

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 0-27512

CSG SYSTEMS INTERNATIONAL, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)
6175 S. Willow Drive, 10th Floor
Greenwood Village, Colorado
(Address of principal executive offices)

47-0783182
(I.R.S. Employer
Identification No.)

80111
(Zip Code)

Registrant's telephone number, including area code: (303) 200-2000

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, Par Value \$0.01 Per Share	CSGS	NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES NO

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES NO

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES NO

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). YES NO

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>	Non-accelerated filer	<input type="checkbox"/>
Smaller reporting company	<input type="checkbox"/>	Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES NO

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on The NASDAQ Stock Market on June 30, 2019, was \$1,158,870,134.

The number of shares of Registrant's Common Stock outstanding as of February 18, 2020 was 32,852,226.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement for its 2020 Annual Meeting of Stockholders to be filed on or prior to April 29, 2020, are incorporated by reference into Part III of this Report.

CSG SYSTEMS INTERNATIONAL, INC.

2019 FORM 10-K

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PART I

Item 1. Business

Overview

CSG Systems International, Inc. (the “Company”, “CSG”, or forms of the pronoun “we”) is one of the world’s leading providers of revenue management, customer experience, and payment solutions that enable a growing list of companies around the world to monetize relationships with their customers in an era of rapid change and digital transformation. We leverage more than 35 years of experience to deliver innovative customer engagement solutions that help our clients solve their toughest challenges, helping them to acquire, monetize, engage, and retain their customers. Our 4,300-plus diverse, worldwide workforce draws from real-world knowledge and extensive expertise to design and implement business solutions that make our clients’ hardest decisions simpler so that they can focus on delivering differentiated and real-time experiences to their customers.

Our proven solutions are built on a combination of on-premise, public and private cloud platforms, either customized or pre-integrated, as well as managed services models that adapt to fit our clients’ unique business needs and enable the transformative change required to create personalized experiences that drive loyalty and retention.

Our principal executive offices are located at 6175 S. Willow Drive, 10th Floor, Greenwood Village, Colorado 80111, and the telephone number at that address is (303) 200-2000.

Our common stock is listed on the NASDAQ Stock Market LLC (“NASDAQ”) under the symbol “CSGS”. We are a S&P Small Cap 600 company.

Industry Overview

Background. We provide software and services solutions that help companies around the world monetize and digitally enable the customer experience. While our heritage is born out of the communications industry, we count among our clients some of the world’s largest and most sophisticated communications, financial services, healthcare, and media and entertainment companies, as well as a long list of governmental entities, with an increasingly diversified revenue mix. Our solutions allow service providers to:

- Monetize new revenue streams through multiple services, across multiple locations and channels, quickly.
- Optimize their business costs to enable the redeployment of capital to support business growth and transformation.
- Protect and maintain existing revenue streams by improving service delivery that drives higher customer satisfaction and increases retention.
- Leverage data and insights to better know and understand their customers and deliver exceptional experiences.
- Become future-ready so they can adapt quickly and efficiently to industry changes and innovations.

Market Trends of Communications Industry. Our primary market, the global communications industry, continues to undergo rapid change. Some key trends are emerging as communications service providers (“CSPs”) try to evolve and compete in this highly complex ecosystem:

- *Consumer choice:* Customers have more choices than ever for information, communications, and entertainment services – a shift that is accelerating. This shift in power to the consumer requires service providers to adopt and deliver new technologies and services which enable a more ubiquitous, flexible, and personalized customer experience. Service providers – whether more traditional or digital native – are developing offerings to cultivate a more recurring, loyal, and “branded” customer experience. Increasing importance is placed on “brand” and “experience” as they both now play a larger role in purchasing decisions. The customer experience will determine the winners and losers in this “always connected” digital world.

- *Competitive landscape:* The proliferation of digital native service providers (e.g., Amazon, Apple, Facebook, Google, Netflix, etc.) has changed the competitive landscape forever. This has forced traditional providers to evaluate the viability of their existing business models, including scale, breadth of offerings, speed to react, and customer experience, and to evolve their businesses to remain not only relevant, but competitive, innovative, and thriving. While consolidation continues between traditional CSPs and content providers (e.g., AT&T and Time Warner Inc.), companies are also scaling their offerings through acquisitions within their respective media (e.g., Disney and 21st Century Fox, Comcast and Sky) and communications industries (e.g., T-Mobile and Sprint). Direct-to-consumer offerings are becoming more prevalent, (e.g., Disney+ and Comcast’s Peacock) and cooperation not only with new partners, but even among competitors (e.g., Netflix and Amazon Prime Video and traditional cable operators) is accelerating.
- *Technology:* Fueled by the intersection of artificial intelligence, the Internet of Things (“IoT”), cloud technologies, and analytics, service providers are fundamentally changing the way they get their products to market and engage with their customers. 5G technologies will propel the expansion of IoT and sensor-enabled services and devices. IoT will underpin the “service-ification” of offerings — the transition of routine activities and purchases (e.g., checking gas meters, driving a car, buying groceries, etc.) to on demand services and pervasive consumer relationships (e.g., only servicing meters that show faults, optimizing parking spots, recommending dinner meals, etc.). To meet the requirements of this hyper-connected ecosystem (speed-to-market, agility, scalability cost structure), service providers are transitioning their legacy technology infrastructure to a combination of private and public cloud technologies to support billions of device connections.
- *New Revenue Sources:* CSPs are facing increased pressure to find new revenue sources, while also managing their cost structure and quality of service delivery during their business transformation. They are navigating declining revenue and profits associated with their traditional services such as wireline voice and video as a result of new or increased competition. In order to offset these declines, CSPs are increasingly looking for ways to improve their cost structure, grow through acquisitions, and launch new revenue-generating services with minimal capital investment. The result is that many CSPs are cutting costs associated with their traditional systems, integrating disparate acquired business operations, and launching new digital services with more flexible, lower-cost solutions.

Overall, these market trends drive the demand for scalable, flexible, and cost-efficient revenue management, customer experience, and payment solutions, which we believe will provide our clients opportunities to monetize and grow revenue from their customers in this age of digital transformation. As a result, we have historically invested meaningfully in research and development (“R&D”) and have acquired companies that enable us to expand our solutions in a timely and efficient manner. We believe that our scalable, modular, and flexible solutions, combined with our rich domain expertise and ability to effectively migrate clients to our solutions, provide the clients with proven solutions to improve their profitability and their customers’ experiences. We have specifically built our solutions to offer service providers a phased, incremental approach to transforming their businesses, thereby reducing the business interruption risk associated with this evolution.

Business Strategy

Our Mission is to deliver innovative engagement solutions that help our clients acquire, monetize, engage with, and retain their customers. We do this by focusing on three goals:

Energizing and developing our Employees. Our people make us exceptional and separate us from our competition. They are ambassadors of the CSG brand and values; they are the point of connection with our clients, for each other, and within our communities.

Delighting our Clients. Our clients depend on us to help them achieve their business objectives. We’ve established a reputation for doing what we say, being easy to do business with, and delivering highly scalable, robust solutions. This reputation has resulted in our becoming a trusted enabler and partner to our clients.

Delivering stockholder value. Our responsibility is to deliver long-term value to shareholders by delivering growth profitably. We achieve this through thoughtfully investing in our business and returning an appropriate amount of capital to stockholders.

We believe that successful execution of our goals will allow us to grow revenues and earnings, and therefore, create long-term value for our clients, employees, and stockholders.

Our strategic focus to accomplish our goals is as follows:

Drive Profitable Growth through Long-Term Relationships: Our relentless focus on our clients is built upon providing market-leading solutions, world-class operations, delivery capabilities and services, and helping our clients solve their toughest challenges. By building strong, long-term relationships based on trust and by delivering on our commitments (i.e., doing what we say), our clients stay with us.

Lead with Technology Innovation: We believe that our broad portfolio of on-premise, cloud and pre-integrated solutions give service providers a competitive advantage. These solutions allow service providers to efficiently manage their traditional businesses while being able to quickly deliver new digital services and a more personalized and relevant experience to their consumers. We continually add new relevant capabilities to what we do as a company, both in terms of our people and our solutions.

Deliver an Exceptional Customer Experience: We believe that we deliver more business value by having developed a long track record of doing what we say and being easy to do business with. We do this by putting the client at the heart of our decision-making which is always directed at improving our agility, delivery capabilities, operational excellence, efficiency and reliability to delight and enable our clients' success.

Attract and Retain Talent: In order to maintain our competitiveness in the market, we must foster a culture in which our people can do their best work. We do this by investing in our people and programs that foster a culture of innovation, collaboration and professional fulfillment.

In short, we believe our strategy is a key enabler to help our clients compete more effectively and successfully in an evolving market.

Description of Business

Key Clients. We work with the leading communication service providers located around the world. A partial list of our key clients as of December 31, 2019 is included below:

Altice	Eastlink
América Móvil	Formula One
AT&T	JPMorgan Chase
Bharti Airtel	Liberty Latin America
Charter Communications, Inc. (“Charter”)	Maximus
CK Hutchison Holdings	MTN
Comcast Corporation (“Comcast”)	Telefónica
Deutsche Telekom	Telstra
DISH Network Corporation (“DISH”)	Verizon

Clients that represented 10% or more of our revenues for 2019 and 2018 were as follows (in millions, except percentages):

	2019		2018	
	Amount	% of Revenues	Amount	% of Revenues
Comcast	\$ 229	23%	\$ 221	25%
Charter	195	20%	179	20%

See the Significant Client Relationships section of our Management’s Discussion and Analysis (“MD&A”) for additional information regarding our business relationships with these key clients.

Research and Development. Our clients around the world are facing competition from new entrants and at the same time, are deploying new services at a rapid pace and dramatically increasing the complexity of their business operations. Therefore, we continue to make meaningful investments in R&D to ensure that we stay ahead of our clients’ needs and advance our clients’ businesses as well as our own. We believe our value proposition is to provide solutions that help our clients ensure that each customer interaction is an opportunity to create value and deepen the business relationship.

Our total R&D expenses for 2019 and 2018 were \$128.0 million and \$124.0 million, respectively, or approximately 13% and 14%, respectively, of our total revenues. We anticipate the level of R&D investment in the near-term to be relatively consistent with that of 2019.

There are certain inherent risks associated with significant technological innovations. Some of these risks are described in this report in our Risk Factors section below.

Solutions and Services. Our solutions and services help companies with complex transaction-centric business models manage the opportunities and challenges associated with accurately capturing, managing, generating, and optimizing the revenue associated with an immense volume of customer interactions and then manage the intricate nature of those customer relationships. Below is a high-level overview:

- Our solutions provide global service providers with a robust, integrated real-time revenue management framework in either a cloud-based or stand-alone environment to optimize and monetize transactions at every stage of the customer lifecycle. Our flexible, configurable business support systems (BSS) help more than 500 companies worldwide monetize and digitally enable the experiences of our client’s customers. We support more than 520 million end users worldwide on behalf of our clients, managing every aspect from billing to customer care to partner settlement, and we help our clients quickly launch and monetize new services while having the flexibility to keep up with rapidly changing customer demands and markets that are continually evolving. This includes our public cloud based, private cloud and on-premise solutions, such as our Advanced Convergent Platform (“ACP”), Ascendon, Singleview, Total Service Mediation (“TSM”) and Wholesale Business Management Solution (“WBMS”) platforms.
- Our solutions offer a diverse and integrated suite of tools designed to manage and improve every aspect of the customer experience, from onboarding to upgrades, payments to field service management. These solutions allow clients to connect with their customers anytime, anywhere, on any channel, at any stage in their customer experience journey. We are an industry leader in supporting omni-channel communications between our clients and their customers, processing more than 1.5 billion voice, SMS/text, print, and e-mail messages each year. More than 75,000 of our clients’ field technicians and dispatchers complete over 100 million work orders per year by leveraging our field service management solutions to optimize routing and provide real-time insights into arrival times for their customers. We help clients deliver a unique customer experience across both traditional and digital channels.
- We empower our clients with options to manage and process payments from their customers by offering an advanced, cloud-based, integrated suite of solutions across a variety of industries. Our broad offering and strategic partnerships with more than 50,000 merchants, resellers, and independent software vendors has fueled growth and success in the integrated payments space.
- We leverage our 35+ year history in running highly scalable, complex business support solutions to improve operational efficiencies and effectiveness. For our managed services clients, we assume long-term responsibility for delivering our software solutions and related operations under a defined scope and specified service levels. Under managed services agreements, we may operate software products (primarily our software solutions) on behalf of our clients: (i) out of a client’s data center; (ii) out of a data center we own and operate; or (iii) out of a third-party data center (including public cloud providers) we contract with for such services.

Historically, a substantial percentage of our total revenues have been generated from our revenue management and customer experience solutions. These solutions are expected to provide a large percentage of our total revenues in the foreseeable future as well.

Business Acquisitions. Our strategy includes acquiring assets and businesses which provide the technology and personnel to expedite our solutions and services development efforts, provide complementary solutions and services, increase market share, and/or provide access to new markets and clients.

Professional Services. We employ professional services experts globally who bring a wide-ranging expertise – including solution architecture, project management, systems implementation, and business consultancy – to every project. We apply a structured methodology to each of our engagements, leveraging consistent world-class processes, best-practice programs, and systemized templates in the development of our solutions.

Sales and Marketing. We organize our sales efforts to clients primarily within our geographically dispersed, dedicated account teams, with senior level account managers who are responsible for new revenues and renewal of existing contracts within a client account. The account teams are supported by sales support personnel who are experienced in the various solutions and services that we provide.

Competition. The market for revenue management solutions and services in the communications industry, as well as in other industries we serve, is highly competitive. We compete with both independent providers and in-house developers of customer management systems. We believe that our most significant competitors in our primary markets are Amdocs Limited and NEC Corporation; network equipment providers such as Ericsson and Huawei; and client-developed internal solutions. Some of our actual and potential competitors have substantially greater financial, marketing, and technological resources than us and in some instances, we may partner and collaborate with our competitors on large opportunities and projects.

We believe service providers in our industry use the following criteria when selecting a vendor for the mission critical management of their revenue, customer experience, and digital ecosystem: (i) functionality, scalability, flexibility, interoperability, and architecture of the software assets; (ii) the breadth and depth of pre-integrated product solutions; (iii) solution quality, client service, and support; (iv) operational excellence and reliability; (v) quality of R&D efforts; and (vi) total cost of ownership. We believe that our solutions allow us to compete effectively in these areas.

Proprietary Rights and Licenses

We rely on a combination of trade secret, copyright, trademark, and patent laws in the United States (“U.S.”) and similar laws in other countries, and non-disclosure, confidentiality, and other types of contractual arrangements to establish, maintain, and enforce our intellectual property rights in our solutions. Despite these measures, any of our intellectual property rights could be challenged, invalidated, circumvented, or misappropriated. Although we hold a select number of patents and patent applications on some of our newer solutions, we do not rely upon patents as a primary means of protecting our rights in our intellectual property. In any event, there can be no assurance that our patent applications will be approved, that any issued patents will adequately protect our intellectual property, or that such patents will not be challenged by third parties. Also, much of our business and many of our solutions rely on key technologies developed or licensed by third parties, and we may not be able to obtain or continue to obtain licenses and technologies from these third parties at all or on reasonable terms. Our failure to adequately establish, maintain, and protect our intellectual property rights could have a material adverse impact on our business, financial position, and results of operations. For a description of the risks associated with our intellectual property rights, see “Item 1A - Risk Factors - Failure to Protect Our Intellectual Property Rights or Claims by Others That We Infringe Their Intellectual Property Rights Could Substantially Harm Our Business, Financial Position and Results of Operations.”

Employees

As of December 31, 2019, we had a total of 4,339 employees, an increase of 374 employees when compared to the number of employees we had as of December 31, 2018. Our success is dependent upon our ability to attract and retain qualified employees. We are subject to various foreign employment laws and regulations based on the country in which our employees are located. We believe that our relations with our employees are good.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy materials, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act are available free of charge on our website at www.csgi.com. Additionally, these reports are available on the SEC’s website at www.sec.gov.

Code of Conduct and Business Ethics

A copy of our Code of Conduct and Business Ethics (the “Code of Conduct”) is maintained on our website. Any future amendments to the Code of Conduct, or any future waiver of a provision of our Code of Conduct, will be timely posted to our website upon their occurrence. Historically, we have had minimal changes to our Code of Conduct, and have had no waivers of a provision of our Code of Conduct.

Item 1A. Risk Factors

We or our representatives from time-to-time may make or may have made certain forward-looking statements, whether orally or in writing, including without limitation, any such statements made or to be made in MD&A contained in our various Securities and Exchange Commission (“SEC”) filings or orally in conferences or teleconferences. We wish to ensure that such statements are accompanied by meaningful cautionary statements, so as to ensure, to the fullest extent possible, the protections of the safe harbor established in the Private Securities Litigation Reform Act of 1995.

We operate in rapidly changing and evolving markets throughout the world addressing the complex needs of communication service providers, financial institutions, and many others, and as a result, new risk factors will likely emerge and currently identified risk factors will likely evolve in their scope. Further, as we enter new market sectors as well as new geographic markets, we could be subject to new regulatory requirements that increase the risk of non-compliance and the potential for economic harm to us and our clients. Accordingly, the risk factors and any forward-looking statements are qualified in their entirety by reference to and are accompanied by the following meaningful cautionary statements:

- If any of the following risk factors would occur, it could have a material adverse effect on our business, financial position, results of operations, and/or trading price of our common stock.
- This list of risk factors is likely not exhaustive and management cannot predict all of the relevant risk factors, nor can it assess the potential impact, if any, of such risk factors on our business or the extent to which any risk factor, or combination of risk factors, may create.
- There can be no assurances that forward-looking statements will be accurate indicators of future actual results, and it is likely that actual results will differ from results projected in the forward-looking statements, and that such differences may be material.

We Derive a Significant Portion of Our Revenues From a Limited Number of Clients, and the Loss of the Business of a Significant Client Could Have a Material Adverse Effect on Our Financial Position and Results of Operations.

Over the past decade, the global communications industry has experienced significant consolidation, resulting in a large percentage of the market being served by a limited number of communication service providers with greater size and scale, and there are possibilities of further consolidation. Consistent with this market concentration, we generate over 40% of our revenues from our two largest clients, which are (in order of size) Comcast and Charter, which each individually accounted for over 10% or more of our total revenues. See the Significant Client Relationships section of MD&A for key renewal dates and a brief summary of our business relationship with these clients.

There are inherent risks whenever a large percentage of total revenues are concentrated with a limited number of clients. Such risks are that a significant client could: (i) undergo a formalized process to evaluate alternative providers for solutions and services we provide; (ii) terminate or fail to renew their contracts with us, in whole or in part for any reason; (iii) significantly reduce the number of customer accounts processed on our solutions, the price paid for our solutions and services, or the scope of solutions and services that we provide; or (iv) experience significant financial or operating difficulties.

Our industry is highly competitive, and as a result, it is possible that a competitor could increase its footprint and share of customers serviced at our expense or a client could develop their own internal solutions. While our clients may incur some costs in switching to our competitors or their own internally-developed solutions, they may do so for a variety of reasons, including: (i) price; (ii) dissatisfaction with our solutions or service levels; or (iii) dissatisfaction with our relationships.

The Delivery of Our Solutions is Dependent on a Variety of Computing and Processing Environments and Communications Networks Which May Not Be Available or May Be Subject to Security Attacks.

Our solutions are generally delivered through a variety of sources including public cloud, third-party data center and other service providers, and internally-operated computing and processing environments (collectively referred to hereafter in this section as “Systems”). We and/or end users are connected to the Systems through a variety of public and private communications networks, which we will collectively refer to herein as “Networks.” Our solutions are generally considered to be mission critical customer management systems by our clients. As a result, our clients are highly dependent upon the high availability and uncompromised security of the Networks and Systems to conduct their business operations.

Networks and Systems are subject to the risk of an extended interruption, outage, or security breach due to many factors such as: (i) changes to the Systems and Networks for such things as scheduled maintenance and technology upgrades, or conversions to other technologies, service providers, or physical location of hardware; (ii) failures or lack of continuity of services from public cloud or third-party data center and other service providers; (iii) defects in software program(s); (iv) human and machine error; (v) acts of war and/or nature; (vi) intentional, unauthorized attacks from computer “hackers”, or cyber-attacks; and (vii) using the Systems to perpetrate identity theft through unauthorized authentication to our clients’ customers’ accounts. Most recently, the marketplace is experiencing an ever-increasing exposure to both the number and severity of cyber-attacks. In addition, we continue to expand our use of third-party Systems and Networks with our solution offerings thereby permitting, for example, our clients’ customers to use the Internet to review account balances, order services or execute similar account management functions. Access to Networks and Systems via the Internet has the potential to increase their vulnerability to unauthorized access and corruption, as well as increasing the dependency of the Systems’ reliability on the availability and performance of the Internet and end users’ infrastructure they obtain through other third-party providers.

The method, manner, cause and timing of an extended interruption, outage, or security breach in third-party and/or the Networks or Systems are impossible to predict. As a result, there can be no assurances that these Networks and Systems will not fail, not suffer a security breach or that the third-party and/or our business continuity or remediation plans will adequately mitigate the negative effects of a disruption or security breach to the Networks or Systems. Further, our property, technology errors and omissions, contractual relationship with third-party providers, and business interruption insurance may not adequately compensate us for losses that we incur as a result of such interruptions or security breaches. Should the Networks or Systems: (i) experience an extended interruption or outage; (ii) have their security breached; and/or (iii) have their data lost, corrupted or otherwise compromised, it would impede our ability to meet solution and service delivery obligations, and likely have an immediate impact to the business operations of our clients. This would most likely result in damaging our reputation as well as our long-term ability to attract and retain new clients. The loss of confidential information could result in losing the customers’ confidence, as well as imposition of penalties, fines, and/or damages.

The Occurrence or Perception of a Security Breach or Disclosure of Confidential Personally Identifiable Information Could Harm Our Business.

In providing solutions to our clients, we process, transmit, and store confidential and personally identifiable information (“PII”), including social security numbers, health-related information, and financial information. Our treatment of such information is subject to contractual restrictions and federal, state, and foreign data privacy laws and regulations, which continue to evolve resulting in greater scrutiny over the protection of PII. In response to these evolving restrictions and regulations, including the European Union’s adoption of the General Data Protection Regulation (“GDPR”) and California Consumer Privacy Act (“CCPA”), we leverage various data protection strategies (e.g., encryption) and have implemented measures to protect against unauthorized access to such information, and comply with these laws and regulations. These measures include standard industry practices (e.g. payment card industry (“PCI”) requirements), periodic security reviews of our systems by independent parties, secure development practices, network firewalls, policy directives, procedural controls, intrusion detection systems, and antivirus applications. Due to the inherent risks and complexities to defend against cybercrime, these measures may fail to adequately protect this information. Any failure on our part to protect the privacy of PII or comply with data privacy laws and regulations may subject us to contractual liability and damages, loss of business, damages from individual claimants, substantial fines/penalties, criminal prosecution, and unfavorable publicity. Even the mere perception of a security breach or inadvertent disclosure of PII could damage our reputation and inhibit market acceptance of our solutions. In addition, third-party vendors that we engage to perform services for us may unintentionally release PII or otherwise fail to comply with applicable laws and regulations. As new laws and regulations emerge and evolve our compliance costs could increase substantially.

We May Not Be Able to Efficiently and Effectively Implement New Solutions or Migrate Clients onto Our Solutions.

Our continued growth plans include the implementation of new solutions, as well as migrating both new and existing clients to our solutions. Such implementations or migrations (collectively referred to hereafter in this section as “implementations”), regardless of whether they involve new solutions or new customers, have become increasingly more difficult because of the sophistication, complexity, and interdependencies of the various software and network environments impacted, combined with the increasing complexity of the clients’ underlying business processes. In addition, the complexity of the implementations increases when the arrangement includes other vendors participating in the project, including but not limited to, prime and subcontractor relationships with our company. For these reasons, implementations subject our clients to potential business disruption, which could cause them to delay or even cancel future implementations.

As a result, there is a risk that we may experience cancellations, delays, or unexpected costs associated with implementations. In addition, our inability to complete implementations in an efficient and effective manner could damage our reputation in the market place, reducing our opportunity to grow our business with both new and existing clients.

We May Not Be Successful in the Integration or Achievement of Financial Targets of Our Acquisitions.

As part of our growth strategy, we seek to acquire assets, technology, and businesses which will provide the technology and personnel to expedite our solutions and services development efforts, provide complementary solutions, or provide access to new markets and clients.

Acquisitions involve a number of risks and difficulties, including: (i) expansion into new markets and business ventures; (ii) the requirement to understand local business practices; (iii) the diversion of management's attention to the assimilation of acquired operations and personnel; (iv) being bound by acquired client or vendor contracts with unfavorable terms; and (v) potential adverse effects on a company's operating results for various reasons, including, but not limited to, the following items: (a) the inability to achieve financial targets; (b) the inability to achieve certain integration expectations, operating goals, and synergies; (c) costs incurred to exit current or acquired contracts or activities; (d) costs incurred to service any acquisition debt; and (e) the amortization or impairment of acquired intangible assets.

Due to the multiple risks and difficulties associated with any acquisition, there can be no assurance that we will be successful in achieving our expected strategic, operating, and financial goals for any such acquisition.

Our Business is Highly Dependent on the Global Communications Industry.

Since a large percentage of our revenues are generated from clients that operate within the global communications industry, we are highly dependent on the health and the business trends occurring within this industry (in particular for our North American cable and satellite clients). Key factors within this industry that could potentially impact our clients' businesses, and thus, our business, are as follows:

- *Key Market Conditions:* The global communications industry has undergone significant fluctuations in growth rates and capital investment cycles in the past decade.

In addition, changes in demand for traditional services for CSPs are causing them to seek new revenue sources, while also managing their cost structure and quality of service delivery during their business transformation. The result is that many CSPs are delaying investment decision on maintaining/advancing legacy systems, and/or making investments in new solutions to drive their business forward into new areas.

- *Market Consolidation:* The pace of consolidation within the industry continues to accelerate as communication service providers look to increase the scale of their operations and footprint within the entire communications ecosystem. Potential byproducts of this consolidation that could impact us are as follows: (i) there could be fewer providers in the market, each with potentially greater bargaining power and economic leverage due to their larger size, which may result in our having to lower our prices to remain competitive, retain our market share, or comply with the surviving client's current more favorable contract terms, and (ii) the controlling entity in a consolidation that is not our current client, may acquire one of our existing clients and choose to consolidate both entities onto the controlling entity's software platform, thus reducing and possibly eliminating our business with our existing client.

Also, as consolidated entities execute upon their revenue and operational synergies, there is generally a slowdown in decision-making on discretionary spending and/or on new business initiatives. While this could be a timing issue only, it could impact quarterly and annual results.

- *Increased Competition:* Our clients operate in a highly competitive environment. Competitors range from traditional wireline and wireless providers to new entrants like new digital native service providers such as Facebook, Apple, Netflix, Google, and Amazon. Should these competitors be successful in their strategies, it could threaten our clients' market share, pricing power, and level of services delivered. These threats could negatively impact our clients' revenues, putting pressure on our source of revenues, as generally speaking, these companies do not use our core solutions and there can be no assurance that new entrants will become our clients. In addition, demand for spectrum, network bandwidth and content continues to increase and any changes in the regulatory environment could have a significant impact to not only our clients' businesses, but in our ability to help our clients be successful.

The above industry factors are impacting our clients' businesses, and thus could cause delays, cancellations/loss of business, and/or downward pricing pressure on our sales and services. This could cause us to either fall short of revenue expectations or have a cost model that is misaligned with revenues.

We May Not Be Able to Respond to Rapid Technological Changes.

The market for business support solutions, such as customer care, billing solutions, and payment solutions is characterized by rapid changes in technology and is highly competitive with respect to the need for timely solution innovations and new solution introductions. As a result, we believe that our future success in sustaining and growing our revenues depends upon: (i) our ability to continuously expand, adapt, modify, maintain, and operate our solutions to address the increasingly complex and evolving needs of our clients without sacrificing the reliability or quality of the solutions; (ii) the integration of acquired technologies and their widely distributed, complex worldwide operations; and (iii) creating and maintaining an integrated suite of customer care and billing solutions, which are portable to new verticals. In addition, the market is demanding that our solutions have greater architectural flexibility and interoperability, and that we are able to meet the demands for technological advancements to our solutions at a greater pace. Our attempts to meet these demands subject our R&D efforts to greater risks.

As a result, substantial and effective R&D and solution investment will be required to maintain the competitiveness of our solutions in the market. Technical problems may arise in developing, maintaining, integrating, and operating our solutions as the complexities are increased. Development projects can be lengthy and costly, and may be subject to changing requirements, programming difficulties, a shortage of qualified personnel, and/or unforeseen factors which can result in delays. In addition, we may be responsible for the implementation of new solutions and/or the conversion of clients to new solutions, and depending upon the specific solution, we may also be responsible for operations of the solution.

There is an inherent risk in the successful development, implementation, conversion, integration, and operation of our solutions as the technological complexities, and the pace at which we must deliver these solutions to market, continue to increase. The risk of making an error that causes significant operational disruption to a client, or results in incorrect computer processing of customer or vendor data that we perform on behalf of our clients, increases proportionately with the frequency and complexity of changes to our solutions and new delivery models. There can be no assurance: (i) of continued market acceptance of our solutions; (ii) that we will be successful in the development of enhancements or new solutions that respond to technological advances or changing client needs at the pace the market demands; or (iii) that we will be successful in supporting the implementation, conversion, integration, and/or operations of enhancements or new solutions.

A Reduction in Demand for Our Key Business Support Solutions Could Have a Material Adverse Effect on Our Financial Position and Results of Operations.

Historically, a substantial percentage of our total revenues have been generated from our core cloud-based , ACP, and related solutions. These solutions are expected to continue to provide a large percentage of our total revenues in the foreseeable future. Any significant reduction in demand for ACP and related solutions could have a material adverse effect on our business.

We May Be Subject to Payments Regulation in the U.S.

Many states in which we operate have laws that govern payment activities and have implemented various definitions and licensing requirements for entities deemed to be money transmitters, including licensure. If we are deemed to be money transmitters in such states and fail to meet such state requirements at any time, we could be subject to enforcement actions and financial penalties and other costs. An enforcement action could result in restrictions upon, or a prohibition on engaging in, the business of money transmission in one or more states and it could delay or prevent us from obtaining a money transmitter license in one or more states. Enforcement actions could also result in reputational harm to our business and force us to cease or limit certain aspects of our business or prevent us from growing our business. Further, laws governing payment activities may evolve and changes in such law could affect our ability to provide our solutions or services in the same form and on the same terms as we have historically, or at all.

If we must apply for money transmitter licenses in one or more states, there can be no assurance that we will be able to obtain any such licenses and such application process may be prolonged and costly. During the application process, states may impose disclosure and vetting requirements of persons deemed in control of our business. In addition, there are substantial costs and potential solution changes involved in maintaining such licenses, and we could be subject to fines or other enforcement action if we are found to have violated applicable federal, state, and local laws and regulations, including those related to licensing and supervision, anti-money laundering, the Bank Secrecy Act, financial privacy, and cybersecurity and data security. These factors could impose substantial additional costs and involve considerable delay to the development or provision of our solutions or services, or could require significant and costly operational changes or prevent us from providing our solutions or services in a given market. These limitations may adversely affect our ability to grow our business.

We may also be subject to card association and network rules and requirements, and violations of such rules and requirements could result in fines or the inability to use third-party networks to conduct our business.

Failure to Deal Effectively with Fraud, Fictitious Transactions, Bad Transactions, and Negative Experiences Could Increase Our Loss Rate and Harm Our Payment Processing Business, and Could Severely Diminish Merchant and Consumer Confidence in and Use of Our Services.

In the event that merchants do not fulfill their obligations to consumers or a consumer disputes a transaction for various reasons, we may incur losses as a result of chargebacks and/or claims from consumers. We would seek to recover such losses from the merchant, however, we may not be able to recover the amounts in full if the merchant is unwilling or unable to pay. While we have established financial reserves based on assumptions and estimates that we believe are reasonable to cover such eventualities, these reserves on individual merchants may be insufficient. We may also incur losses from claims that the consumer did not authorize the purchase, from consumer fraud, from erroneous transactions, and as a result of consumers who have closed bank accounts or have insufficient funds in their bank accounts to satisfy payments. In addition, if losses incurred by us related to payment card transactions become excessive, we could lose the right to process credit card transactions, which would significantly impact our payment processing business. We have taken measures to detect and reduce the risk of fraud, including underwriting and risk management procedures and processes, but these measures need to be continually updated to address emerging means of perpetrating fraud or to accommodate new solution offerings.

Failure to Attract and Retain Our Key Management and Other Highly Skilled Personnel Could Have a Material Adverse Effect on Our Business.

Our future success depends in large part on the continued service of our key management, sales, product development, professional services, and operational personnel. We believe that our future success also depends on our ability to attract and retain highly skilled technical, managerial, operational, and sales and marketing personnel, including, in particular, personnel in the areas of R&D, professional services, and technical support. Competition for qualified personnel at times can be intense, particularly in the areas of R&D, conversions, software implementations, and technical support. This risk is heightened with a widely dispersed customer base and employee populations. For these reasons, we may not be successful in attracting and retaining the personnel we require, which could have a material adverse effect on our ability to meet our commitments and new solution delivery objectives.

Variability of Our Quarterly Revenues and Our Failure to Meet Revenue and Earnings Expectations Would Negatively Affect the Market Price of Our Common Stock.

From time to time, we may experience variability in quarterly revenues and operating results. Common causes of failure to meet revenue and operating expectations include, among others:

- Inability to close and/or recognize revenue on certain transactions in the period originally anticipated;
- Inability to accurately forecast payment processing transaction volumes and related transaction costs;
- Delays in renewal of multiple or individually significant agreements;
- Inability to renew existing client or vendor arrangements at anticipated rates;
- Delays in timing of initiation and/or implementation of significant projects or arrangements;
- Inability to meet client expectations materially within our cost estimates;
- Changes in spending and investment levels;
- Foreign currency fluctuations; and
- Economic and political conditions.

Should we fail to meet our revenue and earnings expectations of the investment community, by even a relatively small amount, it could have a disproportionately negative impact upon the market price of our common stock.

We May be Subject to Various Anti-Money Laundering and Counter-Terrorist Financing Laws and Regulations.

We may be subject to various anti-money laundering (“AML”) and counter-terrorist financing laws and regulations that prohibit, among other things, our involvement in processing the proceeds of criminal activities. We maintain an AML Compliance Policy and Procedure applicable to our payments processing business which policy is intended to comply with any applicable U.S. federal requirements. The laws or their application, our interpretation of the laws, and/or our services may change so that we could be subject to additional regulation and incur additional costs of compliance. We may not be able to meet additional regulatory requirements or the cost of adhering to such requirements could be substantial or could severely impact our ability to continue to maintain and/or grow our payments processing business or retain merchants or partners. The regulations of other countries and/or any increased compliance costs associated with such regulations, could prevent us from entering new markets for our services.

Our Global Operations Subject Us to Additional Risks.

We currently conduct a portion of our business outside the U.S. We are subject to certain risks associated with operating internationally including the following items:

- Our solutions not meeting local requirements;
- Fluctuations in foreign currency exchange rates for which a natural or purchased hedge does not exist or is ineffective;
- Staffing and managing of our foreign operations;
- Longer sales cycles for new contracts;
- Longer collection cycles for client billings or accounts receivable, as well as heightened client collection risks, especially in countries with highly inflationary economies and/or restrictions on the movement of cash out of the country;
- Trade barriers;
- Governmental sanctions;
- Complying with varied legal and regulatory requirements across jurisdictions;
- Reduced protection for intellectual property rights in some countries;
- Inability to recover value added taxes and/or goods and services taxes in foreign jurisdictions;
- Political instability and threats of terrorism and/or war;
- A potential adverse impact to our overall effective income tax rate resulting from, among other things:
 - Operations in foreign countries with higher tax rates than the U.S.;
 - The inability to utilize certain foreign tax credits; and
 - The inability to utilize some or all of losses generated in one or more foreign countries.

Our Global Operations Require Us To Comply With Applicable U.S. and International Laws and Regulations.

Doing business on a global basis requires our company and our subsidiaries to comply with the laws and the regulations of the U.S. government and various international jurisdictions. In addition, the number of countries enacting anti-corruption laws and related enforcement activities is increasing. These regulations place restrictions on our operations, trade practices and trade partners. In particular, our global operations are subject to U.S. and foreign anti-corruption laws and regulations such as the Foreign Corrupt Practices Act (“FCPA”), the U.K. Anti-Bribery Act and economic sanction programs administered by the Office of Foreign Assets Control (“OFAC”).

The FCPA prohibits us from providing anything of value to foreign officials for the purposes of influencing official decisions or obtaining or retaining business. In addition, the FCPA imposes accounting standards and requirements on publicly traded U.S. corporations and their foreign affiliates, which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments, and to prevent the establishment of “off books” slush funds from which such improper payment can be made. As part of our business, we regularly deal with state-owned business enterprises, the employees of which are considered foreign officials for purposes of the FCPA. In addition, some of the international locations in which we operate lack a developed legal system and have higher than normal levels of corruption. We inform our personnel and third-party sales representatives of the requirements of the FCPA and other anti-corruption laws, including, but not limited to their reporting requirements. We have also developed and will continue to develop and implement systems for formalizing contracting processes, performing due diligence on agents and partners while improving our recordkeeping and auditing practices regarding these regulations. However, there is no guarantee that our employees, third-party sales representatives or other agents have not or will not engage in conduct undetected by our processes and for which we might be held responsible under the FCPA or other anti-corruption laws.

Economic sanctions programs restrict our business dealings with certain countries and individuals. As a global provider, we are exposed to a heightened risk of violating OFAC regulations. Violations of these laws and regulations are punishable by civil penalties, including fines, injunctions, asset seizures, debarment from government contracts and revocations or restrictions of licenses, as well as criminal fines and imprisonment. While we actively screen and monitor the global companies and individuals that we do business with, utilizing a risk-based approach, there is no guarantee that we have not or will not, through the lack of accurate information, changing client business structures, process failure, oversight, or error, have violations occur.

Our Use of Open Source Software May Subject Us to Certain Intellectual Property-Related Claims or Require Us to Re-Engineer Our Software, Which Could Harm Our Business.

We use open source software in connection with our solutions, processes, and technology. Companies that use or incorporate open source software into their products have, from time to time, faced claims challenging their use, ownership and/or licensing rights associated with that open source software. As a result, we could be subject to suits by parties claiming certain rights to what we believe to be open source software. Some open source software licenses require users who distribute open source software as part of their software to publicly disclose all or part of the source code in their software and make any derivative works of the open source code available on unfavorable terms or at no cost. In addition to risks related to license requirements, use of open source software can lead to greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties, support, or controls with respect to origin of the software. Use of open source software also complicates compliance with export-related laws. While we take measures to protect our use of open source software in our solutions, open source license terms may be ambiguous, and many of the risks associated with usage of open source software cannot be eliminated. If we were found to have inappropriately used open source software, we may be required to release our proprietary source code, re-engineer our software, discontinue the sale of certain solutions in the event re-engineering cannot be accomplished on a timely basis, or take other remedial action that may divert resources away from our development efforts.

We Face Significant Competition in Our Industry.

The market for our solutions is highly competitive. We directly compete with both independent providers and in-house solutions developed by existing and potential clients. In addition, some independent providers are entering into strategic alliances with other independent providers, resulting in either new competitors, or competitors with greater resources. Many of our current and potential competitors have significantly greater financial, marketing, technical, and other competitive resources than our company, many with significant and well-established domestic and international operations. There can be no assurance that we will be able to compete successfully with our existing competitors or with new competitors.

Failure to Protect Our Intellectual Property Rights or Claims by Others That We Infringe Their Intellectual Property Rights Could Substantially Harm Our Business, Financial Position and Results of Operations.

We rely on a combination of trade secret, copyright, trademark, and patent laws in the U.S. and similar laws in other countries, and non-disclosure, confidentiality, and other types of contractual arrangements to establish, maintain, and enforce our intellectual property rights in our solutions. Despite these measures, any of our intellectual property rights could be challenged, invalidated, circumvented, or misappropriated. Further, our contractual arrangements may not effectively prevent disclosure of our confidential information or provide an adequate remedy in the event of unauthorized disclosure of our confidential information. Others may independently discover trade secrets and proprietary information, which may complicate our assertion of trade secret rights against such parties. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. In addition, the laws of certain countries do not protect proprietary rights to the same extent as the laws of the U.S. Therefore, in certain jurisdictions, we may be unable to protect our proprietary technology adequately against unauthorized third party copying or use, which could adversely affect our competitive position.

Although we hold a limited number of patents and patent applications on some of our solutions, we do not rely upon patents as a primary means of protecting our rights in our intellectual property. In any event, there can be no assurance that our patent applications will be approved, that any issued patents will adequately protect our intellectual property, or that such patents will not be challenged by third parties. Also, much of our business and many of our solutions rely on key technologies developed or licensed by third parties, and we may not be able to obtain or continue to obtain licenses and technologies from these third parties at all or on reasonable terms.

Finally, third parties may claim that we, our clients, licensees or other parties indemnified by us are infringing upon their intellectual property rights. Even if we believe that such claims are without merit, they can be time consuming and costly to defend and distract management's and technical staff's attention and resources. Claims of intellectual property infringement also might require us to redesign affected solutions, enter into costly settlement or license agreements or pay costly damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling certain of our solutions. Even if we have an agreement to indemnify us against such costs, the indemnifying party may be unable to uphold its contractual obligations. If we cannot or do not license the infringed technology on reasonable pricing terms or at all, or substitute similar technology from another source, our business could be adversely impacted. Our failure to adequately establish, maintain, and protect our intellectual property rights could have a material adverse effect on our business.

We May Incur Material Restructuring Charges in the Future.

In the past, we have recorded restructuring charges related to involuntary employee terminations, various facility abandonments, and various other restructuring and reorganization activities. We continually evaluate ways to reduce our operating expenses through new restructuring opportunities, including more effective utilization of our assets, workforce, and operating facilities. As a result, there is a risk, which is increased during economic downturns and with expanded global operations, that we may incur material restructuring or reorganization charges in the future.

Substantial Impairment of Long-lived Assets in the Future May Be Possible.

As a result of various acquisitions and the growth of our company over the last several years, we have approximately \$223 million of long-lived assets other than goodwill (principally, property and equipment, software, acquired client contracts, and client contract costs) as of December 31, 2019. Long-lived assets are required to be evaluated for possible impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. We utilize our market capitalization and/or cash flow models as the primary basis to estimate the fair value amounts used in our long-lived asset impairment valuations. If an impairment was to be recorded in the future, it could materially impact our results of operations in the period such impairment is recognized, but such an impairment charge would be a non-cash expense, and therefore would have no impact on our cash flows.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2019, we were operating in over 25 leased sites around the world, representing over 650,000 square feet.

Our corporate headquarters is located in Greenwood Village, Colorado. In addition, we lease office space in the U.S. in Allen, Texas; Atlanta, Georgia; Bloomfield, New Jersey; Chicago, Illinois; Omaha, Nebraska; and Philadelphia, Pennsylvania. The leases for these office facilities expire in the years 2020 through 2027. We also maintain leased facilities internationally in Australia, Brazil, Canada, Colombia, France, India, Ireland, Malaysia, South Africa, Sweden, United Arab Emirates, and the U.K. The leases for these international office facilities expire in the years 2020 through 2026. We utilize these office facilities primarily for the following: (i) client services, training, and support; (ii) product and operations support; (iii) systems and programming activities; (iv) professional services staff; (v) R&D activities; (vi) sales and marketing activities; and (vii) general and administrative functions.

Additionally, we lease four statement production and mailing facilities totaling approximately 350,000 square feet. These facilities are located in: (i) Omaha, Nebraska; (ii) Crawfordville, Florida; (iii) Austin, Texas; and (iv) Fort Worth, Texas. The leases for these facilities expire in the years 2021 through 2026.

We believe that our facilities are adequate for our current needs and that additional suitable space will be available as required. We also believe that we will be able to either: (i) extend our current leases as they terminate; or (ii) find alternative space without experiencing a significant increase in cost. See Note 6 to our Financial Statements for information regarding our obligations under our facility leases.

Item 3. Legal Proceedings

From time-to-time, we are involved in litigation relating to claims arising out of our operations in the normal course of business. In the opinion of our management, we are not presently a party to any material pending or threatened legal proceedings.

Item 4. Mine Safety Disclosures

Not applicable.

Executive Officers of the Registrant

Our executive officers are Bret C. Griess (President and Chief Executive Officer), Rolland B. Johns (Executive Vice President and Chief Financial Officer), Brian A. Shepherd (Executive Vice President and Group President), and Kenneth M. Kennedy (Executive Vice President, President of Technology and Product). We have employment agreements with each of the executive officers.

Bret C. Griess

President and Chief Executive Officer

Mr. Griess, 51, currently serves as our President and CEO. He joined the Company in 1996 and held a variety of positions in Operations and Information Technology, until being appointed Executive Vice President of Operations in February 2009, Chief Operations Officer in March 2011, and President in June 2015. In January 2016, Mr. Griess was appointed President and CEO and a member of our Board. Mr. Griess holds an M.A. degree in Management and a B.S. degree in Management from Bellevue University in Nebraska, and an A.A.S. degree from the Community College of the Air Force.

Rolland B. Johns

Executive Vice President and Chief Financial Officer

Mr. Johns, 50, serves as CSG's Executive Vice President and Chief Financial Officer, where he oversees finance, accounting and treasury for the organization. Mr. Johns joined CSG in 2013 as Chief Accounting Officer, and was named to his current position in May 2018. Mr. Johns brings more than 25 years of global finance and accounting expertise to the position. Prior to joining CSG, he was an audit partner at KPMG, serving in many leadership and management roles, including lead audit engagement partner on several large public company engagements in various industries across the globe. Mr. Johns is a member of the AICPA and the Nebraska Society of Certified Public Accountants. He holds a B.S. degree in Accounting from the University of San Diego.

Brian A. Shepherd

Executive Vice President and Group President

Mr. Shepherd, 52, joined CSG in 2016. He was named Executive Vice President and Group President of CSG in October 2017. In this position, he leads the profit and loss organization for the entire global organization. Prior to this role, Mr. Shepherd served as Executive Vice President and President of Global Broadband, Cable and Satellite Business from 2016 to 2017, where he focused on accelerating the growth and strategic direction of CSG's global broadband, cable and direct broadcast satellite business. Mr. Shepherd is an international business expert with strong management, strategy, corporate growth, customer relationship, global sales/service, and cloud transformation experience. In previous executive roles at companies such as TeleTech, Amdocs, DST Innovis, and McKinsey & Company, Mr. Shepherd built a successful history of helping companies drive and achieve their strategic growth initiatives. With more than 25 years of technology and cloud expertise serving global brands in communication, media, financial services, government, healthcare and retail, he has built wide and deep relationships with C-Suite leaders, decision-makers and policy influencers who have shaped these industries globally. Mr. Shepherd graduated Magna cum laude in Economics from Wabash College and received a Master of Business Administration degree from Harvard Business School.

Kenneth M. Kennedy

Executive Vice President, President of Technology and Product

Mr. Kennedy, 50, was named President of Technology and Product in October 2017. In this position, he oversees all product development, product management, platform architecture and operations across CSG's solutions portfolio. His expertise and vision contribute to new innovations that enable CSG's clients to have more agile and dynamic operations. Prior to this role, Mr. Kennedy served as CSG's Executive Vice President of Product Development from 2016 to 2017. Prior to this role, he served as CSG's Chief Technology Officer and Senior Vice President of Product Management, Development and Operations from 2006 to 2016, managing CSG's software development organization and implementing technology initiatives for CSG's solution offerings. Prior to CSG, Mr. Kennedy was one of the original founders of Telution where he served as Vice President of Software Development and Professional Services from 1998 to 2006. Prior to Telution, Mr. Kennedy worked at Andersen Consulting where he was responsible for developing highly-scalable distributed software solutions for the manufacturing, financial services, and communications industries. Mr. Kennedy received a Bachelor of Business Administration and Management Information Systems from the University of Notre Dame.

Board of Directors of the Registrant

Information related to our Board of Directors (the “Board”) is provided below.

Donald B. Reed

Mr. Reed, 75, was appointed to the Board in May 2005 and has served as CSG's non-executive Chairman of the Board since January 2010. He is presently retired. He served as CEO of Cable & Wireless Global from 2000 to 2003. Cable & Wireless Global, a subsidiary of Cable & Wireless plc, is a provider of Internet Protocol (“IP”) and data services to business customers in the U.S., United Kingdom, Europe, and Japan. From June 1998 until May 2000, Mr. Reed served Cable & Wireless in various other executive positions. Mr. Reed’s career includes 30 years at NYNEX Corporation (now part of Verizon), a regional telephone operating company. From 1995 to 1997, Mr. Reed served NYNEX Corporation as President and Group Executive with responsibility for directing the company’s regional, national, and international government affairs, public policy initiatives, legislative and regulatory matters, and public relations. Mr. Reed holds a B.A. degree in History from Virginia Military Institute

Bret C. Griess

Mr. Griess’ biographical information is included in the “Executive Officers of the Registrant” section shown directly above.

David G. Barnes

Mr. Barnes, 58, was appointed to the Board in February 2014. He is currently Chief Financial Officer of Trimble Inc., a position he assumed on January 4, 2020. He served as Executive Vice President, Global Operations of Stantec Inc., a publicly traded global provider of engineering, consulting, and construction services from 2016 through 2018. From 2009 through 2016, he served as Executive Vice President and CFO of MWH Global Inc., an employee-owned engineering and construction firm. MWH Global Inc. was acquired by Stantec Inc. in 2016. From 2006 to 2008, he was Executive Vice President of Western Union Financial Services. From 2004 to 2006, Mr. Barnes served as CFO of Radio Shack Corporation, and from 1999 to 2004, he was Vice President, Treasurer, and U.S. CFO for Coors Brewing Company. Mr. Barnes holds an M.B.A. degree from the University of Chicago and a B.A. degree from Yale University.

Ronald H. Cooper

Mr. Cooper, 63, was appointed to the Board in November 2006. He most recently served as the President and CEO of Clear Channel Outdoor Americas, Inc. (an outdoor advertising company) from 2009 through 2012. Prior to this position, he was a Principal at Tufts Consulting LLC from 2006 through 2009. Previously, he spent nearly 25 years in the cable and telecommunications industry, most recently at Adelphia Communications where he served as President and COO from 2003 to 2006. Prior to Adelphia, Mr. Cooper held a series of executive positions at AT&T Broadband, RELERA Data Centers & Solutions, MediaOne and its predecessor Continental Cablevision, Inc. He has served on various boards of directors and committees with the National Cable Television Association, California Cable & Telecommunications Association, Cable Television Association for Marketing, New England Cable Television Association, and Outdoor Advertising Association of America. Mr. Cooper holds a B.A. degree from Wesleyan University.

Marwan H. Fawaz

Mr. Fawaz, 57, was appointed to the Board in March 2016. He is currently an Executive Advisor to Google and Alphabet Inc., after joining Alphabet as the CEO of Nest Labs, Inc. With more than 30 years of experience in the media, cable, telecommunications, and broadband industries, Mr. Fawaz offers a wealth of knowledge and expertise, developed from his time as Executive Vice President and CEO of Google/Motorola Mobility from 2012 to 2013 and Executive Vice President of Strategy and Operations and Chief Technology Officer of Charter Communications from 2006 to 2011. In addition, he served as Senior Vice President and Chief Technology Officer of Adelphia Communications from 2003 to 2006 and held leadership positions for other cable industry companies such as MediaOne, among others. He was the founder and principal of Sarepta Advisors, a strategic advisory and consulting group supporting the technology, media, and telecommunications industries. He holds an M.S. degree in Electrical and Communication Engineering and a B.S. degree in Electrical Engineering, both from California State University at Long Beach.

Rajan Naik

Dr. Naik, 48, was appointed to the Board in August 2018. He currently serves as Chief Strategy and Innovation Officer for Motorola Solutions, Inc., where he is responsible for the corporate strategy organization, chief technology office, venture capital portfolio, and competitive and market intelligence. Motorola Solutions creates mission-critical communication solutions, including devices, networks, software, services, and video. Prior to joining Motorola Solutions, Dr. Naik held the role of Senior Vice President, Chief Strategy Officer at Advanced Micro Devices (AMD), a provider of high-performance computing, graphics and visualization technologies. From 2000 to 2012, Dr. Naik was a Partner at McKinsey & Company in the technology/media/telecom practice. He holds a B.Sc. degree in Engineering from Cornell University and a Ph.D. degree in Engineering from the Massachusetts Institute of Technology.

Janice I. Obuchowski

Ms. Obuchowski, 68, was appointed to the Board in November 1997. She is the founder and President of Freedom Technologies, Inc. (a firm providing public policy, strategic, and engineering advice to companies in the communications sector, government agencies, and international clients), a position she has held since 1992. In 2003, Ms. Obuchowski was appointed by President George W. Bush to serve as Ambassador and Head of the U.S. Delegation to the World Radiocommunication Conference. She has served as Assistant Secretary for Communications and Information at the Department of Commerce, Administrator for the National Telecommunications and Information Administration (“NTIA”), and as the head of international government relations at NYNEX Corporation. She also has served on several non-profit and other publicly traded company boards. She holds a J.D. degree from Georgetown University and a B.A. degree from Wellesley College, and also attended the University of Paris.

Frank V. Sica

Mr. Sica, 69, has served as a director of the Company since its formation in 1994. He has been a Partner of Tailwind Capital (a private equity firm) since 2006. He currently serves as a director on the boards of JetBlue Airways, Kohl’s Corporation, and Safe Bulkers, Inc. Mr. Sica holds an M.B.A. degree from the Tuck School of Business at Dartmouth College and a B.A. degree from Wesleyan University.

Donald V. Smith

Mr. Smith, 77, was elected to the Board in January 2002. He is presently retired. Previously, he served as Senior Managing Director of Houlihan Lokey Howard & Zukin, Inc., an international investment banking firm with whom he had been associated from 1988 through 2009 and where he served on the board of directors. From 1978 to 1988, he served as a Principal with Morgan Stanley & Co. Inc., where he headed the company’s valuation and reorganization services. He also serves on the board of directors of several non-profit organizations. Mr. Smith holds an M.B.A. degree from the Wharton Graduate School of the University of Pennsylvania and a B.S. degree from the United States Naval Academy.

Haiyan Song

Ms. Song, 54, was appointed to the Board in January 2020. She has served as Sr. Vice President and General Manager of Security Markets for Splunk, Inc. since 2014. Prior to that, she spent four years from 2010-2014 with Hewlett Packard Enterprise Co., in engineering and general manager roles within HP’s ArcSight Business Unit. She joined Hewlett Packard following the company’s acquisition of ArcSight, Inc. in 2010. Ms. Song was Vice President of Engineering & Product with ArcSight from 2005-2010. Ms. Song holds both M.S. and B.S. degrees in Computer Science from Florida Atlantic University. She also studied at Tsinghua University in China and completed the Stanford University Graduate School of Business Executive Program in General Management in 2012.

James A. Unruh

Mr. Unruh, 79, was appointed to the Board in June 2005. He became a founding Principal of Alerion Capital Group, LLC (a private equity investment company) in 1998 and currently holds such position. Mr. Unruh was an executive with Unisys Corporation (a global information technology company) from 1987 to 1997, including serving as its Chairman and CEO from 1990 to 1997. From 1982 to 1986, Mr. Unruh held various executive positions, including Senior Vice President–Finance and CFO with Burroughs Corporation, a predecessor of Unisys Corporation. Prior to 1982, Mr. Unruh was CFO with Memorex Corporation and also held various executive positions with Fairchild Camera and Instrument Corporation, including CFO. Mr. Unruh formerly served as director on the boards for Tenet Healthcare Corporation and Prudential Financial, Inc. during the past five years. He holds an M.B.A. degree from the University of Denver and a B.S. degree from the University of Jamestown.

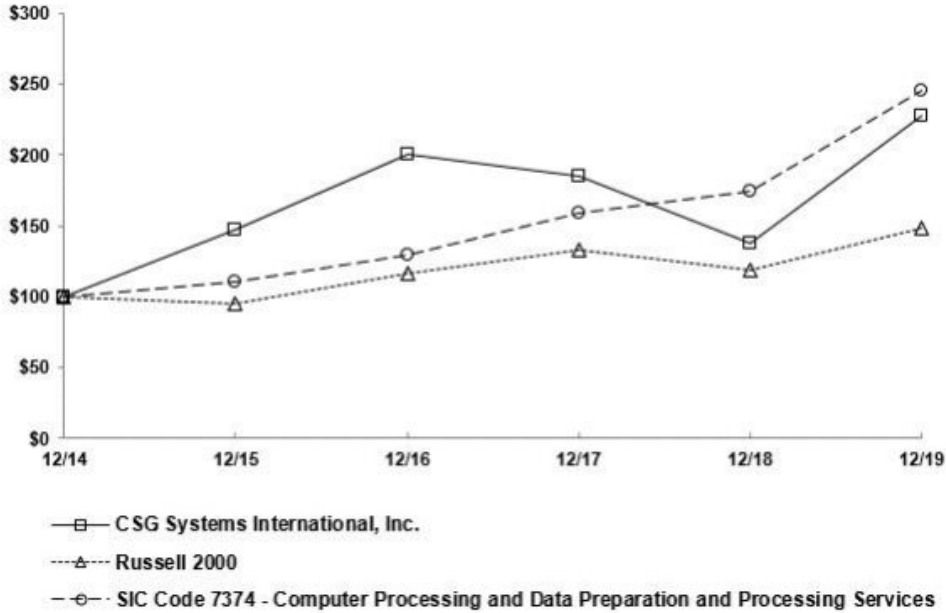
PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed on NASDAQ under the symbol “CSGS”. On January 31, 2020, the number of holders of record of common stock was 126.

Stock Price Performance

The following graph compares the cumulative total stockholder return on our common stock, the Russell 2000 Index, and our Standard Industrial Classification (“SIC”) Code Index: Data Preparation and Processing Services during the indicated five-year period. The graph assumes that \$100 was invested on December 31, 2014, in our common stock and in each of the two indexes, and that all dividends, if any, were reinvested.



	As of December 31,					
	2014	2015	2016	2017	2018	2019
CSG Systems International, Inc.	\$ 100.00	\$ 146.72	\$ 200.85	\$ 185.42	\$ 137.31	\$ 227.96
Russell 2000 Index	100.00	95.59	115.95	132.94	118.30	148.49
Data Preparation and Processing Services	100.00	110.52	129.67	159.46	174.32	245.10

Equity Compensation Plan Information

The following table summarizes certain information about our equity compensation plans as of December 31, 2019:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights	Weighted-average exercise price of outstanding options, warrants, and rights	Number of securities remaining available for future issuance
Equity compensation plans approved by security holders	—	\$ —	3,660,880

Of the total number of securities remaining available for future issuance, 3,438,620 shares can be used for various types of stock-based awards, as specified in the equity compensation plan, with the remaining 222,260 shares to be used for our employee stock purchase plan. See Note 13 to our Financial Statements for additional discussion of our equity compensation plans.

Issuer Repurchases of Equity Securities

The following table presents information with respect to purchases of our common stock made during the fourth quarter of 2019 by CSG Systems International, Inc. or any “affiliated purchaser” of CSG Systems International, Inc., as defined in Rule 10b-18(a)(3) under the Exchange Act.

Period	Total Number of Shares Purchased (1) (2)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plan or Programs (2)
October 1 - October 31	37,679	\$ 51.42	\$ 36,800	5,015,967
November 1 - November 30	28,160	56.98	24,000	4,991,967
December 1 - December 31	31,314	54.08	30,400	4,961,567
Total	97,153	\$ 53.89	91,200	

- (1) The total number of shares purchased that are not part of the Stock Repurchase Program represents shares purchased and cancelled in connection with stock incentive plans.
- (2) See Note 12 to our Financial Statements for additional information regarding our share repurchases.

Item 6. Selected Financial Data

The following selected financial data have been derived from our audited financial statements. The selected financial data presented below should be read in conjunction with, and is qualified by reference to, our MD&A and our Financial Statements. The information below is not necessarily indicative of the results of future operations.

	Year Ended December 31,				
	2019	2018	2017	2016	2015
	(in thousands, except per share amounts)				
Statements of Income Data:					
Revenues (1)(2)(3)	\$ 996,810	\$ 875,059	\$ 789,582	\$ 760,958	\$ 752,520
Operating income (1)(2)(3)	126,109	104,932	105,685	132,629	113,140
Net income(1)(2)(3)	82,770	66,130	61,364	62,882	62,567
Weighted-average diluted shares outstanding	32,465	32,855	32,865	33,014	33,438
Diluted net income per common share	\$ 2.55	\$ 2.01	\$ 1.87	\$ 1.90	\$ 1.87
Dividend declared per share	\$ 0.89	\$ 0.84	\$ 0.79	\$ 0.74	\$ 0.70
Key Capital Activities:					
Shares repurchased under Stock Repurchase Program (4)	576	704	500	318	1,838
Cost of shares repurchased under Stock Repurchase Program (4)	\$ 25,457	\$ 27,628	\$ 20,548	\$ 11,565	\$ 56,959
Dividends declared	29,445	28,148	26,823	23,753	22,852
Balance Sheet Data (at Period End):					
Cash, cash equivalents and short-term investments (1)(4)(7)	\$ 182,657	\$ 162,880	\$ 261,360	\$ 276,498	\$ 240,936
Total assets (6)(8)	1,283,030	1,114,362	904,534	891,879	862,731
Total debt (5)(8)	356,822	359,826	331,736	416,260	279,130
Total treasury stock (4)(5)(7)	867,817	842,360	814,732	826,002	814,437
Total stockholders' equity (2)(4)(7)	396,662	361,024	342,746	251,360	345,845

- (1) During 2018, we acquired Business Ink and Forte Payment Systems, Inc., and as a result, ten and three months of their operations, respectively, are included in our 2018 results (approximately \$74 million of revenue impact), and a full twelve months of their operations are included in our 2019 results (approximately \$165 million impact). The overall cost of these acquisitions was approximately \$155 million and was funded with existing cash.

See Note 7 to our Financial Statements for additional discussion of these acquisitions.

- (2) In 2018, we adopted Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers* (Topic 606), a single comprehensive model which supersedes nearly all existing revenue recognition guidance under U.S. GAAP. Under the new guidance, revenue is recognized when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services.

We adopted the new guidance using the cumulative effect approach, and as a result, recorded a cumulative adjustment increasing beginning retained earnings (net of tax) by approximately \$7 million.

See Note 2 to our Financial Statements for further discussion regarding the adoption of this new standard.

- (3) In September 2015, we sold our cyber-security business, marketed under the Invotas brand, to certain former management personnel, resulting in a gain on the sale of \$3.7 million. In February 2016, this business was acquired by a third-party. Based on the terms of the agreement, we received additional consideration upon a liquidation event, as defined in the agreement, which resulted in an additional gain on the sale of \$6.6 million. The impact of Invotas to our business prior to the divestiture date was not material.
- (4) In March 2015, we entered into an accelerated share repurchase (“ASR”) Agreement with a counterparty to repurchase \$50 million of our common stock. Final share settlement occurred in December 2015, with total shares purchased under the ASR Agreement of 1.6 million.

- (5) In March 2018, we refinanced our Credit Agreement. As a result, under the refinanced Credit Agreement, we: (i) extended the term of the agreement to March 2023; (ii) obtained a reduction in the interest rate and other fees; and (iii) borrowed \$150 million, resulting in a net increase of available cash of \$30 million, after paying off the outstanding \$120 million balance from the term loan under the previous Credit Agreement.
- In March 2016, we completed an offering of \$230 million of 4.25% senior convertible notes due March 15, 2036. The net proceeds of approximately \$223 million were used to settle the outstanding 2010 Convertible Notes, due March 1, 2017. During 2016, we repurchased approximately \$115 million of the 2010 Convertible Notes for approximately \$216 million, and recognized a loss on the repurchases of \$8.7 million. In March 2017, we settled our conversion obligation by paying cash of \$34.8 million for the remaining par value of the notes and delivered 694,240 shares of our common shares from treasury stock to settle the \$28.8 million value of the conversion obligation in excess of par value.
- In February 2015, we refinanced our Credit Agreement. As a result, under the refinanced Credit Agreement, we: (i) extended the term of the agreement to February 2020; (ii) increased the amount of the revolving credit facility from \$100 million to \$200 million; and (iii) borrowed \$150 million, resulting in a net increase of available cash of \$30 million, after paying off the outstanding \$120 million balance from the term loan under the previous Credit Agreement.
- See Note 5 to our Financial Statements for additional discussion of our debt.
- (6) In 2019, we adopted ASU 2016-02, *Leases (Topic 842)*, which requires lessees to recognize a lease liability and a right-of-use asset for all leases, including operating leases, with a term greater than twelve months on its balance sheet.
- We adopted this ASU utilizing the effective date method of transition thus, prior period information in our Financial Statements was not adjusted. In conjunction with the adoption of this ASU we recorded additional assets and liabilities of approximately \$80 million related to the right-of-use assets and lease liabilities.
- See Notes 2 and 6 to our Financial Statements for further discussion regarding the adoption of this new standard.
- (7) In December 2019, Comcast exercised 0.4 million vested stock warrants, which we net cash settled under the provisions of the warrant agreement. The fair value of the stock warrants were \$24.6 million, resulting in a net cash settlement of \$12.9 million. In January 2017, Comcast exercised 1.4 million vested stock warrants, which we net share settled under the provisions of the warrant agreement by delivering 649,221 of our common shares from treasury stock, which had a fair value of \$31.5 million. The carrying value of the shares of treasury stock delivered was \$15.4 million. See Note 12 to our Financial Statements for additional discussion of the stock warrants.
- (8) In 2016, we adopted ASU 2015-03, *Interest-Imputation of Interest* (Subtopic 835-30) and ASU 2015-17, *Income Taxes* (Topic 740). ASU 2015-03 requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a reduction from the carrying amount of that debt liability, consistent with debt discounts. ASU 2015-17 requires that all deferred tax liabilities and assets be classified as noncurrent. We adopted both ASU's on January 1, 2016, which resulted in a reclassification of our Balance Sheets for the periods presented.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

This report contains a number of forward-looking statements relative to our future plans and our expectations concerning our business and the industries we serve. These forward-looking statements are based on assumptions about a number of important factors, and involve risks and uncertainties that could cause actual results to differ materially from estimates contained in the forward-looking statements. Some of the risks that are foreseen by management are outlined above within Item 1A., “Risk Factors”. Item 1A. constitutes an integral part of this report, and readers are strongly encouraged to review this section closely in conjunction with MD&A.

Acquisition Activity

During 2018, we completed the following two acquisitions: (i) Business Ink, Co. (“Business Ink”) on February 28, 2018; and (ii) Forte Payment Systems, Inc. (“Forte”) on October 1, 2018. These two business acquisitions have impacted the year-over-year results of operations, and as a result, amounts may not be comparable between years due to the timing of the transactions. The comparable differences have been described below where relevant or significant.

Additionally, on January 2, 2020, we acquired certain assets of Tekzenit, Inc. (“Tekzenit”) for an initial purchase price of approximately \$10 million. The purchase agreement includes provisions for additional purchase price payments in the form of earn-out and qualified sales payments for up to \$10 million over a three-year measurement period upon meeting certain financial and sales criteria. At this time, we expect that Tekzenit will contribute approximately \$10 million to our 2020 revenues and be neutral to slightly accretive to our results from operations. The expected impact of the Tekzenit acquisition includes estimates for costs associated with our planned integration efforts and estimates for the amortization of acquired intangible assets. Because of the inherent uncertainties in making such estimates, the actual impact of Tekzenit on our 2020 financial performance may vary from our current expectations as we work through our integration efforts and complete the Tekzenit purchase accounting.

These acquisitions are discussed in greater detail in Note 7 to our Financial Statements.

Impact of New Lease Accounting Pronouncement

In February 2016, the FASB issued Accounting Standards Update (“ASU”) 2016-02, *Leases* (Topic 842) (“ASC 842”), which requires lessees to recognize a lease liability and a right-of-use asset for all leases, including operating leases, with a term greater than twelve months on its balance sheet. We adopted ASC 842 in January of 2019, utilizing the effective date method of transition. While the adoption of this standard resulted in a material gross-up of our Balance Sheet assets and liabilities, it did not have a material impact on our Income Statement or Statement of Cash Flows.

Refer to Notes 2 and 6 to our Financial Statements for further detail regarding the adoption of ASC 842.

Management Overview

Results of Operations. A summary of our results of operations for 2019 and 2018, and other key performance metrics are as follows (in thousands, except percentages and per share amounts):

	Year Ended December 31,	
	2019	2018
Revenues	\$ 996,810	\$ 875,059
Transaction fees (1)	69,114	15,602
Operating Results:		
Operating income	126,109	104,932
Operating income margin	12.7%	12.0%
Diluted EPS	\$ 2.55	\$ 2.01
Supplemental Data:		
Restructuring and reorganization charges (2)	\$ 4,834	\$ 8,661
Acquisition-related costs:		
Amortization of acquired intangible assets	12,603	9,699
Earn-out compensation	1,260	1,260
Transaction-related costs	-	3,653
Stock-based compensation (2)	20,896	19,650
Amortization of OID	2,819	2,664
Loss on extinguishment of debt	-	810

- (1) Transaction fees are primarily comprised of interchange and other payment-related fees that we pay, in conjunction with the delivery of service to clients under our payment services contracts, to third-party payment processors and financial institutions. Because we control the integrated service provided under our payment services client contracts, these transaction fees are presented gross, and not netted against revenues.
- (2) Stock-based compensation included in the table above excludes amounts that have been recorded in restructuring and reorganization charges.

Revenues. Our revenues for 2019 were \$996.8 million, a 14% increase when compared to \$875.1 million for 2018, with the increase mainly attributed to the full year impact of the Business Ink and Forte acquisitions, discussed above, which generated an additional \$91 million of combined revenues in 2019 over that in 2018, and the remaining increase due primarily to our cloud solutions and managed services arrangements.

Operating Results. Operating income for 2019 was \$126.1 million, or a 12.7% operating income margin percentage, compared to \$104.9 million, or a 12.0% operating income margin percentage for 2018, with the increase in operating income primarily a result of the higher revenues generated in 2019.

Diluted Earnings Per Share ("EPS"). Diluted EPS for 2019 was \$2.55 compared to \$2.01 for 2018, reflective of the higher operating income for 2019. Additionally, 2019 diluted EPS was positively impacted by a lower effective income tax rate resulting primarily from an approximately \$4 million net income tax benefit related to Comcast's exercise of 0.4 million vested common stock warrants.

Balance Sheet and Cash Flows. As of December 31, 2019, we had cash, cash equivalents, and short-term investments of \$182.7 million, as compared to \$162.9 million as of December 31, 2018. Cash flows from operating activities for 2019 were \$151.1 million, compared to \$143.3 million for 2018. See the Liquidity section below for further discussion of our cash flows.

Significant Client Relationships

Comcast. Comcast continues to be our largest client. For 2019 and 2018, revenues from Comcast were \$229 million and \$221 million, respectively, representing approximately 23% and 25% of our total revenues. On December 16, 2019, we entered into a new CSG Master Subscriber Management System Agreement with Comcast (the “Agreement”) which supersedes all previous agreements with Comcast. The key terms of the Agreement are as follows:

- The Agreement is effective January 1, 2020, and extends our contractual relationship with Comcast through December 31, 2024 for cloud and related solutions, and through December 31, 2025 for print and mail services for residential customer accounts. In addition, the Agreement provides Comcast with the option to extend the cloud and related services for one additional year by exercising the renewal option no later than June 30, 2023.
- We maintain the exclusive right to provide print and mail services to all Comcast residential customer accounts through December 31, 2025.
- The fees to be generated under the Agreement will be based primarily on monthly charges for cloud and related services per Comcast residential customer account, and various other ancillary services based on actual usage. Certain of the per-unit fees include volume-based pricing tiers, and may be subject to annual price escalators.
- The Agreement contains certain financial commitments associated with the number of Comcast residential customer accounts that are to be processed on our systems, with such commitments decreasing over the life of the Agreement. However, if Comcast chooses to process fewer customer accounts on our systems than the committed amounts, the monthly fees to be paid by Comcast will be based on the higher number of committed customer accounts for the applicable billing period.
- The Agreement includes potential financial incentives related to Comcast’s efficient use of our systems.
- The Agreement contains certain rights and obligations of both parties, including the following key items: (i) the termination of the Agreement under certain conditions; (ii) various service level commitments; and (iii) remedies and limitation on liabilities associated with specified breaches of contractual obligations.

When compared to the previous agreement, we provided overall pricing adjustments of approximately 10% to Comcast, which in effect, will reduce the current fees we will receive from Comcast. The anticipated revenue impact in both the near and long terms may vary depending on the type of service consumed by Comcast. The impact from the Agreement is only an estimate and actual results may vary depending upon a variety of factors. We undertake no duty to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

A copy of the Agreement, with confidential information redacted, is filed as exhibit 10.27 to this Form 10-K.

Charter. Charter is our second largest client. For 2019 and 2018, revenues from Charter were \$195 million and \$179 million, respectively, representing approximately 20% of our total revenues for both years. Our agreement with Charter runs through December 31, 2021, with an option to extend the agreement for an additional one-year term.

A copy of the Charter agreements and related amendments, with confidential information redacted, are included in the exhibits to our periodic filings with the SEC.

Stock-Based Compensation Expense

Stock-based compensation expense is included in the following (in thousands):

	2019	2018	2017
Cost of revenues:			
Cloud and related solutions	\$ 3,624	\$ 3,568	\$ 3,573
Software and services	893	904	895
Maintenance	67	64	357
Research and development	2,657	2,483	3,103
Selling, general and administrative	13,655	12,631	12,854
Restructuring	(977)	(292)	267
Total stock-based compensation expense	\$ 19,919	\$ 19,358	\$ 21,049

See Notes 2 and 13 to our Financial Statements for additional discussion of our stock-based compensation expense.

Amortization of Acquired Intangible Assets

Amortization of acquired intangible assets is included in the following (in thousands):

	2019	2018	2017
Cost of revenues:			
Cloud and related solutions	\$ 9,048	\$ 5,229	\$ 1,065
Maintenance	3,555	4,470	5,799
Total amortization expense	<u>\$ 12,603</u>	<u>\$ 9,699</u>	<u>\$ 6,864</u>

The increases in amortization of acquired intangible assets between years are due to the amortization of the intangible assets acquired with the Business Ink and Forte acquisitions in 2018, discussed above, thus 2019 having the full year impact. See Note 4 to our Financial Statements for additional discussion of our acquired intangible assets and related amortization.

Critical Accounting Policies

The preparation of our Financial Statements in conformity with accounting principles generally accepted in the U.S. requires us to select appropriate accounting policies, and to make judgments and estimates affecting the application of those accounting policies. In applying our accounting policies, different business conditions or the use of different assumptions may result in materially different amounts reported in our Financial Statements.

We have identified the most critical accounting policies that affect our financial position and the results of our operations. These critical accounting policies were determined by considering our accounting policies that involve the most complex or subjective decisions or assessments. The most critical accounting policies identified relate to: (i) revenue recognition; (ii) impairment assessments of long-lived assets; (iii) income taxes; and (iv) loss contingencies. These critical accounting policies, as well as our other significant accounting policies, are disclosed in the notes to our Financial Statements.

Revenue Recognition. In accordance with ASC 606, revenue is recognized upon conclusion that a contract with a client exists. Such conclusion is made by us when the contract is legally enforceable and certain criteria, including collectability, are met. In making our determination of collectability, we consider a number of factors depending upon the specific aspects of an arrangement, which may include, but is not limited to, the following items: (i) an assessment of the client's specific credit worthiness, evidenced by its current financial position and/or recent operating results, credit ratings, and/or a bankruptcy filing status (as applicable); (ii) the client's current accounts receivable status and/or its historical payment patterns with us (as applicable); (iii) the economic condition of the industry in which the client conducts the majority of its business; and/or (iv) the economic conditions and/or political stability of the country or region in which the client is domiciled and/or conducts the majority of its business. The evaluation of these factors, and the ultimate determination of collectability, requires significant judgments to be made by us. The judgments made in this area could have a significant effect to the amount and timing of revenue recognized in any period.

Our contracts with clients include cloud-based revenue management solution arrangements, managed services arrangements, cloud-based payment processing transaction services, software license and service arrangements, professional services arrangements, and bundled service arrangements. The revenue recognition policies that involve the most complex and subjective decisions or assessments that may have a material impact on our operations relate to the accounting for cloud-based revenue management solution arrangements, software license and service arrangements, and bundled service arrangements.

Our cloud-based revenue management solution arrangements are complex agreements that typically include multiple performance obligations. Key factors considered in accounting for cloud-based revenue management solution arrangements include the following criteria: (i) identification of performance obligations within the contract; (ii) determination of the transaction price given the variable nature of the consideration and significance of the consideration; (iii) determination of stand-alone selling price for each performance obligation and the allocation of value between the performance obligations; and (iv) calculation of revenue recognized in each period. The evaluation of these factors and ultimate revenue recognition decision requires significant judgements to be made by us. Depending on the significance of variable consideration, number of solutions/services, complex pricing structures and long-term nature of these types of contracts, the judgements and estimates made in this area could have a significant effect on the amount and timing of revenue recognized in any period. In addition, certain solutions and arrangements require us to make an assessment of whether we are a principal to the transaction (gross revenue) or an agent to the transaction (net revenue). Such assessments can have a significant effect on the amount of revenue recognized.

Our software license and services arrangements and bundled service arrangements include multiple performance obligations and can be complex and require considerable judgement. Key factors considered in accounting for our software license and related service arrangements include the following criteria: (i) identification of performance obligations within the contract; (ii) assessment of whether services included in the arrangement represent significant production, modification or customization of the software (as applicable), such that the delivery of the software license and related services required to implement the software represent one combined performance obligation; (iii) determination of the transaction price for the contract as these types of arrangements may include both fixed and variable consideration; (iv) determination of stand-alone selling price for each performance obligation; allocation of value between performance obligations; and (v) estimates to measure progress for delivery. The evaluation of these factors and ultimate revenue recognition decision requires significant judgements to be made by us. We generally determine stand-alone selling prices using pricing calculations (which include regional market factors) for our software license fees and maintenance, and cost-plus margins for services. The pricing calculations can be complex and require estimates based on volumes and regional market factors. Additionally, our use of an hours-based method of accounting for software license and other professional services performance obligations that are satisfied over time requires estimates of total project revenues and costs, along with the expected hours necessary to complete a project. Changes in estimates as a result of additional information or experience on a project as work progresses are inherent characteristics of this method of revenue recognition as we are exposed to various business risks in completing these types of performance obligations. The estimation process to support our hours-based recognition method is more difficult for projects of greater length and/or complexity. The judgments and estimates made in this area could: (i) have a significant effect on revenues recognized in any period by changing the amount and/or the timing of the revenue recognized; and/or (ii) impact the expected profitability of a project, including whether an overall loss on an arrangement has occurred.

Our contracts are subject to modification via amendment, change requests, and/or statement of works. Such modifications can occur frequently. The accounting for contract modifications under ASC 606 can be complex and requires significant judgements to be made by us as to whether the contract modification is treated as either a separate contract or part of the existing contract. The judgements made in this area could have a significant effect on the revenues recognized in any period by changing the amount and/or timing of the revenue recognized.

Our contracts typically include service level agreements or other incentives that may result in refunds or credits to our clients. Under ASC 606, failure to meet service level standards under the terms of the contract represent adjustments to the overall consideration (reductions in revenue) and may need to be estimated at the outset of the arrangement as part of the overall variable consideration. Such estimates require significant judgement by us and may impact the amount and/or timing of the revenue recognized.

Impairment Assessments of Long-Lived Assets. Long-lived assets, which for us relates primarily to property and equipment, software, acquired client contracts, and client contract costs, are required to be evaluated for possible impairment whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. A long-lived asset (or group of long-lived assets) is impaired if estimated future undiscounted cash flows associated with that asset, without consideration of interest, are insufficient to recover the carrying amount of the long-lived asset. Once deemed impaired, even if by \$1, the long-lived asset is written down to its fair value which could be considerably less than the carrying amount or future undiscounted cash flows. The determination of estimated future cash flows and, if required, the determination of the fair value of a long-lived asset, are by their nature, highly subjective judgments. Changes to one or more of the assumptions utilized in such an analysis could materially affect our impairment conclusions for long-lived assets.

Income Taxes. We are required to estimate our income tax liability in each jurisdiction in which we operate, which includes the U.S. (including both Federal and state income taxes) and numerous foreign countries.

Various judgments are required in evaluating our income tax positions and determining our provisions for income taxes. We regularly assess the likelihood of the future realization of our deferred income tax assets. To the extent we believe that it is more likely than not that a deferred income tax asset will not be realized, a valuation allowance is established. During the ordinary course of our business, there are certain transactions and calculations for which the ultimate income tax determination may be uncertain. In addition, we may be subject to examination of our income tax returns by various tax authorities which could result in adverse outcomes. For these reasons, we establish a liability associated with unrecognized tax benefits based on estimates of whether additional taxes and interest may be due. We adjust this liability based upon changing facts and circumstances, such as the closing of a tax audit, the closing of a tax year upon the expiration of a statute of limitations, or the refinement of an estimate. Should any of the factors considered in determining the adequacy of this liability change significantly, an adjustment to the liability may be necessary. Because of the potential significance of these issues, such an adjustment could be material.

One of the more complex items within our income tax expense is the determination of our annual research and experimentation income tax credit ("R&D credit"). We have incurred approximately \$100 - \$130 million annually in R&D expense over the last three years. The calculation of the R&D tax credit involves the identification of qualifying projects, and then an estimation of the qualifying costs for such projects. Because of the size, nature, and the number of projects worked on in any given year, the calculation can become complex and certain judgments are necessary in determining the amount of the R&D credits claimed.

Loss Contingencies. In the ordinary course of business, we are subject to claims (and potential claims) related to various items including but not limited to the following: (i) legal and regulatory matters; (ii) vendor contracts; (iii) solution and service delivery matters; and (iv) labor matters. Accounting and disclosure requirements for loss contingencies requires us to assess the likelihood of any adverse judgments in or outcomes to these matters, as well as the potential ranges of probable losses. A determination of the amount of reserves for such contingencies, if any, is based on an analysis of the issues, often with the assistance of legal counsel. The evaluation of such issues, and our ultimate accounting and disclosure decisions, are by their nature, subject to various estimates and highly subjective judgments. Should any of the factors considered in determining the adequacy of any required reserves change significantly, an adjustment to the reserves may be necessary. Due to the potential significance of these issues, such an adjustment could be material.

Detailed Discussion of Results of Operations

The discussion that follows includes a comparison of our results of operations and liquidity for the year ended December 31, 2019 compared to the year ended December 31, 2018. For a discussion of the year ended December 31, 2018 compared to the year ended December 31, 2017, please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on February 22, 2019.

Total Revenues. Total revenues for 2019 were \$996.8 million, a 14% increase when compared to \$875.1 million for 2018. This increase in total revenues can be mainly attributed to the full year impact the Business Ink and Forte acquisitions, which generated an additional \$91 million of combined revenues in 2019 over that in 2018 due to the timing of the transactions, and the remaining increase due primarily to our cloud solutions and managed services arrangements.

The components of total revenues, discussed in more detail below, are as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Revenues:			
Cloud and related solutions	\$ 896,164	\$ 766,377	\$ 651,010
Software and services	52,364	58,101	62,892
Maintenance	48,282	50,581	75,680
Total revenues	\$ 996,810	\$ 875,059	\$ 789,582

Cloud and Related Solutions Revenues. Cloud and related solutions revenues for 2019 increased 17% to \$896.2 million, from \$766.4 million for 2018. The year-over-year increase can be primarily attributed to the full year impact the Business Ink and Forte acquisitions, which generated an additional \$91 million of combined revenues in 2019 over that in 2018, and the remaining increase due to our cloud solutions and managed services arrangements.

Amortization of the investments in client contracts intangible asset (reflected as a reduction of cloud and related solutions revenues) for 2019, 2018, and 2017 was \$6.0 million, \$11.1 million, and \$7.4 million, respectively.

Software and Services Revenues. Software and services revenues for 2019 decreased 10% to \$52.4 million, from \$58.1 million for 2018, with the decrease primarily attributed to the continued shift in our focus towards longer-term managed services arrangements, which are included in our cloud and related solutions revenues.

Maintenance Revenues. Maintenance revenues for 2019 decreased 5% to \$48.3 million, from \$50.6 million for 2018, with the decrease reflective of our decreasing software revenues and also impacted by the timing of maintenance renewals and related revenue recognition.

We continue to transition our focus towards more predictable recurring revenue models with our longer-term managed services arrangements and delivery of our cloud-based solutions and away from software and services revenues with related maintenance agreements.

Total Operating Expenses. Our operating expenses for 2019 increased 13% to \$870.7 million, from \$770.1 million for 2018, with over 85% of this increase mainly attributed to the full year impact of the Business Ink and Forte businesses operating expenses being included in our results, to include an additional \$53.5 million of transaction fees and \$3.8 million of acquisition amortization, year-over-year.

Cost of Revenues (Exclusive of Depreciation). The components of total expenses are discussed in more detail below.

The components of cost of revenues, discussed in more detail below, are as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Cost of revenues:			
Cloud and related solutions	\$ 472,391	\$ 392,801	\$ 315,006
Software and services	31,719	34,870	39,018
Maintenance	21,012	22,149	40,787
Total cost of revenues	<u>\$ 525,122</u>	<u>\$ 449,820</u>	<u>\$ 394,811</u>

Cost of Cloud and Related Solutions (Exclusive of Depreciation). The cost of cloud and related solutions revenues consists principally of the following: (i) computing capacity and network communications costs; (ii) statement production costs (e.g., labor, paper, envelopes, equipment, equipment maintenance, etc.); (iii) transaction fees-interchange and other payment-related fees to third-party payment processors and financial institutions; (iv) client support organizations (e.g., our client support call center, account management, etc.); (v) various product delivery and support organizations (e.g., managed services delivery, product management, product maintenance, etc.); (vi) facilities and infrastructure costs related to the statement production and support organizations; and (vii) amortization of acquired intangibles. The costs related to new solution development (including significant enhancements to existing solutions and services) are included in R&D expense.

The cost of cloud and related solutions for 2019 increased 20% to \$472.4 million, from \$392.8 million for 2018. This increase can be mainly attributed to the cloud and related solutions expense of the acquired Business Ink and Forte businesses included in our results, to include transaction fees and acquisition amortization, and is also reflective of the increase in non-acquisition-related cloud and related solutions revenues between years. Total cloud and related solutions cost of revenues as a percentage of our cloud and related solutions revenues for 2019, 2018, and 2017, were 52.7%, 51.3%, and 48.4%, respectively (with 2019 and 2018 reflective of transaction fees of \$69.1 million and \$15.6 million, respectively).

Cost of Software and Services (Exclusive of Depreciation). The cost of software and services revenues consists principally of the following: (i) professional services organization; (ii) various product support organizations (e.g., delivery, etc.); (iii) facilities and infrastructure costs related to these organizations; and (iv) third-party software costs and/or royalties related to certain software products. The costs related to new solution development (including significant enhancements to existing solutions and services) are included in R&D expense.

The cost of software and services for 2019 was \$31.7 million, a 9% decrease when compared to \$34.9 million for 2018. This decrease is reflective of the lower software and services revenues and as a result, personnel and the related costs previously allocated to professional services projects have been reassigned to other areas of the business. Total cost of software and services as a percentage of our software and services revenues for 2019, 2018, and 2017 were 60.6%, 60.0%, and 62.0%, respectively.

Variability in quarterly revenues and operating results are inherent characteristics of companies that sell software licenses and perform professional services. Our quarterly revenues for software licenses and professional services may fluctuate, depending on various factors, including the timing of executed contracts and revenue recognition, and the delivery of contracted solutions. However, the costs associated with software and professional services revenues are not subject to the same degree of variability (e.g., these costs are generally fixed in nature within a relatively short period of time), and thus, fluctuations in our cost of software and services as a percentage of our software and services revenues will likely occur between periods.

Cost of Maintenance (Exclusive of Depreciation). The cost of maintenance consists principally of the following: (i) client support organizations (e.g., our client support call center, account management, etc.); (ii) various product support organizations (e.g., product maintenance, product management, etc.); (iii) facilities and infrastructure costs related to these organizations; and (iv) amortization of acquired intangibles.

The cost of maintenance for 2019 decreased 5% to \$21.0 million, from \$22.1 million for 2018, with the decrease primarily due to lower amortization expense for certain acquired intangible assets. Total cost of maintenance as a percentage of our maintenance revenues for 2019, 2018, and 2017 were 43.5%, 43.8%, and 53.9%, respectively.

R&D Expense (Exclusive of Depreciation). R&D expense for 2019 was \$128.0 million, a 3% increase when compared to \$124.0 million for 2018, with the increase mainly attributed to the R&D costs associated with the acquired Forte business.

Our R&D efforts are focused on the continued evolution of our solutions that enable global service providers worldwide to provide a more personalized customer experience while introducing new digital products and services. This includes the continued investment in our cloud-based solutions.

As a percentage of total revenues, R&D expense for 2019, 2018, and 2017 was 12.8%, 14.2%, and 14.3%, respectively (with the percentage decrease in 2019 reflective of a full year of transaction fees of \$69.1 million). We anticipate the level of R&D investment in the near-term to be relatively consistent with 2019.

Selling, General and Administrative Expense ("SG&A") (Exclusive of Depreciation). SG&A expense for 2019 increased 13% to \$191.3 million, from \$169.3 million for 2018. The increase in SG&A expense between 2019 and 2018 is primarily due to the SG&A costs related to the acquired Forte business, and an increase in employee-related costs. As a percentage of total revenues, SG&A expense for 2019, 2018, and 2017 was 19.2%, 19.3% and 19.5%, respectively.

Depreciation Expense. Depreciation expense for all property and equipment is reflected separately in the aggregate and is not included in the cost of revenues or the other components of operating expenses. Depreciation expense for 2019 was \$21.4 million, a 17% increase from \$18.3 million for 2018. The increase can be primarily attributed to depreciation expense from the acquired Business Ink and Forte assets and the full year impact of our increased level of capital expenditures during 2018.

Restructuring and Reorganization Charges. In 2019 and 2018, we implemented various cost reduction and efficiency initiatives that resulted in restructuring and reorganization charges of \$4.8 million and \$8.7 million, respectively. These initiatives included: (i) reducing and reorganizing our workforce to further align it around our long-term growth initiatives; (ii) the abandonment of space at some of our facility locations; and (iii) the reversal of a liability related to a previous disposition of a business.

See Note 8 to our Financial Statements for additional information regarding these initiatives.

Operating Income. Operating income and operating income margin for 2019 was \$126.1 million, or 12.7% of total revenues, compared to \$104.9 million, or 12.0% of total revenues for 2018. The increase in operating income can be primarily attributed to the higher revenues generated in 2019.

Interest Expense and Amortization of Original Issue Discount ("OID"). Our interest expense relates primarily to our 2016 Convertible Notes and our Credit Agreement. See Note 5 to our Financial Statements for additional discussion of our long-term debt, to include the non-cash interest expense related to the amortization of the convertible debt OID.

Loss on Extinguishment of Debt. In March 2018, we refinanced our 2015 Credit Agreement (see Note 5 to our Financial Statements). As a result, we incurred a loss of \$0.8 million related to the write-off of unamortized debt issuance costs.

Income Tax Provision. Our effective income tax rates for 2019, 2018, and 2017 were as follows:

2019 (1)(2)	2018 (2)	2017
22%	24%	30%

- (1) As a result of Comcast's exercise of their remaining 0.4 million of vested stock warrants in December 2019 (see Note 12 to our Financial Statements), we received an additional income tax benefit of approximately \$4 million due to the stock warrants appreciating in value since the grant date.
- (2) Our 2019 and 2018 effective income tax rates reflect the impact of the U.S. Tax Cuts and Jobs Act (see Note 9 to our Financial Statements), which reduced the U.S. base corporate rate of income taxation from 35% to 21% applicable to taxable years beginning after December 31, 2017.

Liquidity

Cash and Liquidity. As of December 31, 2019, our principal sources of liquidity included cash, cash equivalents, and short-term investments of \$182.7 million, compared to \$162.9 million as of December 31, 2018. We generally invest our excess cash balances in low-risk, short-term investments to limit our exposure to market and credit risks.

During the first quarter of 2018, we refinanced our 2015 Credit Agreement which extended the term of the loan to March 2023 as well as obtained a reduction in the interest rate and other fees. The 2018 Credit Agreement increased our liquidity and capital resources position by approximately \$30 million.

As part of our 2018 Credit Agreement, we have a \$200 million senior secured revolving loan facility with a syndicate of financial institutions that expires in March 2023. As of December 31, 2019, there were no borrowings outstanding on the 2018 Revolver. The 2018 Credit Agreement contains customary affirmative covenants and financial covenants. As of December 31, 2019, and the date of this filing, we believe that we are in compliance with the provisions of the 2018 Credit Agreement.

Our cash, cash equivalents, and short-term investment balances as of the end of the indicated periods were located in the following geographical regions (in thousands):

	December 31, 2019	December 31, 2018
Americas (principally the U.S.)	\$ 125,309	\$ 110,385
Europe, Middle East and Africa	50,477	45,884
Asia Pacific	6,871	6,611
Total cash, cash equivalents and short-term investments	<u>\$ 182,657</u>	<u>\$ 162,880</u>

We generally have ready access to substantially all of our cash, cash equivalents, and short-term investment balances, but may face limitations on moving cash out of certain foreign jurisdictions due to currency controls and potential negative economic consequences. As of December 31, 2019, we had \$2.7 million of cash restricted as to use to collateralize outstanding letters of credit.

Cash Flows From Operating Activities. We calculate our cash flows from operating activities beginning with net income, adding back the impact of non-cash items or non-operating activity (e.g., depreciation, amortization, amortization of OID, impairments, gain/loss from debt extinguishments, deferred income taxes, stock-based compensation, etc.), and then factoring in the impact of changes in operating assets and liabilities.

Our primary source of cash is from our operating activities. Our current business model consists of a significant amount of recurring revenue sources related to our long-term cloud-based and managed services arrangements (mostly billed monthly), payment process transaction services (mostly billed monthly), and software maintenance agreements (billed monthly, quarterly, or annually). This recurring revenue base provides us with a reliable and predictable source of cash. In addition, software license fees and professional services revenues are sources of cash, but the payment streams for these items are less predictable.

The primary use of our cash is to fund our operating activities. Over half of our total operating costs relate to labor costs (both employees and contracted labor) for the following: (i) compensation; (ii) related fringe benefits; and (iii) reimbursements for travel and entertainment expenses. The other primary cash requirements for our operating expenses consist of: (i) computing capacity and related services and communication lines for our outsourced cloud-based business; (ii) paper, envelopes, and related supplies for our statement processing solutions; (iii) transaction fees paid in conjunction with the delivery of services under our payment services contracts; (iv) hardware and software; and (v) rent and related facility costs. These items are purchased under a variety of both short-term and long-term contractual commitments. A summary of our material contractual obligations is provided below.

Our 2019 and 2018 net cash flows from operating activities, broken out between operations and changes in operating assets and liabilities, for the indicated quarterly periods are as follows (in thousands):

	<u>Operations</u>	<u>Changes in Operating Assets and Liabilities</u>	<u>Net Cash Provided by (Used In) Operating Activities – Totals</u>
Cash Flows from Operating Activities:			
2019:			
March 31 (1)(2)	\$ 42,003	\$ (29,177)	\$ 12,826
June 30 (2)	46,072	(30,469)	15,603
September 30	44,210	34,888	79,098
December 31	40,342	3,207	43,549
Total	<u>\$ 172,627</u>	<u>\$ (21,551)</u>	<u>\$ 151,076</u>
2018:			
March 31 (1)	\$ 38,247	\$ (8,392)	\$ 29,855
June 30 (2)	38,476	(42,117)	(3,641)
September 30	34,888	12,167	47,055
December 31	46,646	23,426	70,072
Total	<u>\$ 158,257</u>	<u>\$ (14,916)</u>	<u>\$ 143,341</u>

- (1) Cash flows from operating activities for the first quarter of 2019 and 2018 reflect the negative impacts of the payment of the 2018 and 2017 year-end accrued employee incentive compensation in the first quarter subsequent to the year-end accrual for those items.
- (2) Cash flows from operating activities for the first and second quarters of 2019, and the second quarter of 2018, were negatively impacted by the timing around certain recurring client payments that were received subsequent to quarter-end.

We believe the above table illustrates our ability to generate recurring quarterly cash flows from our operations, and the importance of managing our working capital items. The quarterly and annual variations in our net cash provided by operating activities are related mostly to the changes in our operating assets and liabilities (related mostly to fluctuations in timing at quarter-end of client payments and changes in accrued expenses), and generally over longer periods of time, do not significantly impact our cash flows from operations.

Significant fluctuations in key operating assets and liabilities between 2019 and 2018 that impacted our cash flows from operating activities are as follows:

Billed Trade Accounts Receivable

Management of our billed accounts receivable is one of the primary factors in maintaining strong quarterly cash flows from operating activities. Our billed trade accounts receivable balance includes significant billings for several non-revenue items (primarily postage, sales tax, and deferred revenue items). As a result, we evaluate our performance in collecting our accounts receivable through our calculation of days billings outstanding (“DBO”) rather than a typical days sales outstanding (“DSO”) calculation.

Our gross and net billed trade accounts receivable and related allowance for doubtful accounts receivable (“Allowance”) as of the end of the indicated quarterly periods, and the related DBOs for the quarters then ended, are as follows (in thousands, except DBOs):

<u>Quarter Ended</u>	<u>Gross</u>	<u>Allowance</u>	<u>Net Billed</u>	<u>DBOs</u>
2019:				
March 31	\$ 247,833	\$ (2,897)	\$ 244,936	65
June 30	268,656	(2,861)	265,795	67
September 30	245,972	(3,356)	242,616	67
December 31	247,793	(3,735)	244,058	63
2018:				
March 31	\$ 217,018	\$ (3,967)	\$ 213,051	70
June 30	243,874	(3,961)	239,913	67
September 30	250,913	(4,182)	246,731	68
December 31	238,942	(3,115)	235,827	66

As of December 31, 2019 and 2018, approximately 95% of our billed accounts receivable balance, for both periods, was less than 60 days past due.

As a result of the Business Ink and Forte acquisitions in 2018, we have seen an increase in our gross and net billed accounts receivable balances. Additionally, we may experience fluctuations in our accounts receivable balance due to the timing around certain recurring client payments at quarter-end. However, these recurring monthly payments that cross a reporting period-end do not raise any collectability concerns, as payment is generally received subsequent to quarter-end. All other changes in our gross and net billed accounts receivable reflect the normal fluctuations in the timing of client payments at quarter-end, as evidenced by our relatively consistent DBO metric over the past several quarters.

As a global provider of software and professional services, a portion of our accounts receivable balance relates to clients outside the U.S. This diversity in the geographic composition of our client base may adversely impact our DBOs as longer billing cycles (i.e., billing terms and cash collection cycles) are an inherent characteristic of international software and professional services transactions. For example, our ability to bill (i.e., send an invoice) and collect arrangement fees may be dependent upon, among other things: (i) the completion of various client administrative matters, local country billing protocols and processes (including local cultural differences), and/or non-client administrative matters; (ii) meeting certain contractual invoicing milestones; or (iii) the overall project status in certain situations in which we act as a subcontractor to another vendor on a project.

Other Current and Non-Current Assets and Liabilities

The increase in other current and non-current assets in 2019 is due primarily to additional client contract costs related to client conversion/set-up activities and direct material costs to fulfill our cloud-based solution arrangements.

Cash Flows From Investing Activities. Our typical investing activities consist of purchases/sales of short-term investments, purchases of property and equipment, and investments in client contracts, which are discussed below. Additionally, our recent investing activities also include acquisition and investment activities related to: (i) the acquisitions of the Business Ink and Forte businesses in 2018 that resulted in payments in 2019 and 2018 of \$13.2 million and \$142.0 million, respectively, (see Note 7 of our Financial Statements); and (ii) investments in a payment technology and services company in 2019 and 2018 of \$4.0 million and \$2.8 million, respectively (see Note 2 of our Financial Statements). All of these activities are included in our cash flows from investing activities.

Purchases/Sales of Short-term Investments

During 2019 and 2018, we purchased \$54.3 million and \$75.0 million, respectively, and sold or had mature \$52.1 million and \$190.8 million, respectively, of short-term investments. We continually evaluate the possible uses of our excess cash balances and will likely purchase and sell additional short-term investments in the future.

Software, Property and Equipment

Our annual capital expenditures for software, property and equipment for 2019 and 2018 were \$37.3 million and \$57.1 million, respectively. Our capital expenditures for these periods consisted principally of investments in: (i) computer hardware, software, and related equipment; (ii) statement production equipment; and (iii) facilities and internal infrastructure items.

Cash Flows From Financing Activities. Our financing activities typically consist of various debt-related transactions and activities with our common stock, which are discussed below.

Issuance of Common Stock

Proceeds from the issuance of common stock for 2019 and 2018 were \$2.2 million and \$2.3 million, respectively, and relate primarily to employee stock purchase plan purchases.

Repurchase of Common Stock

During 2019 and 2018, we repurchased approximately 576,000 shares and 704,000 shares of our common stock under the guidelines of our Stock Repurchase Program for \$25.5 million and \$27.6 million, respectively.

Additionally, outside of our Stock Repurchase Program, during 2019 and 2018, we repurchased from our employees and then canceled approximately 117,000 shares and 159,000 shares, of our common stock for \$5.1 million and \$7.4 million, respectively, in connection with minimum tax withholding requirements resulting from the vesting of restricted stock under our stock incentive plans.

Through December 31, 2019 and, 2018, we have paid \$30.9 million and \$34.7 million, respectively, for our total repurchases of common stock, with the differences in the amounts accrued attributed to the timing of the settlement.

Cash Dividends Paid on Common Stock

During 2019 and 2018, the Board approved dividend payments totaling \$29.4 million and \$28.1 million, respectively, of which \$29.1 million and \$28.0 million, respectively, had been paid through December 31, 2019 and 2018 (with the differences attributed to unvested incentive shares that are paid upon vesting).

Common Stock Warrants

During the fourth quarter of 2019, Comcast exercised the remaining 0.4 million of their vested common stock warrants, which we net cash settled under the provisions of the warrant agreement for \$12.9 million. See Note 12 to our Financial Statements for further discussion of Comcast's exercise of their common stock warrants.

Long-term Debt

During the first quarter of 2018, we refinanced our 2015 Credit Agreement and as a result, we repaid the outstanding principal balance of \$120.0 million and borrowed \$150.0 million under the 2018 Credit Agreement, resulting in a net increase of available cash of \$30.0 million. As part of the refinancing, we paid \$1.5 million of deferred financing costs.

Additionally, during 2019 and 2018, we made principal repayments of \$7.5 million and \$5.6 million, respectively, on our long-term debt balance. See Note 5 to our Financial Statements for additional discussion of our long-term debt.

Contractual Obligations and Other Commercial Commitments and Contingencies

We have various contractual obligations that are recorded as liabilities in our Consolidated Balance Sheets. Other items, such as certain purchase commitments and other executory contracts, are not recognized as liabilities in our Balance Sheets but are required to be disclosed.

The following table summarizes our significant contractual obligations and commercial commitments as of December 31, 2019, and the future periods in which such obligations are expected to be settled in cash (in thousands).

	Total	Less than 1 Year	Years 2-3	Years 4-5	More than 5 Years
Long-term debt	\$ 542,707	\$ 25,164	\$ 57,402	\$ 117,728	\$ 342,413
Facility and equipment leases	105,839	17,749	35,229	27,952	24,909
Purchase obligations	376,799	84,563	130,680	107,945	53,611
Total	\$ 1,025,345	\$ 127,476	\$ 223,311	\$ 253,625	\$ 420,933

The contractual obligation amounts reflected for our long-term debt are based upon the following assumptions:

- (i) Our 2016 Convertible Notes will remain outstanding through their maturity date of March 15, 2036 (although the 2016 Convertible Notes can be converted during the period from, and including, December 15, 2021 to the close of business on the business day immediately preceding March 15, 2022 and holders may require us to repurchase the 2016 Convertible Notes for cash on each of March 15, 2022, March 14, 2026, and March 15, 2031); upon settlement, our cash obligation will not exceed the principal amount; and interest paid through maturity is at a rate of 4.25%; and
- (ii) Our 2018 Credit Agreement includes the mandatory quarterly amortization payments on the term loan as of December 31, 2019, and the interest paid throughout the life of the term loan is based upon the interest rate applicable as of December 31, 2019.

Our long-term debt obligations are discussed in more detail in Note 5 to our Financial Statements.

Our operating leases are discussed in Note 6 to our Financial Statements. As of December 31, 2019, our purchase obligations consist primarily of our expected minimum base fees under the Ensono service agreement, which includes embedded lease components related to processors at our outsourced data center environment (discussed in Notes 6 and 11 to our Financial Statements).

Of the total contractual obligations and commercial commitments above, approximately \$490 million is reflected on our Balance Sheet.

Off-Balance Sheet Arrangements

None

Capital Resources

The following are the key items to consider in assessing our sources and uses of capital resources:

Current Sources of Capital Resources.

- **Cash, Cash Equivalents and Short-term Investments.** As of December 31, 2019, we had cash, cash equivalents, and short-term investments of \$182.7 million, of which approximately 64% is in U.S. Dollars and held in the U.S. We have \$2.7 million of restricted cash included in cash and cash equivalents, used primarily to collateralize outstanding letters of credit. For the remainder of the monies denominated in foreign currencies and/or located outside the U.S., we do not anticipate any material amounts being unavailable for use in running our business.
- **Operating Cash Flows.** As described in the Liquidity section above, we believe we have the ability to generate strong cash flows to fund our operating activities and act as a source of funds for our capital resource needs.
- **Revolving Loan Facility.** We currently have a \$200 million revolving loan facility, our 2018 Revolver. As of December 31, 2019, we had no borrowing outstanding on our 2018 Revolver and had the entire \$200 million available to us. Our long-term debt obligations are discussed in more detail in Note 5 to our Financial Statements.

Uses/Potential Uses of Capital Resources. Below are the key items to consider in assessing our uses/potential uses of capital resources:

- **Common Stock Repurchases.** We have made repurchases of our common stock in the past under our Stock Repurchase Program. As of December 31, 2019, we had 5.0 million shares authorized for repurchase remaining under our Stock Repurchase Program. Our 2018 Credit Agreement places certain limitations on our ability to repurchase our common stock.

Under our Stock Repurchase Program, we may repurchase shares in the open market or in privately negotiated transactions, including through an accelerated stock repurchase plan or under a SEC Rule 10b5-1 plan. The actual timing and amount of share repurchases are dependent on the current market conditions and other business-related factors. Our common stock repurchases are discussed in more detail in Note 11 to our Financial Statements.

During 2019, we repurchased 0.6 million shares of our common stock for \$25.5 million (weighted-average price of \$44.17 per share) under our Stock Repurchase Program.

Outside of our Stock Repurchase Program, during 2019, we repurchased from our employees and then cancelled 0.1 million shares of our common stock for \$5.1 million in connection with minimum tax withholding requirements resulting from the vesting of restricted stock under our stock incentive plans.

- **Cash Dividends.** During the year ended December 31, 2019, the Board declared dividends totaling \$29.4 million. Going forward, we expect to pay cash dividends each year in March, June, September, and December, with the amount and timing subject to the Board's approval.
- **Acquisitions.** In July 2019, we paid approximately \$13 million of the remaining purchase price from the 2018 Forte acquisition, that had been held back subject to certain tax filings. Additionally, the Forte purchase agreement includes provisions for \$18.8 million of potential future earn-out payments over a four-year measurement period. The earn-out payments are tied to performance-based goals and continued employment by the eligible recipients. As of December 31, 2019, we have made no earn-out payments.

In January 2020, we acquired certain assets of Tekzenit for an initial purchase price of approximately \$10 million. The purchase agreement includes provisions for additional purchase price payments in the form of earn-out and qualified sales payments for up to \$10 million over a three-year measurement period upon meeting certain financial and sales criteria.

These acquisitions were funded from currently available cash. Our acquisitions are discussed in more detail in Note 7 to our Financial Statements. As part of our growth strategy, we are continually evaluating potential business and/or asset acquisitions and investments in market share expansion with our existing and potential new clients and expansion into verticals outside the global communications market.

- **Equity Method Investment.** In the first quarter of 2019, we made an additional \$4 million investment in a payment technology and services company that enables omni-channel digital payments in Latin America. As of December 31, 2019, we held an 8% noncontrolling interest with a carrying value of \$6.6 million. See Note 2 to our Financial Statements for additional discussion.
- **Capital Expenditures.** During 2019, we spent \$37.3 million on capital expenditures. As of December 31, 2019, we have made no significant capital expenditure commitments.
- **Stock Warrants.** We have issued Stock Warrants with an exercise price of \$26.68 per warrant to Comcast as an incentive for Comcast to convert new customer accounts to ACP. Once vested, Comcast may exercise the Stock Warrants and elect either physical delivery of common shares or net share settlement (cashless exercise). Alternatively, the exercise of the Stock Warrants may be settled with cash based solely on our approval, or if Comcast were to beneficially own or control in excess of 19.99% of the common stock or voting of the Company. In December 2019, Comcast exercised their remaining 0.4 million of vested Stock Warrants, which we net cash settled under the provision of the Warrant Agreement. The fair value of the Stock Warrants was \$24.6 million (weighted-average price of \$56.12 per share), resulting in a net cash settlement of \$12.9 million. As of December 31, 2019, approximately 1.0 million Stock Warrants are outstanding, none of which are vested.

The Stock Warrants are discussed in more detail in Note 12 to our Financial Statements.

- **Long-Term Debt.** As of December 31, 2019, our long-term debt consisted of the following: (i) 2016 Convertible Notes with a par value of \$230.0 million; and (ii) 2018 Credit Agreement term loan borrowings of \$136.9 million.

2016 Convertible Notes

During the next twelve months, there are no scheduled conversion triggers on our 2016 Convertible Notes. As a result, we expect our required debt service cash outlay during the next twelve months for the 2016 Convertible Notes to be limited to interest payments of \$9.8 million.

2018 Credit Agreement

Our 2018 Credit Agreement mandatory repayments and the cash interest expense (based upon current then interest rates) for the next twelve months is \$10.3 million, and \$5.1 million, respectively. We have the ability to make prepayments on our 2018 Credit Agreement without penalty.

Our long-term debt obligations are discussed in more detail in Note 5 to our Financial Statements.

In summary, we expect to continue to have material needs for capital resources going forward, as noted above. We believe that our current cash, cash equivalents and short-term investments balances and our 2018 Revolver, together with cash expected to be generated in the future from our current operating activities, will be sufficient to meet our anticipated capital resource requirements for at least the next twelve months. We also believe we could obtain additional capital through other debt sources which may be available to us if deemed appropriate.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the potential loss arising from adverse changes in market rates and prices. As of December 31, 2019, we are exposed to various market risks, including changes in interest rates, fluctuations and changes in the market value of our cash equivalents and short-term investments, and changes in foreign currency exchange rates. We have not historically entered into derivatives or other financial instruments for trading or speculative purposes.

Interest Rate Risk

Long-Term Debt. The interest rate on our 2016 Convertible Notes is fixed, and thus, as it relates to our convertible debt borrowings, we are not exposed to changes in interest rates.

The interest rates under our 2018 Credit Agreement are based upon an adjusted LIBOR rate plus an applicable margin, or an alternate base rate plus an applicable margin. Refer to Note 5 to our Financial Statements for further details of our long-term debt.

A hypothetical adverse change of 10% in the December 31, 2019 adjusted LIBOR rate would not have had a material impact upon our results of operations.

Market Risk

Cash Equivalents and Short-Term Investments. Our cash and cash equivalents as of December 31, 2019 and 2018 were \$156.6 million and \$139.3 million, respectively. Certain of our cash balances are “swept” into overnight money market accounts on a daily basis, and at times, any excess funds are invested in low-risk, somewhat longer term, cash equivalent instruments and short-term investments. Our cash equivalents are invested primarily in institutional money market funds, commercial paper, and time deposits held at major banks. We have minimal market risk for our cash and cash equivalents due to the relatively short maturities of the instruments.

Our short-term investments as of December 31, 2019 and 2018 were \$26.1 million and \$23.6 million, respectively. Currently, we utilize short-term investments as a means to invest our excess cash only in the U.S. The day-to-day management of our short-term investments is performed by a large financial institution in the U.S., using strict and formal investment guidelines approved by our Board. Under these guidelines, short-term investments are limited to certain acceptable investments with: (i) a maximum maturity; (ii) a maximum concentration and diversification; and (iii) a minimum acceptable credit quality. At this time, we believe we have minimal liquidity risk associated with the short-term investments included in our portfolio.

Settlement Assets. We are exposed to market risk associated with cash held on behalf of our clients related to our payment processing services. As of December 31, 2019 and 2018, we had \$169.3 million and \$124.6 million, respectively, of cash collected on behalf of our clients which is held for an established holding period until settlement with the client. The holding period is generally one to four business days depending on the payment model and contractual terms with the client. During the holding period, cash is held in accounts with various major financial institutions in the U.S. in an amount equal to at least 100% of the aggregate amount owed to our clients. These balances can significantly fluctuate between periods due to activity at the end of the period and the day in which the period ends.

Long-Term Debt. The fair value of our convertible debt is exposed to market risk. We do not record our convertible debt at fair value but present the fair value for disclosure purposes (see Note 2 to our Financial Statements). Generally, the fair value of our convertible debt is impacted by changes in interest rates and changes in the price and volatility of our common stock. As of December 31, 2019, the fair value of the 2016 Convertible Notes was estimated at \$262.8 million using quoted market prices.

Foreign Currency Exchange Rate Risk

Due to foreign operations around the world, our balance sheet and income statement are exposed to foreign currency exchange risk due to the fluctuations in the value of currencies in which we conduct business. While we attempt to maximize natural hedges by incurring expenses in the same currency in which we contract revenue, the related expenses for that revenue could be in one or more differing currencies than the revenue stream.

During the year ended December 31, 2019, we generated approximately 88% of our revenues in U.S. dollars. We expect that, in the foreseeable future, we will continue to generate a very large percentage of our revenues in U.S. dollars.

As of December 31, 2019 and 2018, the carrying amounts of our monetary assets and monetary liabilities on the books of our non-U.S. subsidiaries in currencies denominated in a currency other than the functional currency of those non-U.S. subsidiaries are as follows (in thousands, in U.S. dollar equivalents):

	December 31, 2019		December 31, 2018	
	Monetary Liabilities	Monetary Assets	Monetary Liabilities	Monetary Assets
Pounds sterling	\$ (30)	\$ 1,786	\$ (3)	\$ 1,848
Euro	(76)	11,284	(448)	7,482
U.S. Dollar	(117)	18,890	(632)	18,044
South African Rand	-	7,602	-	270
Other	(6)	1,065	(7)	957
Totals	<u>\$ (229)</u>	<u>\$ 40,627</u>	<u>\$ (1,090)</u>	<u>\$ 28,601</u>

A hypothetical adverse change of 10% in the December 31, 2019 exchange rates would not have had a material impact upon our results of operations.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED FINANCIAL STATEMENTS
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Management's Report on Internal Control Over Financial Reporting

Management of CSG Systems International, Inc. and subsidiaries (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

- (i) Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- (ii) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- (iii) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013)*.

Based on our assessment, management believes that the Company maintained effective internal control over financial reporting as of December 31, 2019.

The Company's independent registered public accounting firm, KPMG LLP, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. That report appears immediately following.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
CSG Systems International, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited CSG Systems International, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements), and our report dated February 21, 2020 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Omaha, Nebraska
February 21, 2020

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
CSG Systems International, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of CSG Systems International, Inc. and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 21, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Adoption of ASC Topic 842 in 2019

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of ASC Topic 842, *Leases* (ASC 842). The Company adopted the standard using the effective date method, and as such, the 2018 and 2017 comparative information in the financial statements has not been adjusted and continues to be as previously reported.

Adoption of ASC Topic 606 in 2018

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of revenue recognition in 2018 due to the adoption of ASC Topic 606, *Revenue from Contracts with Customers* (ASC 606). The Company adopted the standard using the cumulative effect method, and as such, the 2017 comparative information in the financial statements has not been adjusted and continues to be as previously reported.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of amendments, change requests, or statements of work with significant clients

As discussed in Note 3 to the consolidated financial statements, the Company generated 43% of its revenues from its significant clients. The contracts with these clients are subject to modification in the form of amendments, change requests, or statements of

work (contract modifications), which can occur frequently. The Company's accounting for customer contracts requires judgments regarding whether each contract modification is treated as a separate contract or modification of an existing contract. The judgments made in this area, specifically those related to significant clients, could impact the timing of revenue recognized.

We identified the evaluation of contract modifications with significant clients as a critical audit matter. In particular, assessing the Company's judgments regarding whether each contract modification is treated as a separate contract or a modification of an existing contract required a higher degree of auditor judgment.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's revenue recognition process, including controls over monitoring and evaluating contract modifications with significant clients. For certain contract modifications with significant clients, we performed an independent analysis of the accounting treatment as a separate contract or a modification of an existing contract. We compared our conclusions to those made by the Company for each selected contract modification.

Assessment of estimate of total expected hours to complete software and services projects

As discussed in Note 2 to the consolidated financial statements, the Company's software and services revenues relate primarily to software license sales and professional services. The initial sale of software products generally requires significant production, modification or customization. The Company has determined that the delivery of the software license and the related professional services required to implement the software represent one combined performance obligation that is satisfied over time based of hours worked (hours-based method). To determine the amount of revenue to record at each reporting period, the Company estimates the total expected hours necessary to complete a project, and records revenue proportional to the hours incurred to date compared to total expected hours. Accordingly, the revenue recognized for these contracts is dependent upon estimates of the total expected hours necessary to complete projects. The Company's revenue from software and services totaled \$52 million during the year.

We identified the assessment of the Company's estimate of total expected hours to complete software and services projects as a critical audit matter. There was subjectivity in performing audit procedures due to the nature of the estimates and assumptions about future events, which could impact the timing of the revenue recognized.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's process of estimating of expected hours to complete a project. We assessed the Company's historical accuracy in estimating expected hours by performing a retrospective analysis of actual hours incurred compared to initially estimated hours for a sample of completed and in-progress customer contracts. For a sample of in-progress customer contracts, we read the customer contract to understand the nature and complexity of the work to be performed. In addition, we compared the estimate of total expected hours as of December 31, 2019 to the initial estimate of total expected hours. Based on this comparison, we examined documentation evidencing the change in scope of work, for certain contracts.

/s/ KPMG LLP

We have served as the Company's auditor since 2002.

Omaha, Nebraska
February 21, 2020

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	<u>December 31,</u> <u>2019</u>	<u>December 31,</u> <u>2018</u>
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 156,548	\$ 139,277
Short-term investments	26,109	23,603
Total cash, cash equivalents and short-term investments	182,657	162,880
Settlement assets	169,327	124,627
Trade accounts receivable:		
Billed, net of allowance of \$3,735 and \$3,115	244,058	235,827
Unbilled	33,450	37,227
Income taxes receivable	4,297	6,720
Other current assets	35,293	32,286
Total current assets	<u>669,082</u>	<u>599,567</u>
Non-current assets:		
Property and equipment, net of depreciation of \$98,029 and \$93,278	84,429	81,813
Operating lease right-of-use assets	94,847	-
Software, net of amortization of \$125,437 and \$119,381	32,526	36,400
Goodwill	259,164	255,816
Acquired client contracts, net of amortization of \$93,767 and \$82,692	55,105	65,456
Client contract costs, net of amortization of \$31,526 and \$43,051	50,746	37,289
Deferred income taxes	9,392	11,087
Other assets	27,739	26,934
Total non-current assets	<u>613,948</u>	<u>514,795</u>
Total assets	<u>\$ 1,283,030</u>	<u>\$ 1,114,362</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ 10,313	\$ 7,500
Operating lease liabilities	22,442	-
Client deposits	38,687	36,889
Trade accounts payable	32,704	45,386
Accrued employee compensation	77,527	61,107
Settlement liabilities	168,342	123,613
Deferred revenue	45,094	40,236
Income taxes payable	2,806	218
Other current liabilities	20,778	35,442
Total current liabilities	<u>418,693</u>	<u>350,391</u>
Non-current liabilities:		
Long-term debt, net of unamortized discounts of \$10,053 and \$14,549	346,509	352,326
Operating lease liabilities	78,936	-
Deferred revenue	18,552	17,527
Income taxes payable	2,543	2,284
Deferred income taxes	6,376	8,205
Other non-current liabilities	14,759	22,605
Total non-current liabilities	<u>467,675</u>	<u>402,947</u>
Total liabilities	<u>886,368</u>	<u>753,338</u>
Stockholders' equity:		
Preferred stock, par value \$.01 per share; 10,000 shares authorized; zero shares issued and outstanding	-	-
Common stock, par value \$.01 per share; 100,000 shares authorized; 3,661 and 4,460 shares reserved for employee stock purchase plan and stock incentive plans; 32,891 and 33,158 shares outstanding	696	693
Common stock warrants; zero and 439 warrants vested; 950 and 1,425 issued	-	9,082
Additional paid-in capital	454,663	441,417
Treasury stock, at cost; 35,356 and 34,779 shares	(867,817)	(842,360)
Accumulated other comprehensive income (loss):		
Unrealized gains on short-term investments, net of tax	16	2
Cumulative foreign currency translation adjustments	(39,519)	(42,937)
Accumulated earnings	848,623	795,127
Total stockholders' equity	<u>396,662</u>	<u>361,024</u>
Total liabilities and stockholders' equity	<u>\$ 1,283,030</u>	<u>\$ 1,114,362</u>

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)

	Year Ended December 31,		
	2019	2018	2017
Revenues	\$ 996,810	\$ 875,059	\$ 789,582
Cost of revenues (exclusive of depreciation, shown separately below)	525,122	449,820	394,811
Other operating expenses:			
Research and development	127,994	124,034	113,215
Selling, general and administrative	191,329	169,308	153,695
Depreciation	21,422	18,304	13,380
Restructuring and reorganization charges	4,834	8,661	8,796
Total operating expenses	<u>870,701</u>	<u>770,127</u>	<u>683,897</u>
Operating income	<u>126,109</u>	<u>104,932</u>	<u>105,685</u>
Other income (expense):			
Interest expense	(17,748)	(17,667)	(16,794)
Amortization of original issue discount	(2,819)	(2,664)	(2,790)
Interest and investment income, net	1,785	2,646	3,246
Loss on extinguishment of debt	-	(810)	-
Other, net	(1,604)	550	(1,637)
Total other	<u>(20,386)</u>	<u>(17,945)</u>	<u>(17,975)</u>
Income before income taxes	105,723	86,987	87,710
Income tax provision	(22,953)	(20,857)	(26,346)
Net income	<u>\$ 82,770</u>	<u>\$ 66,130</u>	<u>\$ 61,364</u>
Weighted-average shares outstanding:			
Basic	32,051	32,488	32,415
Diluted	32,465	32,855	32,865
Earnings per common share:			
Basic	\$ 2.58	\$ 2.04	\$ 1.89
Diluted	2.55	2.01	1.87

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	<u>Year Ended December 31,</u>		
	<u>2019</u>	<u>2018</u>	<u>2017</u>
Net income	\$ 82,770	\$ 66,130	\$ 61,364
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	3,418	(14,203)	16,479
Unrealized holding gains on short-term investments arising during period	14	90	71
Other comprehensive income (loss), net of tax	<u>3,432</u>	<u>(14,113)</u>	<u>16,550</u>
Total comprehensive income, net of tax	<u>\$ 86,202</u>	<u>\$ 52,017</u>	<u>\$ 77,914</u>

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)

	Shares of Common Stock Outstanding	Common Stock	Common Stock Warrants	Additional Paid-in Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings	Total Stockholders' Equity
BALANCE, January 1, 2017	32,261	\$ 672	\$ 16,007	\$ 391,209	\$ (826,002)	\$ (45,372)	\$ 714,846	\$ 251,360
Comprehensive income:								
Net income	-	-	-	-	-	-	61,364	-
Unrealized gain on short-term investments, net of tax	-	-	-	-	-	71	-	-
Foreign currency translation adjustments	-	-	-	-	-	16,479	-	-
Total comprehensive income	-	-	-	-	-	-	-	77,914
Repurchase of common stock	(749)	(2)	-	(10,099)	(20,548)	-	-	(30,649)
Issuance of common stock pursuant to employee stock purchase plan	50	-	-	1,776	-	-	-	1,776
Issuance of restricted stock pursuant to stock-based compensation plans	649	6	-	(6)	-	-	-	-
Cancellation of restricted stock issued pursuant to stock-based compensation plans	(39)	-	-	-	-	-	-	-
Stock-based compensation expense	-	-	-	20,996	-	-	-	20,996
Issuance of common stock warrants	-	-	9,082	-	-	-	-	9,082
Exercise of common stock warrants	649	6	(16,007)	641	15,360	-	-	-
Repurchase of convertible notes, net of tax	695	7	-	22,574	16,458	-	-	39,039
Dividends	-	-	-	-	-	-	(26,772)	(26,772)
BALANCE, December 31, 2017	33,516	689	9,082	427,091	(814,732)	(28,822)	749,438	342,746
Comprehensive income:								
Net income	-	-	-	-	-	-	66,130	-
Unrealized gain on short-term investments, net of tax	-	-	-	-	-	90	-	-
Foreign currency translation adjustments	-	-	-	-	-	(14,203)	-	-
Total comprehensive income	-	-	-	-	-	-	-	52,017
Repurchase of common stock	(862)	-	-	(7,339)	(27,628)	-	-	(34,967)
Issuance of common stock pursuant to employee stock purchase plan	71	-	-	2,311	-	-	-	2,311
Issuance of restricted stock pursuant to stock-based compensation plans	553	5	-	(5)	-	-	-	-
Cancellation of restricted stock issued pursuant to stock-based compensation plans	(120)	(1)	-	1	-	-	-	-
Stock-based compensation expense	-	-	-	19,358	-	-	-	19,358
Dividends	-	-	-	-	-	-	(28,003)	(28,003)
Adjustments due to adoption of new accounting standards	-	-	-	-	-	-	7,562	7,562
BALANCE, December 31, 2018	33,158	693	9,082	441,417	(842,360)	(42,935)	795,127	361,024
Comprehensive income:								
Net income	-	-	-	-	-	-	82,770	-
Unrealized gain on short-term investments, net of tax	-	-	-	-	-	14	-	-
Foreign currency translation adjustments	-	-	-	-	-	3,418	-	-
Total comprehensive income	-	-	-	-	-	-	-	86,202
Repurchase of common stock	(693)	-	-	(5,068)	(25,457)	-	-	(30,525)
Issuance of common stock pursuant to employee stock purchase plan	55	-	-	2,227	-	-	-	2,227
Issuance of restricted stock pursuant to stock-based compensation plans	513	4	-	(4)	-	-	-	-
Cancellation of restricted stock issued pursuant to stock-based compensation plans	(142)	(1)	-	1	-	-	-	-
Stock-based compensation expense	-	-	-	19,919	-	-	-	19,919
Exercise of common stock warrants	-	-	(9,082)	(3,829)	-	-	-	(12,911)
Dividends	-	-	-	-	-	-	(29,274)	(29,274)
BALANCE, December 31, 2019	<u>\$ 32,891</u>	<u>\$ 696</u>	<u>\$ -</u>	<u>\$ 454,663</u>	<u>\$ (867,817)</u>	<u>\$ (39,503)</u>	<u>\$ 848,623</u>	<u>\$ 396,662</u>

The accompanying notes are an integral part of these consolidated financial statements.

CSG SYSTEMS INTERNATIONAL, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended		
	2019	2018	2017
Cash flows from operating activities:			
Net income	\$ 82,770	\$ 66,130	\$ 61,364
Adjustments to reconcile net income to net cash provided by operating activities-			
Depreciation	21,422	18,304	13,380
Amortization	45,700	44,328	29,501
Amortization of original issue discount	2,819	2,664	2,790
Asset impairment	438	1,851	3,135
Gain on short-term investments and other	(364)	(101)	(184)
Loss on extinguishment of debt	-	810	-
Deferred income taxes	(77)	4,913	7,112
Stock-based compensation	19,919	19,358	21,049
Changes in operating assets and liabilities, net of acquired amounts:			
Trade accounts receivable, net	(4,015)	(138)	(6,421)
Other current and non-current assets and liabilities	(17,727)	(23,179)	2,875
Income taxes payable/receivable	4,771	5,055	(2,729)
Trade accounts payable and accrued liabilities	(10,317)	(7,146)	(4,377)
Deferred revenue	5,737	10,492	(300)
Net cash provided by operating activities	<u>151,076</u>	<u>143,341</u>	<u>127,195</u>
Cash flows from investing activities:			
Purchases of software, property and equipment	(37,319)	(57,104)	(28,942)
Purchases of short-term investments	(54,258)	(75,022)	(182,247)
Proceeds from sale/maturity of short-term investments	52,135	190,778	193,465
Acquisition of and investments in business, net of cash acquired	(17,194)	(144,791)	-
Acquisition of and investments in client contracts	-	-	(12,180)
Net cash used in investing activities	<u>(56,636)</u>	<u>(86,139)</u>	<u>(29,904)</u>
Cash flows from financing activities:			
Proceeds from issuance of common stock	2,227	2,311	1,776
Payment of cash dividends	(29,126)	(27,979)	(26,850)
Repurchase of common stock	(30,918)	(34,726)	(30,649)
Exercise of common stock warrants	(12,911)	-	-
Proceeds from long-term debt	-	150,000	-
Payments on long-term debt	(7,500)	(125,625)	(15,000)
Settlement of convertible notes	-	-	(34,771)
Payments of deferred financing costs	-	(1,490)	-
Net cash used in financing activities	<u>(78,228)</u>	<u>(37,509)</u>	<u>(105,494)</u>
Effect of exchange rate fluctuations on cash	1,059	(2,659)	4,095
Net increase (decrease) in cash and cash equivalents	17,271	17,034	(4,108)
Cash and cash equivalents, beginning of period	139,277	122,243	126,351
Cash and cash equivalents, end of period	<u>\$ 156,548</u>	<u>\$ 139,277</u>	<u>\$ 122,243</u>
Supplemental disclosures of cash flow information:			
Cash paid during the period for-			
Interest	\$ 16,064	\$ 15,857	\$ 14,729
Income taxes	18,358	10,426	22,144

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. General

CSG Systems International, Inc. (the “Company”, “CSG”, or forms of the pronoun “we”), a Delaware corporation, was formed in October 1994 and is based in Greenwood Village, Colorado. We are a revenue management, customer experience, and payment solutions provider primarily serving the global communications industry. We have over 35 years of experience supporting communications service providers’ management of their revenue, customer communications, and digital ecosystem as they advance their video, voice, data content, and digital services to consumers. Over the years, we have focused our research and development (“R&D”) and acquisition investments on expanding our solution set to address the complex, transformative needs of service providers. We are a S&P SmallCap 600 company.

The accompanying Consolidated Financial Statements (“Financial Statements”) are prepared in conformity with generally accepted accounting principles (“GAAP”) in the United States of America (“U.S.”).

2. Summary of Significant Accounting Policies

Principles of Consolidation. Our Financial Statements include all of our accounts and our subsidiaries’ accounts. All material intercompany accounts and transactions have been eliminated.

Translation of Foreign Currency. Our foreign subsidiaries use the local currency of the countries in which they operate as their functional currency. Their assets and liabilities are translated into U.S. dollars at the exchange rates in effect at the balance sheet date. Revenues, expenses, and cash flows are translated at the average rates of exchange prevailing during the period. Foreign currency translation adjustments are included in comprehensive income in stockholders’ equity. Foreign currency transaction gains and losses are included in the determination of net income.

Use of Estimates in Preparation of Our Financial Statements. The preparation of our Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of our Financial Statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. The more critical estimates and related assumptions that affect our financial position and results of operations are in the areas of: (i) revenue recognition; (ii) impairment assessments of long-lived assets; (iii) income taxes; and (iv) loss contingencies.

Revenue Recognition. We adopted Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers* (Topic 606) (“ASC 606”) as of January 1, 2018 using the cumulative effect method and recorded a cumulative adjustment increasing beginning retained earnings (net of tax) by approximately \$7 million, primarily related to contracts that we were previously required to defer revenue as we did not have vendor specific objective evidence of fair value for certain undelivered elements. Since we adopted ASC 606 using the cumulative effect method, comparative information in our Financial Statements for the year ended December 31, 2017 has not been adjusted and continues to be as previously reported. The adoption of ASC 606 did not have a material impact to our Income Statements in any period presented. The adoption of ASC 606 resulted in a change in the presentation of investments in client contracts in our Cash Flows. Previous to the adoption, investments in client contracts were included in cash flows from investing activities. Investments in client contracts for the years ended December 31, 2019 and 2018 are included in cash flows from operating activities.

Our revenue from client contracts is primarily related to our cloud and related solutions and, to a lesser degree, software and service and related maintenance arrangements, and is measured based on consideration specified within each of our contracts, excluding sales incentives and amounts collected on behalf of third parties, if any. We account for various products and services separately if they are distinct performance obligations. A product or service, or group of products or services, is a distinct performance obligation if it is separately identifiable from other items in the context of the contract and if our client can benefit from the product or service on their own or with other resources that are readily available to that client. We recognize revenue when we satisfy our performance obligations by transferring control of a particular product or service, or group of products or services, to our clients, as described in more detail below. Taxes assessed on our products and services based on governmental authorities at the time of invoicing are excluded from our revenues.

Cloud and Related Solutions

Our cloud and related solutions revenues relate to: (i) our software-as-a-service (“SaaS”), revenue management solutions, and various related ancillary services; (ii) our managed services offering in which we operate software solutions (primarily our software solutions) on behalf of our clients; and (iii) cloud-based payment processing transaction services.

We contract for our cloud-based revenue management solutions using long-term arrangements whose terms have typically ranged from three to five years. These arrangements consist of a series of multiple services delivered daily or monthly, to include such things as: (i) revenue and customer experience services; (ii) business support services (e.g., workforce management tools, consumer credit verifications, etc.); (iii) digital enablement and delivery functions; and (iv) customer statement invoice printing and mailing services. The fees for these services typically are billed to our clients monthly based upon actual monthly volumes and/or usage of services (e.g., the number of client customers maintained on our solutions, the number of transactions processed on our solutions, and/or the quantity and content of the monthly statements and mailings processed through our solutions).

For cloud-based revenue management solution contracts, the total contract consideration (including impacts of discounts or incentives) is primarily variable dependent upon actual monthly volumes and/or usage of services; however, these contracts can also include ancillary fixed consideration in the form of one-time, monthly or annual fees. Although there may be multiple performance obligations, there is generally no allocation of value between the individual performance obligations as all are considered cloud and related solutions revenues that are recognized based on activities performed in each daily or monthly period.

We contract for managed services solutions using long-term arrangements whose terms have typically ranged from three to five years. Under managed services agreements, we may operate software products (primarily our software solutions) on behalf of our clients: (i) out of a client's data center; (ii) out of a data center we own and operate; or (iii) out of a third-party data center we contract with for such services. Managed services can also include us providing other services, such as transitional services, fulfillment, remittance processing, operational consulting, back office, and end user billing services.

For managed services contracts, the total contract consideration is typically a fixed monthly fee, but these contracts may also have variable fee components. The fees for these services typically are billed to our clients on a monthly basis. Unless managed services are included with a software license contract (as discussed further below), there is generally only one performance obligation and revenues are recognized for these arrangements on a ratable basis as the services are performed.

Our contracts for payment processing transaction services are generally month-to-month or fixed term with automatic renewals. Services provided under these arrangements primarily include automated clearing house (ACH) transaction processing, credit/debit card processing, web-based and telephone payment processing and real-time check verification and authentication services. The fees for these services typically are billed on a monthly basis.

Our payment processing services are comprised of one performance obligation. Revenues for payment processing services is based primarily on a fee per transaction or a percentage of the transaction principal and recognized as delivered over a series of daily service periods. Transaction fees collected from clients are recognized as revenue on a gross basis when we are the principal in completing the payment processing transaction. As a principal to the transaction, we control the service of processing payments on our platform. We bear primary responsibility for the fulfillment of the payment service, contract directly with our clients, and have full discretion in determining the fee charged to our clients which is independent of the costs we incur when we utilize payment processors or other financial institutions to perform services on our behalf. We therefore bear full margin risk when completing a payment processing transaction. Transaction fees paid to third-party payment processors and other financial institutions are primarily comprised of interchange and other payment-related fees paid in conjunction with the delivery of service to clients under our payment services contracts. These fees are recognized in cost of revenues.

Fees related to set-up or implementation activities for both cloud-based solution and managed services contracts are deferred and recognized ratably over the related service period to which the activities relate.

Depending on the significance of variable consideration, number of products/services, complex pricing structures and long-term nature of these types of contracts, the judgments and estimates made in this area could have a significant effect on the amount and timing of revenues recognized in any period.

Software and Services

Our software and services revenues relate primarily to: (i) software license sales on either a perpetual or term license basis; and (ii) professional services to implement the software. Our software and services contracts are often contracted in bundled arrangements that include not only the software license and related implementation services, but they can also include maintenance, managed services and/or additional professional services.

For our software arrangements, the total contract consideration is allocated between the separate performance obligations based on stand-alone selling prices for software licenses, cost plus applicable margin for services and established pricing for maintenance. The initial sale of our software products generally requires significant production, modification or customization, such that the delivery of the software license and the related professional services required to implement the software represent one combined performance obligation that is satisfied over time based on hours worked (hours-based method). We are using hours worked on the project, compared against expected hours necessary to complete the project, as the measure to determine progress toward completion as we believe it is the most appropriate metric to measure such progress. The software and services fees are generally fixed fees billed to our clients on a milestone or date basis.

The determination of the performance obligations and allocation of value for software license arrangements require significant judgment. We generally determine stand-alone selling prices using pricing calculations (which include regional market factors) for our software license fees and maintenance, and cost-plus margins for services. Additionally, our use of an hours-based method of accounting for software license and other professional services performance obligations that are satisfied over time requires estimates of total project revenues and costs, along with the expected hours necessary to complete a project. Changes in estimates as a result of additional information or experience on a project as work progresses are inherent characteristics of this method of revenue recognition as we are exposed to various business risks in completing these types of performance obligations. The estimation process to support our hours-based recognition method is more difficult for projects of greater length and/or complexity. The judgments and estimates made in this area could: (i) have a significant effect on revenues recognized in any period by changing the amount and/or the timing of the revenues recognized; and/or (ii) impact the expected profitability of a project, including whether an overall loss on an arrangement has occurred. To mitigate the inherent risks in using this hours-based method, we track our performance on projects and reevaluate the appropriateness of our estimates as part of our monthly accounting cycle.

In certain instances, we sell software license volume upgrades, which provide our clients the right to use our software to process higher transaction volume levels. In these instances, we analyze the contract to determine if the volume upgrade is a separate performance obligation and if so, we recognize the value associated with the software license as revenues on the effective date of the volume upgrade.

A portion of our professional services revenues are contracted separately (e.g., business consulting services, etc.). Such contracts can either be on a fixed-price or time-and-materials basis. Revenues from fixed-price professional service contracts are recognized using an hours-based method, as these professional services represent a performance obligation that is satisfied over time. Revenues from professional services contracts billed on a time-and-materials basis are recognized as the services are performed.

Maintenance

Our maintenance revenues relates primarily to support of our software once it has been implemented. Maintenance revenues are recognized ratably over the software maintenance period as services are provided. Our maintenance consists primarily of client and product support, technical updates (e.g., bug fixes, etc.), and unspecified upgrades or enhancements to our software products. If specified upgrades or enhancements are offered in a contract, which are rare, they are accounted for as a separate performance obligation. Maintenance can be invoiced to our clients on a monthly, quarterly or annual basis.

Transaction Price Allocated to the Remaining Performance Obligations

As of December 31, 2019, our aggregate amount of the transaction price allocated to the remaining performance obligations is approximately \$1 billion, which is made up of fixed fee consideration and guaranteed minimums expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied). We expect to recognize approximately 80% of this amount by the end of 2022, with the remaining amount recognized by the end of 2028. We have excluded from this amount variable consideration expected to be recognized in the future related to performance obligations that are unsatisfied. The majority of our future revenues are related to our cloud and related solution client contracts that include variable consideration dependent upon a series of monthly volumes and/or daily usage of services and have contractual terms ending from 2020 through 2028.

Disaggregation of Revenues

The nature, amount, timing and uncertainty of our revenue and how revenue and cash flows are affected by economic factors is most appropriately depicted by type of revenue as presented below (in thousands) and by geographic region as presented in Note 3.

	For the Year Ended December 31,	
	2019	2018
Cloud and related solutions	\$ 896,164	\$ 766,377
Software and services	52,364	58,101
Maintenance	48,282	50,581
Total revenues	\$ 996,810	\$ 875,059

Billed and Unbilled Accounts Receivable. Billed accounts receivable represents our unconditional rights to consideration. Once invoiced, our payment terms are generally between 30-60 days, and rarely do we have contracts with financing arrangements. Unbilled accounts receivable represents our rights to consideration for work completed but not billed. Unbilled accounts receivable is transferred to billed accounts receivable when the rights become unconditional which is generally at the time of invoicing. The following table rolls forward our unbilled accounts receivable from January 1, 2018 to December 31, 2019 (in thousands):

	Unbilled Receivables
Beginning Balance, January 1, 2018	\$ 33,104
Recognized during the period	237,134
Reclassified to receivables	(231,689)
Other	(1,322)
Ending Balance, December 31, 2018	37,227
Recognized during the period	252,445
Reclassified to receivables	(255,983)
Other	(239)
Ending Balance, December 31, 2019	\$ 33,450

Deferred Revenue. Deferred revenue represents consideration received from clients in advance of services being performed.

The following table rolls forward our deferred revenue from January 1, 2018 to December 31, 2019 (in thousands):

	Deferred Revenue
Beginning Balance, January 1, 2018	\$ (47,611)
Revenue recognized that was included in deferred revenue at the beginning of the period	38,832
Consideration received in advance of services performed net of revenue recognized in the current period	(50,861)
Other	1,877
Ending Balance, December 31, 2018	(57,763)
Revenue recognized that was included in deferred revenue at the beginning of the period	39,352
Consideration received in advance of services performed net of revenue recognized in the current period	(44,051)
Other	(1,184)
Ending Balance, December 31, 2019	\$ (63,646)

Postage. We pass through to our clients the cost of postage that is incurred on behalf of those clients, and typically require an advance payment on expected postage costs. These advance payments are included in client deposits in the accompanying Consolidated Balance Sheets (“Balance Sheets” or “Balance Sheet”) and are classified as current liabilities regardless of the contract period. We net the cost of postage against the postage reimbursements for those clients where we require advance deposits, and include the net amount (which is not material) in cloud and related solutions revenues.

Cash and Cash Equivalents. We consider all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. As of December 31, 2019 and 2018, our cash equivalents consist primarily of institutional money market funds, commercial paper, and time deposits held at major banks.

As of December 31, 2019 and 2018, we had \$2.7 million and \$3.0 million, respectively, of restricted cash that serves to collateralize outstanding letters of credit. This restricted cash is included in cash and cash equivalents in our Balance Sheets.

Short-term Investments and Other Financial Instruments. Our financial instruments as of December 31, 2019 and 2018 include cash and cash equivalents, short-term investments, accounts receivable, accounts payable, and debt. Due to their short maturities, the carrying amounts of cash equivalents, accounts receivable, and accounts payable approximate their fair value.

Our short-term investments and certain of our cash equivalents are considered “available-for-sale” and are reported at fair value in our Balance Sheets, with unrealized gains and losses, net of the related income tax effect, excluded from earnings and reported in a separate component of stockholders’ equity. Realized and unrealized gains and losses were not material in any period presented.

Primarily all short-term investments held by us as of December 31, 2019 and 2018 have contractual maturities of less than two years from the time of acquisition. Our short-term investments at December 31, 2019 and 2018 consisted almost entirely of fixed income securities. Proceeds from the sale/maturity of short-term investments in 2019, 2018, and 2017 were \$52.1 million, \$190.8 million, and \$193.5 million, respectively.

The following table represents the fair value hierarchy based upon three levels of inputs, of which Levels 1 and 2 are considered observable and Level 3 is unobservable, for our financial assets measured at fair value (in thousands):

	December 31, 2019			December 31, 2018		
	Level 1	Level 2	Total	Level 1	Level 2	Total
Cash equivalents:						
Money market funds	\$ 4,847	\$ —	\$ 4,847	\$ 4,392	\$ —	\$ 4,392
Commercial paper	—	26,964	26,964	—	9,078	9,078
Short-term investments:						
Corporate debt securities	—	22,159	22,159	—	16,357	16,357
U.S. government agency bonds	—	—	—	—	3,724	3,724
Asset-backed securities	—	3,950	3,950	—	3,522	3,522
Total	\$ 4,847	\$ 53,073	\$ 57,920	\$ 4,392	\$ 32,681	\$ 37,073

Valuation inputs used to measure the fair values of our money market funds were derived from quoted market prices. The fair values of all other financial instruments are based upon pricing provided by third-party pricing services. These prices were derived from observable market inputs.

We have chosen not to record our debt at fair value, with changes recognized in earnings each reporting period. The following table indicates the carrying value and estimated fair value of our debt as of the indicated periods (in thousands):

	December 31, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
2018 Credit Agreement (carrying value including current maturities)	\$ 136,875	\$ 136,875	\$ 144,375	\$ 144,375
2016 Convertible debt (par value)	230,000	262,775	230,000	228,275

The fair value for our Credit Agreement was estimated using a discounted cash flow methodology, while the fair value for our convertible debt was estimated based upon quoted market prices or recent sales activity, both of which are considered Level 2 inputs. See Note 5 for discussion regarding our debt.

Settlement Assets and Settlement Liabilities. Settlement assets and settlement liabilities represent cash collected on behalf of our clients via payment processing services which is held for an established holding period until settlement with the client. The holding period is generally one to four business days depending on the payment model and contractual terms with the client. During the holding period, cash is held in trust with various major financial institutions and a corresponding liability is recorded for the amounts owed to the clients. At any given time, there may be differences between the cash held in trust and the corresponding liability due to the timing of operating-related cash transfers.

Concentrations of Credit Risk. In the normal course of business, we are exposed to credit risk. The principal concentrations of credit risk relate to cash deposits, cash equivalents, short-term investments, and accounts receivable. We regularly monitor credit risk exposures and take steps to mitigate the likelihood of these exposures resulting in a loss. We hold our cash deposits, cash equivalents, and short-term investments with financial institutions we believe to be of sound financial condition.

We are exposed to credit risk related to settlement assets and risk of loss related to our settlement obligations. We hold our settlement assets in major financial institutions we believe to be of sound financial condition. To mitigate the risk of loss due to non-performance or non-payment by a client, we perform credit risk evaluations based on multiple criteria and may require a cash deposit from the client depending on the risk profile. If a deposit is required, the cash is held in a segregated bank account for the duration of the relationship with the client. These deposits are restricted and are fully offset by corresponding liabilities and are included in other assets and other liabilities in our Balance Sheet.

We generally do not require collateral or other security to support accounts receivable. We evaluate the credit worthiness of our clients in conjunction with our revenue recognition processes, as well as through our ongoing collectability assessment processes for accounts receivable. We maintain an allowance for doubtful accounts receivable based upon factors surrounding the credit risk of specific clients, historical trends, and other information. We use various judgments and estimates in determining the adequacy of the allowance for doubtful accounts receivable. See Note 3 for additional details of our concentration of accounts receivable.

The activity in our allowance for doubtful accounts receivable is as follows (in thousands):

	2019	2018	2017
Balance, beginning of year	\$ 3,115	\$ 4,149	\$ 3,080
Additions to expense	778	462	2,434
Write-offs	(158)	(1,659)	(1,392)
Recoveries	—	—	5
Other	—	163	22
Balance, end of year	<u>\$ 3,735</u>	<u>\$ 3,115</u>	<u>\$ 4,149</u>

Property and Equipment. Property and equipment are recorded at cost (or at estimated fair value if acquired in a business combination) and are depreciated over their estimated useful lives ranging from three to ten years. Leasehold improvements are depreciated over the shorter of their economic life or the lease term. Depreciation expense is computed using the straight-line method for financial reporting purposes. Depreciation expense for all property and equipment is reflected in our Income Statements separately in the aggregate and is not included in the cost of revenues or the other components of operating expenses. Depreciation for income tax purposes is computed using accelerated methods.

Software. We expend substantial amounts on R&D, particularly for new solutions and services, or for enhancements of existing solutions and services. For development of software solutions that are to be licensed by us, we expense all costs related to the development of the software until technological feasibility is established. For development of software to be used internally (e.g., cloud-based systems software), we expense all costs prior to the application development stage.

During 2019, 2018, and 2017, we expended \$128.0 million, \$124.0 million, and \$113.2 million, respectively, on R&D projects. We did not capitalize any R&D costs in 2019, 2018, and 2017, as the costs subject to capitalization during these periods were not material. We did not have any capitalized R&D costs included in our December 31, 2019 and 2018 Balance Sheets.

Realizability of Long-Lived Assets. We evaluate our long-lived assets, other than goodwill, for possible impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. A long-lived asset is impaired if estimated future undiscounted cash flows associated with that asset are insufficient to recover the carrying amount of the long-lived asset. If deemed impaired, the long-lived asset is written down to its fair value.

Goodwill. We evaluate our goodwill for impairment on an annual basis. In addition, we evaluate our goodwill on a more periodic basis (e.g., quarterly) if events occur or circumstances change that could indicate a potential impairment may have occurred. Goodwill is considered impaired if the carrying value of the reporting unit which includes the goodwill is greater than the estimated fair value of the reporting unit.

Contingencies. We accrue for a loss contingency when: (i) it is probable that an asset has been impaired, or a liability has been incurred; and (ii) the amount of the loss can be reasonably estimated. The determination of accounting for loss contingencies is subject to various judgments and estimates. We do not record the benefit from a gain contingency until the benefit is realized.

Earnings Per Common Share ("EPS"). Basic and diluted EPS amounts are presented on the face of our Income Statements.

The reconciliation of the basic and diluted EPS denominators related to the common shares is included in the following table (in thousands):

	2019	2018	2017
Basic weighted-average common shares	32,051	32,488	32,415
Dilutive effect of restricted stock	282	218	444
Dilutive effect of Stock Warrants	132	149	6
Diluted weighted-average common shares	<u>32,465</u>	<u>32,855</u>	<u>32,865</u>

The Convertible Notes have a dilutive effect only in those quarterly periods in which our average stock price exceeds the current effective conversion price (see Note 5).

The Stock Warrants have a dilutive effect only in those quarterly periods in which our average stock price exceeds the exercise price of \$26.68 per warrant (under the treasury stock method) and are not subject to performance vesting conditions (see Note 12).

Potentially dilutive common shares related to unvested restricted stock and Stock Warrants were excluded from the computation of diluted EPS, as the effect was antidilutive, were not material in any period presented.

Equity Method Investment. During the twelve months ended December 31, 2019, we made an additional \$4.0 million investment in a payment technology and services company that enables omni-channel digital payments in Latin America. As of December 31, 2019 and 2018, we held an 8% and 4% noncontrolling interest with a carrying value of \$6.6 million and \$2.8 million, respectively.

Stock-Based Compensation. Stock-based compensation represents the cost related to stock-based awards granted to employees and non-employee directors. We measure stock-based compensation cost at the grant date of the award, based on the estimated fair value of the award and recognize the cost (net of estimated forfeitures) over the requisite service period.

Income Taxes. We account for income taxes using the asset and liability method. Under this method, income tax expense is recognized for the amount of taxes payable or refundable for the current year. In addition, deferred tax assets and liabilities are recognized for expected future tax consequences of temporary differences between the financial reporting and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

Accounting Pronouncements Adopted. In February 2016, the FASB issued ASU 2016-02, *Leases* (Topic 842) (“ASC 842”). This ASU requires lessees to recognize a lease liability and a right-of-use asset for all leases, including operating leases, with a term greater than twelve months on its balance sheet.

We adopted ASC 842 in January 2019, utilizing the effective date method of transition. Since we adopted ASC 842 utilizing the effective date method, prior period information in our Financial Statements has not been adjusted and continues to be as previously reported. We elected the package of practical expedients permitted under the transition guidance within the new standard. In conjunction with the adoption of ASC 842, we recorded a balance sheet gross up of approximately \$80 million, related to the right-of-use assets and lease liabilities, and have included the amortization of the right-of-use-assets in the changes in other current and non-current assets and liabilities and the accretion and payments of lease liabilities in the changes in trade accounts payable and accrued liabilities, respectively, on our Statement of Cash Flows.

3. Segment Reporting and Significant Concentration

Segment Information. We have evaluated how our chief operating decision maker has organized our company for purposes of making operating decisions and assessing performance, and have concluded that as of December 31, 2019, we have one reportable segment.

Solutions and Services. Our solutions and services help companies around the world monetize and digitally enable the customer experience by accurately capturing, managing, generating, and optimizing the interactions and revenues associated with their customers. We generate a substantial percentage of our revenues from customers utilizing Advanced Convergent Platform (“ACP”), a private cloud-based platform, and related customer communications management solutions (e.g. field force automation, analytics, electronic bill presentment, ACH, etc.) to the North American cable and satellite markets. In addition, a smaller portion of our revenues are generated from our public cloud revenue management and payments solutions serving service providers globally. These solutions serve a broad range of companies, including financial services, media and entertainment, government, and health care. Finally, we license certain solutions (e.g., mediation, partner management, rating, and charging) and provide our professional services to implement, configure, and maintain these solutions. These solutions are sometimes provided under a managed service arrangement, where we assume long-term responsibility for delivering our solutions and related operations under a defined scope and specified service levels.

Geographic Regions. For 2019, 2018, and 2017, revenues attributable to our operations in the Americas were 87%, 85%, and 85%, respectively. We use the location of the client as the basis of attributing revenues to individual regions.

Financial information relating to our operations by geographic region is as follows (in thousands):

Total Revenues:

	2019	2018	2017
Americas (principally the U.S.)	\$ 866,831	\$ 740,885	\$ 669,712
Europe, Middle East and Africa (principally Europe)	91,685	89,924	72,120
Asia Pacific	38,294	44,250	47,750
Total revenues	<u>\$ 996,810</u>	<u>\$ 875,059</u>	<u>\$ 789,582</u>

Property and Equipment:

	As of December 31,		
	2019	2018	2017
Americas (principally the U.S.)	\$ 70,990	\$ 72,079	72,079
Europe, Middle East and Africa (principally Europe)	1,564	2,056	2,056
Asia Pacific	11,875	7,678	7,678
Total property and equipment	<u>\$ 84,429</u>	<u>\$ 81,813</u>	<u>\$ 81,813</u>

Significant Clients and Industry Concentration. A large percentage of our revenues have been generated from our two largest clients, which are Comcast Corporation (“Comcast”) and Charter Communications, Inc. (“Charter”).

Revenues from these clients represented the following percentages of our total revenues for the following years:

	2019	2018	2017
Comcast	23%	25%	28%
Charter	20%	20%	22%

As of December 31, 2019 and 2018, the percentage of net billed accounts receivable balances attributable to these clients were as follows:

	As of December 31,		
	2019	2018	2017
Comcast	24%	24%	24%
Charter	24%	21%	21%

We expect to continue to generate a significant percentage of our future revenues from our largest clients, mentioned above. There are inherent risks whenever a large percentage of total revenues are concentrated with a limited number of clients. Should a significant client: (i) terminate or fail to renew their contracts with us, in whole or in part for any reason; (ii) significantly reduce the number of customer accounts processed on our solutions, the price paid for our solutions and services, or the scope of solutions and services that we provide; or (iii) experience significant financial or operating difficulties, it could have a material adverse effect on our financial position and results of operations.

4. Long-Lived Assets

Property and Equipment. Property and equipment at December 31 consisted of the following (in thousands, except years):

	Useful Lives (Years)	2019	2018
Computer equipment	3-6	\$ 88,701	\$ 84,814
Leasehold improvements	5-10	25,778	22,494
Operating equipment	3-8	59,864	58,521
Furniture and fixtures	8	8,115	9,262
		<u>182,458</u>	<u>175,091</u>
Less - accumulated depreciation		(98,029)	(93,278)
Property and equipment, net		<u>\$ 84,429</u>	<u>\$ 81,813</u>

Goodwill. We do not have any intangible assets with indefinite lives other than goodwill. A rollforward of goodwill in 2018 and 2019 is as follows (in thousands):

January 1, 2018 balance	\$	210,080
Adjustments related to prior acquisitions		(60)
Goodwill acquired during period		51,591
Effects of changes in foreign currency exchange rates		(5,795)
December 31, 2018 balance		255,816
Adjustments related to prior acquisitions		640
Effects of changes in foreign currency exchange rates		2,708
December 31, 2019 balance	\$	259,164

Other Intangible Assets. Our intangible assets subject to ongoing amortization consist of acquired client contracts and software.

Acquired Client Contracts. As of December 31, 2019 and 2018, the carrying values of our acquired client contracts were as follows (in thousands):

	December 31, 2019			December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Acquired client contracts	\$ 148,872	\$ (93,767)	\$ 55,105	\$ 148,148	\$ (82,692)	\$ 65,456

The aggregate amortization related to client contracts included in our operations for 2019, 2018, and 2017 was as follows (in thousands):

	2019	2018	2017
Investments in client contracts (1)	\$ -	\$ -	\$ 7,402
Capitalized costs (2)	-	-	5,141
Acquired client contracts (3)	10,374	7,898	5,406
Total client contracts	\$ 10,374	\$ 7,898	\$ 17,949

- (1) Investments in client contracts consist principally of incentives provided to new or existing clients to convert their customer accounts to, or retain their customer's accounts on, our customer care and billing systems. As part of the adoption of ASC 606 in 2018, these were reclassified to client contract costs on our Balance Sheets.
- (2) Capitalized costs are related to client conversion/set-up services related to long-term cloud-based or managed services arrangements. As part of the adoption of ASC 606, in 2018 these were reclassified to client contract costs on our Balance Sheets.
- (3) Acquired client contracts represent assets acquired in our prior business acquisitions. Acquired client contracts are being amortized over their estimated useful lives ranging from two to twenty years based on the approximate pattern in which the economic benefits of the intangible assets are expected to be realized, with the amortization expense included as cost of revenues in our Income Statements.

The weighted-average remaining amortization period of the acquired client contract as of December 31, 2019 was approximately 109 months. Based on the net carrying value of these acquired client contracts, the estimated amortization for each of the five succeeding fiscal years ending December 31 will be: 2020 – \$9.5 million; 2021 – \$6.8 million; 2022 – \$6.5 million; 2023 – \$5.5 million; and 2024 – \$5.3 million.

Software. Software consists of: (i) software and similar intellectual property rights from various business combinations; and (ii) internal use software. As of December 31, 2019 and 2018, the carrying values of our software assets were as follows (in thousands):

	2019			2018		
	Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Acquired software (4)	\$ 75,370	\$ (68,157)	\$ 7,213	\$ 75,156	\$ (65,719)	\$ 9,437
Internal use software (5)	82,593	(57,280)	25,313	80,625	(53,662)	26,963
Total software	\$ 157,963	\$ (125,437)	\$ 32,526	\$ 155,781	\$ (119,381)	\$ 36,400

The aggregate amortization related to software included in our operations for 2019, 2018, and 2017 was as follows (in thousands):

	2019	2018	2017
Acquired software (4)	\$ 2,229	\$ 1,801	\$ 1,458
Internal use software (5)	10,641	9,517	7,845
Total software	<u>\$ 12,870</u>	<u>\$ 11,318</u>	<u>\$ 9,303</u>

- (4) Acquired software represents the software intangible assets acquired in our prior business acquisitions, which are being amortized over their estimated useful lives ranging from two to fifteen years.
- (5) Internal use software represents: (i) third-party software licenses; and (ii) the internal and external costs related to the implementation of the third-party software licenses. Internal use software is amortized over its estimated useful life ranging from twelve months to ten years.

The weighted-average remaining amortization period of the software intangible assets as of December 31, 2019 was approximately 43 months. Based on the net carrying value of these intangible assets, the estimated amortization for each of the five succeeding fiscal years ending December 31 will be: 2020 – \$12.0 million; 2021 – \$8.4 million; 2022 – \$6.1 million; 2023 – \$3.8 million; and 2024 – \$0.9 million.

Client Contract Costs. As of December 31, 2019 and 2018, the carrying values of our client contract cost assets, related to those contracts with a contractual term greater than one year, were as follows (in thousands):

	December 31, 2019			December 31, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Client contract incentives (6)	\$ 4,626	\$ (1,612)	\$ 3,014	\$ 28,366	\$ (20,833)	\$ 7,533
Capitalized costs (7)	68,085	(26,482)	41,603	44,469	(20,230)	24,239
Capitalized commission fees (8)	9,561	(3,432)	6,129	7,505	(1,988)	5,517
Total client contract costs	<u>\$ 82,272</u>	<u>\$ (31,526)</u>	<u>\$ 50,746</u>	<u>\$ 80,340</u>	<u>\$ (43,051)</u>	<u>\$ 37,289</u>

The aggregate amortization related to our client contract costs included in our operations for 2019 and 2018 was as follows (in thousands):

	2019	2018
Client contract incentives (6)	\$ 6,018	\$ 11,052
Capitalized costs (7)	12,625	10,304
Capitalized commission fees (8)	2,136	2,025
Total client contract costs	<u>\$ 20,779</u>	<u>\$ 23,381</u>

- (6) Client contract incentives consist principally of incentives provided to new or existing clients to convert their customer accounts to, or retain their customer's account on, our outsourced solutions and are amortized ratably over the contract period to include renewal periods, if applicable, which as of December 31, 2019, have termination dates that range from 2023 to 2025. The amortization of client contract incentives is reflected as a reduction in cloud and related solutions revenues.
- (7) Capitalized costs are related to client conversion/set-up activities and direct material costs to fulfill long-term cloud-based or managed services arrangements. These costs are amortized over the contract period based on the transfer of goods or services to which the assets relate, which as of December 31, 2019, range from 2020 to 2028, and are included in cost of cloud and related solutions.
- (8) Capitalized commission fees are incremental commissions paid as a result of obtaining a customer contract. These fees are amortized over the contract period based on the transfer of goods or services to which the assets relate, which as of December 31, 2019, range from 2020 to 2026, and are included in selling, general and administrative ("SG&A") expenses. Incremental commission fees incurred as a result of obtaining a customer contract are expensed when incurred if the amortization period of the asset that we otherwise would have recognized is one year or less (a practical expedient allowed under ASC 606).

5. Debt

As of December 31, 2019 and 2018, our long-term debt was as follows (in thousands):

	December 31, 2019	December 31, 2018
<i>2018 Credit Agreement:</i>		
Term loan, due March 2023, interest at adjusted LIBOR plus 1.5% (combined rate of 3.44% at December 31, 2019 and 4.30% at December 31, 2018)	\$ 136,875	\$ 144,375
Less – deferred financing costs	(1,715)	(2,281)
2018 term loan, net of unamortized discounts	135,160	142,094
\$200 million revolving loan facility, due March 2023, interest at adjusted LIBOR plus applicable margin	—	—
<i>2016 Convertible Notes:</i>		
Convertible Notes – Senior convertible notes; due March 15, 2036; cash interest at 4.25%	230,000	230,000
Less – unamortized original issue discount	(6,004)	(8,823)
Less – deferred financing costs	(2,334)	(3,445)
2016 Convertible Notes, net of unamortized discounts	221,662	217,732
Total debt, net of unamortized discounts	356,822	359,826
Current portion of long-term debt, net of unamortized discounts	(10,313)	(7,500)
Long-term debt, net of unamortized discounts	\$ 346,509	\$ 352,326

2018 Credit Agreement

On March 5, 2018, we entered into a new \$350 million credit agreement (the “2018 Credit Agreement”) with a consortium of banks to replace the amended and restated \$350 million credit agreement entered into in February 2015, (the “2015 Credit Agreement”).

The 2018 Credit Agreement provides borrowings in the form of: (i) a \$150 million aggregate principal five-year term loan (the “2018 Term Loan”); and (ii) a \$200 million aggregate principal five-year revolving loan facility (the “2018 Revolver”). With the \$150 million proceeds from the 2018 Term Loan, we repaid the outstanding \$120 million balance of the term loan under the 2015 Credit Agreement, resulting in a net increase of available cash by \$30 million, a portion of which was used to pay certain fees and expenses in connection with the refinancing, and the remainder of which was used for general corporate purposes.

The interest rates under the 2018 Credit Agreement are based upon our choice of an adjusted LIBOR rate plus an applicable margin of 1.50% - 2.50%, or an alternate base rate plus an applicable margin of 0.50% - 1.50%, with the applicable margin, depending on our then-net secured total leverage ratio. We will pay a commitment fee of 0.200% - 0.375% of the average daily unused amount of the 2018 Revolver, with the commitment fee rate also dependent upon our then-net secured total leverage ratio. If the LIBOR rate is no longer available, then our interest rate under the Credit Agreement will be determined by the alternate base rate plus an applicable margin as discussed above. The 2018 Credit Agreement includes mandatory repayments of the aggregate principal amount of the 2018 Term Loan (payable quarterly) for the first, second, third, fourth, and fifth years, with the remaining principal balance due at maturity. The 2018 Credit Agreement has no prepayment penalties and requires mandatory repayments under certain circumstances, including: (i) asset sales or casualty proceeds; and (ii) proceeds of debt or preferred stock issuances.

The 2018 Credit Agreement contains customary affirmative covenants. In addition, the 2018 Credit Agreement has customary negative covenants that places limits on our ability to: (i) incur additional indebtedness; (ii) create liens on our property; (iii) make investments; (iv) enter into mergers and consolidations; (v) sell assets; (vi) declare dividends or repurchase shares; (vii) engage in certain transactions with affiliates; (viii) prepay certain indebtedness; and (ix) issue capital stock of subsidiaries. We must also meet certain financial covenants to include: (i) a maximum total leverage ratio; (ii) a maximum first-lien leverage ratio; and (iii) a minimum interest coverage ratio. In conjunction with the 2018 Credit Agreement, we entered into a security agreement in favor of Bank of America N.A, as collateral agent (the “Security Agreement”). Under the Security Agreement and 2018 Credit Agreement, certain of our domestic subsidiaries have guaranteed our obligations, and have pledged substantially all of our assets to secure the obligations under the 2018 Credit Agreement and such guarantees.

During the year ended December 31, 2019, we made \$7.5 million of principal repayments on our 2018 Credit Agreement. As of December 31, 2019, our interest rate on the 2018 Term Loan is 3.44% (adjusted LIBOR plus 1.50% per annum), effective through March 31, 2020, and our commitment fee on the 2018 Revolver is 0.20%. As of December 31, 2019, we had no borrowings outstanding on our 2018 Revolver and had the entire \$200 million available to us.

In conjunction with the closing of the 2018 Credit Agreement, we incurred financing costs of \$1.5 million. When combined with the remaining deferred financing costs of the 2015 Credit Agreement, financing costs of \$2.8 million have been deferred and are being amortized to interest expense using the effective interest method over the related term of the 2018 Credit Agreement. Additionally, as certain lenders from the 2015 Credit Agreement chose not to participate in the 2018 Credit Agreement syndication group, we wrote-off \$0.8 million of unamortized debt issuance costs and recognized a loss on extinguishment of that debt.

2016 Convertible Notes

In March 2016, we completed an offering of \$230 million of 4.25% senior convertible notes due March 15, 2036 (the “2016 Convertible Notes”) to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended. The 2016 Convertible Notes are unsecured obligations and pay 4.25% annual cash interest, payable semiannually in arrears on March 15 and September 15 of each year.

The 2016 Convertible Notes will be convertible at the option of the note holders upon the satisfaction of specified conditions and during certain periods. During the period from, and including, December 15, 2021 to the close of business on the business day immediately preceding March 15, 2022 and on or after December 15, 2035, holders may convert all or any portion of their 2016 Convertible Notes at the conversion rate then in effect at any time regardless of these conditions. Under the terms of the 2016 Convertible Notes, we will adjust the conversion rate for any quarterly dividends exceeding \$0.185 per share. As of December 31, 2019, the conversion rate was 17.5843 shares of our common stock per \$1,000 principal amount of the 2016 Convertible Notes, which is equivalent to an initial conversion price of \$56.87 per share of our common stock. As of December 31, 2019, none of the conversion features have been achieved, and thus, the 2016 Convertible Notes are not convertible by the holders.

We will settle conversions of the 2016 Convertible Notes by paying or delivering, as the case may be, cash, shares of our common stock, or a combination thereof, at our election. It is our current intent and policy to settle our conversion obligations as follows: (i) pay cash for 100% of the par value of the 2016 Convertible Notes that are converted; and (ii) to the extent the value of our conversion obligation exceeds the par value, we can satisfy the remaining conversion obligation in our common stock, cash or a combination thereof. As of December 31, 2019, the value of our conversion obligation did not exceed the par value of the 2016 Convertible Notes.

Holders may require us to repurchase the 2016 Convertible Notes for cash on each of March 15, 2022, March 15, 2026, and March 15, 2031, or upon the occurrence of a fundamental change (as defined in the 2016 Convertible Notes Indenture (the “2016 Notes Indenture”)) in each case at a purchase price equal to the principal amount thereof plus accrued and unpaid interest.

We may not redeem the 2016 Convertible Notes prior to March 20, 2020. On or after March 20, 2020, we may redeem for cash all or part of the 2016 Convertible Notes if the last reported sale price of our common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption. On or after March 15, 2022, we may redeem for cash all or part of the 2016 Convertible Notes regardless of the sales price condition described in the preceding sentence. In each case, the redemption price will equal the principal amount of the 2016 Convertible Notes to be redeemed, plus accrued and unpaid interest.

The 2016 Notes Indenture includes customary terms and covenants, including certain events of default after which the 2016 Convertible Notes may be due and payable immediately. The 2016 Notes Indenture contains customary affirmative covenants, including compliance with terms of certain other indebtedness of the Company over a defined threshold amount.

The remaining original issue discount (“OID”) related to the 2016 Convertible Notes is being amortized to interest expense through December 15, 2021, the first date the 2016 Convertible Notes can be put back to us by the holders.

Estimated Maturities on Long-Term Debt

As of December 31, 2019, the maturities of our long-term debt, based upon: (i) the mandatory repayment schedule for the 2018 Term Loan; and (ii) the expected remaining life of the 2016 Convertible Notes, was as follows (in thousands):

	2020	2021	2022	2023	Total
2018 Term Loan	\$ 10,313	\$ 14,062	\$ 15,000	\$ 97,500	\$ 136,875
2016 Convertible Notes	—	230,000	—	—	230,000
Total long-term debt repayments	<u>\$ 10,313</u>	<u>\$ 244,062</u>	<u>\$ 15,000</u>	<u>\$ 97,500</u>	<u>\$ 366,875</u>

Deferred Financing Costs

As of December 31, 2019, net deferred financing costs related to the 2018 Credit Agreement were \$1.7 million, and are being amortized to interest expense over the related term of the 2018 Credit Agreement (through March 2023). As of December 31, 2019, net deferred financing costs related to the 2016 Convertible Notes were \$2.3 million, and are being amortized to interest expense through December 15, 2021, the first date the 2016 Convertible Notes can be put back to us by the holders. The net deferred financing costs are presented as a reduction from the carrying amount of the corresponding debt liability in our Balance Sheets. Interest expense for 2019, 2018, and 2017 includes amortization of deferred financing costs of \$1.8 million, \$1.9 million, and \$2.4 million, respectively. The weighted-average interest rate on our debt borrowings, including amortization of OID, amortization of deferred financing costs, and commitment fees on the revolving loan facility, for 2019, 2018, and 2017, was approximately 6%, 5%, and 5%, respectively.

6. Leases

We have operating leases for: (i) real estate which include both office space and statement production and mailing facilities; (ii) our outsourced data center environment, as discussed further in Note 11; and (iii) operating equipment. Our leases have remaining terms of up to eight years, some of which include options to extend the leases for up to an additional ten years. For leases commencing prior to 2019, we used the noncancelable term to calculate the related right-of-use asset and corresponding lease liability. The exercise of lease renewal options is at our sole discretion. Additionally, certain of our leases include payments that are adjusted periodically for inflation.

We have made an accounting policy election not to recognize on our balance sheet, leases with an initial term of twelve months or less, for any class of underlying asset. We have also made an election for real estate leases beginning in 2019 and later, not to separate the lease and non-lease components, but rather account for the entire arrangement as a single lease component (a practical expedient allowed under ASC 842). For our outsourced data center environment agreement, we have concluded that there are lease and non-lease components, and have allocated the consideration in the agreement on a relative stand-alone price basis. Due to the significant assumptions and judgements required in accounting for leases (to include whether a contract contains a lease, the allocation of the consideration, and the determination of the discount rate), the judgements and estimates made could have a significant effect on the amount of assets and liabilities recognized.

We sublease certain of our leased real estate to third parties. These subleases have remaining lease terms of up to four years and certain subleases have renewal terms that can extend the lease for up to an additional two years.

The components of lease expense were as follows (in thousands):

	Year Ended
	December 31, 2019
Operating lease expense	\$ 24,670
Variable lease expense	4,647
Short-term lease expense	583
Sublease income	(1,710)
Total net lease expense	<u>\$ 28,190</u>

Other information related to leases was as follows (in thousands, except term and discount rate):

	Year Ended
	December 31, 2019
Supplemental Cash Flows Information:	
Cash paid for amounts included in the measurement of operating lease liabilities	\$ 24,006
Right-of-use assets obtained in exchange for new operating lease liabilities	33,782
Weighted-average remaining lease term - operating leases	59 months
Weighted-average discount rate - operating leases	4.32%

Future minimum lease payments under non-cancelable leases as of December 31, 2019 were as follows (in thousands):

2020	\$ 25,976
2021	25,134
2022	20,251
2023	15,097
2024	13,848
Thereafter	12,639
Total future minimum lease payments (1)	112,945
Less: Interest (2)	(11,567)
Total	<u>\$ 101,378</u>
Current operating lease liabilities	\$ 22,442
Non-current operating lease liabilities	78,936
Total	<u>\$ 101,378</u>

- (1) For leases commencing prior to 2019, minimum lease payments exclude payments for real estate taxes and non-lease components.
- (2) We used our functional currency adjusted incremental borrowing rate for the discount rate for the leases at adoption date and will use the same approach for all leases commencing thereafter.

As of December 31, 2019, we have an operating lease for office space that has not yet commenced of approximately \$23 million. This operating lease will commence during 2020 with a lease term through 2031. Additionally, prior to December 31, 2019 we entered into an agreement to upgrade the processors at our outsourced data center environment in 2020. As a result, when we have access and control of the new asset, we will account for the termination of the original agreement by writing off the remaining right-of-use asset and lease liability, and recording a new right-of-use asset and lease liability. At this time, we expect the net impact of these entries will increase the related right-of-use asset and lease liability by approximately \$12 million.

Future minimum lease payments under non-cancelable leases as of December 31, 2018 were as follows: 2019 – \$16.6 million; 2020 – \$14.1 million; 2021 – \$13.1 million; 2022 – \$11.5 million; 2023 – \$9.6 million; and thereafter – \$14.7 million. Total lease expense for 2018 and 2017 was \$19.0 million and \$16.4 million, respectively.

7. Acquisitions

Business Ink, Co. On February 28, 2018, we acquired Business Ink for a purchase price of approximately \$70 million. Business Ink was a central communications provider of outsourced, customized business communications services to the telecommunications, healthcare, financial services, utilities and government sectors across statements, email, mobile messaging and more. The acquisition extended the scale of our operations and platform capabilities, expanded our customer base into new verticals, and further solidified our customer communications footprint.

Forte Payment Systems, Inc. On October 1, 2018, we acquired Forte for a purchase price of approximately \$93 million (approximately \$85 million, excluding cash acquired), of which approximately \$13 million of the purchase price was initially held back subject to certain tax filings, and then paid in July 2019. Forte was a leading provider of advanced payment solutions. The acquisition accelerated our ability to offer a comprehensive suite of next generation payment solutions that enables service providers to provide a differentiated customer experience while also strengthening our position in the revenue management and payment sector and allowed us to grow our footprint into new verticals. The purchase agreement also includes provisions for \$18.8 million of potential future earn-out payments over a four-year measurement period. The earn-out payments are tied to performance-based goals and a defined service period by the eligible recipients and is being accounted for as post-acquisition compensation. As of December 31, 2019, we have accrued \$2.5 million related to the potential earn-out payments. There were no material changes to Forte’s purchase accounting estimated fair values of assets acquired and liabilities assumed during 2019.

Subsequent Event – Tekzenit, Inc. In January 2020, we acquired certain assets of Tekzenit, Inc. (“Tekzenit”) for a purchase price of approximately \$10 million. This acquisition will allow us to accelerate our go-to-market approach serving clients who are focused on improving their customers’ experience while transforming their business. The purchase agreement includes provisions for additional purchase price payments in the form of earn-out and qualified sales payments for up to \$10 million over a three-year measurement period upon meeting certain financial and sales criteria. The results of Tekzenit will be included in our results of operations for the period subsequent to the acquisition date.

8. Restructuring and Reorganization Charges

Restructuring and reorganization charges are expenses that generally result from cost reduction initiatives and/or significant changes to our business, to include such things as involuntary employee terminations, changes in management structure, divestitures of businesses, facility consolidations and abandonments, impairment of acquired intangible assets, and fundamental reorganizations impacting operational focus and direction. The following are the key restructuring and reorganizational activities we incurred over the last three years that have impacted our results from operations:

During 2019 we implemented the following restructuring activities:

- We reduced our workforce by approximately 70 employees, primarily in North America, as a result of organizational changes and efficiencies. As a result, we incurred restructuring charges related to involuntary terminations of \$2.5 million.

During 2018 we implemented the following restructuring activities:

- We reduced our workforce by approximately 170 employees as a result of organizational changes made to pursue global opportunities and efficiencies. As a result, we incurred restructuring charges related to involuntary terminations of \$6.2 million.
- We closed one of our print facilities. As a result, we incurred restructuring charges related to involuntary terminations and impairment of assets of \$2.7 million.
- We reversed a liability related to a previous disposition of a business resulting in a reduction in restructuring charges of \$2.3 million.

During 2017 we implemented the following restructuring activities:

- We reduced our workforce by approximately 60 employees, primarily in North America, as a result of organizational changes made to pursue global opportunities and efficiencies. As a result, we incurred restructuring charges related to involuntary terminations of \$3.7 million.
- We impaired a long-term receivable related to the disposition of a business in 2013 resulting in additional restructuring charges of \$2.9 million.
- We abandoned space at several locations to improve our space utilization, resulting in restructuring charges of \$2.2 million.

The activities discussed above resulted in total charges for 2019, 2018, and 2017 of \$4.8 million, \$8.7 million, and \$8.8 million, respectively, which have been reflected as a separate line item in our Income Statements.

The activity in the business restructuring and reorganization reserves during 2017, 2018, and 2019 is as follows (in thousands):

	Termination Benefits	Facilities Abandonment	Disposition of Business Operations	Other	Total
January 1, 2017, balance	\$ 2,414	\$ 1,332	\$ —	\$ —	\$ 3,746
Charged to expense during period	3,693	2,236	2,904	(37)	8,796
Cash payments	(4,345)	(1,329)	—	—	(5,674)
Adjustment for asset impairment	—	(231)	(2,904)	—	(3,135)
Other	(646)	1,024	—	37	415
December 31, 2017, balance	1,116	3,032	—	—	4,148
Charged to expense during period	6,555	1,981	(2,330)	2,455	8,661
Cash payments	(6,744)	(2,625)	—	—	(9,369)
Adjustment for asset impairment	—	—	—	(1,851)	(1,851)
Other	475	546	2,330	(604)	2,747
December 31, 2018, balance	1,402	2,934	—	—	4,336
Charged to expense during period	2,499	—	—	2,335	4,834
Cash payments	(3,551)	—	—	(1,987)	(5,538)
Adjustment for asset impairment	—	—	—	(438)	(438)
Adjustment for adoption of ASC 842 (1)	—	(2,934)	—	—	(2,934)
Other	472	—	—	90	562
December 31, 2019, balance	\$ 822	\$ —	\$ —	\$ —	\$ 822

- (1) With the adoption of ASC 842 on January 1, 2019, the facilities abandonment liabilities of \$2.9 million were offset against our initial lease right-of-use assets on our Balance Sheet (see Notes 2 and 6 for further discussion of the adoption of ASC 842).

As of December 31, 2019, \$0.8 million of the business restructuring and reorganization reserves were included in current liabilities.

9. Income Taxes

Income Tax Provision/(Benefit). The components of net income before income taxes are as follows (in thousands):

	2019	2018	2017
Domestic	\$ 93,510	\$ 80,234	\$ 89,095
Foreign	12,213	6,753	(1,385)
Total	<u>\$ 105,723</u>	<u>\$ 86,987</u>	<u>\$ 87,710</u>

The income tax provision consists of the following (in thousands):

	2019	2018	2017
Current:			
Federal	\$ 16,616	\$ 7,814	\$ 13,422
State	2,910	4,589	1,909
Foreign	3,519	3,541	3,903
	<u>23,045</u>	<u>15,944</u>	<u>19,234</u>
Deferred:			
Federal	(1,943)	4,584	5,582
State	624	(619)	937
Foreign	1,227	948	593
	<u>(92)</u>	<u>4,913</u>	<u>7,112</u>
Total income tax provision	<u>\$ 22,953</u>	<u>\$ 20,857</u>	<u>\$ 26,346</u>

The difference between our income tax provision computed at the statutory Federal income tax rate and our financial statement income tax is summarized as follows (in thousands):

	2019	2018	2017
Provision at Federal rate of 21% for 2019 and 2018, 35% for 2017)	\$ 22,202	\$ 18,267	\$ 30,699
State income taxes, net of Federal impact	2,792	2,985	1,850
Research and experimentation credits	(3,314)	(4,040)	(2,853)
Stock award vesting	(3,661)	(1,513)	(7,882)
Tax uncertainties	(56)	(122)	166
Section 199 manufacturing deduction	—	168	(962)
Section 162(m) compensation limitation	978	951	273
Foreign rate differential	930	1,238	162
Valuation allowance for deferred tax assets	(495)	(177)	2,351
Other impact of foreign operations	2,635	2,755	3,933
Statutory rate change	(10)	(87)	(2,210)
Other	952	432	819
Total income tax provision	<u>\$ 22,953</u>	<u>\$ 20,857</u>	<u>\$ 26,346</u>

We have undistributed earnings of approximately \$49 million from certain foreign subsidiaries. We intend to indefinitely reinvest these foreign earnings; therefore, a provision has not been made for foreign withholding taxes that might be payable upon remittance of such earnings. Determination of the amount of unrecognized deferred tax liability on unremitted foreign earnings is not practicable because of the complexities of the hypothetical calculation. The Tax Cuts and Jobs Act (the "Tax Reform Act"), see further discussion below, effectively eliminates the U.S. tax consequences of unremitted earnings at December 31, 2017 due to inclusion of a deemed repatriation tax on such earnings. In addition, the Tax Reform Act establishes a participation exemption from the taxation of future dividends received from 10% or more owned foreign subsidiaries.

Deferred Income Taxes. Net deferred income tax assets as of December 31, 2019 and 2018 are as follows (in thousands):

	2019	2018
Deferred income tax assets	\$ 71,343	\$ 51,533
Deferred income tax liabilities	(48,411)	(28,837)
Valuation allowance	(19,916)	(19,814)
Net deferred income tax assets	<u>\$ 3,016</u>	<u>\$ 2,882</u>

The components of our net deferred income tax assets (liabilities) as of December 31, 2019 and 2018 are as follows (in thousands):

	2019	2018
Net deferred income tax assets:		
Accrued expenses and reserves	\$ 8,810	\$ 7,180
Stock-based compensation	4,844	3,695
Software	(1,556)	(3,001)
Client contracts and related intangibles	(7,771)	(3,741)
Goodwill	(7,431)	(6,635)
Net operating loss carryforwards	25,989	24,857
Property and equipment	(4,410)	(8,315)
Convertible debt securities	—	19
Deferred revenue	1,307	2,606
State Taxes	1,387	4,520
Contingent payments	(1,710)	(2,333)
Foreign exchange gain/loss	1,340	2,048
R&D credit	207	1,413
Operating lease right-of-use assets and lease liabilities	1,611	—
Other	315	383
Total deferred income tax assets	<u>22,932</u>	<u>22,696</u>
Less: valuation allowance	(19,916)	(19,814)
Net deferred income tax assets	<u>\$ 3,016</u>	<u>\$ 2,882</u>

We regularly assess the likelihood of the future realization of our deferred income tax assets. To the extent we believe that it is more likely than not that a deferred income tax asset will not be realized, a valuation allowance is established. As of December 31, 2019, we believe we will generate sufficient taxable income in the future such that we will realize 100% of the benefit of our U.S. Federal deferred income tax assets, thus no valuation allowance has been established. As of December 31, 2019, we have deferred income tax assets net of federal benefit related to state and foreign income tax jurisdictions of \$3.8 million and \$26.8 million, respectively, and have established valuation allowances against those deferred income tax assets of \$2.4 million and \$17.5 million, respectively.

As of December 31, 2019 and 2018, we have an acquired U.S. Federal net operating loss (“NOL”) carryforward of approximately \$29 million and \$34 million, respectively, which will begin to expire in 2024 and can be utilized through 2030. The acquired U.S. Federal NOL carryforward is attributable to the pre-acquisition periods of acquired subsidiaries. The annual utilization of this U.S. Federal NOL carryforward is limited pursuant to Section 382 of the Internal Revenue Code of 1986, as amended. In addition, as of December 31, 2019 and 2018, we have: (i) state NOL carryforwards of approximately \$51 million and \$49 million, respectively, which will expire beginning in 2020 and end in 2044; and (ii) foreign subsidiary NOL carryforwards of approximately \$96 million and \$97 million, respectively, which will expire beginning in 2020, with a portion of the losses available over an indefinite period of time.

Our 2004 Convertible Debt Securities, which we fully extinguished in 2011, were subject to special U.S. Treasury regulations governing contingent payment debt instruments. These regulations allowed us to take a tax deduction for interest expense on our U.S. Federal income tax return at a constant rate of 9.09% (subject to certain adjustments), compounded semi-annually, which represented the estimated yield on comparable non-contingent, non-convertible, fixed-rate debt instruments with terms and conditions otherwise similar to the 2004 Convertible Debt Securities. This interest expense tax deduction was greater than the interest expense reflected in the accompanying Income Statements, thus creating a deferred income tax liability. The extinguishment of the 2004 Convertible Debt Securities resulted in: (i) the holders of the 2004 Convertible Debt Securities not having the ability to achieve the 9.09% target yield, and (ii) a requirement for us to pay an amount equal to the cumulative deferred income tax liability to the U.S. tax authorities (without interest or penalties). During 2011, we paid cash of approximately \$6 million related to the deferred income tax liabilities associated with the 2004 Convertible Debt Securities repurchased in 2011. In 2018 and 2017 we paid cash of \$3.4 million, and \$5.6 million, respectively, related to the deferred income tax liabilities associated with the 2004 Convertible Debt Securities repurchased in 2009 and 2010.

Accounting for Uncertainty in Income Taxes. We are required to estimate our income tax liability in each jurisdiction in which we operate, including U.S. Federal, state and foreign income tax jurisdictions. Various judgments and estimates are required in evaluating our tax positions and determining our provisions for income taxes. During the ordinary course of business, there are certain transactions and calculations for which the ultimate income tax determination may be uncertain. In addition, we may be subject to examination of our income tax returns by various tax authorities, which could result in adverse outcomes. For these reasons, we establish a liability associated with unrecognized tax benefits based on estimates of whether additional taxes and interest may be due. This liability is adjusted based upon changing facts and circumstances, such as the closing of a tax audit, the expiration of a statute of limitations or the refinement of an estimate.

A reconciliation of the beginning and ending balances of our liability for unrecognized tax benefits is as follows (in thousands):

	2019	2018	2017
Balance, beginning of year	\$ 1,668	\$ 1,915	\$ 1,891
Additions based on tax positions related to current year	—	—	136
Audit Settlements	—	—	(183)
Lapse of statute of limitations	(420)	(226)	(174)
Additions for tax positions of prior years	322	85	257
Reductions for tax positions of prior years	(30)	(106)	(12)
Balance, end of year	<u>\$ 1,540</u>	<u>\$ 1,668</u>	<u>\$ 1,915</u>

We recognize interest and penalty expense associated with our liability for unrecognized tax benefits as a component of income tax expense in our Income Statements. In addition to the \$1.5 million, \$1.7 million, and \$1.9 million of liability for unrecognized tax benefits as of December 31, 2019, 2018, and 2017, we had \$0.6 million, \$0.6 million, and \$0.5 million, respectively, of income tax-related accrued interest, net of any federal benefit of deduction. If recognized, the \$1.5 million of unrecognized tax benefits as of December 31, 2019, would favorably impact our effective tax rate in future periods.

We file income tax returns in the U.S. Federal jurisdiction, various U.S. state and local jurisdictions, and many foreign jurisdictions. The U.S., U.K., and Australia are the primary taxing jurisdictions in which we operate. The years open for audit vary depending on the taxing jurisdiction. We estimate that it is reasonably possible that the amount of gross unrecognized tax benefits will decrease by up to \$0.3 million over the next twelve months due to completion of audits and the expiration of statute of limitations. We adopted ASU 2016-09, *Compensation – Stock Compensation* (Topic 718) in the first quarter of 2017. This ASU requires a change in the recognition of excess tax benefits and tax deficiencies, related to share-based payment transactions, which were recorded in equity, and now are recorded discrete to the quarter incurred as a component of income tax expense in the income statement. The adoption of this ASU provided an approximately \$0.4 million and \$1 million benefit to the income tax provision for 2019 and 2018, respectively.

U.S. Tax Cuts and Job Act. On December 22, 2017, the Tax Reform Act was passed into legislation. The Tax Reform Act amends the Internal Revenue Code, reducing the corporate income tax rate, changing or eliminating certain income tax deductions and credits and provides sweeping change to how U.S. companies are taxed on their international operations. The Tax Reform Act is generally effective for tax years beginning after December 31, 2017; however, certain provisions of the Tax Reform Act have effective dates beginning in 2017.

The Tax Reform Act reduced the U.S. maximum rate of income taxation from 35% to 21% applicable to taxable years beginning after December 31, 2017. In the fourth quarter of 2017, we recorded an estimated benefit of \$2.3 million from revaluation of our U.S.-based net deferred income tax liabilities in accordance with ASC Topic 740. In the fourth quarter of 2017 we recorded provisional amounts for the tax effects of the tax law change for which the accounting was not complete, and for which a reasonable estimate could be determined. In the fourth quarter of 2018 we completed the accounting for the tax effects of the tax law change with no additional adjustments recorded.

10. Employee Retirement Benefit Plans

Defined Contribution-Type Plans. We sponsor a defined contribution plan covering substantially all of our U.S.-based employees. Participants may contribute up to 100% of their eligible pay, subject to certain limitations, as pretax, salary deferral contributions. We make certain matching, and at our discretion, non-elective employer contributions to the plan. All contributions are subject to certain IRS limitations. The expense related to these contributions for 2019, 2018, and 2017 was \$11.3 million, \$12.8 million, and \$10.4 million, respectively. We also have defined contribution-type plans for certain of our non-U.S.-based employees. The total contributions made to these plans in 2019, 2018, and 2017 were \$4.1 million, \$4.5 million, and \$4.5 million, respectively.

11. Commitments, Guarantees and Contingencies

Service Agreements. We have an agreement with Ensono, Inc. (“Ensono”) to provide us outsourced computing services through September 30, 2025. We outsource the computer processing and related services required for the operation of our outsourced ACP solutions. Our ACP proprietary software and other software applications are run in an outsourced data center environment in order to obtain the necessary computer processing capacity and other computer support services without us having to make the substantial capital and infrastructure investments that would be necessary for us to provide these services internally. Our clients are connected to the outsourced data center environment through a combination of private and commercially-provided networks. Our ACP cloud-based solutions are generally considered to be mission critical customer management systems by our clients. As a result, we are highly dependent upon Ensono for system availability, security, and response time.

Warranties. We generally warrant that our solutions and related offerings will conform to published specifications, or to specifications provided in an individual client arrangement, as applicable. The typical warranty period is 90 days from delivery of the solution or offering. For certain service offerings we provide a limited warranty for the duration of the services provided. We generally warrant that services will be performed in a professional and workmanlike manner. The typical remedy for breach of warranty is to correct or replace any defective deliverable, and if not possible or practical, we will accept the return of the defective deliverable and refund the amount paid under the client arrangement that is allocable to the defective deliverable. Our contracts also generally contain limitation of damages provisions in an effort to reduce our exposure to monetary damages arising from breach of warranty claims. Historically, we have incurred minimal warranty costs, and as a result, do not maintain a warranty reserve.

Solution and Services Indemnifications. Our arrangements with our clients generally include an indemnification provision that will indemnify and defend a client in actions brought against the client that claim our products and/or services infringe upon a copyright, trade secret, or valid patent. Historically, we have not incurred any significant costs related to such indemnification claims, and as a result, do not maintain a reserve for such exposure.

Claims for Company Non-performance. Our arrangements with our clients typically cap our liability for breach to a specified amount of the direct damages incurred by the client resulting from the breach. From time-to-time, these arrangements may also include provisions for possible liquidated damages or other financial remedies for our non-performance, or in the case of certain of our outsourced customer care and billing solutions, provisions for damages related to service level performance requirements. The service level performance requirements typically relate to system availability and timeliness of service delivery. As of December 31, 2019, we believe we have adequate reserves, based on our historical experience, to cover any reasonably anticipated exposure as a result of our nonperformance for any past or current arrangements with our clients.

Indemnifications Related to Officers and the Board of Directors. We have agreed to indemnify members of our Board of Directors (the “Board”) and certain of our officers if they are named or threatened to be named as a party to any proceeding by reason of the fact that they acted in such capacity. We maintain directors’ and officers’ (“D&O”) insurance coverage to protect against such losses. We have not historically incurred any losses related to these types of indemnifications, and are not aware of any pending or threatened actions or claims against any officer or member of our Board. As a result, we have not recorded any liabilities related to such indemnifications as of December 31, 2019. In addition, as a result of the insurance policy coverage, we believe these indemnification agreements are not significant to our results of operations.

Legal Proceedings. From time-to-time, we are involved in litigation relating to claims arising out of our operations in the normal course of business.

12. Stockholders’ Equity

Stock Repurchase Program. We currently have a stock repurchase program, approved by our Board, authorizing us to repurchase shares of our common stock from time-to-time as market and business conditions warrant (the “Stock Repurchase Program”). During 2019, 2018, and 2017, we repurchased 576,000 shares of our common stock for \$25.5 million (weighted-average price of \$44.17 per share), 704,000 shares of our common stock for \$27.6 million (weighted-average price of \$39.23 per share), and 500,000 shares of our common stock for \$20.5 million (weighted-average price of \$41.10 per share), respectively, under a Securities and Exchange Commission (“SEC”) Rule 10b5-1 Plan.

As of December 31, 2019, the remaining number of shares available for repurchase under the Stock Repurchase Program totaled 5.0 million shares.

Stock Repurchases for Tax Withholdings. In addition to the above mentioned stock repurchases, during 2019, 2018, and 2017, we repurchased and then cancelled approximately 117,000 shares, 159,000 shares, and 249,000 shares for \$5.1 million, \$7.4 million, and \$10.1 million, respectively, of common stock from our employees in connection with minimum tax withholding requirements resulting from the vesting of restricted stock under our stock incentive plans.

Cash Dividend. During 2019, 2018, and 2017 our Board approved total cash dividends of \$0.89 per share, \$0.84 per share, and \$0.79 per share of common stock, totaling \$29.4 million, \$28.1 million, and \$26.8 million, respectively.

Warrants. In 2014, in conjunction with the execution of an amendment to our current agreement with Comcast, we issued stock warrants (the “Warrant Agreement”) for the right to purchase up to approximately 2.9 million shares of our common stock (the “Stock Warrants”) as an additional incentive for Comcast to convert new customer accounts onto our ACP cloud solution. The Stock Warrants have a 10-year term and an exercise price of \$26.68 per warrant.

Of the total Stock Warrants, 1.9 million Stock Warrants relate to Comcast’s existing residential business and vested as follows:

- The first 25% of these Stock Warrants (approximately 0.5 million) vested upon the successful conversion of the first 0.5 million customer accounts, which occurred during the fourth quarter of 2014.
- The next 25% of these Stock Warrants had a time-based vesting provision and vested in January 2015.
- The next 25% of these Stock Warrants vested after a cumulative total of 5.5 million customer accounts were converted onto ACP, which occurred in the fourth quarter of 2016.
- Of the last 25% of these Stock Warrants, 0.4 million vested upon completion of the conversion of all of Comcast’s approximately eleven million residential customer accounts onto ACP in the fourth quarter of 2017.

The remaining 1.0 million Stock Warrants relate to additional residential accounts that Comcast may acquire and convert onto ACP in the future and vest proportionately with acquired customer accounts converted onto ACP from other providers’ billing platforms, with full vesting based on a target of five million newly converted customer accounts.

Fifty percent of the unvested Stock Warrants become fully vested upon a fundamental change (including a change in control) of the Company, as defined, proportionally reducing the number of Stock Warrants eligible for vesting based on future performance conditions.

Once vested, Comcast may exercise the Stock Warrants and elect either physical delivery of common shares or net share settlement (cashless exercise). Alternatively, the exercise of the Stock Warrants may be settled with cash based solely on our approval, or if Comcast were to beneficially own or control in excess of 19.99% of the common stock or voting of the Company.

Upon vesting, the Stock Warrants were recorded as a client contract cost asset, as determined using the Black-Scholes option-pricing model, with the corresponding offset to stockholders’ equity. The client contract cost asset related to the Stock Warrants was amortized as a reduction in cloud and related solutions revenues over the original term of the Comcast amended agreement. As of June 30, 2019, the client contract cost asset related to these Stock Warrants was fully amortized. As of December 31, 2018, the client contact cost asset and accumulated amortization related to these Stock Warrants was \$25.1 million and \$19.8 million, respectively.

The remaining unvested Stock Warrants will be accounted for as a client contract cost asset once the performance conditions necessary for vesting are considered probable.

In January 2017, Comcast exercised 1.4 million vested Stock Warrants, which we net share settled under the provisions of the Warrant Agreement. In December 2019, Comcast exercised their remaining 0.4 million of vested Stock Warrants, which we net cash settled under the provision of the Warrant Agreement. The fair value of the Stock Warrants were \$24.6 million (weighted-average price of \$56.12 per share), resulting in a net cash settlement of \$12.9 million. The difference between the net cash settlement and the \$9.1 million carrying amount of the Stock Warrants was recorded as an adjustment to additional paid-in capital. As of December 31, 2019, 1.0 million Stock Warrants remain issued, none of which were vested.

13. Equity Compensation Plans

Stock Incentive Plan. In May 2018, our stockholders approved an increase of 2.7 million shares authorized for issuances under the Amended and Restated 2005 Stock Incentive Plan (the “2005 Plan”), from 18.7 million shares to 21.4 million shares. Shares reserved under the 2005 Plan can be granted to officers and other key employees of our company and its subsidiaries and to non-employee directors of our company in the form of stock options, stock appreciation rights, performance unit awards, restricted stock awards, or stock bonus awards. Shares granted under the 2005 Plan in the form of a performance unit award, restricted stock award, or stock bonus award are counted toward the aggregate number of shares of common stock available for issuance under the 2005 Plan as two shares for every one share granted or issued in payment of such award. As of December 31, 2019, 3.4 million shares were available for issuance, with 3.1 million shares available for grant.

Restricted Stock. We generally issue new shares (versus treasury shares) to fulfill restricted stock award grants. Restricted stock awards are granted at no cost to the recipient. Historically, our restricted stock awards have vested annually primarily over three or four years with no restrictions other than the passage of time (i.e., the shares are released upon calendar vesting with no further restrictions) (or “Time-Based Awards”). Unvested Time-Based Awards are typically forfeited and cancelled upon termination of employment with our company. Certain Time-Based Awards become fully vested (i.e., vesting accelerates) upon a change in control, as defined, and the subsequent involuntary termination of employment. The fair value of the Time-Based Awards (determined by using the closing market price of our common stock on the grant date) is charged to expense on a straight-line basis over the requisite service period for the entire award.

We also issue restricted stock shares to key members of management that vest upon meeting either pre-established financial performance objectives or total shareholder return objectives (“Performance-Based Awards”). The structure of the performance goals for the Performance-Based Awards has been approved by our stockholders. The Performance-Based Awards become fully vested (i.e., vesting accelerates) upon a change in control, as defined, and the subsequent involuntary termination of employment. The fair value of the Performance-Based Awards (determined by using the closing market price of our common stock on the grant date) is charged to expense on a straight-line basis over the requisite service period, taking into consideration the probability of vesting, for each separately vesting portion of the award as if the award is, in substance, multiple awards.

A summary of our unvested restricted stock activity during 2019 is as follows (shares in thousands):

	Shares	Weighted-Average Grant Date Fair Value
Unvested awards, beginning	1,145	\$ 41.64
Awards granted	530	41.69
Awards forfeited/cancelled	(168)	42.41
Awards vested	(390)	38.64
Unvested awards, ending	<u>1,117</u>	<u>\$ 42.60</u>

The weighted-average grant date fair value per share of restricted stock shares granted during 2019, 2018, and 2017 was \$41.69, \$45.57, and \$39.79, respectively. The total market value of restricted stock shares vesting during 2019, 2018, and 2017 was \$17.0 million, \$22.7 million, and \$29.5 million, respectively.

1996 Employee Stock Purchase Plan

As of December 31, 2019, we have an employee stock purchase plan whereby 1.7 million shares of our common stock have been reserved for sale to our U.S. employees through payroll deductions. The price for shares purchased under the plan is 85% of market value on the last day of the purchase period. Purchases are made at the end of each month. During 2019, 2018, and 2017, 54,949 shares, 68,902 shares, and 50,674 shares, respectively, were purchased under the plan for \$2.3 million (\$30.76 to \$48.99 per share), \$2.4 million (\$27.00 to \$39.68 per share), and \$1.8 million (\$31.88 to \$41.14 per share), respectively. As of December 31, 2019, 222,260 shares remain eligible for purchase under the plan.

Stock-Based Compensation Expense

We recorded stock-based compensation expense of \$19.9 million, \$19.4 million, and \$21.0 million, respectively, for 2019, 2018, and 2017. As of December 31, 2019, there was \$28.6 million of total compensation cost related to unvested awards not yet recognized. That cost, excluding the impact of forfeitures, is expected to be recognized over a weighted-average period of 2.2 years.

We recorded a deferred income tax benefit related to stock-based compensation expense during 2019, 2018, and 2017, of \$4.3 million, \$4.4 million, and \$7.1 million, respectively. The actual income tax benefit realized for the tax deductions from the vesting of restricted stock for 2019, 2018, and 2017, totaled \$3.9 million, \$5.3 million, and \$11.0 million, respectively.

14. Unaudited Quarterly Financial Data

	Quarter Ended			
	March 31	June 30	September 30	December 31
	(in thousands, except per share amounts)			
2019 (1):				
Total revenues	\$ 244,793	\$ 245,856	\$ 251,414	\$ 254,747
Total cost of revenues (exclusive of depreciation)	128,963	132,234	132,054	131,871
Operating income (2)	32,093	30,338	33,420	30,258
Income before income taxes (2)	25,851	26,837	28,821	24,214
Income tax provision (3)	(6,600)	(7,458)	(7,262)	(1,633)
Net income (2)(3)	19,251	19,379	21,559	22,581
Basic earnings per common share (2)(3)	\$ 0.60	\$ 0.60	\$ 0.67	\$ 0.71
Diluted earnings per common share (2)(3)	0.59	0.60	0.66	0.70
2018 (1):				
Total revenues	\$ 201,704	\$ 213,033	\$ 213,055	\$ 247,267
Total cost of revenues (exclusive of depreciation)	101,096	109,492	109,052	130,180
Operating income (2)	25,767	24,087	25,653	29,425
Income before income taxes (2)	20,204	20,724	20,492	25,567
Income tax provision (3)	(6,190)	(5,607)	(4,391)	(4,669)
Net income (2)(3)	14,014	15,117	16,101	20,898
Basic earnings per common share (2)(3)	\$ 0.43	\$ 0.46	\$ 0.50	\$ 0.65
Diluted earnings per common share (2)(3)	0.42	0.46	0.49	0.64

(1) During 2018, we completed the Business Ink and Forte acquisitions in February and October, respectively (see Note 7), and as a result, their results of operations are included in our 2019 and 2018 results above. Additionally, in conjunction with these acquisitions, during the first, third, and fourth quarters of 2018, we incurred transaction-related costs of \$2.4 million, \$0.2 million, and \$2.3 million, respectively, or \$0.05, \$0.01, and \$0.06 per diluted share and in the first quarter of 2019, we incurred transaction related costs of \$1.3 million, or \$0.03 per diluted share.

(2) During the second, third, and fourth quarters of 2019 we incurred restructuring and reorganization charges of \$1.8 million, \$1.3 million, and \$1.6 million, respectively, or \$0.04, \$0.03, and \$0.04 per diluted share.

During the first, second, third, and fourth quarters of 2018 we incurred restructuring and reorganization charges of \$0.9 million, \$3.3 million, \$2.8 million, and \$1.6 million, respectively, or \$0.02, \$0.07, \$0.07, and \$0.04 per diluted share.

See Note 8 for further discussion of our restructuring and reorganization activities.

(3) Fluctuations in our effective income tax rate between quarters generally relates to the accounting for discrete income tax items in any given quarter, and revisions of estimates for certain income tax components during the year.

For 2019: Our effective income tax rates for the first, second, third, and fourth quarters were 26%, 28%, 25%, and 7%, respectively. The fourth quarter effective income tax rate was positively impacted by an approximately \$4 million net income tax benefit we received as a result of Comcast's exercise of their remaining 0.4 million of vested common stock warrants (see Note 12).

For 2018: Our effective income tax rates for the first, second, third, and fourth quarters were 31%, 27%, 21%, and 18%, respectively. The 2018 effective income tax rate reflects the impact of the Tax Reform Act (see Note 9). Additionally, the decreasing rate throughout 2018 is mainly attributed to a change in the estimate of R&D credits and improved profitability in certain international entities.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b), our management, including the Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), conducted an evaluation as of the end of the period covered by this report of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e). Based on that evaluation, the CEO and CFO concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

(b) Management’s Annual Report on Internal Control over Financial Reporting

As required by Rule 13a-15(d), our management, including the CEO and CFO, also conducted an evaluation of our internal control over financial reporting, as defined by Rule 13a-15(f). Management’s Report on Internal Control over Financial Reporting is located at the front of Part II, Item 8 of this report.

(c) Attestation Report of the Independent Registered Public Accounting Firm

Our independent registered public accounting firm issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2019. KPMG LLP’s report is located immediately following Management’s Report on Internal Control over Financial Reporting at the front of Part II, Item 8 of this report.

(d) Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Exchange Act Rules 13a-15 or 15d-15 that occurred during the fourth quarter of 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

See the Proxy Statement for our 2020 Annual Meeting of Stockholders, from which information regarding directors is incorporated herein by reference. Information regarding our executive officers will be omitted from such proxy statement and is furnished in a separate item captioned “Executive Officers of the Registrant” included at the end of Part I of this Form 10-K.

Item 11. Executive Compensation

See the Proxy Statement for our 2020 Annual Meeting of Stockholders, from which information in response to this Item is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

See the Proxy Statement for our 2020 Annual Meeting of Stockholders, from which information required by this Item is incorporated herein by reference, with the exception of the equity compensation plan information which is presented in Item 5, “Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities,” and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

See the Proxy Statement for our 2020 Annual Meeting of Stockholders, from which information in response to this Item is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

See the Proxy Statement for our 2020 Annual Meeting of Stockholders, from which information in response to this Item is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules, and Exhibits:

(1) Financial Statements

The financial statements filed as part of this report are listed on the Index to Consolidated Financial Statements on page 39.

(2) Financial Statement Schedules:

None. Any information required in the Financial Statement Schedules is provided in sufficient detail in our Financial Statements and notes thereto.

(3) Exhibits

Exhibits are listed in the Exhibit Index on page 74.

The Exhibits include management contracts, compensatory plans and arrangements required to be filed as exhibits to the Form 10-K by Item 601 of Regulation S-K.

(b) Exhibits

The Exhibits filed or incorporated by reference herewith are as specified in the Exhibit Index.

Item 16. Form 10-K Summary

None.

EXHIBIT INDEX

Exhibit Number	Description
2.10 (10)	Implementation Agreement between CSG Systems International, Inc. and Intec
3.01 (1)	Restated Certificate of Incorporation of the Company (P)
3.02 (40)	Amended and Restated Bylaws of CSG Systems International, Inc.
3.03 (2)	Certificate of Amendment of Restated Certificate of Incorporation of CSG Systems International, Inc.
4.01 (1)	Form of Common Stock Certificate (P)
4.10 (38)	Indenture dated March 15, 2016, between CSG Systems International, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee
4.50 (49)	\$350 million Credit Agreement dated as of March 5, 2018, among CSG Systems International, Inc., as Borrower, the Subsidiary Guarantors Party hereto, Bank of America, N.A., as Administrative Agent, Collateral Agent, Swingline Lender and Issuing Bank, Wells Fargo Bank, National Association, as Syndication Agent, Compass Bank and HSBC Bank USA, National Association, as Co-Documentation Agents, the Lenders Party Hereto, and the Other Issuing Banks Party Hereto Merrill Lynch, Pierce, Fenner & Smith Incorporated and Wells Fargo Securities, LLC, as Joint Lead Arrangers and Joint Bookrunners
4.70 (30)	\$350,000,000 Second Amended and Restated Credit Agreement dated as of February 3, 2015, among CSG Systems International, Inc., as Borrower, The Guarantors Party Hereto, The Lenders Party Hereto, RBC Capital Markets, Wells Fargo Securities, LLC, HSBC Bank USA, National Association, BBVA, and Merrill Lynch, Pierce, Fenner & Smith Incorporated as Joint Lead Arrangers and Joint Bookmanagers; Wells Fargo Bank, National Association as Syndication Agent; HSBC Bank USA, National Association, BBVA Compass, and Bank of America, N.A. as Co-Documentation Agents; Royal Bank of Canada as Administrative Agent and Collateral Agent, and Royal Bank of Canada as Issuing Bank and Swingline Lender
4.90	Description of Capital Stock
10.02 (13)	Second Amended and Restated 1996 Employee Stock Purchase Plan, as adopted on May 17, 2011
10.04 (50)	CSG Systems International, Inc. Amended and Restated 2005 Stock Incentive Plan, as amended on May 17, 2018
10.05 (13)	CSG Systems International, Inc. Performance Bonus Program, as amended on August 14, 2007
10.06 (5)	CSG Systems International, Inc. 2001 Stock Incentive Plan, as amended August 14, 2007
10.15 (9)	Form of Indemnification Agreement between CSG Systems International, Inc. and Directors and Executive Officers
10.16 (4)	Indemnification Agreement between CSG Systems International, Inc. and Mr. Ronald Cooper, dated November 16, 2006
10.22* (21)	CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.22A* (22)	First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC

Exhibit Number	Description
10.22B* (23)	<u>Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22C* (23)	<u>Third Amendment to the Restated and Amended CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22D* (23)	<u>Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22E* (24)	<u>Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22F* (24)	<u>Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22G* (24)	<u>Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22H* (25)	<u>CD Addendum to CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22I* (29)	<u>Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22J* (29)	<u>Tenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22K* (30)	<u>Eleventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22L* (30)	<u>Twelfth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22M* (30)	<u>Thirteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22N* (31)	<u>Fourteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22O* (31)	<u>Fifteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22P* (32)	<u>Sixteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22Q* (33)	<u>Seventeenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22R* (35)	<u>Eighteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22S* (35)	<u>Nineteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22T*(39)	<u>Nineteenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22U* (39)	<u>Twentieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>

Exhibit Number	Description
10.22V* (41)	<u>Twenty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22W* (41)	<u>Twenty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22X* (44)	<u>Twenty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22Y* (44)	<u>Common Stock Purchase Warrant between CSG Systems International, Inc. and Comcast Alpha Holdings, Inc., dated January 3, 2017</u>
10.22Z* (45)	<u>Twenty-Sixth Amendment to the CSG Master Subscriber Master Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AA* (46)	<u>Twenty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AB* (46)	<u>Twenty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AC* (46)	<u>Twenty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AD* (46)	<u>Twenty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AE* (46)	<u>Thirtieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AF* (46)	<u>Thirty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AG* (47)	<u>Thirty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AH* (51)	<u>Thirty-third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AI* (51)	<u>Thirty-fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AJ* (52)	<u>Thirty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG System, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AK* (54)	<u>Thirty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AL* (54)	<u>Thirty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AM* (54)	<u>Thirty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>
10.22AN* (55)	<u>Thirty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC</u>

Exhibit Number	Description
10.22AO* (55)	Fortieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.22AP* (56)	Forty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.23* (8)	CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23A* (9)	Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23B* (11)	Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23C* (12)	Tenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network, L.L.C.
10.23D* (14)	Eleventh Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23E* (14)	Twelfth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23F* (14)	Thirteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23G* (14)	Fourteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23H* (15)	Fifteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23I* (18)	Sixteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23J* (17)	Seventeenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23K* (17)	Eighteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23L* (16)	Nineteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23M* (17)	Twentieth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23N* (16)	Twenty-First Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23O* (18)	Twenty-Second Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23P* (18)	Twenty-Third Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23Q* (18)	Twenty-Fourth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.

Exhibit Number	Description
10.23R* (19)	Twenty-Fifth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23S* (19)	Twenty-Sixth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23T* (20)	Twenty-Seventh Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23U* (20)	Twenty-Eighth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23V* (20)	Twenty-Ninth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23W* (20)	Thirtieth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and DISH Network L.L.C.
10.23X* (22)	Thirty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23Y* (22)	Thirty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23Z* (22)	Thirty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AA* (22)	Thirty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AB* (23)	Thirty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AC* (23)	Thirty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AD* (24)	Thirty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AE* (24)	Thirty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AF* (26)	Fortieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AG* (26)	Forty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AH* (29)	Forty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AI* (29)	Forty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AJ* (29)	Forty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.

Exhibit Number	Description
10.23AK* (29)	Forty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AL* (29)	Forty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AM* (30)	Forty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AN* (32)	Forty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AO* (33)	Forty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AP* (33)	Fiftieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AQ (39)	Fifty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AR* (42)	Fifty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AS* (42)	Fifty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AT* (42)	Fifty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AU* (44)	Fifty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AV* (44)	Fifty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AW* (46)	Fifty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network L.L.C.
10.23AX* (47)	Sixtieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23AY* (47)	Sixty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23AZ* (48)	Fifty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23BA* (48)	Sixty-Second Amendment to Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23BB* (48)	Sixty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and DISH Network, L.L.C.
10.23BC* (52)	Sixty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.
10.23BD (53)	Sixty-Fourth Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.

Exhibit Number	Description
10.23BE (53)	Sixty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.
10.23BF (53)	Sixty-Seventh Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.
10.23BG (53)	Sixty-Eighth Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.
10.23BH (53)	Seventieth Amendment to Master Subscriber Management System Agreement between CSG System, Inc. and DISH Network, L.L.C.
10.24* (7)	CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable dated March 13, 2003
10.24A* (7)	ComTec Processing and Production Services Agreement
10.24B* (7)	Second Amendment to the Processing and Production Services Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24C* (11)	Forty-Ninth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24D* (14)	Third Amendment to the Processing and Production Services Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24E* (14)	Fifty-First Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24F* (14)	Fifty-Third Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24G* (18)	Fifty-Seventh Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24H* (18)	Sixty-First Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24I* (19)	Fifty-Sixth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24J* (19)	Sixty-Third Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24K* (19)	Sixty-Fifth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24L* (20)	Forty-Eighth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24M* (20)	Fifty-Ninth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24N* (20)	Sixty-Seventh Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24O* (20)	Sixty-Eighth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.

Exhibit Number	Description
10.24P (20)	Second Amendment to Affiliate Addendum (Corporate National Sales Division)
10.24P* (21)	Sixtieth Amendment to the CSG Master Subscriber Management Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24Q (20)	Fourth Amendment to Affiliate Addendum Carolina Region
10.24Q* (21)	Seventieth Amendment to the CSG Master Subscriber Management Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24R (21)	First Amendment to Affiliate Addendum Media Sales Division between CSG Systems, Inc. and Time Warner Cable Inc.
10.24S* (22)	Sixty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24T* (23)	Seventy-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24U* (23)	Seventy-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24V* (24)	Fifty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24W* (24)	Seventy-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24X* (24)	Seventy-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24Y* (24)	Seventy-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24Z* (24)	Eighty-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AA* (26)	Seventy-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AB* (26)	Seventy-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AC* (26)	Seventy-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AD* (27)	Eighty-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AE* (27)	Eighty-Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AF* (27)	Eighty-Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AG* (27)	Eighty-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.

Exhibit Number	Description
10.24AH* (28)	Amended and Restated Processing and Production Services Agreement entered into between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AI* (29)	Eighty-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AJ* (29)	Eighty-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AK* (29)	Eighty-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AL* (29)	Ninetieth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AM* (29)	Ninety-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AN* (30)	Eighty-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AO* (30)	First Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Time Warner Cable Enterprises LLC
10.24AP* (31)	Ninety-Fifth Amendment of the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AQ* (31)	Second Amendment to the Amended and Restated Processing and Production Services Agreement Between CSG Systems, Inc. and Time Warner Cable Enterprises LLC
10.24AR* (32)	Ninety-Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AS* (32)	Ninety-Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AT* (33)	Third Amendment to the Amended and Restated Processing and Production Services Agreement between CSG Systems, Inc. and Time Warner Cable Enterprises LLC
10.24AU* (33)	Ninety-Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AV* (33)	Ninety-Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AW* (35)	Ninety-Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AX* (35)	One Hundredth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AY* (35)	One Hundred First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24AZ* (36)	One Hundred Third Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.
10.24BA* (39)	One Hundred Second Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.

Exhibit Number	Description
10.24BB* (41)	<u>One Hundred Fourth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24BC* (41)	<u>One Hundred Sixth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24BD* (42)	<u>One Hundred Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BE* (42)	<u>One Hundred Seventh Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Time Warner Cable Inc.</u>
10.24BF* (42)	<u>One Hundred Eighth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BG* (44)	<u>One Hundred Ninth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BH* (44)	<u>One Hundred Tenth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BI* (44)	<u>One Hundred Twelfth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BJ* (45)	<u>One Hundred Eleventh Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BK* (45)	<u>One Hundred Fourteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BL* (45)	<u>One Hundred Fifteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BM* (45)	<u>One Hundred Sixteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BN (45)	<u>One Hundred Seventeenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BO* (46)	<u>One Hundred Eighteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BP* (46)	<u>One Hundred Nineteenth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BQ (46)	<u>One Hundred Twentieth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BR (46)	<u>One Hundred Twenty-First Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BS* (46)	<u>One Hundred Twenty-Second Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.24BT (46)	<u>One Hundred Twenty-Third Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.24BU* (46)	<u>One Hundred Twenty-Fourth Amendment to the CSG Master Subscriber Management System Agreement Between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25* (41)	<u>Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25A* (41)	<u>First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25B* (41)	<u>Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25C* (41)	<u>Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25D* (41)	<u>Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25E* (41)	<u>Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25F* (41)	<u>Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25G* (41)	<u>Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25H* (41)	<u>Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25I* (41)	<u>Tenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25J* (41)	<u>Eleventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25K* (41)	<u>Twelfth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25L* (41)	<u>Thirteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25M* (41)	<u>Fourteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25N* (41)	<u>Fifteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25O (41)	<u>Sixteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25P* (41)	<u>Seventeenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25Q* (41)	<u>Eighteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25R* (41)	<u>Nineteenth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25S* (41)	<u>Twentieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25T* (41)	<u>Twenty-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25U* (41)	<u>Twenty-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25V (41)	<u>Twenty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25W* (41)	<u>Twenty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25X* (41)	<u>Twenty-Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25Y* (41)	<u>Twenty-Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25Z* (41)	<u>Twenty-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AA* (41)	<u>Twenty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AB* (41)	<u>Thirtieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AC* (41)	<u>Thirty-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AD* (41)	<u>Thirty-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AE* (41)	<u>Thirty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AF* (41)	<u>Thirty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AG* (41)	<u>Amended and Restated Thirty-Sixth Amendment to Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AH* (41)	<u>Thirty-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AI* (41)	<u>Thirty-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AJ* (41)	<u>Thirty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25AK* (41)	<u>Fortieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25BF (41)	<u>Sixty-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BG* (41)	<u>Sixty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BH (41)	<u>Sixty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BI (41)	<u>Sixty-Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BJ (41)	<u>Sixty-Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BK* (41)	<u>Sixty-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BL* (41)	<u>Sixty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BM* (41)	<u>Seventieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BN* (41)	<u>Seventy-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BO* (41)	<u>Seventy-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BP* (41)	<u>Seventy-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BQ* (41)	<u>Seventy-Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BR* (41)	<u>Seventy-Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BS* (41)	<u>Seventy-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BT* (41)	<u>Seventy-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BU* (41)	<u>Seventy-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BV* (41)	<u>Eightieth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BW* (41)	<u>Eighty-First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BX* (41)	<u>Eighty-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25BY* (41)	<u>Eighty-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25BZ* (41)	<u>Eighty-Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CA* (41)	<u>Eighty-Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CB* (41)	<u>Eighty-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CC* (41)	<u>Eighty-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CD* (42)	<u>Eighty-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CE* (42)	<u>Ninety-First Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CF* (42)	<u>Ninety-Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CG* (44)	<u>Ninety-Third Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CH* (44)	<u>Ninety-Fifth Amendment to the CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Cable Holding Company, LLC</u>
10.25CI* (45)	<u>Ninety-Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CJ* (45)	<u>Ninety-Seventh Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CK* (45)	<u>Ninety-Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CL* (45)	<u>Ninety-Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CM* (45)	<u>One Hundred First Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CN* (46)	<u>One Hundredth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CO* (46)	<u>One Hundred Second Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CP* (46)	<u>One Hundred Fourth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CQ* (46)	<u>One Hundred Sixth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>
10.25CR* (46)	<u>One Hundred Eighth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC</u>

Exhibit Number	Description
10.25CS* (46)	One Hundred Ninth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.25CT* (47)	One Hundred Fifth Amendment to the Amended and Restated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Holding Company, LLC
10.26* (47)	Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26A* (47)	Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26B* (47)	Third Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26C* (47)	Fourth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26D (48)	First Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26E* (48)	Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26F* (48)	Sixth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26G* (48)	Eighth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26H* (48)	Ninth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26I (48)	Tenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26J* (49)	Eleventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26K* (51)	Thirteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26L* (51)	Fifteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26M* (51)	Seventeenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26N* (51)	Eighteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26O* (52)	Seventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26P* (52)	Twelfth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC

Exhibit Number	Description
10.26Q* (52)	Fourteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26R* (52)	Nineteenth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26S* (54)	Twentieth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26T* (55)	Twenty-Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26U* (55)	Twenty-Fourth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26V* (55)	Twenty-Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26W* (55)	Twenty-Sixth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26X* (55)	Twenty-Seventh Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26Y* (55)	Twenty-Eighth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26Z* (56)	Twenty-Third Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AA* (56)	Thirty-First Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AB* (56)	Thirty-Second Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AC* (56)	Thirty-Third Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AD* (56)	Thirty-Fourth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.26AE*	Thirty-Fifth Amendment to Consolidated CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Charter Communications Operating, LLC
10.27*	CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.27A*	CD Addendum to CSG Master Subscriber Management System Agreement between CSG Systems, Inc. and Comcast Cable Communications Management, LLC
10.39 (52)	CSG Systems, Inc. Wealth Accumulation Plan, as restated and amended effective December 6, 2017
10.39A (52)	Adoption Agreement to CSG Systems, Inc. Wealth Accumulation Plan, executed September 13, 2018
10.50 (3)	CSG Systems International, Inc. 2001 Stock Incentive Plan
10.51 (6)	Employment Agreement with Bret C. Griess, dated February 19, 2009

Exhibit Number	Description
10.51A (34)	Amended and Restated Employment Agreement with Bret C. Griess, dated November 19, 2015
10.51B (43)	Amendment No. 1 to Amended and Restated Employment Agreement with Bret C. Griess, dated November 17, 2016
10.52 (37)	Employment Agreement with Brian Shepherd, dated February 15, 2016
10.52A (43)	Amendment No. 1 to Employment Agreement with Brian Shepherd, dated November 17, 2016
10.53 (37)	Employment Agreement with Kenneth M. Kennedy, dated March 1, 2016
10.53A (43)	Amendment No. 1 to Employment Agreement with Kenneth M. Kennedy, dated November 17, 2016
10.54 (50)	Employment Agreement with Rolland B. Johns, dated May 17, 2018
10.83 (51)	Forms of Agreement for Equity Compensation
10.84 (39)	Forms of Agreement for Equity Compensation
10.85 (51)	Forms of Agreement for Equity Compensation
21.01	Subsidiaries of the Registrant
23.01	Consent of KPMG LLP
31.01	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.02	Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.01	Certification pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)
(1)	Incorporated by reference to the exhibit of the same number to the Registration Statement No. 333-244 on Form S-1.
(2)	Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 1997.
(3)	Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2002.
(4)	Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated November 16, 2006.
(5)	Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2007.
(6)	Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated February 19, 2009.
(7)	Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K/A for the year ended December 31, 2008, filed on September 8, 2009.

- (8) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2009.
- (9) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2010.
- (10) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2010.
- (11) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2010.
- (12) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2011.
- (13) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated May 17, 2011.
- (14) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2011.
- (15) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2011.
- (16) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2012.
- (17) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q/A for the period ended March 31, 2012, filed on August 29, 2012.
- (18) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2012.
- (19) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2012.
- (20) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012.
- (21) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2013.
- (22) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2013.
- (23) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2013.
- (24) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2013.
- (25) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-K/A for the period ended December 31, 2013, filed on July 9, 2014.
- (26) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2014.
- (27) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2014.
- (28) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q/A for the period ended June 30, 2014, filed on October 23, 2014.
- (29) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2014.
- (30) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2014.
- (31) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2015.
- (32) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2015.
- (33) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2015.
- (34) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated November 19, 2015.
- (35) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015.
- (36) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K/A for the year ended December 31, 2015, filed on August 29, 2016.
- (37) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated February 25, 2016.

- (38) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated March 9, 2016.
- (39) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2016.
- (40) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated May 26, 2016.
- (41) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2016.
- (42) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2016.
- (43) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated November 17, 2016.
- (44) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2016.
- (45) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2017.
- (46) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2017.
- (47) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2017.
- (48) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017.
- (49) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2018.
- (50) Incorporated by reference to the exhibit of the same number to the Registrant's Current Report on Form 8-K for the event dated May 17, 2018.
- (51) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2018.
- (52) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2018.
- (53) Incorporated by reference to the exhibit of the same number to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018.
- (54) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2019.
- (55) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2019.
- (56) Incorporated by reference to the exhibit of the same number to the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2019.

* Portions of the exhibit have been omitted pursuant to an application for confidential treatment, and the omitted portions have been filed separately with the Commission.

DESCRIPTION OF CAPITAL STOCK

The following sets forth certain material terms and provisions of the common stock of CSG Systems International, Inc. (the “company,” “we,” “us,” and “our”) that is registered under Section 12 of the Securities Exchange Act of 1934, as amended. The following summary does not purport to be complete and is subject to, and is qualified in its entirety by reference to, the applicable provisions of our Restated Certificate of Incorporation, as amended (“Restated Certificate”), and our Amended and Restated Bylaws (“Bylaws”), copies of which are incorporated by reference as exhibits to the Annual Report on Form 10-K of which this Exhibit 4.90 is a part. We encourage you to read our Restated Certificate, our Bylaws and the applicable provisions of Delaware law for additional information.

Our authorized capital stock consists of: (i) 100,000,000 shares of common stock, par value \$0.01 per share; and (ii) 10,000,000 shares of preferred stock, par value \$0.01 per share.

The registrar and transfer agent for the common stock is Computershare Trust Company, N.A.

Common Stock

The outstanding shares of common stock are fully paid and non-assessable. Our common stock is listed on The Nasdaq Stock Market LLC under the trading symbol “CSGS”.

Dividend and Liquidation Rights

Subject to preferences applicable to any preferred stock outstanding at the time, holders of common stock are entitled to receive ratably such dividends, if any, as our board of directors lawfully may declare from time to time out of funds legally available for the payment of dividends. Upon our dissolution, the holders of common stock are entitled to share ratably in the assets remaining after payment of our liabilities and subject to the liquidation preference of any outstanding preferred stock.

Voting Rights

Holders of common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders.

Other Rights

Holders of common stock, as such, have no preemptive, subscription, redemption, or conversion rights and are not subject to future calls or assessments by us. The rights, preferences, and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock which we may designate and issue from time to time in the future.

Preferred Stock

Our board of directors has the authority to issue preferred stock in one or more series, and to fix the rights, preferences, privileges and restrictions, including the dividend, conversion, voting, redemption (including sinking fund provisions) and other rights, liquidation preferences and the number of shares constituting any series and the designations of such series, without any further vote or action by our stockholders. The provisions of any preferred stock could adversely affect the voting power of the holders of common stock and could, among other things, have the effect of delaying, deferring or preventing a fundamental change of our company.

There are currently no outstanding shares of preferred stock.

Limitation of Liability

As permitted by the Delaware General Corporation Law (“DGCL”), our Restated Certificate provides that our directors shall not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability:

- for any breach of the director’s duty of loyalty to us or our stockholders;
 - for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
-

- under Section 174 of the DGCL, relating to prohibited dividends or distributions or the repurchase or redemption of stock; or
- for any transaction from which the director derives an improper personal benefit.

As a result of this provision, we and our stockholders may be unable to obtain monetary damages from a director for breach of his or her duty of care. Although stockholders may continue to seek injunctive or other equitable relief for an alleged breach of fiduciary duty by a director, stockholders may not have any effective remedy against the challenged conduct if equitable remedies are unavailable.

Our Bylaws require us, to a maximum extent and in the manner permitted by the DGCL, to indemnify each of our directors and officers against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any threatened, pending or completed action, suit or proceeding arising by reason of the fact that the person is or was our director, officer, employee or agent. In addition, we may, to the extent and in the manner permitted by the DGCL, indemnify each of our employees and agents (other than directors and officers) against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred in connection with any threatened, pending or completed action, suit or proceeding arising by reason of the fact that the person is or was our employee or agent. We maintain directors and officers liability insurance for the benefit of our directors and officers. We have also entered into separate indemnification agreements with each of our directors and certain executive and other officers.

Anti-Takeover Provisions

Business Combination Provisions

The business combination provision contained in Section 203 of the DGCL, or Section 203, defines an interested stockholder as any person that:

- owns, directly or indirectly, 15% or more of the outstanding voting stock of a corporation; or
- is an affiliate or associate of a corporation and was the owner of 15% or more of the outstanding voting stock at any time within the three-year period immediately prior to the date on which it is sought to be determined whether such person is an interested stockholder, and the affiliates and the associates of such person.

Under Section 203, a corporation may not engage in any business combination with any interested stockholder for a period of three years following the date such stockholder became an interested stockholder, unless:

- prior to such date the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced (excluding, for determining the number of shares outstanding, (a) shares owned by persons who are directors and officers and (b) employee stock plans, in certain instances); or
- on or subsequent to such date the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders by the affirmative vote of at least 66²/₃% of the outstanding voting stock which is not owned by the interested stockholder.

Although Section 203 does permit companies to elect out of the statute, we have not done so and therefore the restrictions imposed by Section 203 will apply to us.

Other Anti-Takeover Provisions

Certain provisions of our Restated Certificate and Bylaws also may have the effect of prohibiting or delaying a change of control of our company. Our Restated Certificate and Bylaws provide that:

- our board of directors is divided into three classes, each of whose members will serve for a term of three years, with the members of one class being elected each year;

- directors may be removed by the stockholders only for cause, and only by the affirmative vote of the holders of at least 75% of the voting power of all outstanding shares of our capital stock entitled to vote in an election of directors, voting as a single class;
- any vacancy on our board of directors may be filled only by a majority vote of the remaining directors then in office or by a sole remaining director;
- our board of directors shall consist of not fewer than five members and not more than thirteen members, as determined the board of directors; and
- a stockholder desiring to nominate a person for election to the board of directors must deliver advance written notice thereof and provide certain information with respect to stockholder nominees and the stockholder making the nomination.

Our Restated Certificate requires the affirmative vote of the holders of at least 75% of the voting power of all outstanding shares of our capital stock then entitled to vote in an election of directors, voting as a single class, to alter, amend or repeal the provisions of the Restated Certificate discussed above or to adopt any provision of our Restated Certificate or Bylaws inconsistent with the provisions discussed above.

In addition, our Bylaws provide that:

- stockholders seeking to bring business before an annual meeting of stockholders must provide advance notice,
- special meetings of stockholders may be called only by our board of directors, the chairman of our board of directors or our president, and
- no business may be conducted at a special meeting of the stockholders other than business brought before the meeting by our board of directors, the chairman of our board of directors or our president.

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH (*)**

**THIRTY-FIFTH AMENDMENT
TO
CONSOLIDATED
CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT
BETWEEN
CSG SYSTEMS, INC.
AND
CHARTER COMMUNICATIONS OPERATING, LLC**

SCHEDULE AMENDMENT

This **Thirty-fifth Amendment** (the “Amendment”) is made by and between **CSG Systems, Inc.**, a Delaware corporation (“CSG”), and **Charter Communications Operating, LLC**, a Delaware limited liability company (“Customer”). CSG and Customer entered into that certain Consolidated CSG Master Subscriber Management System Agreement effective as of August 1, 2017 (CSG document no. 4114281), as amended (the “Agreement”), and now desire to further amend the Agreement in accordance with the terms and conditions set forth in this Amendment. If the terms and conditions set forth in this Amendment shall be in conflict with the Agreement, the terms and conditions of this Amendment shall control. Any terms in initial capital letters or all capital letters used as a defined term but not defined in this Amendment shall have the meaning set forth in the Agreement. Upon execution of this Amendment by the parties, any subsequent reference to the Agreement between the parties shall mean the Agreement as amended by this Amendment. Except as amended by this Amendment, the terms and conditions set forth in the Agreement shall continue in full force and effect according to their terms.

WHEREAS, pursuant to the terms of the Agreement, CSG has the ability to provide batch financial extract data files, as and when requested by Customer and implemented by CSG, for delivery to Customer [*****] (the “[*****] Financial Extracts”); and

WHEREAS, CSG currently delivers certain [*****] Financial Extracts to Customer; and

WHEREAS, Customer has requested that CSG implement and deliver additional [*****] Financial Extracts; and

WHEREAS, CSG and Customer each acknowledge and agree that such processing and delivery of the [*****] Financial Extracts impacts CSG processing capacity; and

WHEREAS, CSG and Customer agree to amend the Agreement to include terms and conditions for processing and delivery of the [*****] Financial Extracts.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, CSG and Customer agree as follows:

- 1. Effective upon execution of this Amendment, Schedule F, “Fees,” of the Agreement shall be amended to add a new subsection Q, “[*****] Financial Extracts,” to Subsection “X” “Custom Implementation Services,” of Section III., “Payment Procurement,” as follows:**
-

Q. Monthly Financial Extracts

Description of Item/Unit of Measure	Frequency	Fee
1. Revenue Transaction Earned/Unearned Data Extract		
a. Design, development and programming (Note 1)	[*****]	[****]
b. Extract Processing Fee (per [**** *****])		
i) Delivery non-compliant with the Financial Delivery SLAs (Note 2)	[*****]	[*****]
ii) Delivery compliant with the Financial Delivery Data SLAs (Note 2)	[*****]	\$[*****]
2. Account Delinquency and Bad Debt Data Extract		
a. Design, development and programming (Note 1)	[*****]	[****]
b. Extract Processing Fee (per [**** *****])		
i) Delivery non-compliant with the Financial Delivery SLAs (Note 2)	[*****]	[*****]
ii) Delivery compliant with the Financial Delivery Data SLAs (Note 2)	[*****]	\$[*****]

Note 1: [*****] Financial Extracts are available for Customer pursuant to executed Statements of Work for each Customer-requested [*****] Financial Extract.
Note 2: The [*****] Financial Extracts are subject to service level agreements with respect to the timing of their delivery as more specifically described in Schedule H, "Service Level Agreement," Exhibit H-5, "Service Levels," Table E, Line Item 8, "Financial Data Delivery" (the "Financial Delivery Data SLAs"). However, CSG and Customer have agreed CSG shall deliver the [*****] Financial Extracts in a manner that is compliant or non-compliant with the Financial Delivery Data SLAs as determined by Customer and subject to additional fees. Customer and CSG have further agreed CSG shall deliver the [*****] Financial Extract in a manner that is non-compliant with the requirements of the Financial Delivery Data SLAs and therefore the associated fees for delivery shall be [*****]. Customer may require CSG to comply with the Financial Delivery Data SLAs by requesting [*****(**)****] prior to the date of delivery of the [*****] Financial Extract and the Extract Processing Fees specified in 1(b)ii and/or 2(b)ii of the table above shall then apply.

THIS AMENDMENT is executed on the days and year last signed below to be effective as of the date last signed below (the "Effective Date").

CHARTER COMMUNICATIONS HOLDING COMPANY, LLC ("CUSTOMER") **CSG SYSTEMS, INC. ("CSG")**

By: Charter Communications, Inc., its Manager

By: /s/ Mike Ciszek

By: /s/ Gregory L. Cannon

Title: SVP – Billing Strategy and Operation

Title: Gregory L. Cannon

Name: Mike Ciszek

Name: SVP, General Counsel & Secretary

Date: 10/17/19

Date: 10/18/19

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH (*)**

CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT

This CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT (“Agreement”) (including the attached Schedules and Exhibits) is entered into this 18th day of December 2019 but shall be effective as of January 1, 2020 (“Effective Date”), by and between **CSG Systems, Inc.**, a Delaware corporation with offices at 6175 South Willow Drive, 10th Floor, Greenwood Village, Colorado 80111 (“CSG”), and **Comcast Cable Communications Management, LLC**, a Delaware limited liability company with offices at One Comcast Center, Philadelphia, Pennsylvania 19103 (“Comcast”), on behalf of itself and its Affiliates (collectively, the “Customer”). Customer and CSG shall at times be referred herein individually as a “Party” and collectively as the “Parties.”

RECITALS

WHEREAS, CSG and Customer are parties to that certain CSG Master Subscriber Management Systems Agreement (Document #*****) with an effective date as of March 1, 2013 (as amended to date, the “2013 Master Agreement”) and upon execution of this Agreement, except as otherwise set forth herein, desire to supersede the terms and conditions of such 2013 Master Agreement with the terms and conditions of this Agreement; and

WHEREAS, Comcast enters into this Agreement on behalf of itself and, subject to the terms and conditions of this Agreement, its Affiliates; and

WHEREAS, Customer desires to obtain from CSG, and CSG desires to grant to Customer, a license to use the Products set forth in Schedule B, along with any other CSG products subsequently licensed by CSG to Customer under this Agreement or an Ancillary Agreement; and

WHEREAS, from time-to-time, Customer may request CSG to provide to Customer the Recurring Services, Technical Services or other CSG services provided by CSG to Customer under this Agreement;

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties agree:

**ARTICLE 1
OVERVIEW**

1.1 General. This Agreement provides the terms and conditions upon which CSG shall provide, and Customer shall procure, the Products and Services within the United States.

1.2Term.

(a) Unless earlier terminated pursuant to Section 6.1, Section 9.2(c) or Schedule L, this Agreement shall commence on the Effective Date and remain in effect until the expiration of the last Service Specific Term (as defined in Section 1.2(b)) (the “Term”) and, if applicable, any De-conversion Period (as defined in Section 6.2). Termination of a given Service Specific Term is subject to Section 6.1.

(b) Customer’s right to purchase and CSG’s obligation to provide a given Product or Service under this Agreement or an Ancillary Agreement is subject to a distinct and independent term for such Product and/or Services as set forth in this Section 1.2 (each, a “Service Specific Term”). The term of any specific license for the Products and the term for any specific Services to be provided shall be effective from the Effective Date or the date set forth in an applicable amendment to this Agreement or Ancillary Agreement and shall terminate upon the expiration of the Service Specific Term applicable to such Product or Service, unless stated otherwise herein or as otherwise provided in the applicable Schedule, Exhibit, amendment or Ancillary Agreement.

(c) The Service Specific Terms under this Agreement are as follows:

(i) ACP Term and ACP Extension. CSG shall provide the ACP Related Services to Customer from the Effective Date through December 31, 20** (the "ACP Term"). CSG shall provide Customer with written notice on or before May 1, 20** that the ACP Term will expire on December 31, 20**. Customer has the option in its sole discretion to extend the ACP Term for one (1) additional year through December 31, 20** (the "ACP Extension"), so long as Customer provides written notice to CSG of such extension on or before **** ***. If Customer does not timely notify CSG of its exercise of the ACP Extension, CSG shall not be required to extend the ACP Term through the ACP Extension, provided that Customer shall still be entitled to receive the De-conversion Services in accordance with Section 6.2. The Parties acknowledge and agree that ACP Related Services provided during the ACP Extension shall be subject to the fees set forth in Schedule F and any Ancillary Agreement then in effect.

(ii) Output / Print Term. CSG shall provide the Output / Print Services to Customer from the Effective Date through December 31, 20** (the "Output / Print Term"). The Parties acknowledge (1) the Output / Print Services are subject to Section 1.5 (*****), and (2) there is no extension option or renewal right of the Output / Print Term absent the Parties executing an amendment to this Agreement to prescribe the same.

(iii) Kiosk Term. CSG shall provide the Kiosk Services to Customer from the Effective Date through (a) with respect to the Legacy Kiosk Services, the date prescribed in Exhibit C-4, and (b) with respect to the Kiosk Managed Services (as defined in the Master Kiosk SOW), the same date that the SOW Term expires as defined and prescribed in the Master Kiosk SOW (the "Kiosk Term"). For the convenience of the Parties, the Parties acknowledge as of the Effective Date that the Kiosk Term (i.e., the SOW Term of the Master Kiosk SOW) expires on August 31, 20**. If the Kiosk Term is modified via amendment or change order, or the Parties enter into an additional SOW that by its terms expressly states that the term of such SOW is intended to renew or extend the Kiosk Term under this Agreement, then the Kiosk Term shall be automatically amended accordingly without the need to amend this Agreement.

(iv) Other Products / Services. Any Products and/or Services (a) that are not ACP Related Services, Output / Print Services or Kiosk Services, and (b) which have a specific term associated with such Products or Services as set forth in this Agreement or an Ancillary Agreement shall be provided during the term specified hereunder or in such Ancillary Agreement. By way of example only, the SaaS Operations Services provided by CSG to Customer pursuant to that certain Amended and Restated Ascendon Service Order No. 1 (Document Number *****) effective as of the Effective Date ("Ascendon Service Order No. 1") is subject to the Ascendon Order Term as specified in such Ascendon Service Order No. 1.

1.3 Pre-Existing Agreements.

(a) Within **** (*) **** following the Effective Date, Customer shall pay all Undisputed amounts due under the 2013 Master Agreement. Upon the Effective Date, the 2013 Master Agreement (including any licenses, perpetual or otherwise, granted therein) shall immediately terminate and the Parties shall have no further rights, duties or obligations under such 2013 Master Agreement (subject to the survival clause set forth in such 2013 Master Agreement). The Parties further agree that upon the Effective Date, the terms and conditions related to CSG's offering of its Products and Services to Customer, Customer's purchase of such Products and Services and the treatment of each Party's Confidential Information shall be governed by this Agreement.

(b) Customer and CSG further agree that each of the Ancillary Agreements executed prior to the Effective Date and listed in Schedule J (the "Prior Ancillary Agreements") shall be deemed executed under and subject to the terms and conditions of this Agreement. If after the Effective Date the Parties identify an Ancillary Agreement that should be given full force and effect under this Agreement but was not included in Schedule J, the Parties agree to amend Schedule J to identify such additional Ancillary Agreement(s) as a Prior Ancillary Agreement and give such Ancillary Agreement full force and effect from the Effective Date as if it was initially listed in Schedule J. Each Prior Ancillary Agreement, including any amounts earned but not yet billed as of the Effective Date, shall be invoiced in accordance with this Agreement, unless such Prior Ancillary Agreement provides terms that conflict with this Agreement. In the event of a conflict, the

***** Remedy that Customer shall pay to CSG as a result of Customer's breach of this Section 1.5 is a reasonable estimate of CSG's Damages in accordance with applicable state Law. The Parties agree that the ***** Remedy shall be CSG's sole and exclusive remedy at law or equity for Customer's breach of this Section 1.5, subject to the subsequent sentence and ***** Should Customer be in violation of this Section 1.5, ***** (**). ***** CSG agrees, to the extent it has knowledge of Customer's violation of this Section 1.5, to provide Customer with written notice of the violation. However, for the purpose of calculating the ***** Remedy, the Parties agree to ***** of this Section 1.5. In the event Customer fails to cure such violation or breach using commercially reasonable efforts ***** (**), the Parties agree that ***** and for the purposes of calculating the ***** Remedy only, the ***** (**%) ***** (**%). For the avoidance of doubt, in the event of a termination of the Agreement ***** pursuant to Section ****, the ***** for the purposes of calculating such ***** shall ***** (**%). The assessment of the ***** Remedy shall not constitute a waiver or release of any other remedy CSG may have under this Agreement for Customer's breach of any other provision of this Agreement, including CSG's right to terminate this Agreement.

(d) During the Output / Print Term, in the event Customer acquires new Residential Subscribers and print and mail services for such Residential Subscribers that fall within the definition of ***** are being performed by a third-party provider (excluding any Customer Affiliate), Customer agrees to migrate the Residential Subscribers to CSG's ***** (**). In addition, should Customer acquire Residential Subscribers, and print and mail services for such Residential Subscribers that fall within the definition of ***** are being performed by Customer or its Affiliate, Customer agrees to migrate the Residential Subscribers to CSG's ***** (**). In the event migration does not occur as provided herein CSG shall be entitled to the ***** Remedy for those Residential Subscribers ***** As used in this Section 1.5(d), "acquire" and "acquires" means acquisition or securing Management Rights.

(e) The Parties acknowledge the ***** shall be subject to the ***** set forth in *****.

1.6 Additional Rights to Purchase Under this Agreement.

(a) Comcast's U.S.-formed Affiliates shall have the right to purchase under this Agreement as Customer. Such U.S.-formed Affiliate(s) shall become additional Customers subject to the terms and conditions of this Agreement upon Customer's written notice to CSG thereof. Notwithstanding any rights granted to or obligations assumed by any such Comcast Affiliate under this Agreement, Comcast will remain liable for all obligations of Customer under the Agreement. If after the Effective Date, Customer requests that CSG provide Products or Services to a non U.S.-formed Affiliate (a "Non-U.S. Affiliate"), and such Non U.S. Affiliate intends to use such Products and Services to support its offerings and services outside of the United States, CSG shall have sole discretion whether to provide such Products and Services to such Non-U.S. Affiliate.

(b) In the event Comcast acquires Management Rights of a U.S.-formed Person that does not qualify as an Affiliate and Comcast wishes to purchase Products or Services on behalf of such U.S.-formed Person under this Agreement, then Comcast shall notify CSG in writing thereof and provide necessary written proof of such Management Rights and CSG shall provide Products and Services to such U.S.-formed Person, subject to the terms of this Section 1.6 and ***** (**). The Parties agree to discuss any opportunity identified by Customer in which Customer wishes to purchase Products or Services on behalf of any Person that either is not an Affiliate of Comcast as of the Effective Date or for which Customer does not have Management Rights of such Person. In the event Customer is permitted under this subsection (b) to purchase Products or Services on behalf of such Person, the Parties agree to enter into an addendum

("Entity Addendum") substantially similar to the form provided in Schedule M, which is attached hereto and incorporated by reference. Customer agrees to remain liable for the acts and omissions of any such Person. In no event shall any such relationship expand the obligations of CSG or act to extend the Term or a Service Specific Term without a written amendment to this Agreement. Unless otherwise provided in this Agreement, the Parties agree that * * * * *, which Products or Services include the Products and Services included in the BSC for Non-Rated Video and Non-Rated High-Speed Data and Residential Voice Services (as identified in Schedule F.1), * * * * * (*) * * * * * (* * * * *) * * * * * (* * * * *) * * * * * (the "Acquired Non-ACP Subscribers"). For the avoidance of doubt, Acquired Non-ACP Subscribers shall require a Migration SOW as prescribed in Section 4.2.

(c) If (i) Customer acquires a U.S.-formed Person and subsequently dissolves the corporate structure of such U.S.-formed Person in order to add subscribers under this Agreement, and (ii) at the time of such acquisition, the U.S.-formed Person is a CSG customer on CSG's ACP System (in which case such subscribers are referred to as "Acquired ACP Subscribers"), then * * * * * (*) * * * * * (*) * * * * * . Nothing in the foregoing shall * * * * * . For the avoidance of doubt, Acquired ACP Subscribers shall require the Parties to enter into a SOW to prescribe the fees, terms and conditions to move /align billing cycles.

1.7 **Set-Off.** Notwithstanding anything to the contrary set forth in this Agreement, CSG understands and agrees that any and all Undisputed payments or Damages due and payable to Customer by CSG under this Agreement are subject to set-off by Customer against any Undisputed payments, or Damages due and payable to CSG under this Agreement. The Parties further agree that any and all Undisputed payments or Damages due and payable to CSG by Customer under this Agreement are subject to set-off by CSG against any Undisputed payments or Damages due and payable to Customer under this Agreement.

1.8 **Definitions.** Capitalized terms used herein but not defined shall have the meanings set forth in Schedule A. Other terms may be defined elsewhere in the text of this Agreement and, unless otherwise indicated, shall have such meanings throughout this Agreement.

ARTICLE 2 OWNERSHIP OF PROPERTY

2.1 **Ownership.**

(a) CSG's Intellectual Property. All Intellectual Property Rights in or related to the Software or Services, and any third-party software included or embedded in the Software, or copies thereof (collectively, "CSG's Intellectual Property") are and will remain the exclusive property of CSG, its Affiliates or their respective licensors and CSG, its Affiliates or their respective licensors shall have all ownership rights associated therewith, whether or not specifically recognized or perfected under applicable Law. Customer will not take any action that jeopardizes CSG's , its Affiliates' or their respective licensors' proprietary rights or acquire any right in CSG's Intellectual Property, except for the limited use rights specified herein.

(b) Customer Property. All documents, data and files provided to CSG hereunder by Customer, its Affiliates, its customers, or third parties on its or their behalf in their original format, compilations and derivative works thereof ("Customer Property") are and shall remain the exclusive property of Customer, and Customer shall have all ownership rights associated therewith, whether or not specifically recognized or perfected under applicable Law. CSG will not take

3.5 Insurance. CSG will obtain and keep in force during the Term and any De-conversion Period insurance with the following minimum limits of liability or such greater amounts as required by applicable Law:

(a) Statutory Workers' Compensation or Employer's Liability, as required by Law in any jurisdiction where work is performed by CSG personnel, with minimum limits of \$***** each accident / \$***** each disease / \$***** policy limit.

(b) Commercial General Liability insurance, including bodily injury, property damage, personal and advertising injury liability, and contractual liability covering operations, independent contractor and products/completed operations hazards, with a minimum combined single limit of not less than \$***** per occurrence and \$***** aggregate.

(c) Business Automobile Liability insurance covering owned, non-owned and hired autos with limits of *** ** * ** * ** * ** * ** * ** * ** * ** * ** * ** * \$***** combined single limit per accident for bodily injury and property damage liability.

(d) Property or Transit/Cargo Insurance on any and all tangible property belonging to Customer that is within CSG's possession or control, written on a replacement cost basis without depreciation. Verification Customer has been included as a Loss payee under the policy must be provided.

(e) Umbrella Liability, on an occurrence basis, with a minimum limit of at least \$***** per occurrence, in excess of the insurance under policies indicated in the foregoing Sections 3.5(a) (Employer's Liability only), (b) and (c).

(f) Technology Errors and Omissions Liability covering the liability for financial loss due to error, omission, negligence of employees and machine malfunction, and including coverage for introduction of a computer virus onto, allowing unauthorized access to, denial of service, or otherwise causing damage to, a computer, computer system, network, or similar computer-related property and the data, software and programs used thereon, as well cyber liability and privacy, in an amount of at least \$***** per claim and \$***** in the aggregate. Coverage will include intentional or unintentional disclosure of private personal or corporate information. Liability will also include the cost of regulatory action defense and fines/penalties, privacy breach notification, fraud monitoring, and public relations expenses, whether computer-related or not. These amounts will not be sublimited, nor will costs be limited to those mandated by statute or regulation.

(g) Crime Insurance (also known as Employee Dishonesty insurance/ Fidelity Bond) in an amount of not less than \$***** per claim and \$***** in the aggregate covering all CSG personnel and including coverage for cybercrime and privacy breaches and Customer's property endorsement or insuring agreement specifying that Employee Theft coverage extends to Customer's property in the event of any theft of Customer's money or property, or money or property of other Persons for which Customer is responsible. Verification that Customer has been included as a Joint Loss payee under the policy must be provided.

All insurance required herein shall be carried with companies rated "A" or better with a financial rating of "VIII" or better in the most recent A.M. Best's Rating Guide, licensed to do business in the jurisdiction where the Products or Services are to be provided, and except for the Technology Errors and Omissions Liability policy, shall name "Comcast Corporation and its affiliates and subsidiaries and its officers, directors, employees and agents" as additional insured parties. CSG's insurance shall be primary. CSG will provide Customer, upon request, with a certificate of insurance, satisfactory in form and content to Customer, evidencing that all the required coverages are in force. CSG agrees that it will not cancel any policy of insurance required under this Agreement except after providing at least ***** (**) ***** written notice thereof to Customer. CSG also agrees to provide Customer at least ***** (**) ***** notice of any material diminishment of any policy. The Parties acknowledge their mutual intent that the limitations of liability and exclusions of certain Damages and liabilities set forth in this Agreement shall not be affected by the types and limits of insurance coverage maintained by the Parties during the Term and any De-conversion Period, including those types of coverage set forth in this section and any referenced limitations. Accordingly, the Parties agree that the types and limits of insurance coverage maintained by CSG during the Term and any De-conversion Period (i) shall not in any manner increase or decrease CSG's liability in excess of the limitations and exclusions (if and as applicable) set forth in this Agreement, including Article 9, and (ii) any approval or waiver of said insurance by Customer, shall not except as otherwise provided

in this Agreement, limit or qualify the liabilities and obligations expressly assumed by Customer pursuant to the express terms of this Agreement.

3.6 Prudent Use of Resources. In the provision of all Services under this Agreement, CSG will seek to provide such Products and Services in a cost effective manner and will advise Customer of different options for attaining any goal or development specified in this Agreement, including any proposed Statement of Work or other Technical Services request. CSG will use commercially reasonable efforts to cooperate with Customer to provide Services in a timely manner and with minimal disruption to Customer's operations.

3.7 Reliance on Information. In performing any obligations under this Agreement, CSG shall be entitled to rely upon and act in accordance with any instructions, guidelines, data or information provided to CSG by any of the authorized representatives of Customer (a) set forth on Schedule I (as such authorized representatives may be updated by Customer in accordance with Section 12.12) or (b) identified in an Ancillary Agreement as having authorization under Section 3.7 of the Agreement (collectively, "Authorized Customer Representatives"), and shall incur no liability in doing so, unless the CSG resource that received such instructions, guidelines, data or information from such Authorized Customer Representative(s) knew or reasonably should have known that (i) its reliance thereon would result in, or reasonably would have been expected to result in, any Products or Services provided under this Agreement or an Ancillary Agreement operating in a materially degraded fashion, in the case of a Product, or being performed in a materially deficient manner, in the case of a Service, or (ii) such instructions, guidelines, data or information is manifestly inconsistent with the Documentation applicable to such Product or Service.

***** (*) *****
***** (*) *****
***** Indemnification under
this Section 3.7 is subject to the Standard Indemnification Procedures.

3.8 Optional and Ancillary Services and Products.

(a) At Customer's written request pursuant to Schedule P, CSG shall provide optional and ancillary services or products, including any services or products described in Schedule F, an Ancillary Agreement or where applicable on the terms and conditions set forth in an additional Schedule or Exhibit attached to this Agreement by amendment. Any Services or Products provided by CSG to Customer as of the Effective Date that do not specifically reference a separate fee payable for such Services or Products (whether on Schedule F or in an Ancillary Agreement) will be deemed to be included in the BSC for Connected Subscribers. At the request of Customer, CSG may provide additional services, products or new functionalities which are not being provided by CSG to Customer as of the Effective Date and for which fees are not specifically set forth herein subject to fees, terms and conditions to be mutually agreed upon between the Parties in an amendment to this Agreement (including Schedule F) or an executed Ancillary Agreement.

(b) In the event of a Product license termination due to the end of life of such Product, CSG shall use commercially reasonable efforts to immediately furnish identical Products that are functionally equivalent to Customer for as long as CSG provides the ACP Services (described in Exhibit C-1), including any De-conversion Period in accordance with Section 6.2. CSG shall furnish and install (if applicable) such replacement Products to Customer at no additional cost to Customer, including any Required Equipment pursuant to Section 5.6. The preceding obligation *****

CSG understands and agrees that it has no right to discontinue any Recurring Services as a result of any Product license violation by Customer or its agents, except in cases where (a) the Recurring Services are directly related to the terminated Product; and (b) the Product license violation was material and not cured in accordance with Section 6.1(b). CSG further understands and agrees that, subject to any injunctive rights CSG may have, *****
***** (*) ***** (*) *****
***** (*)

ARTICLE 4
CSG AND CUSTOMER ADDITIONAL RESPONSIBILITIES

4.1 ***** and *****.

(a) For each month during the ACP Term and, if applicable, the ACP Extension, ***** (*)(*)(*):

*****	*****
***	*****
***	*****
***	*****
***	*****
***	*****
(** ***)	*****

(b) ***** (* *****)

(c) ***** §*****

4.2 New Subscriber Migration. If after the Effective Date Customer desires to bring subscribers served as of the Effective Date by a Non-ACP Solution (whether as Acquired Non-ACP Subscribers or migration of Customer subscribers from such Non-ACP Solution) under this Agreement, the Parties will enter into a SOW (a "Migration SOW") to migrate such subscribers, as applicable, and bring all such desired subscribers under the terms of this Agreement as Connected Subscribers. CSG shall migrate such new subscribers in accordance with the Migration SOW, which Migration SOW shall include (*) ***** (*) ***** and (c) a governance structure which will identify necessary teams and level of participation by the Parties. Once migrated, such new subscribers will be deemed Connected Subscribers billed pursuant to ***** in Schedule F (including, if and as applicable, *****).

4.3 ***** – ACP System.

(a) Customer shall configure its retention settings to systematically delete, no later than ***** (***) ***** after a ***** ("Retention Settings Parameter 1").

(b) Customer shall configure its retention settings to systematically delete no later than ***** (*) ***** (* *****), ***** after a ***** those records of all ***** ("Retention Settings Parameter 2"). CSG shall develop and deliver new functionality on or before ***** to enable Customer to implement Retention Settings Parameter 2.

(c) Customer agrees the retention period with respect to ***** subject to Retention Settings Parameter 2 will not exceed ***** (**)
***** (*****), without the Parties' prior mutual agreement and execution of an amendment to this Agreement. If Customer wishes to modify Retention Settings Parameter 2 that results in a ***** Customer will provide notice to CSG and within ***** (***) ***** of CSG's receipt of such notice, the Parties shall use their commercial good faith efforts to address the aforementioned Retention Settings Parameter 2 modification through an amendment to this Agreement. Should the Parties fail to reach a commercial agreement to accommodate ***** Customer's failure to comply with Retention Settings Parameter 2 on and after ***** shall be deemed a material breach of this Agreement.

(d) Notwithstanding anything to the contrary in this Section 4.3 and Section 4.4 below, the retention periods prescribed by Retention Settings Parameter 1, Retention Settings Parameter 2 and the ***** Retention Settings Parameter ***** (*****), CSG is required to ***** after the ***** of ***** from all ***** (%) of the ***** the Parties shall negotiate a commercially reasonable *****

4.4 *****

(a) Customer shall be entitled to ***** as described below. For the avoidance of doubt, Customer may ***** (if applicable) and may *****

(b) ***** If Customer ***** no later than ***** (*) ***** after such ***** those ***** has an ***** or ***** (the *****), CSG ***** Customer ***** Customer ***** (\$) on ***** (the *****). Customer acknowledges that if after ***** that results in ***** (a *****), the ***** shall be ***** to CSG in *****

(c) ***** If Customer ***** CSG shall ***** a ***** (\$) on ***** (the *****). If, after ***** Customer ***** that results in ***** (a *****), the ***** shall be ***** to CSG in *****

4.5 ***** Reduction ***** (*) *****

(*) ***** (*) *****

(d) On a ***** basis, if Customer believes the ***** (as defined in *****).

(e) The Parties will mutually agree when to ***** from the *****.

(f) If the Parties either (i) ***** as provided in foregoing subsection (d) or (ii) ***** as provided in foregoing subsection (e), then CSG shall ***** (including *****), ***** and ***** defined and set forth in Schedule *) on ***** such *****.

(g) To assist Customer with managing its ***** and ***** , CSG shall make available to Customer ***** a ***** that ***** Customer to process ***** that are currently ***** . Customer acknowledges CSG's ***** , which, if implemented, will occur ***** CSG makes ***** and consistent with CSG's notice obligations under this Agreement.

4.7 ***** – CSG ***** .

(a) Subject to the remaining terms of this subsection (a), Customer shall have the right during the ACP Term and, if applicable, ACP Extension, upon no less than ***** (**) ***** prior written notice to CSG, to have CSG ***** and its ***** (“*****”) from the ***** . On or before the ***** (**) ***** after Customer’s written request, the Parties shall negotiate an amendment to this Agreement that (i) identifies one or more ***** for CSG ***** (which ***** shall be based on the *****), and (ii) identifies the ***** applicable to the ***** .

(b) The Parties acknowledge that the Products, Services and functionality of CSG ***** that are ***** in the ***** include only (i) CSG ***** , (ii) ***** and CSG ***** (**) , (iii) CSG ***** and (iv) CSG’s hosting of the foregoing. The Parties further acknowledge that the following Products, Services and functionality/features are subject to ***** , as ***** , and shall (1) not ***** Fee and (2) be ***** in addition to the ***** fee, in each case ***** of CSG ***** from the ***** : (x) CSG ***** and (z) CSG ***** .

(c) The Parties shall ***** the ***** to the ***** e as of the effective date of ***** . As the basis for such ***** , the Parties acknowledge that if Customer requested CSG to ***** CSG ***** from the ***** , such ***** would ***** in an ***** of \$***** based on the ***** (*****) and ***** (*****) (i.e., \$*****).

4.8 ***** – Other Products and Services. At Customer’s request, the Parties agree to engage in good faith negotiations on the ***** of ***** in the ***** , including ***** and the ***** and ***** . The Parties acknowledge and agree that the ***** of ***** Services other than CSG ***** is subject to the Parties’ agreement to mutually acceptable commercial terms.

4.9 Compliance with Laws. Each Party and all of the Products, Services and Deliverables shall comply with, and each Party agrees that its performance under this Agreement, including all Schedules and Exhibits hereto, is subject to, all applicable Laws, including any Privacy Laws or consumer protection Laws. The Parties acknowledge and agree that

(b) ***** ** and ***** , in each case as set forth in Schedule F, Section * entitled "*****", ***** for these Services and thus, no Annual Adjustment to Fees or other increase is applicable for these items.

(c) ***** . All ***** or ***** that are either (i) not identified in subsections (a) and (b) above, or (ii) specifically identified ***** or ***** as being subject to ***** the Annual Adjustment of Fees, are subject to an Annual Adjustment of Fees.

5.5 Shipment. CSG will ship FOB shipping, from a U.S. based shipping center, the Products (FOB shipping point), and any CSG-provided third-party software from its distribution center, subject to delays beyond CSG's control. CSG will comply with Customer's request for method of delivery of Products, whether via tape, disk, other medium, or electronic file transfer for Customer's account so long as such format is available to CSG using commercially reasonable efforts. Customer's license to the Products commences upon CSG's delivery of the Products to the carrier for shipment to Customer. In the event delivery is made via file transfer protocol ("FTP") or electronic media, delivery shall occur when loaded and available for download by Customer. Upon timely notice by Customer to CSG, CSG will promptly replace, at CSG's expense, any Products that are lost or damaged while en route to Customer. CSG will use commercially reasonable efforts to deliver all software to Customer via the Internet or other remote delivery and will not ship software media unless agreed to by the Parties.

5.6 Equipment Purchase.

(a) Except as otherwise set forth in this Agreement or agreed in writing between Customer and CSG in accordance with Schedule P, Customer is fully responsible for obtaining and installing all computer hardware, software, peripherals and necessary communications facilities, including servers, power supply, workstations, printers, concentrators, communications equipment and routers that are necessary at Customer's place of business in order for Customer to utilize the Services, Products and Deliverables ("Required Equipment"). Except as otherwise set forth in this Agreement or agreed in writing between Customer and CSG in accordance with Schedule P, Customer shall bear responsibility for the Required Equipment, including the costs of procuring, installing, operating and maintaining such Required Equipment.

(b) CSG may provide, at Customer's request and expense, a data communications line from CSG's data processing center to each or any of Customer's system sites receiving Products and/or Services ("System Sites"), as appropriate. Customer shall pay all pre-approved fees and charges in connection with the installation and use of and peripheral equipment related to the data communications line in accordance with the fees set forth in Schedule F.

**ARTICLE 6
TERMINATION**

6.1 Termination. This Agreement may be terminated in whole or in part, subject to the obligations of the Parties under Section 6.2 (De-conversion Services), in accordance with the following:

(a) If Customer fails to pay any Undisputed amounts (in accordance with Section 5.2) within ***** (**) ***** following Customer's receipt of written notice of such failure to pay amounts owed, CSG may terminate this Agreement (i) in its entirety, subject to the final sentence of this Section 6.1(a), if Customer failed to pay Undisputed Monthly BSC Fees (as defined in Schedule F) that exceed ***** (\$*****), or (ii) only as it pertains to a particular Product, Deliverable or Service, upon written notice to Customer, as of a date specified in such notice of termination. Before CSG is entitled to terminate this Agreement in its entirety in accordance with subsection (a)(i) above, CSG shall first provide Customer with written notice of its intent to so terminate this Agreement and Customer shall have an additional ***** (*) ***** from its receipt of such notice to cure such breach.

(b) If either Party breaches any material term or condition of this Agreement, other than those identified in Section 6.1(a) above or in ***** *, and fails either to substantially cure such breach within ***** (**) ***** after receiving written notice specifying in precise detail the nature of the breach or, for those breaches which cannot reasonably be cured within ***** (**) ***** , promptly commence curing such breach and thereafter proceed with all due diligence to substantially cure such breach, then the Party not in breach may, by giving written notice to the breaching Party, terminate (i) this

Agreement in its entirety, or (ii) with respect to a particular Product, Deliverable, Service or Ancillary Agreement if such breach pertains to a particular Product, Deliverable, Service or Ancillary Agreement, as of a date specified in such notice of termination. For the avoidance of doubt and by way of example, a breach of the Kiosk Services that is not applicable to other Products and Services shall only terminate the Kiosk Services and will not affect the ACP Services or Output / Print Services. *****

 ***** All of the obligations of the Parties contained in this Agreement, except for Customer’s obligation to pay fees, shall be deemed to have been performed in an acceptable manner unless the Party not in breach provides the breaching Party with written notice as stated above within ***** (**)* of the discovery of the event giving rise to the breach.

(c) If either Party becomes or is declared insolvent or bankrupt, is the subject of any proceedings related to its liquidation, insolvency or for the appointment of a receiver or similar officer for it, makes an assignment for the benefit of all or substantially all of its creditors, or enters into an agreement for the composition, extension or readjustment of all or substantially all of its obligations, then the other Party may, by giving written notice thereof to such Party, terminate this Agreement as of the date specified in such notice of termination.

(d) Customer may terminate this Agreement or any Ancillary Agreement by giving written notice thereof to CSG ***** (**)* ***** To exercise its termination right under this Section 6.1(d), Customer must provide written notice thereof to CSG of termination ***** **, provided, that ***** **, whether pursuant to *****

(e) Upon termination of this Agreement or any portion hereof pursuant to Sections 6.1(a) through (d), Section **(*) or ***** *, except as otherwise specifically set forth in Section 6.2, all rights granted to Customer under this Agreement or said portion of this Agreement, as applicable, with respect to the terminated Products, Deliverables and Services will cease, and Customer will (and, with respect to clauses (i) and (ii) following, instruct its Outsourcing Vendors to) promptly, but in any event no later than ***** (**)* after completion of the standard De-conversion Services as set forth in Section 6.2, (i) purge all terminated Software from the Designated Environment and all of Customer’s (and, as applicable, its Outsourcing Vendors’) other computer systems, storage media and other files; (ii) destroy the Software and all copies thereof; and (iii) pay to CSG all Undisputed fees and Reimbursable Expenses due, invoiced and unpaid pursuant to this Agreement. In the event that CSG terminates this Agreement or any portion hereof pursuant to Section 6.1(a), Section 6.1(b) or Section 6.1(c), Customer shall pay ***** within ***** (**)* following the effective date of termination (as defined in subsection (f) below), but in any event CSG shall not be obligated to release the standard de-conversion packages (as defined in Subsection 6.2 (a)) scheduled for delivery on or after the effective date of termination until ***** In the event of termination of this Agreement by Customer pursuant to Section 6.1(b), Section 6.1(c), Section 6.1(d), Section **(*) or ***** *, and such termination is either uncontested by CSG or pursuant to a final arbitral award under Section 11.5, Customer shall have ***** (**)* from CSG’s performance of the standard De-conversion Services outlined in Section 6.2(a) to meet the requirements of the foregoing clauses (i), (ii) and (iii).

(f) Except as otherwise set forth in Section **(*) or ***** *, for purposes of this Agreement, the effective date of termination shall be (i) the ***** (1) ***** **, or (2) ***** **, or (ii) ***** **, A Party’s failure to respond to the other Party’s notice of termination within ***** (**)* following the non-terminating Party’s receipt of such notice shall be the equivalent of a written confirmation that such termination is not disputed.

(g) Upon termination of this Agreement in its entirety by CSG pursuant to Section 6.1(a), Section 6.1(b) or Section 6.1(c), and provided that such termination is either uncontested by Customer or pursuant to a final arbitral award under Section 11.5, then in addition to all other Undisputed amounts then due and owing to CSG for Services previously rendered and

*** , CSG shall also be entitled to receive the actual Damages incurred by CSG for (i) *** , provided that CSG *** , (ii) *** , and (iv) *** , solely to the extent such termination could have been or was pursuant to *** (*) ** (*) for * . In addition, CSG shall be entitled to charge Customer, pursuant to the fees set forth in Schedule F, and Customer shall pay, any additional fees incurred by Customer after the effective date of termination for Services requested by Customer, to the extent CSG continues to provide Services in relation to Customer's Connected Subscribers and Residential Subscribers. The Parties agree, however, that *** or applicable *** to the extent that such *** . For the avoidance of doubt, if (1) *** Services from CSG, CSG may *** (x) *** (*) *** applicable to the *** on an " " and (y) any applicable *** that and (2) *** that are subject to the *** , Customer is *** .

6.2 De-conversion and Customer Data.

(a) Upon the request of Customer prior to the expiration of the ACP Term or, if applicable, the ACP Extension, CSG shall provide the activities set forth in this Section 6.2 ("De-conversion Services") to Customer in order to allow Customer to de-convert its subscribers to systems of one or more customer care or billing vendor(s) of Customer's choosing or to one or more customer care or billing systems maintained by Customer or one of its Affiliates, or any combination thereof, provided that CSG's obligation to provide the De-conversion Services shall be conditioned upon Customer paying all Undisputed invoices pursuant to this Agreement issued in the ordinary course of business and in accordance with Section 5.2. CSG shall provide De-conversion Services to Customer from the date first requested by Customer for De-conversion Services through *** (*) *** following *** (***) (the "De-conversion Period"), provided that (a) if *** terminates this Agreement pursuant to *** (*) ** , the De-conversion Period shall *** (i) *** (ii) *** , or (b) if this Agreement is terminated by *** pursuant to *** (*)* *** (*)* *** (*)* , the De-conversion Period shall *** (i) *** and (ii) *** . If *** terminates this Agreement pursuant to *** (*) and *** , the Parties will *** . De-conversion Services provided by CSG are *** . Such De-conversion Services shall be provided in a manner that *** . Such De-conversion Services include (1) CSG's full and complete cooperation with Customer and any vendors or Affiliates to whom subscribers are being de-converted in connection with the conversion; and (2) furnishing CSG's standard de-conversion data package as well as any specifications for any interfaces used by Customer that are under CSG's sole control via electronic data transmission provided CSG has *** (*) *** termination and pursuant to the notice requirements in Section 6.2(a) during the *** (*) . Customer acknowledges

that if CSG sends the de-conversion data package via electronic transmission upon Customer's request and such transmission fails for reasons beyond CSG's control, then CSG shall not be liable for such failure. Any request for de-conversion files or data shall be reasonably stated in a SOW, LOA or such other written notification received by CSG that clearly states the desired cut-off date and the system principles ("SYS PRINS") involved. The Parties agree that for the purposes of this ***** (*) ***** payment for such activities shall be ***** (1) ***** (S*****) ***** (2) ***** (S*****) ***** and (3) ***** (S*****) ***** (which amounts are each subject to Section 5.4, Adjustment to Fees).

For purposes of this Agreement, CSG's "standard de-conversion package" shall mean ***** (1*) ***** , which may be updated from time to time and included as part of the standard de-conversion package:

- 1) *****
- 2) *****
- 3) *****
- 4) *****
- 5) *****
- 5) *****
- 6) ****
- 7) *****
- 8) *****
- 9) *****
- 10) *****
- 11) ***** (***)
- 12) ***** (*****) (***)
- 13) ***** (***)
- 14) ***** (***)
- 15) **** *
- 16) *****

Customer acknowledges that: (x) CSG's standard cut-off day for de-conversions is during the nightly cycle of the twenty first (21st) of the month and the de-conversion timeline starts at upsystem on the morning of the 22nd, which normally occurs at 3:30 am Central Time; and (y) in the event Customer designates a cut-off date other than the 21st of the month, Customer shall be required to pay CSG's then-current fees for a financial snapshot as of the cut-off date, provided CSG identifies the fees associated therewith and will not commence any activity until Customer agrees thereto. For de-conversions of up to ***** (*****) subscribers, CSG shall start file transmission which includes the standard de-conversion package (live subscriber data) within ***** (**) ***** from upsystem (normally occurs by 3:30 am Central Time) on the ***** following the designated cut-off date. For de-conversions between ***** (*****) and ***** (*****) ***** , CSG shall furnish such standard de-conversion package (live subscriber data) within ***** (**) ***** from upsystem (normally occurs by 3:30 am Central Time) on the ***** following the designated cut-off date. For test de-conversions under ***** (*****) ***** , CSG shall start file transmission which includes the test data within ***** (**) ***** after ***** after ***** pursuant to the terms set forth above. For test de-conversions between ***** (*****) ***** and ***** (*****) ***** , CSG shall start file transmission which includes the test data within ***** (**) ***** after the end of the live de-conversion timeframe for the given month pursuant to the terms set forth above. CSG shall start file transmission of the data or the standard de-conversion data package in the following sequence as it becomes available: I) live; II) 30-day test; III) 90-day test.

During the De-conversion Period, CSG shall provide the same Products, Services and levels of support to Customer pursuant to the terms of the Agreement as CSG provides to Customer immediately prior to the De-conversion Period.

period of *** (*) **** from the date the applicable Technical Services are performed, such Technical Services were performed in a professional and workmanlike manner. CSG provides any Third Party Software that is not Embedded Third Party Software AS IS. Other than as expressly set forth in this Section 8.1, Customer acknowledges that the Products and any such Third Party Software may not satisfy all of Customer's requirements and the use of the Products and such Third Party Software may not be uninterrupted or error-free. CSG further warrants that it has not knowingly inserted, or knowingly allowed to be inserted, and will use all commercially reasonable efforts to prevent insertion, into the Products, Services or Recurring Services, and the medium in which the Products, Services or Recurring Services, and other materials are provided to Customer by CSG, any program, information, code and commands, including viruses, bombs, worms, backdoors or Trojan horses (i) that are designed to cause the Products, Services or Recurring Services or any of Customer's software or hardware systems to malfunction, self-destruct or deny services, (ii) that are designed to cause damage to or degrade performance (unless such degradation in performance is explicitly provided for in this Agreement) of any computer, network, or any information, program or data contained therein, or (iii) that are designed to enable or allow unauthorized access to any of Customer's software or hardware systems, or to any Confidential Information (as defined below) of Customer or Customer Data. With respect to Customer's access to Products, Services, or Recurring Services or to any CSG hardware or software, Customer warrants that it will use all commercially reasonable efforts to prevent insertion of any program, information, code and commands, including viruses, bombs, worms, backdoors or Trojan horses (1) that are designed to cause the Products, Services or Recurring Services or any of CSG's software or hardware systems to malfunction, self-destruct or deny services, (2) that are designed to cause damage to or degrade performance of any computer, network, or any information, program or data contained therein, or (3) that are designed to enable or allow unauthorized access to any of CSG's software or hardware systems or to any Confidential Information or Customer Data.

8.2 Remedies. In case of a breach of warranty or any other duty related to the quality of the Products, CSG or its representative will correct or replace any defective Product or, if not practicable, CSG will accept the return of the defective Product and refund to Customer. Except for CSG's obligations set forth in Article 7, Customer acknowledges that this Section sets forth Customer's sole and exclusive remedy, and CSG's exclusive liability, for any breach of warranty or other duty related to the quality of the Products or Deliverables. THE REMEDIES SET FORTH IN THIS PARAGRAPH ARE SUBJECT TO THE LIMITATION OF LIABILITY SET FORTH BELOW IN SECTION 9.2.

8.3 Exclusion of Certain Warranties. EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT, ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE PRODUCTS, ANY THIRD PARTY SOFTWARE, AND THE SERVICES, WHETHER EXPRESS OR IMPLIED, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY CSG, ITS AGENTS OR OTHERWISE (INCLUDING ANY WARRANTY OF MERCHANTABILITY, SATISFACTION, OR FITNESS FOR PARTICULAR PURPOSE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED. CUSTOMER ACKNOWLEDGES AND AGREES THAT THE PRODUCTS AND SERVICES BEING PROVIDED ARE NOT WARRANTED TO BE ERROR-FREE.

**ARTICLE 9
LIMITATION OF REMEDIES AND DAMAGES**

9.1 Protection of Data and Property. Backup and recovery plans or backup and recovery software is not included with the Products that are located at Customer's site(s). Any Customer documents, data and files located at Customer's site(s) are and shall remain Customer's property; and therefore, Customer is solely responsible for its own backup and recovery plan(s) for its data stored within the Designated Environment or utilized within such Products.

9.2 No Consequential Damages; Limitation of Liability.

(a) EXCEPT FOR (*****), UNDER NO

CIRCUMSTANCES WILL EITHER PARTY OR THEIR RELATED PERSONS, AFFILIATES, LICENSORS OR VENDORS BE LIABLE TO THE OTHER PARTY OR THEIR RELATED PERSONS, AFFILIATES, LICENSORS AND VENDORS FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES, WHETHER FORESEEABLE OR UNFORESEEABLE. CONSEQUENTIAL DAMAGES SHALL INCLUDE LOST PROFITS, LOST BUSINESS OPPORTUNITY, LOST GOODWILL, LOST REPUTATION AND OTHER SIMILAR DAMAGES OR ECONOMIC LOSS.

(b) EXCEPT FOR ***** (*) ***** THE EXPIRATION OF THE TERM FOR WHICH CSG PROVIDES DE-CONVERSION SERVICES ("DIRECT DAMAGES CAP"). ANY AND ALL CLAIMS (OR SERIES OF RELATED CLAIMS) ARISING DURING A ***** OF THE TERM OR THEREAFTER SHALL BE SUBJECT TO THE APPLICABLE LIABILITY LIMITATION FOR ***** AS DESCRIBED HEREIN. THE PARTIES AGREE THE DIRECT DAMAGES CAP ***** IN ADDITION, THE PARTIES AGREE THAT SHOULD ***** THE PARTIES SHALL BE DETERMINED ***** AND SUCH ***** IN NO EVENT SHALL THE *****

(c) ***** (THE "*****"), SUBJECT TO ***** (*) ***** CUSTOMER ACKNOWLEDGES AND AGREES THAT CSG'S OBLIGATIONS AND CUSTOMER'S REMEDIES UNDER THIS AGREEMENT RELATED TO INDEMNIFIED SECURITY INCIDENT CLAIMS AND DIRECT SECURITY INCIDENT CLAIMS SHALL BE SPECIFICALLY SUBJECT TO ***** (%) ***** "*****" ***** ***** (*****)

(d) THE AFOREMENTIONED EXCLUSIONS AND LIMITATIONS OF DAMAGES SHALL BE INDEPENDENT OF, AND SHALL SURVIVE, ANY FAILURE OF THE ESSENTIAL PURPOSE OF ANY WARRANTY OR

LIMITED REMEDY STATED HEREIN AND SHALL APPLY EVEN IF THE LIABLE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

9.3

(a) Notwithstanding anything to the contrary herein, ***** (*). *****

(b) Notwithstanding anything to the contrary herein, where CSG is ***** (*). ***** (S*****). ***** (*). ***** (S*****). ***** (S*****). ***** (S*****).

(c) ***** (*) ***** (*). ***** (*). ***** (*) ***** (*)

ARTICLE 10 CONFIDENTIAL INFORMATION

10.1 No Disclosure. Each Party agrees that during and after the Term, neither the receiving Party nor any Person affiliated with, owned in whole or in part by, employed by or otherwise connected with the receiving Party, shall directly or indirectly, without the express written consent of the disclosing Party, divulge, use, sell, exchange, furnish, give away,

or transfer in any way any Confidential Information of the disclosing Party, unless otherwise expressly provided for in this Agreement.

10.2 Purpose of Access. Each Party acknowledges that any Confidential Information that has been disclosed to it by the disclosing Party, or that the receiving Party has come into possession of, has been disclosed solely for the purpose of enabling the receiving Party to perform its obligations hereunder. Each Party agrees that all Confidential Information, whether provided by the disclosing Party prior to or after the Effective Date or that the receiving Party otherwise comes into possession of, is the exclusive property of the disclosing Party and, in addition, CSG further agrees that all of Customer's subscribers are and shall remain customers of Customer, until or unless Customer de-converts such subscribers to another provider for whom CSG provides billing services. For the avoidance of doubt, nothing in the Agreement shall be construed to apply to Personal Information that CSG may have access to and use of for one of CSG's third-party customers other than Customer to the extent such Personal Information has been provided by or collected by CSG on behalf of such third-party customer and is processed by CSG solely in connection with its provision of a product or service to such third-party customer. Customer Data shall at all times remain the sole and exclusive property of Customer. Customer Data shall include data maintained by CSG by virtue of this Agreement on current Subscribers and Former Subscribers (for periods when they were subscribers or customers). ***** Indemnification under this Section 10.2 is subject to the Standard Indemnification Procedures.

10.3 Compelled Disclosure. If either Party is served with any form of process purporting to require the receiving Party to disclose any Confidential Information to any third party, the receiving Party shall, unless prohibited by the order or Law, immediately notify the disclosing Party who shall, in addition to the receiving Party's similar efforts, if any, have the right to seek to quash such process at the disclosing Party's expense. The receiving Party shall cooperate with the disclosing Party (at the disclosing Party's expense) in a commercially reasonable manner to quash such process or otherwise to limit the scope of any required disclosure.

10.4 Confidential Information Defined. The term "Confidential Information" shall include information provided to a receiving Party by a disclosing Party that the disclosing Party designates as confidential; this Agreement (and all amendments thereto), any Ancillary Agreement and all of their respective terms and conditions; all Documentation, manuals and training materials provided to CSG by Customer or provided to Customer by CSG; Personal Information of all past, present, and subsequently acquired Connected Subscribers, Residential Subscribers and other subscribers to any product or service offered by or in conjunction with Customer, subject to Section 10.2 above; personally identifiable information relating to Connected Subscribers and Former Subscribers, as further defined by applicable Privacy Laws and applicable generally accepted industry standards ("PII"), subject to Section 10.2 above and Section 10.5 below; Usage Data and Employee Data, in each case as set forth and defined in Section 10.6; any other information relating to any Connected Subscribers, Former Subscribers, Residential Subscribers, other subscribers and Customer or CSG employees, including all lists or other records containing any such information, even if such information is aggregated; and all financial, technical, business, and credit information relating to Customer, including all market analyses and market expansion plans, all revenue and profit analyses and projections and all commission structures and statements; all technical information provided by Customer, including all implemented or planned product and service improvements or changes, and all information about Customer's network configuration, plant or any equipment attached thereto; and all other information relating to the operations of Customer which was disclosed or provided to CSG or became known to CSG through its relationship with Customer; all other information not generally known to the public relating to Customer; each Party's trade secrets, know-how, design, inventions, plan or process; all other information relating to CSG's business operations, services, Products, Services, research, and development which was disclosed or provided to Customer or became known to Customer through its relationship with CSG; each Party's vendors' or licensors' information and products; and all other information that the receiving Party should reasonably know from the markings or the circumstances of disclosure to contain confidential information. The obligations of confidentiality and restriction on use in this Article 10 shall not apply to any Confidential Information that:

(a) was lawfully in the public domain prior to the Effective Date or subsequently lawfully came into the public domain through no fault of the receiving Party;

(b) is rightfully obtained by the receiving Party from a third party authorized to make such disclosure without restriction or being in breach of any confidentiality duty owed to the disclosing Party or an Affiliate of the disclosing Party;

(c) is required to be disclosed in a judicial or administrative proceeding, but only for purposes of such required disclosure, and only after all reasonable legal remedies for maintaining such information in confidence have been exhausted including giving the disclosing Party as much advance notice of the possibility of such disclosure as is practical so that the disclosing Party may attempt to stop such disclosure or obtain a protective order concerning such disclosure, in each case at such disclosing Party's expense; or

(d) is independently developed by or for the receiving Party without reference to, access to, or use of the Confidential Information disclosed to it under this Agreement.

10.5 Subscriber Information. CSG hereby acknowledges that Customer has a responsibility under applicable Law, including any Privacy Laws, to keep PII private and confidential. CSG also acknowledges that the PII to which it will have access pursuant to this Agreement (if any) constitutes Customer Confidential Information and that CSG in no way possesses or shall gain possession of any ownership or other proprietary rights with respect to such PII. CSG acknowledges and understands that PII is subject to the subscriber privacy protections set forth in Section 631 of the Cable Communications Policy Act of 1984, as amended (47 USC Sec. 551) ("Section 631"), as well as other applicable Laws and applicable information industry standards, provided, however to the extent that Customer informs CSG of a local Law expanding the foregoing definition of PII, CSG shall only be required to use commercially reasonable efforts to comply with such expanded local Law. CSG agrees that it shall use all such information described in this Section 10.5 in confidence, and in connection with its receipt and use of such information, it shall perform its obligations under this Agreement in strict compliance with those requirements of Section 631 applicable to CSG's actions and obligations prescribed under this Agreement and all other Laws applicable to CSG governing the use, collection, disclosure, storage and disposal of such information. CSG further agrees to restrict disclosure of such PII to CSG subcontractors (subject to CSG's provision of prior written notice to Customer in accordance with Section 12.5) with a need to know and who are bound by confidentiality restrictions that are materially similar to those herein, and ensure such subcontractors shall not further disclose such information to any third party except (a) as expressly provided in this Agreement or (b) at the direction of or with the prior written consent of Customer. As of the Effective Date, CSG shall cause all CSG employees and all (i) newly hired subcontractors and (ii) renewals of any agreements that CSG has in place with its subcontractors, in each case who obtain or are reasonably likely to obtain access to (1) Customer Confidential Information (other than PII) to be bound by confidentiality provisions that are no less restrictive than those contained herein that apply to CSG relative to Customer Confidential Information and (2) PII to be bound by confidentiality provisions that are no less restrictive than those contained herein that apply to CSG relative to PII. CSG shall be liable for any breach by CSG or any of its employees, vendors or subcontractors of the confidentiality provisions contained in this Article 10, but subject to the applicable terms of Section 9.2(c) in the event that such breach results in or is caused by a Security Incident. In addition, should a security audit conducted by Customer pursuant to the Data Security Measures reveal that any CSG subcontractor is out of compliance with the required confidentiality provisions contained in this Article 10, then Customer shall have the right to cause CSG to cease using such subcontractor on any matters in which such subcontractor may come into contact with any PII. Customer agrees that at all times during the Term and any De-conversion Period, in connection with its performance under this Agreement, it will comply with its obligations under all applicable Laws in relation to PII and Usage Data, and where required by Law, Customer will either obtain the appropriate consents or provide the necessary disclosures, as applicable, from its subscribers prior to such collection, use and disclosure to CSG.

10.6 Usage and Employee Data. Confidential Information shall include any and all data relating to account activity and subscriber usage of products and services or other information collected from or about or otherwise regarding Connected Subscribers ("Usage Data") or a Party's employees ("Employee Data"), in each case whether in individual or aggregate form. Such Employee Data or Usage Data is and shall remain the property of the disclosing Party. To the extent that a receiving Party has access to or collects such Usage Data or Employee Data, it does so solely on behalf of the disclosing Party pursuant to the receiving Party's obligations hereunder and shall maintain the confidentiality of such data as required in this Article 10 and shall treat it in accordance with applicable Law. A Party shall not use Usage Data or Employee Data for any purpose other than to perform its obligations under this Agreement and shall not disclose such data, whether in aggregate or individual form, to any third party except as explicitly provided in this Agreement or as otherwise approved in writing by Customer consistent with Schedule I or Schedule P. A Party shall not collect or maintain such Usage Data or Employee Data except to the extent necessary to perform its obligations under this Agreement.

10.7 Unauthorized Use. The receiving Party shall notify the disclosing Party immediately upon discovery of any unauthorized use or disclosure of Confidential Information by receiving Party and/or its representatives (and, with respect to Customer, its agents and consultants) and in every reasonable way will cooperate and assist the disclosing Party to regain possession of the Confidential Information and to prevent its further unauthorized use.

10.8 Destruction/Return of Information. Upon (a) the expiration or termination of this Agreement and any De-conversion Period or (b) the disclosing Party's request during the Term and any De-conversion Period, the receiving Party shall, at the disclosing Party's option, use commercially reasonable efforts to return to the disclosing Party or securely erase or destroy all (or such portion of) Confidential Information upon such timetable as shall be mutually negotiated in good faith by the Parties, but in any case no more than ***** (**) **** following the date of implementation of such return or destruction activities, provided that if such Confidential Information constitutes Personal Information, the receiving Party shall return or securely erase or destroy all such Personal Information as mutually negotiated in good faith by the Parties. Upon completion of such activities, but subject to the immediately following two (2) sentences, the receiving Party shall provide, a written certification signed by an officer of the receiving Party, certifying that the receiving Party has complied with the provisions of this Section 10.8. The requirements of this Section 10.8 shall not be applicable to (i) the extent necessary to be retained by a Party in the performance of its obligations expressly provided for herein, provided that such information shall be returned or destroyed in compliance with this section upon completion of any such additional performance, or (ii) to Confidential Information a Party has on archived or back-up systems, so long as such Confidential Information is securely isolated and protected and the Party in possession thereof will use commercially reasonable efforts to securely erase or destroy such Confidential Information within *** (*) **** after the implementation of return or destruction activities pursuant to this Section 10.8, provided that if such archived Confidential Information constitutes Personal Information, the Party in possession thereof shall securely erase or destroy all such Personal Information within *** (*) **** after the implementation of return or destruction activities pursuant to this Section 10.8. The Parties acknowledge any Confidential Information retained by a receiving Party consistent with this Section 10.8 shall remain subject to the restrictions and limitations of this Article 10 for so long as such Confidential Information is retained.

10.9 Publicity. Except for disclosures required by Law or outlined herein, each Party will submit to the other all public disclosure(s), advertising and other publicity matters relating to this Agreement in which the other Party's name or mark is mentioned or language from which the connection of said name or mark may be inferred or implied, and will not publish or use such advertising or publicity matters without the express prior written approval of the other Party, said approval shall not be unreasonably withheld or delayed. This Agreement, upon execution, shall constitute a material definitive contract for CSG, and CSG is required to file a Form 8-K within four (4) business days after the Parties' full execution of this Agreement. Prior to the date hereof, the Parties agreed on the form of a press release to be issued by CSG in connection with the execution of this Agreement. CSG is authorized to issue such press release; provided any modifications to such agreed form shall require the prior written approval of Customer (which approval may be withheld in Customer's sole discretion). Notwithstanding anything to the contrary herein, CSG may, without the prior written consent of Customer, make reference to the existence of this Agreement and use Customer's name and mark on CSG's customer reference lists, in CSG's newsletters, in CSG's disclosure documents submitted to the SEC and posted on EDGAR, and on the websites of CSG or its parent company. CSG shall provide Customer the redacted version of this Agreement and related documents (which shall not include letters seeking confidential request or a filing on form K or a filing on form Q, as applicable) reasonably in advance of the anticipated filing date of such redacted Agreement with the Securities Exchange Commission. Upon its receipt of such redacted version and related documents, Customer shall have **** (*) ***** **** to review such redacted version and related documents prior to CSG filing such documentation with the Securities Exchange Commission. Subject to CSG's obligations under applicable Law, CSG agrees to consider, in good faith, Customer's comments on such redactions. If Customer does not provide any comments within **** (*) ***** **** after its receipt of a proposed redacted version, Customer shall be deemed to have no comments to such document and CSG may file such version with the Securities Exchange Commission.

10.10 Indemnity and Injunctive Relief.

(a) Each Party (as such, the Indemnifying Party) shall indemnify, defend and hold the other Party (as such, the Indemnified Party) harmless from and against any and all Damages incurred by an Indemnified Party pursuant to a Third Party Claim that arises out of the Indemnifying Party's breach of this Article 10, provided any Third Party Claim that is

an Indemnified Security Incident Claim is subject to Section 3(d) of Schedule N. Indemnification under this Section 10.10(a) is subject to the Standard Indemnification Procedures.

(b) Each Party understands and agrees that the other Party will suffer irreparable harm in the event that the receiving Party of Confidential Information breaches any of its obligations under this Article 10 and that monetary damages will be inadequate to compensate the non-breaching Party. In the event of a breach or threatened breach of any of the provisions of this Article 10, the non-breaching Party, in addition to and not in limitation of any other rights, remedies or damages available to it at law or in equity, shall be entitled to seek a temporary restraining order, preliminary injunction and/or permanent injunction in order to prevent or to restrain any such breach by the other Party.

(c) Any breach of this Article 10 that is a Direct Security Incident Claim is subject to Section 3(e) of Schedule N.

ARTICLE 11
CUSTOMER COMPETITORS, EQUITABLE RELIEF AND MEETINGS

11.1 Customer Competitors. The Parties have identified in Schedule A the Customer Competitors as of the Effective Date. The list of Persons identified as Customer Competitors may be amended from time-to-time to reflect changes in Customer's competitive environment; provided any such amendment is mutually agreed by the Parties (such agreement not to be unreasonably withheld, conditioned or delayed) consistent with this Section 11.1 and incorporated into an amendment to this Agreement. If either Party proposes an amendment to the Persons included as Customer Competitors (whether an addition or deletion), such Party shall provide written notice thereof to the other Party, after which the Parties shall engage in good faith negotiations on such request. If the receiving Party agrees with such request, the Parties shall *****
***** of such receiving Party's agreement. If within *****
***** of receipt of a written request the receiving Party does not agree with a request to amend the list of Customer Competitors, the matter shall be escalated to each Party's respective Senior Vice President for resolution. Each Party acknowledges that notwithstanding anything in this Section 11.1 to the contrary, a Person that *****
***** (\$*****
***** in annual revenue from the sale (*****
***** be deemed a Person reasonable to include as a Customer Competitor.

11.2 Equitable Relief. Nothing in this Agreement will prevent either Party from seeking interim injunctive relief against the other Party in the courts having jurisdiction over the other Party.

11.3 Meetings. The Parties will jointly develop a formal process for reporting and tracking software problems, and the reporting of them to Customer on no less than a monthly basis. The Parties shall also meet monthly to discuss and coordinate operational and other issues arising from this Agreement, anticipated operational and business needs of Customer, and, if applicable, any proposed changes to the Designated Environment. The Parties further agree to meet ***** to review the Designated Environments and discuss any proposed changes thereto.

11.4 Reserved.

11.5 Arbitration. Any controversy or claim arising out of this Agreement, or the existence, validity, breach or termination thereof, whether during or after its termination or expiration, will be finally settled by arbitration in accordance with the Commercial Arbitration Rules of American Arbitration Association ("AAA"), as modified or supplemented under this Section 11.5.

(a) To initiate arbitration, either Party may give the appropriate notice at the Regional Office in *****
***** Any communications between a Party and any appointed panel will be directed to the AAA for transmittal to the panel. The panel shall have the authority to order production of documents and deposition of Party witnesses as may be reasonably requested by either Party or the panel itself. The Parties expressly agree that the arbitrator or panel will be empowered to, as to either Party's request, grant injunctive relief. *****

(b) The arbitral award will be the exclusive remedy of the Parties for all claims, counterclaims, issues or accountings presented to the panel. The award will (i) be granted and paid in U.S. dollars exclusive of any tax, deductions or offset, and (ii) include interest from the date the award is rendered until it is fully paid, computed at the maximum amount allowed by applicable Law. Judgment upon the arbitral award may be entered in any court that has jurisdiction thereof. ***** ** ***** ** ***** ** ***** ** ***** ** *****

11.6 Discovery Support.

(a) CSG acknowledges and agrees that from time to time in the course of its business Customer may have a legal obligation to preserve, collect and produce certain data that CSG maintains pursuant to this Agreement and/or to preserve, collect, and produce such data in response to requests, inquiries or demands that may be made to Customer or CSG from time to time by Governmental Authorities, courts or opposing parties with which Customer is engaged in litigation (each a "Discovery Event"). CSG agrees to reasonably cooperate with Customer and at Customer's request or as required by the applicable rules of civil procedure or court order, to the fullest extent required by Law, and with respect to any further or other request made by Customer or a third-party litigant to which Customer is a party, in complying with and responding to such Discovery Event(s) with respect to data or other information relating to Customer's business that has come or will come into the possession and/or custody of CSG ("Discovery Support").

(b) No later than ***** (**) ***** following CSG's receipt of notice of a Discovery Event, which contains sufficient detail and information for CSG to act upon, from Customer or a third party, CSG shall provide Customer, with a good faith proposal (each a "Discovery Estimate") consisting of (i) the scope and nature of the applicable Discovery Support; (ii) the estimated time that must be expended by CSG personnel in providing the applicable Discovery Support; (iii) any necessary investment in hardware or software by CSG or third-party vendor resources in connection with the proposed Discovery Support; and (iv) if applicable, any proposed budget for the work in question. Upon receipt of the Discovery Estimate, Customer shall negotiate in good faith with CSG to document via a Statement of Work the scope and terms of Discovery Support, including applicable timelines and service levels. No SOW shall be effective and CSG shall not be required to provide any services hereunder, until and unless signed by a member of Customer's legal department.

(c) During the Term and any De-conversion Period, ***** (**) ***** *****

(d) CSG further acknowledges that such requests may require the collection and production of data with respect to subscribers that have been divested by Customer and CSG agrees, to the extent it still has such information at the time of such request, to preserve, collect and/or produce such information with respect to the period during which such subscribers were Connected Subscribers as long as CSG receives the approval of any acquiring entity to provide same. Such obligation shall survive the expiration or early termination of this Agreement and any De-conversion Period. Customer and CSG recognize that certain Discovery Events or other information may entail or require some level of utilization of copyrighted, patented, trade secret or other proprietary technology of CSG. CSG consents to the use of such technology for such purposes, and Customer agrees, upon request of CSG, to take all reasonable steps requested and available to protect the copyrighted, patented, secret or proprietary nature of such technology, which shall include pursuing the confidential treatment of the foregoing under a protective order and to the extent reasonably necessary, requiring Customer's counsel or consultants to sign a non-disclosure agreement with CSG. Nothing in this Agreement shall prohibit CSG from seeking a protective order or other appropriate relief if, in CSG's reasonable discretion, such action is necessary to protect CSG's proprietary information and technology.

ARTICLE 12
GENERAL TERMS AND CONDITIONS

12.1 Reporting

(a) Status Reports. Upon Customer’s request to the CBU, CSG shall prepare a written status report, in a format to be mutually agreed to in advance, to Customer detailing the status of the any or all outstanding Statements of Work issued pursuant to this Agreement. The status report shall enumerate any problems that may adversely affect the progress of the Deliverables from such Statements of Work and shall contain such additional information as mutually agreed upon by the Parties. In addition to providing current schedule estimates of project completion or milestone achievement, status reports shall provide an accurate and timely accounting of all billable expenses incurred and billable labor hours expended for each outstanding Statement of Work. Status reports shall be provided in printed form as well as in a widely used word processing and /or spreadsheet or database format such as Microsoft Excel or Access as appropriate to the structure of the reports and as the Parties mutually agree. Delivery schedules for such status reports shall be mutually agreed upon at the time of Customer’s request.

(b) Project Book. Upon Customer’s request to the CBU, for projects with an estimated cost exceeding *** ***** ***** ***** (\$*****), CSG shall, at its sole cost and expense, maintain a project book in a format to be mutually agreed upon in advance, which shall contain: (i) the names, titles, and business addresses of CSG’s personnel managing services related to a Statement of Work issued pursuant to this Agreement; (ii) a copy of the Statement of Work; (iii) a copy of status reports for such Statement of Work; (iv) documentation and manuals developed as part of the Statement of Work; and (v) any other data in CSG’s possession substantially pertinent to the progress and/or status of the Statement of Work, such as confidentiality agreements, subcontracts, amendments, or Change Orders relating to the Statement of Work. Delivery schedules for such project books shall be mutually agreed upon at the time of Customer’s request. The project book shall be the property of Customer and shall be provided to Customer upon request.

12.2 Survival. Termination or expiration of this Agreement and any De-conversion Period shall not impair either Party’s then accrued rights, obligations, liabilities or remedies. Notwithstanding any other provisions of this Agreement to the contrary, the terms and provisions of Sections 1.3, 1.4, 1.5, 1.7, 2.1, 3.5, 3.7, 3.9, 3.11, 5.1, 5.2, 5.3, 6.1, 6.2, Articles 7 through 12 (other than Sections 12.1, 12.8, 12.12 and 12.16 – 12.20); Schedules A, B (sections 8, 9 and 10), F, I, J, L and N; and any other provision of this Agreement or any Ancillary Agreement that contemplates performance or observance subsequent to any termination or expiration of this Agreement and any De-conversion Period shall survive the termination or expiration of this Agreement and any De-conversion Period.

12.3 *****

(a) The Parties have mutually agreed upon the fees for the Products and Services to be provided hereunder based upon *** ***** ***** ***** **
***** ** ***** **, and ***** ***** ***** ***** ** ***** ** ***** ***** ***** ***** ***** ***** *****
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(c)The Parties acknowledge and agree that the *****
 ***** (*) ***** (*) ***** (*) *****

(d) The Parties acknowledge and agree that the ***** in this Section 12.3 *****

12.4 Independent Contractor

- (a) CSG warrants and agrees that (i) it is engaged in an independent business and that it and its employees and agents will perform under this Agreement as independent contractors and not as agents or employees of Customer; and (ii) will maintain complete control over performance by its employees, agents and subcontractors at all times during the Term and any De-conversion Period. Customer is not liable for debts or expenses incurred by CSG, its employees, agents and subcontractors. Nothing in this Agreement nor any subcontract shall create any contractual relationship or liabilities between any agent or subcontractor and Customer. CSG shall be responsible for its own acts and those of its agents, employees and subcontractors in connection with performance of this Agreement.
- (b) CSG will be solely responsible for all matters relating to payment of its employees, including compliance with workers' compensation, unemployment, disability insurance, social security withholding, and all other federal, state and local Laws governing such matters. CSG and its employees are not entitled to unemployment insurance benefits as a result of performing under this Agreement unless unemployment compensation coverage is provided by CSG. CSG is responsible for and shall pay all assessable federal and state income tax on amounts paid under this Agreement. CSG shall be solely responsible for its safety, the safety of its employees, its subcontractors and agents, and its general work area while on CSG's premises. Each Party shall be solely responsible for the acts and omissions of their respective employees, subcontractors and agents while on the other's premises.

12.5 Subcontractors. CSG shall provide Customer written notice prior to subcontracting any obligations hereunder. Such requirement shall not apply to purchases of incidental, standard commercial supplies or raw materials, including services necessary in the performance of duties under the Agreement. Notwithstanding the immediately preceding sentence, CSG shall have the right to engage consultants, supplemental staffing, or individual or independent contractors to perform any Services CSG deems necessary, without providing notice thereof to Customer. Notwithstanding anything in this Section 12.5 to the contrary, and subject to the applicable exclusions of and limitations on liability set forth in this Agreement, CSG agrees to be responsible for any and all Damages incurred by Customer, whether pursuant to a Third Party Claim or direct claim, arising from the acts or omissions of any third party contemplated by this Section 12.5, including any subcontractor, consultant, supplemental staff or independent contractor, as though such contractors were employees of CSG.

12.6 Force Majeure. Neither Party will be liable for any failure or delay in performing an obligation under this Agreement that is due to causes beyond its reasonable control, including epidemics, earthquake, lightning, failures or fluctuations in electrical power or telecommunications equipment, accidents, floods, acts of God, the elements, war, civil disturbances, acts of civil or military authorities or the public enemy, acts or omissions of any common carrier, strikes, labor disputes, regulatory restrictions, restraining orders or decrees of any court, changes in Law or other acts of government, transportation stoppages or slowdowns or the inability to procure parts or materials; provided, Customer’s obligations relating to fees or payment relating to specific Products, Services or Recurring Services shall be forgiven to the extent such events interfere with Customer’s use of any such Products, Services or Recurring Services. These causes will not excuse Customer from paying accrued Undisputed amounts due to CSG through any reasonably available lawful means reasonably acceptable to CSG.

12.7 Assignment. Neither Party may assign, delegate (except to a subcontractor or Affiliate as otherwise permitted herein) or otherwise transfer this Agreement or any of its rights or obligations hereunder without the other Party’s prior written approval, which shall not be unreasonably withheld. Any attempt to do so without such approval will be void. ***** (* “*****”)*****

***** Following ***** public announcement that it has entered into a definitive agreement intended to result in a Change of Control, *** agrees to provide ***** with reasonably requested information pertaining to the intended acquiror’s financial and technical capacity to continue to perform ***** obligations under the Agreement, to the extent such information is not obtainable from publicly available resources and to the extent permitted pursuant to any applicable confidentiality or other contractual obligations relating to such nonpublic information, provided, however *** shall take commercially reasonable efforts to seek permission of the acquiror to disclose such non-public information.

12.8 Source Code Escrow. In the event that, during the Term or any De-conversion Period, (a) ***** (*), (b) ***** (the “Covered Products”) and ***** or (c) ***** , then within ***** (***) ***** of Customer’s written request CSG will *****

*** ***** place all source code and applicable documentation related to the Covered Products (“Deposit Material”) in escrow and take all steps necessary to register Customer, and maintain as registered through the ACP Term (and, if applicable, ACP Extension) and any De-conversion Period, as a beneficiary to a standard escrow agreement with a nationally recognized escrow agent, with terms no less protective of Customer’s rights as prescribed by *** ***** ***** ***** ***** (***) ***** ** ***** ** ***** *****) that previously governed the Parties’ escrow relationship prior to the Effective Date (the “Escrow Agreement”). The Escrow Agreement shall provide that in the event that CSG (i) files for protection under Chapter 7 of the bankruptcy laws of the United States of America or takes other steps to liquidate its assets for the purposes of discontinuing its business or (ii) ceases to provide maintenance and support for any Covered Product as required by this Agreement (each of the foregoing, a “Release Condition”); then, Customer may request a release of the applicable Deposit Materials sufficient to allow Customer to maintain services for Customer’s cable systems that utilize a Covered Product, subject to the terms of the Escrow Agreement.

12.9 Construction; Interpretation.

(a) Each Party acknowledges that it was represented by counsel in connection with this Agreement and the transactions contemplated herein, that it and its counsel reviewed and participated in the preparation and negotiation of this Agreement and the documents and instruments to be delivered hereunder, and that any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be employed in the interpretation of this Agreement or the documents and instruments to be delivered hereunder. This Agreement, together with all Ancillary Agreements, constitutes the entire agreement between the Parties and supersedes any and all written or oral prior agreements and understandings regarding the matters herein, including the 2013 Master Agreement. Each Party has not relied on and will not rely on, and each Party is not liable for or bound by, any express or implied warranties, guaranties, statements, representations or information pertaining to the matters herein, excluding those warranties which are set forth elsewhere in this Agreement or in any Ancillary Agreement.

(b) For purposes of this Agreement: (a) the words “include,” “includes” and “including” shall be deemed to be followed by the words “without limitation”; (b) the word “or” is not exclusive; and (c) the words “herein,” “hereof,” “hereby,” “hereto” and “hereunder” refer to this Agreement as a whole. The definitions given for any defined terms in this Agreement shall apply equally to both the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. Unless the context otherwise requires, references herein to Articles, Sections, Schedules and Exhibits mean the Articles and Sections of, and Schedules and Exhibits attached to, this Agreement.

12.10 Notices. Unless a different or alternative method of notice or approval is otherwise specified in a Schedule attached hereto or an Ancillary Agreement, any notice or approval required or permitted under this Agreement will be in writing and will be sent by courier or mail, postage prepaid, to the address specified below or to any other address that may be designated by prior written notice. Any notice or approval sent by courier will be deemed received *** (*) *** after its date of posting. Any notice or approval sent by mail will be deemed to have been received on the ***** (***) ***** ** after its date of posting.

If to Customer:
Comcast Cable Communications Management, LLC
One Comcast Center
Philadelphia, PA 19103-2838
Tel: (***)*****
Attn:***** ***** *****
With a copy similarly addressed to:
***** **

Comcast Cable Communications Management, LLC

And with a copy similarly addressed to:
***** *****
Comcast Cable Communications Management, LLC

If to CSG:
CSG Systems, Inc.
18020 Burt Street
Omaha, NE 68022
Tel: (***) *****
Attn: ***** * **
With a copy to:
***** *****
CSG Systems, Inc.
6175 South Willow Drive, 10th Floor
Greenwood, CO 80111
And with a copy to:
***** *****
CSG Systems, Inc.
6175 South Willow Drive, 10th Floor

12.11 Binding Authority. Except as provided in Section 12.12, no amendments, modifications, or other changes and additions to this Agreement, including any Ancillary Agreements, will be effective, binding or enforceable against Customer, unless such are approved in advance in writing by the applicable authorized individual(s) identified in Schedule P or in any other manner mutually designated by the Parties.

12.12 Updates to Schedule I and Schedule P. Following the Effective Date, Customer may amend, revise or replace each of Schedule I and Schedule P without the need to amend this Agreement by causing an authorized individual identified on Schedule P (as represented by the form of Schedule P prior to the receipt of such notice and as Schedule P is revised consistent with such notice) to provide written notice thereof to CSG in accordance with Section 12.10. The effective date of any revision to, or amendment or replacement of, Schedule I or Schedule P shall be as of the date specified in such notice (provided such effective date is no less than *** (*) ***** ***) after the date such notice is deemed received pursuant to Section 12.10). Nothing in this Section 12.12 shall be deemed to limit the revision or replacement to Schedule I or Schedule P through an amendment to this Agreement in accordance with Section 12.11.

12.13 Miscellaneous. Any waiver or modification of this Agreement will not be effective unless executed in writing and signed by the Party to be charged. Any attempted oral modification of this Agreement shall be void and of no effect. This Agreement will be governed by and interpreted in accordance with the laws of New York, U.S.A., to the exclusion of its conflict of laws provisions. The Parties agree that the United Nations Convention on Contracts for the International Sales of Goods is specifically excluded from application to this Agreement. If any provision of this Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this Agreement.

12.14 Counterparts and Facsimile. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same Agreement. A document signed, scanned and transmitted electronically and verifiably is to be treated as an original and shall have the same binding effect as an original signature on an original document.

12.15 No Assumption of Obligations. Unless agreed otherwise in this Agreement or a Schedule, nothing in this Agreement shall be construed as requiring a Party to assume any of the other Party's obligations, responsibilities or liabilities under applicable Law, and neither Party shall be obligated to validate or perform any investigation into the other Party's compliance with Laws.

12.16 Background Checks. During the Term and any De-conversion Period, CSG shall cause a Background Check to be completed on all CSG personnel (including, for avoidance of doubt, any personnel of subcontractors used by CSG) assigned by CSG to provide Services hereunder prior to the date such Services commence, and shall not assign CSG personnel to provide Services hereunder if the results of any Background Check, or CSG's actual knowledge, indicate that such CSG personnel may pose a threat to Customer's property, employees, subscribers, subscribers' property or Confidential Information or such CSG personnel would be otherwise unsuitable for assignment. For purposes of this Section 12.16 only, CSG personnel (including any personnel of subcontractors used by CSG) providing Services hereunder shall mean those CSG personnel that (a) have access to any Customer Confidential Information, PII or Usage Data, (b) perform specific services for the direct benefit of Customer (which, for the avoidance of doubt, does not include any CSG personnel that perform services with respect to any Products or Services for which Customer is but one of several CSG customers that may access or use such Products or Services), or (c) perform any portion of the Services while at Customer's premises. Further, for U.S.-based employees, a "Background Check" means a background investigation performed by an agency in good standing with the National Association of Professional Background Screeners, and shall include (i) a check of felony and misdemeanor criminal convictions (federal, state and county) for at least the immediately preceding ***** (*) ***** period, (ii) searches of the U.S. Government Specially Designated National (OFAC) and export denial lists and relevant national and state sex offender registries and (iii) verification of the individual's citizenship and legal right to work in the jurisdiction in which the CSG personnel would be performing the Services. To the extent permitted by local Law, for (1) any period of time encompassed in the foregoing background check requirement when an individual was a resident outside of the United States and (2) any individual that is a current resident outside of the United States, such background checking shall be conducted by a reputable investigative agency that conducts background checking in the relevant country(ies), utilizing database checking, field checking and interviews as needed (which background checking shall constitute the Background Check for such non-U.S. residents).

CSG shall comply with all applicable Laws in conducting the Background Check specified in this Section 12.16, including, if permitted by applicable Law, securing from each individual who provides Services for Customer written consent to perform the background checking specified in this Section 12.16. The Parties understand and agree that the nature of the information that CSG personnel may access, as well as the requirements of applicable Law, may change from time-to-time, and in such cases, upon the request of Customer the Parties will work together in good faith to modify this Section 12.16 to address any such changes.

12.17 Equal Employment Opportunity. If applicable by the terms of the following regulatory provisions, the referenced provisions are incorporated herein by this reference: 41 CFR 60-1.4, 41 CFR 60-250.5(a), 41 CFR 60-300.5(a), 41 CFR 60-741.5(a), and 29 CFR part 471, Appendix A to Subpart A. The coverage determinations for these provisions are complex and fact-specific. Accordingly, Customer takes no position on whether the above regulatory provisions apply to this specific Agreement. It is CSG's position that these provisions are not applicable to this Agreement.

12.18 Federal Contractor Requirements. Customer and CSG shall abide by the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, gender identity, sexual orientation, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability. The Parties also agree that, as applicable, they will abide by the requirements of Executive Order 13496 (29 CFR Part 471, Appendix A to Subpart A) relating to the notice of employee rights under federal labor Laws.

12.19 Supplier Diversity. Comcast is committed to providing meaningful opportunities for minority, women, veteran, and small disadvantaged business entities and individuals ("Diversity Suppliers") to provide products and services to Customer. In connection with such commitment, Customer encourages CSG to explore all available opportunities to partner with Diversity Suppliers who offer complementary products and services to the services to be provided under this Agreement. Customer expects any such arrangements to augment, and not duplicate, the responsibilities and efforts of CSG and other suppliers engaged in the provision of the Products or Services contemplated under this Agreement.

12.20 Local Wage and Benefit Ordinances and Standards. In certain jurisdictions, Comcast may be required to comply with local wage and benefit ordinances and standards ("Standards"), which typically require employers to pay employees wages at a rate that exceeds the minimum wage levels established by state and federal Law and/or to provide a certain level of benefits. As a result of this Agreement, CSG also may be required to comply with applicable Standards. Consequently, CSG agrees that it will take all necessary steps to ensure that it understands the scope of all applicable Standards, including consultation with its local human resources professionals and/or legal counsel, and, to the extent it is covered or temporary workers provided by CSG to Comcast are covered, to ensure compliance with all such Standards.

12.21 Schedules and Attachments. The following Schedules and Exhibits are attached and incorporated herein, and each reference herein to the "Agreement" shall be construed to include the following:

Schedule A – Definitions

Schedule B and associated Exhibits – Product License, Maintenance and Support

Schedule C and associated Exhibits – Recurring Services

Schedule D – Services Commitment Rules

Schedule E and associated Exhibits– Technical Services

Schedule F – Fees

Schedule G – Interim Letter Agreement

Schedule H – Support Services

Schedule I – Authorized Customer Representatives

Schedule J – Outstanding Ancillary Agreements

Schedule K – Guidelines for Passer and Agent Transfer Program Requests

Schedule L – Performance Standards and Remedies

Schedule M – Sample Entity Addendum

Schedule N and associated Exhibits– Data Security Measures

Schedule O – Examples Illustrating Application of Subsection (*) of Schedule * (***** ** ***)

Schedule P – Customer Authorization Schedule

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first above written, effective as of the Effective Date.

CUSTOMER:

**COMCAST CABLE COMMUNICATIONS
MANAGEMENT, LLC (“CUSTOMER”)**

By: /s/ Peter Kiriacoulacos

Name: Peter Kiriacoulacos

Title: Executive Vice President &
Chief Procurement Officer

CSG:

CSG SYSTEMS, INC. (“CSG”)

By: /s/ Bret C. Griess

Name: Bret C. Griess

Title: President & CEO

SCHEDULE A

DEFINITIONS

“**2013 Master Agreement**” shall have the meaning set forth in the first recital.

“**2020 Services Commitment SOW**” shall have the meaning set forth in Section 3.4(a).

“***** ** *****” shall have the meaning set forth in Section 4.5.

“***** ** *****” shall have the meaning set forth in Section 4.5.

“**AAA**” shall have the meaning set forth in Section 11.15.

“**ACP**” shall have the meaning set forth in the definition of “Connected Subscriber.”

“**ACP Extension**” shall have the meaning set forth in Section 1.2(c)(i).

“**ACP Related Services**” shall mean all Products identified on Exhibit B-1, all Recurring Services identified on Schedule C and any Technical Services performed in connection with the foregoing, but specifically excludes all (a) Output / Print Services, (b) Kiosk Services and (c) any other Product, Recurring Service or other CSG offering that is prescribed by an Ancillary Agreement and includes in such Ancillary Agreement an independent term for the provision of such Product, Recurring Service or other CSG offering.

“**ACP Services**” shall have the meaning set forth in Exhibit C-1.

“**ACP System**” shall mean CSG’s ACP billing and management information system and related software.

“**ACP Term**” shall have the meaning set forth in Section 1.2(c)(i).

“**ACP Wireless Module**” shall have the meaning set forth in Exhibit C-9.

“**Acquired ACP Subscribers**” shall have the meaning set forth in Section 1.6(c).

“**Acquired Non-ACP Subscribers**” shall have the meaning set forth in Section 1.6(b).

“**Acquiring Entity**” shall have the meaning set forth in Schedule G.

“**Additional EBP Services**” shall have the meaning set forth in Exhibit C-3(a).

“**Additional Product**” shall have the meaning set forth in Schedule B.

“**Additional Terms**” shall have the meaning set forth in Section 1.2.

“**Advanced ESP**” shall have the meaning set forth in Exhibit C-2.

“**Advanced ESP Statement**” shall have the meaning set forth in Exhibit C-2.

“**Affected Products**” shall have the meaning set forth in Section 7.1(c)(ii).

“**Affiliate(s)**” shall mean any Person that directly or indirectly controls, is controlled by, or is under common control with a Party, where “control” means the ownership of, or the power to vote, at least fifty one percent (51%) of the voting stock, shares or interests of such Person. Any Person that otherwise qualifies under this definition will be included within the meaning of “Affiliate” even though it qualifies after the Effective Date.

“***** ** *****” shall have the meaning set forth in Schedule L.

“CSG Indemnified Party” shall mean CSG, CSG’s Affiliates and the directors, officers, employees, successors and permitted assigns of CSG and its Affiliates.

“CSG’s Intellectual Property” shall have the meaning set forth in Section 2.1(a).

“CSG IP Claim Options” shall have the meaning set forth in Section 7.1(c)(iii).

“CSG Supplier Claim” shall have the meaning set forth in Section 3.11.

“CSG – Supplier Final Resolution” shall have the meaning set forth in Section 3.11.

“CSG Vendor Privacy Controls” shall have the meaning set forth in Section 4(c) of Schedule N.

“Custom Development” shall mean any Deliverable provided in the form of Software that is independently developed from the Product.

“Customer” shall have the meaning set forth in the Preamble.

“Customer Competitor” shall mean (a) **** * and (b) those additional Persons identified as a competitor of Customer pursuant to Section 11.1.

“Customer Data” shall mean PII and any and all documents, data, files or other information provided to CSG by Customer, its subscribers, or to the extent that Customer Data is provided by other third parties on behalf of Customer, or its subscribers, or is developed or obtained by CSG in its performance under this Agreement and pertaining to subscribers, including compilations, summaries or the derivative information processed, created or maintained by CSG relating thereto. Without limiting the foregoing, Customer Data shall include *** * or its vendors or subcontractors on behalf of Customer.

“Customer Discretionary Notice” shall have the meaning set forth in Section 3(a) of Schedule N.

“Customer Indemnified Party” shall mean Comcast, Comcast’s Affiliates and the directors, officers, employees, successors and permitted assigns of Comcast and its Affiliates.

“Customer Property” shall have the meaning set forth in Section 2.1(b).

“Customer Unique Materials” shall have the meaning set forth in Section 1.5(c).

“Customer Value Optional Table in CSG Vantage®” shall have the meaning set forth in Exhibit C-19(g).

“CY” shall have the meaning set forth in Schedule D.

“CY Services Commitment” shall have the meaning set forth in Schedule D.

“CY Services Commitment Period” shall have the meaning set forth in Schedule D.

“**** Report” shall have the meaning set forth in Section 4.6(b).

“Damages” shall mean all (a) ***** (*****), (b) *****

***** ** ***** ** ***** and (c) ***** ***** ***** ***** ***** ***** ** * ***** ** ***** ***** ***** *****

“**Data Security Measures**” shall have the meaning set forth in Section 4.10.

“**De-conversion Period**” shall have the meaning set forth in Section 6.2.

“**De-conversion Services**” shall have the meaning set forth in Section 6.2.

“***** ** ***** ** *****” shall have the meaning set forth in Section 1.5(a).

“***** ** ***** *****” shall have the meaning set forth in Section 1.5(a).

“**Deliverable**” shall mean any Work Product which is, has or must be delivered to Customer pursuant to a mutually executed Statement of Work.

“**Deposit**” shall have the meaning set forth in Exhibit C-2.

“**Deposit Materials**” shall have the meaning set forth in Section 12.8.

“**Design Statement of Work**” or “**D-SOW**” shall have the meaning set forth in Schedule E.

“**Designated Environment**” shall have the meaning set forth in Section 7 of Schedule B.

“**Designated Environment Guide**” shall have the meaning set forth in Section 7 of Schedule B.

“**Direct Damages Cap**” shall have the meaning set forth in Section 9.2(b).

“**Direct Security Incident Claim**” shall have the meaning set forth in Section 3(e) of Schedule N.

“**Disbursements**” shall have the meaning set forth in Exhibit C-2.

“***** ** *****” shall have the meaning set forth in Section 12.3.

“**Discovery Estimate**” shall have the meaning set forth in Section 11.6(b).

“**Discovery Event**” shall have the meaning set forth in Section 11.6(a).

“**Discovery Support**” shall have the meaning set forth in Section 11.6(a).

“**Disposing Entity**” shall have the meaning set forth in Schedule G.

“**Disputed**” shall mean disputed by Customer in good faith by providing written notice to CSG no later than ***** (**) ***** after receipt of a CSG submitted invoice. To the extent an invoice or fee is not Disputed in accordance with this definition, such invoice or fee shall be considered “**Undisputed**.”

“**Diversity Suppliers**” shall have the meaning set forth in Section 12.19.

“**Documentation**” shall mean the published user manuals and documentation that CSG may make generally available for a Product or Service.

“**EBP Subscribers**” shall have the meaning set forth in Exhibit C-3(a).

“**Effective Date**” shall have the meaning set forth in the Preamble.

“**Electronic Payment Policies**” shall have the meaning set forth in Section 5.2.

“**Embedded Third Party Software**” shall mean software which forms an integral part or is otherwise fundamental to the core functionality of the CSG Product(s).

“**Employee Data**” shall have the meaning set forth in Section 10.6.

“**Enhanced Account Ledger**” or “**EAL**” shall have the meanings set forth in Exhibit C-7.

“**Enhanced Past Due Notices**” shall have the meaning set forth in Exhibit C-2.

“**Enterprise License**” shall have the meaning set forth in Schedule B.

“**Enterprise Products**” shall have the meaning set forth in Schedule B.

“**Entity Addendum**” shall have the meaning set forth in Section 1.6(b).

“**Escrow Agreement**” shall have the meaning set forth in Section 12.8.

“*****” shall have the meaning set forth in Section 1.5(a).

“**Export Approved Countries**” shall have the meaning set forth in Section 11 of Schedule B.

“**Export Approved Products**” shall have the meaning set forth in Section 11 of Schedule B.

“**Export Laws**” shall have the meaning set forth in Section 11 of Schedule B.

“*****” shall have the meaning set forth in Schedule L.

“**Filing Requirements**” shall have the meaning set forth in Section 11 of Schedule B.

“**Final ACP Contract Year**” shall mean (a) January 1, 20** through December 31, 20** if Comcast does not exercise the ACP Extension and (b) January 1, 20** through December 31, 20** if Comcast exercises the ACP Extension.

“**Former Subscriber**” shall mean a customer or subscriber that is no longer an active user of Customer’s services, whether or not the customer has been de-converted to another entity.

“**Governmental Authority**” shall mean a governmental, regulatory or law enforcement agency.

“**Indemnified Party**” shall mean a Party that is entitled to indemnification pursuant to the specific terms of this Agreement, and shall include such Party’s Affiliates and the directors, officers, employees, successors and permitted assigns of such Party and its Affiliates.

“**Indemnified Security Incident Claim**” shall have the meaning set forth in Section 3(d) of Schedule N.

“**Indemnifying Party**” shall mean a Party that is required to indemnify an Indemnified Party pursuant to the specific terms of this Agreement.

“**Individual Notification**” shall have the meaning set forth in Section 3(a) of Schedule N.

“**Initial Project Analysis**” or “**IPA**” shall have the meaning set forth in Exhibit E.

“**InfoCast Files**” shall have the meaning set forth in Exhibit C-19(f).

“**Intellectual Property**” shall mean: (a) any idea, design, concept, method, process, technique, apparatus, invention, discovery, improvement, derivative, including any patents, trade secrets, and know-how, (b) any work of authorship, including any copyrights, moral rights or neighboring rights, (c) any trademark, service mark, trade dress, trade name, or other indicia of source or origin, (d) other proprietary rights and (e) and all applications, registrations and/or filings regarding the foregoing.

“*****” shall have the meaning set forth in Schedule L.

“*****” shall have the meaning set forth in Section 4.1(b).

“***” shall have the meaning set forth in Schedule L.

“***” shall have the meaning set forth in Schedule L.

“***” shall have the meaning set forth in Section 6.2(e).

“**Non-ACP Solution**” shall mean a billing, revenue management and monetization solution other than the ACP System.

“**Non-U.S. Affiliate**” shall have the meaning set forth in Section 1.6(b).

“**One-Time Credit Card Processing Services**” shall have the meaning set forth in Exhibit C-3(c).

“**Output / Print Services**” shall mean the Direct Solutions, as referenced in Exhibits C-2 (Print and Mail Services/Advanced Enhanced Statement Presentation (AESP)), C-6 (Braille/Large Print Statement Functionality), C-17 (AFP Statement Image File Transfer) and C-20 (Message Manager), and Section III Direct Solutions (Print and Mail Services) of Schedule F.

“**Output / Print Term**” shall have the meaning set forth in Section 1.2(c)(ii).

“**Outsourcing Vendor**” shall have the meaning set forth in Section 11 of Schedule B.

“**P&M Subscribers**” shall have the meaning set forth in Schedule L.

“**PA Hours**” shall have the meaning set forth in Schedule K.

“**Party**” and/or “**Parties**” shall have the meaning set forth in the Preamble.

“*****” shall have the meaning set forth in Section 1.5(c).

“*****” shall have the meaning set forth in Schedule L.

“**Person**” shall mean an individual, corporation, partnership, joint venture, limited liability company, Governmental Authority, unincorporated organization, trust, association or other entity.

“**Personal Information**” shall have the meaning set forth in Exhibit B to Schedule N.

“**PII**” shall have the meaning set forth in Section 10.4.

“***” shall mean *****.

“***” shall have the meaning set forth in Section 9.3(b).

“***” shall have the meaning set forth in Section 9.3(b).

“***” shall have the meaning set forth in Section 9.3(a).

“**Precision eCare Services**” shall have the meaning set forth in Exhibit C-4.

“**Precision e-Mail®**” shall have the meaning set forth in Exhibit C-10.

“*****” shall have the meaning set forth in Section 12.2(b).

“**Print and Mail Services**” shall have the meaning set forth in Exhibit C-2.

“***** Remedies” shall have the meaning set forth in Section 1.5(c).

“**Prior Ancillary Agreements**” shall have meaning set forth in Section 1.3(b).

“*****” shall have the meaning set forth in Section 4(c) of Schedule N.

“**Privacy Laws**” shall mean Laws in all jurisdictions that relate to (a) the confidentiality, collection, use, handling, processing, security, protection, transfer or free movement of personal data, PII or customer information, (b) electronic data privacy, (c) trans-border data flow or (d) data protection, in each case applicable to a given Party’s respective rights and responsibilities under this Agreement.

“*****” shall have the meaning set forth in Section 12.2(b).

“**Product(s)**” shall mean the software products set forth in Schedule B, including (i) the machine-readable object code version of the software related to the products identified in Schedule B, whether embedded on disc, tape or other media; (ii) the Documentation; (iii) any applicable Updates, (iv) any Embedded Third Party Software and (v) any copies of the foregoing.

“****” shall have meaning set forth in Section 4.5.

“****” shall have meaning set forth in Section 4.5.

“**Recurring Credit Card Processing Services**” shall have the meaning set forth in Exhibit C-3(d).

“**Recurring Services**” shall mean those services described in Schedule C and those services described in a Service Order or Statement of Work executed pursuant to the terms of this Agreement.

“**Refund Check**” shall have the meaning set forth in Exhibit C-3(e).

“**Refund Services**” shall have the meaning set forth in Exhibit C-3(e).

“**Reimbursable Expenses**” shall have the meaning set forth in Section 5.1.

“**Release Condition**” shall have the meaning set forth in Section 12.8.

“**Releasees**” shall have the meaning set forth in Section 1.4.

“**Releasor**” shall have the meaning set forth in Section 1.4.

“**Remediation Action**” shall have the meaning set forth in Section 3(a) of Schedule N.

“**Remediation Event**” shall have the meaning set forth in Section 3(a) of Schedule N.

“*****” shall have the meaning set forth in Section 9.2(c)

“**Required Equipment**” shall have the meaning set forth in Section 5.6.

“**Residential Subscribers**” shall have the meaning set forth in Section 1.5(a).

“**Residential Voice Services**” shall have the meaning set forth in Exhibit C-5.

“**Restricted Country**” shall have the meaning set forth in Section 11 of Schedule B.

“**Restricted Transaction**” shall have the meaning set forth in Section 6.1(d).

“**Retention Settings**” shall have the meaning set forth in Section 3(b) of Schedule N.

“**Retention Settings Parameter 1**” shall have the meaning set forth in Section 4.3(a).

“**Retention Settings Parameter 2**” shall have the meaning set forth in Section 4.3(b).

“*****” shall have the meaning set forth in Section 5.4(a)(ii).

“**Risk Management Services**” shall have the meaning set forth in Exhibit C-3(b).

“**RMS Vendor**” shall have the meaning set forth in Exhibit C-3(b).

“**Sanctions List**” shall have the meaning set forth in Section 11 of Schedule B.

“**SCO**” shall have the meaning set forth in Schedule D.

“**Screen Scraping**” shall mean selecting multiple fields from CSG’s online screens and populating an application or database on Customer’s end.

“**Section 631**” shall have the meaning set forth in Section 10.5.

“**Security Disclosure Exceptions**” shall have the meaning set forth in Section 1(b) of Schedule N.

“**Security Incident**” shall mean an actual breach of security of, or a Party suspects based on reasonable evidence available to it that a breach of security occurred with respect to, any system, website, database, equipment or storage medium in the control of that Party, its subcontractors or vendors that resulted or will result in the unauthorized access to or unauthorized disclosure, theft or other loss of any PII, Usage Data or Employee Data by any third party, including access by any consultant, subcontractor or vendor that is not authorized to access such information. For the avoidance of doubt, a Security Incident includes a Security Requirement Security Incident, as defined in Exhibit B to Schedule N.

“***** ***** *****” shall have the meaning set forth in Section 9.2(c).

“**Security Incident Report**” shall have the meaning set forth in Section 1(b) of Schedule N.

“**Security Questionnaire**” shall have the meaning set forth in Section 4(b) of Schedule N.

“**Security Requirements Assessment Audit**” shall have the meaning set forth in Section 4(d) of Schedule N.

“**Service Interruption**” shall have the meaning set forth in Schedule L.

“**Service Request Form**” shall have the meaning set forth in Exhibit E.

“**Service Specific Term**” shall have the meaning set forth in Section 1.2(b).

“**Services**” shall mean the Recurring Services and Technical Services, along with any other CSG services provided by CSG to Customer under the Agreement.

“**Services Commitment**” shall have the meaning set forth in Section 3.4(a).

“**Services Commitment Confirmation**” shall have the meaning in Section 3.4(a).

“**Services Commitment SOW**” shall have the meaning set forth in Section 3.4(a).

“*** ***** *****” shall have the meaning set forth in Schedule L.

“****” shall mean * ***** ***** ***** , as prescribed on Schedule L.

“*** **” shall have the meaning set forth in Schedule L.

“**Software**” shall mean software code and computer programs provided by CSG to Customer, including any Products, Updates or Deliverables. Unless specifically stated to the contrary, Customer shall only be entitled to receive Software in machine-readable object code.

“**Standard Indemnification Procedures**” shall have the meaning set forth in Section 7.4(b).

“**Standards**” shall have the meaning set forth in Section 12.20.

“**Statement of Work**” or “**SOW**” shall have the meaning set forth in Schedule E.

“*** **” shall have the meaning set forth in Section 9.3(b).

“*** **” shall have the meaning set forth in Section 9.3(b).

“**Subscriber Information**” shall have the meaning set forth in Section 10.5.

“**Subscriber Statements**” shall have the meaning set forth in Exhibit C-2.

“**Successor-In-Interest**” shall mean any party now or hereafter controlled or under common control with a Party.

“**Supplies**” shall have the meaning set forth in Exhibit C-2.

“**Support Services**” shall have the meaning set forth in Section 4 of Schedule B.

“**System Sites**” shall have the meaning set forth in Section 5.6.

“**SYS PRIN**” shall have the meaning set forth in Section 6.2.

“**Technical Services**” shall have the meaning set forth in Section 3.2.

“**Term**” shall have the meaning set forth in Section 1.2(a).

“**Third Party Access**” shall have the meaning set forth in Section 9 of Schedule B.

“**Third Party Claim**” shall mean any claim, suit, action or proceeding brought directly or indirectly against a Party by a third party other than a Party’s Affiliate, agents, contractors, service providers, and vendors.

“**Third Party Software**” shall have the meaning set forth in Schedule B.

“***** **” shall have the meaning set forth in Schedule L.

“***** **” ***** ** * * * * * ***** ** ***** ** ***** ** ***** ** ***** ***** ***** ** *****
***** ***** ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** ***** **
*****) * * * * * ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** ***** ** *****

“***** **” shall have the meaning set forth in Section 3.11.

“**Total Service Code Statistics Optional Table in CSG Vantage®**” shall have the meaning set forth in Exhibit C-19(g).

“**Transfer Amount**” shall have the meaning set forth in Exhibit C-3(e).



“**Transferred Subscribers**” shall have the meaning set forth in Exhibit C-1.

“**Trigger Document**” shall have the meaning set forth in Schedule E.

“**UDF Cards 1-143 Vantage Optional Table**” shall have the meaning set forth in Exhibit C-19(g).

“**Unauthorized Access**” shall have the meaning set forth in Section 3(c) of Schedule N.

“**Undisputed**” shall have the meaning set forth in the definition of “Disputed.”

“**Updates**” shall mean the fixes, updates, upgrades or new versions or any other major and minor enhancements of the Products, Services or Documentation that CSG may make generally available to its customers as part of its standard support services.

“**Usage Data**” shall have the meaning set forth in Section 10.6.

“**Vendor**” shall have the meaning set forth in Exhibit C-3(b).

“**Warrant**” shall have the meaning set forth in Section 1.3(c).

“**Wired Funds**” shall have the meaning set forth in Exhibit C-3(e).

“**Work Product**” shall have the meaning set forth in Section 3.9.

“**Workstation**” shall mean a computer on which the Product is installed.

SCHEDULE B

PRODUCT LICENSES, MAINTENANCE AND SUPPORT

1. Overview

Products licensed by CSG to Customer pursuant to this Agreement are for the purpose of facilitating and supplementing the Recurring Services provided by CSG to Customer under this Agreement. Usage of the Products licensed herein shall be at the sole discretion of the Customer, provided that such usage is in conjunction with the Recurring Services provided by CSG. Except as expressly set forth in Section 12.8 of the Agreement or an Ancillary Agreement, Customer and CSG agree that CSG will not provide any access to the source code for any licensed Software provided pursuant to this Agreement.

2. Licenses.

2.1 Enterprise Products License. Upon delivery of the applicable medium (or media) containing the Products identified on Exhibit B-1 ("Enterprise Products"), or in cases where Customer obtains access to the Enterprise Products via a server, upon (a) installation of the server at Customer's site; or (b) access is provided to the server located in CSG's facilities, CSG grants Customer a non-exclusive, nontransferable license to (i) access the Enterprise Products located on the servers in CSG facilities, in object form only and only for the Customer's own internal purposes and business operations with the Recurring Services, and (ii) reproduce, distribute and use an unlimited number of copies of the Enterprise Products, in object code form only and only for Customer's own internal purposes and business operations with the Recurring Services ("Enterprise License"). CSG acknowledges that Customer received and obtained access to certain Enterprise Products under the 2013 Master Agreement. With respect to such Enterprise Products CSG hereby grants Customer the license set forth in this Section 2.1. Except as expressly set forth in Section 8 below, Customer may use the Enterprise Products only on Workstations on the Customer's premises or otherwise under the control of Customer, which shall include an Affiliate or a subcontractor which Customer has an agreement for the provision of services. All Enterprise Products shall have no usage restrictions governing the number of Customer's end users accessing and using the software at any time during the Term.

2.2 Future License Grants. From time to time during the Term, the Parties may execute one or more (a) amendments to this Agreement modifying the Enterprise Products licensed by Customer or (b) amendments to this Agreement and/or Ancillary Agreements to add new Products (whether such Products are new Enterprise Products or Products subject to different license terms (an "Additional Product"). Each amendment to this Agreement or Ancillary Agreement that, in each case, prescribes an Additional Product, shall specify the license terms applicable to such Ancillary Product.

2.3 Affiliates. CSG agrees that any licenses granted hereunder may be extended to any Affiliate of Customer on the terms and conditions of this Agreement, without additional charge. Any such Affiliate shall be added to this Agreement as an additional licensed user; provided such Affiliate's use of the licensed Products is in conjunction with its use of the ACP Services.

2.4 Documentation. CSG grants to Customer a license to use and make copies of Documentation at no cost for its use. CSG grants Customer the rights to post Documentation on its Intranet for access by Customer personnel with a need to know provided the Documentation is treated as Confidential Information in accordance with Article 10. Customer agrees that all copies of Documentation made by Customer shall retain CSG's copyright notices and proprietary markings.

3. Updates

3.1 CSG shall use commercially reasonable efforts to provide Customer Bulletins for Updates to the Products and Services ***** (**) **** prior to the general release date of such Updates but in no event less than ***** (**) **** prior to the general release date.

a. **Bundle Releases.** ***** ** *** ***** ***** ** ***** ** *** ***** (**) ***** ***** ***** ** ***** ** *** ** **
***** ** *** ***** ***** ***** ** **

to the license terms that might accompany such Third Party Software. The fees, if any, for such Third Party Software that may be procured through CSG are set forth in Schedule F. Customer shall execute reasonable and customary documents that such vendors may require enabling CSG to deliver the Third Party Software that Customer elects to procure through CSG. To the extent Third Party Software is procured through CSG, and provided CSG has the necessary rights, CSG shall pass through all warranties and indemnities provided by any licensor of any such Third Party Software. Customer may be required to procure other third party software in the Designated Environments for the Products licensed by Customer from someone other than CSG and Customer shall be responsible for any and all fees related thereto. CSG makes no warranty and provides no indemnity with respect to such Third Party Software procured through CSG; provided, however, any Embedded Third Party Software shall be subject to all agreements, covenants, indemnities and other undertakings made by CSG relating to the Products. Third Party Software that is not Embedded Third Party Software is listed in an Exhibit to Schedule C, an Ancillary Agreement or the Documentation, and shall not be considered "Products" for purposes of this Agreement. Maintenance and support for Third Party Software, if any, are provided by the licensor of those products. Although CSG will assist with front line support, CSG will have no liability with respect thereto and Customer must look solely to the third party licensor. Nothing herein will prevent Customer from purchasing such Third Party Software and technology directly from the third parties.

6. Third Party Licenses. CSG may provide Customer with Software, commercially available third party software and Services subject to patent or copyright licenses or sublicense that third parties, ***** ** * ("*****"). Customer acknowledges that Customer receives no express or implied license or other rights under *** other than the right to use the Software, commercially available third party software and Services, as provided by CSG. Any modification of or addition to the Software, third party software or Services or combination or use thereof with other software, hardware or services not made or provided by CSG is not licensed under this Agreement, expressly or impliedly, and may subject Customer and any third party supplier or service provider to an infringement claim.

7.Designated Environment. "Designated Environment," means the current combination of other computer programs and hardware equipment that CSG specifies for use with the Products and Services as set forth and updated from time to time on CSG's customer extranet website (*****) (the "Designated Environment Guide"). CSG shall communicate any updates made to the customer extranet website for the Designated Environment to Customer. Customer (or any third parties permitted in accordance with Section 11 below) will use commercially reasonable efforts to keep their hardware and software in conformance with the Designated Environment specifications that CSG may provide from time to time in accordance with this Section 7. CSG shall use commercially reasonable efforts to provide Customer at least ***** (**), but in any case provide Customer no less than ***** (**), prior written notice for any changes to the hardware and/or software that Customer is required to maintain in order to use or access any of the Products or Services solely related to (a) operating system, or (b) in CSG's Products or Services which are solely under CSG's control. **** CSG agrees to promptly notify Customer upon learning that a third party vendor will cease supporting any particular hardware or software. CSG shall have no obligation to give prior notice to Customer of changes to the Designated Environment that do not require Customer or their Subscribers to upgrade its computer programs or hardware equipment unless such changes would necessitate training of Customer's customer service representatives, in which case at least ***** (**), notice shall be given to Customer.

8. Restrictions. Customer agrees that it shall not: (a) reverse engineer, decompile or disassemble any Software; (b) sell, lease, license or sublicense any Software; (c) publish any results of benchmark tests on the Software; (d) use the Software to provide any service to or on behalf of any third parties in a service bureau capacity, except to third parties purchasing Customer cable systems, as further provided in paragraph 2 of Exhibit C-1 ("Acquiring Entity"); (e) use, or permit any other Person to use, the Software to provide any service to, on behalf of, or for the benefit of, any unrelated third party (except an Acquiring Entity); or (f) permit any other Person (except an Acquiring Entity) to use the Software, whether on a time-sharing, remote job entry or other multiple user arrangement. Use, duplication or disclosure by the U.S. Government or any of its agencies is subject to restrictions set forth in the Commercial Computer Software and Commercial Computer Software Documentation clause at DFARS 227.7202 and/or the Commercial Computer Software Restricted Rights clause at FAR 52.227.19(c).

maintained by the United States Government (collectively, a "Sanctions List"); or (iii) not knowingly provide the Products or Services or any technical information related to the Products or Services to any Person that is located or is a resident of Cuba, Iran, North Korea, Crimea or Syria or any country designated as an embargoed or sanctioned country by the United States government (a "Restricted Country"). "Outsourcing Vendor" shall mean third party service providers of Customer located in any foreign country listed on Exhibit B(1)(a). "Export Approved Countries" and "Export Approved Products" shall mean those countries and CSG Products identified in Exhibit B(1)(a) and shall specifically exclude, if listed on Exhibit B(1)(a), any Restricted Country, as identified from time-to-time during the Term and any De-conversion Period.

EXHIBIT B (1) (a)
EXPORT APPROVED PRODUCTS AND EXPORT APPROVED COUNTRIES

Countries

***** * *****

***** * * *****
***** * * *****

Products

***** (*****)

*These products include the following software or product modules:

- 1.***
- 2.*****
- 3.***** (***)
- 4.*****
- 5.*****
- 6.***** (***)
- 7.*****
- 8.*****
- 9.*****
- 10.****
- 11.*** **
- 12.*****
- 13.*****
- 14.*****
- 15.*****
- 16.*** **
- 17.*** ***** (**** ***** ***)* ***** **
- 18.*****
- 19.***** ***** (***)

Exhibit B-1

ENTERPRISE PRODUCTS

Subject to the terms and conditions of the Agreement, Customer licenses the following Products (as further described below) from CSG as Enterprise Products without any limitations as to the number of users.

Product Name

Advanced Customer Service Representative (ACSR)
Advanced Customer Service Representative (web enabled) (ACSR (web enabled))
ACSR® module for High Speed Data
ACSR AOI
ACP for Voice (ACPV)
Application Integration Tool (AIT)
CSG Desktop Solution Bundle
CSG Event Notification Interface (ENI)

Customer Interaction Tracking (CIT)
CSG Order Work Flow (OWF)
CSG Receipt Storage
CSG Statement Express®
CSG Field Service Management (FSM)
CSG Field Service Management (FSM) TechNet
CSG Field Service Management (FSM) TechNet iOS
CSG SmartLink
CSG SmartLinkBOS
CSG Field Service Management (FSM) Capacity Planning
CSG Field Service Management (FSM) GPS

As part of the Recurring Services CSG shall provide operational and systems management services as required for Customer's use and fully functional operation of the Enterprise Licensed Products, including system administration, database administration, network administration and engineering to ensure a stable, scalable, highly performing hardware and software platform/environment.

CSG shall provide installation, implementation, and conversion services for the Enterprise License Products pursuant to a mutually agreed upon SOW executed by the Parties in connection with Customer's conversion of any Connected Subscribers added by mutual agreement of the Parties to CSG's data processing system subsequent to the execution of this Agreement (the "Implementation/Conversion Services"), if any, for the fees set forth in Schedule F.

Product Descriptions

Advanced Customer Service Representative® (ACSR®). ACSR is a graphical user interface for CSG's ACP System. ACSR significantly reduces training time and eliminates the need for CSRs to memorize transactions and codes. CSRs instead may access reference tools, help screens and subscriber data. ACSR enables accounts to be serviced by the same CSR and permits CSRs to communicate with one another through a self-contained message system. ACSR is designed so that module-based functionality such as CIT can be added as needed.

ACSR® (web enabled). ACSR (web-enabled) will permit Customer to utilize the ICA technology to migrate application software from the desktop to a "server-based" environment. The ICA technology enhances the functionality of ACSR and ACSR-related desktop call center applications (including ACSR module of High Speed Data, ACPV, CIT, and Statement Express) by allowing Customer to utilize these applications via the web.

ACSR® module for HSD. The ACSR module of HSD allows customers, through the graphical user interface, to access subscriber information on ACP as it relates to Customer's offering of high speed data services.

ACP for Voice (ACPV). ACPV provides customer management, service ordering and fulfillment and usage processing for telephone and high speed data subscribers. Video, telephony and high speed data services may be managed by a single customer management package. Included in ACPV are the Graphic User Interface to support customer management, the Service Delivery System, the Usage Handling System and Application Administration. ACPV also supports development of interfaces and APIs to provide interfaces to external service elements and providers.

ACSR AOI. ACSR AOI is an application object interface that allows third party applications to be used with ACSR.

Customer Interaction Tracking® (CIT®). CIT is a module offered with ACSR that provides enhanced methods for tracking the interaction with the customer base. It provides note taking functionality as well as an interaction history feature that allows specific actions to be recorded in a transaction history log. CIT also allows for the scheduling of customer call backs. These call backs can be reviewed by management as well as moved between CSRs.

CSG Desktop Solution Bundle. CSG Desktop Solution Bundle is an enhanced desktop solution bundle which consists of the following CSG applications:

Application Integration Tool (AIT) – AIT provides the ability to dynamically add applications into ACSR through a standard configuration process. In addition, it allows applications to be accessed either through the ACSR toolbar, or a menu drop down list.

CSG Order Workflow (OWF) – Provides the ability to reduce the number of screens a call center agent navigates to add an order in ACSR. This includes support for upgrades, transfers, and new connects in the form of an order wizard, and configurable edits to ensure the order process can be effectively managed.

Enhanced Campaigns Configuration Tool – Enhanced Campaigns Configuration Tool provides system sites the capability to more effectively administer campaigns in the Enhanced Campaigns system.

CSG Event Notification Interface (ENI) - The Event Notification Interface enables ACP to send downstream event notifications for real-time updates, nightly cycle updates, and cycle-generated notifications. Event notification includes activity-based changes to the attributes associated with the following ACP files: Account, Customer, Customer equipment, Equipment inventory, Item, Job, Location, and Order.

CSG Statement Express®. CSG Statement Express electronically stores, retrieves and prints an Advanced ESP statement exactly as it appears to subscribers, including customized statement messages and advertisements. CSG Statement Express works in either a stand-alone capacity or integrated with ACSR.

CSG Field Service Management. CSG Field Service Management is a client-server application for routing and dispatching activities that receives and updates work orders from integrated billing systems (including ACP) and assigns work orders to technicians based on each technician's skills, location and availability.

CSG Field Service Management (FSM) TechNet® enables technicians to access jobs/work orders and account information through wireless devices (including large screen devices such as laptops) to manage and complete jobs without calling dispatch. Text messaging functionality allows tech-to-tech and tech-to-dispatch communication and provides technicians with alerts that may affect their scheduled appointments. CSG FSM TechNet includes equipment capabilities, allowing techs to update inventory real time when equipment is removed, added or swapped.

CSG Field Service Management (FSM) TechNet iOS is an application that runs on the iOS device that includes all the standard features available within CSG FSM TechNet® and is designed to leverage enhanced functionality within the operating system on Apple devices (iOS) through direct integration with the iOS Safari browser. This application is designed to operate on Apple iOS devices only per current iOS versions as defined in CSG's Designated Environment Guide. This application will need to be downloaded and installed on the iOS device. In addition, CSG hereby grants Customer ownership rights to the archive file created using the Customer's certificate received from Apple, which shall not include any CSG Intellectual Property created or used in the development of the archive file. Customer further agrees that it shall not enforce any ownership rights granted in the foregoing sentence against CSG or any other CSG customer.

Apple deployment method and implementation is as outlined and provided in SOW #2502990, TechNet to Customer Apple Developer Application Archive Library. Customer will provide an annual Apple Push Notification certificate update to CSG. Upon receipt of an annual Apple Push Notification certificate update from Customer, CSG will add the update to Customer's production configuration. Upon an identified application change, CSG will publish a new application.

Configurable TechNet features specific to this CSG FSM TechNet iOS application include:

- **Audible Alerts** – leverages Apple's Push Notification Service for audible alerts which also enables alerts when the device is in battery saving mode (black screen).
- **Bar Code Scanning** – enables scanning if the device has a bar code scanning application installed.
- **Credit Card Scanning** – magnetic card reader functionality available when headphone jack scanning device (third-party optional device) is present.

Jump out URL – enables the ability to link to external web-based applications from within CSG FSM TechNet and provides the user option to seamlessly link back to CSG FSM TechNet.

Customer's use and deployment of CSG FSM TechNet iOS is subject to the following terms of use:

Use and deployment of CSG FSM TechNet iOS is subject to the following additional terms of use:

- a) The license to use CSG FSM TechNet iOS is non-transferable and subject to and governed by the Usage Rules set forth in the App Store Terms of Service.
- b) The license granted under Schedule B to CSG FSM TechNet iOS is between CSG and Customer and not Apple.
- c) Customer agrees that CSG, not Apple, shall be solely responsible for any claims related to Customer's possession and/or use of CSG FSM TechNet iOS and that Apple has no obligation to furnish maintenance and support services with respect to CSG FSM TechNet iOS.
- d) Customer acknowledges that Apple and Apple's subsidiaries are third party beneficiaries of the license terms to CSG FSM TechNet iOS.
- e) Customer represents and warrants that it is not located in a country subject to a U.S. Government embargo, or that has been designated by the U.S. Government as a "terrorist supporting" country; and Customer is not listed on any U.S. Government list of prohibited or restricted parties.

CSG Receipt Storage. CSG Receipt Storage provides a means for CSG FSM TechNet® customers to store and manage the data contained in the receipt generated from CSG TechNet when a subscriber signs on the handheld computer, including an image of the actual signature. Receipt data is retained for a minimum of * **** and a maximum

of ** *****. Additionally, to retrieve receipt information CSG provides a browser based search tool that allows users to retrieve receipts from long term storage and download the receipt in .pdf format for printing, email, etc.

CSG SmartLink®. CSG SmartLink is an upstream activity based XML interface that provides a mechanism for Customer to use the open standards of the eXtensible Markup Language (XML) to communicate with core CSG systems (e.g., ACP). The XML technology allows Customer to build applications using these open standards. Message based XML is used for communicating upstream to core CSG systems. The data communications method for the CSG SmartLink interface is TCP/IP. Customer can use either CSG's External Integration Protocol (EIP) or HTTP to organize, request and reply records on the TCP/IP data stream. CSG provides Customer with the CSG SmartLink Interface Specification and the XML document type definitions (DTDs) for each defined XML exchange. XML requests sent by Customer must use the DTDs as supplied by CSG and validate successfully against those DTDs.

CSG SmartLink® BOS. CSG SmartLink BOS is an upstream XML interface that enables Customer to integrate its applications to the CSG Customer Care and Billing (CC&B) system. The interface utilizes business logic technology to route transactions, make business decisions based on input and response data, and helps to expedite requests and responses. Message based XML is used for communicating upstream from Customer's application to the CSG CC&B. The data communications method for the CSG SmartLink BOS interface is TCP/IP. Customer can use either CSG's External Integration Protocol (EIP) or HTTP to organize request and reply records on the TCP/IP data stream. CSG provides Customer with the CSG SmartLink BOS Interface Developers Guide and the XML schemas for the business functions supported by the interface. XML requests sent by Customer must use the schemas as supplied by CSG and validate successfully against those schemas.

CSG Field Service Management ("FSM") Capacity Planning. CSG Field Service Management ("FSM") Capacity Planning ("FSM Capacity Planning") is an enhancement to FSM that will effectively manage and monitor management of Customer's technical field resources for scheduling Subscriber-requested service calls by providing integration from FSM to CCS®. FSM Capacity Planning has the ability to provide automation, intelligent guidance and recommendations to allocate field resource capacity and make adjustments as necessary to meet operational demands (promotional campaigns, time to install/repair, regulatory) and other business factors.

CSG Field Service Management Global Positioning System (FSM GPS). CSG FSM GPS provides the location of a technician in relation to jobs in real-time on a routing and dispatch map for those customers who have purchased CSG Field Service Management. Also included is real-time report of stops and details of each collected global positioning point. The solution is easy to set-up, deploy and requires no additional training of the workforce to utilize. CSG FSM GPS is supported on designated hand -held devices as well as vehicle mounted black boxes.

SCHEDULE C

RECURRING SERVICES

Subject to the terms and conditions of the Agreement, including the applicable Exhibit, if any (as identified below), upon the request of Customer, which it may make at its sole election, CSG shall perform the following Services (as further described below) for Customer in accordance with Customer's request:

Recurring Service Name Exhibit Reference

Exhibit C-1
Print and Mail Services/Advanced Enhanced Statement Presentation (AESP) Exhibit C-2
Financial Services Exhibit C-3
 Electronic Payment Services (Paybill Advantage) Exhibit C-3(a)
 Risk Management Services (Equifax) Exhibit C-3(b)
 Credit Card Authorization (1 Time) Exhibit C-3(c)
 Credit Card Authorization (Recurring) Exhibit C-3(d)
 Account Updater Processing Exhibit C-3(e)
Precision eCare Services Exhibit C-4
Residential Voice Services Exhibit C-5
Braille/Large Print Statement Functionality Exhibit C-6
Enhanced Account Ledger Exhibit C-7
CSG ACP Commercial Upgrade Exhibit C-8
CSG's ACP Wireless Module Exhibit C-9
Precision e-Mail™ Exhibit C-10
CSG's Event Management Exhibit C-11
Product Configurator - Billing Configuration Edition Exhibit C-12
Product Configurator - Enhanced Sales Edition Exhibit C-13
Mass Change Platform (MCP) Exhibit C-14
Configurable Line of Business Functionality (C-LOB Functionality) Exhibit C-15
Check Verification Exhibit C-16
AFP Statement Image File Transfer Exhibit C-17
FSM Scheduling & Resource Allocation Manager Exhibit C-18
CSG Reporting Services Exhibit C-19
 CSG Vantage Exhibit C-19(a)
 CSG's Vantage® Near-Real Time VNRT Exhibit C-19(b)
 CSG Vantage Plus Exhibit C-19(c)
 CSG Vantage Direct Exhibit C-19(d)
 Financial Forecaster in CSG Vantage Exhibit C-19(e)
 InfoCast Files Exhibit C-19(f)
 Vantage Optional Tables Exhibit C-19(g)
 Customer Value Optional Table in CSG Vantage®
 UDF Cards 1-143 Vantage Optional Table in CSG Vantage®
 Total Service Code Statistics Optional Table in CSG Vantage®
 AIU Optional Table in CSG Vantage®
 Pending UDF Cards and 9XX Service Changes Optional Tables in CSG Vantage®
 Query OJC Optional Table in CSG Vantage®
 Order, Job and Item Updates Optional Tables in CSG Vantage®
Message Manager Exhibit C-20
CSG StatHub Exhibit C-21
CSG Traffic Data Service Exhibit C-22
CheckFree API Exhibit C-23

Exhibit C-1

Advanced Convergent Platform (ACP)

- 1. ACP Services.** Customer may elect from time-to-time to purchase from CSG, and upon said election CSG shall provide certain data processing services, applications and other video, high speed data and Residential Voice services ("ACP Services") for any of Customer's Connected Subscribers using CSG's ACP System as designated by Customer. The ACP Services will provide Customer with an on-line terminal facility (not the terminals themselves), service bureau access to ACP processing software, and other mechanical data processing services as more specifically described in the published manuals related to ACP. Customer's personnel shall enter all payments and non-monetary changes on terminal(s) located at Customer's offices, or provide CSG payment information on magnetic tape or electronic record in CSG's format. The Parties acknowledge and agree that the published manuals describing the ACP Services are subject to ongoing review and modification.
 - 2. Disposition to an Acquiring Entity.** If Customer sells, transfers, assigns or otherwise disposes of any Connected Subscribers to an Acquiring Entity ("Transferred Subscribers"), CSG will provide Customer with all Customer Data and all transition assistance (described in Section 6.2 of the Agreement) reasonably requested by Customer in connection with such Transferred Subscribers. If the Acquiring Entity is a party to a Third Party CSG Agreement and agrees to have the Transferred Subscribers processed under such agreement, then the Connected Subscribers being processed shall be transferred to such Third Party CSG Agreement effective upon the date of transfer. However, in the event the Acquiring Entity is not being processed under a CSG Master Subscriber Management System Agreement, or such Acquiring Entity does not agree to have the Transferred Subscribers processed under its Third Party CSG Agreement, Customer agrees to execute, and have such Acquiring Entity execute, a separate agreement governing the Acquiring Entity's access to and use of CSG's Products and Services prior to the provision of any services under this paragraph (2) in a form substantially similar to the letter agreement attached hereto as Schedule G ("Interim Agreement"). CSG is under no obligation and has no responsibility to accommodate the transfer of any subscribers from the Customer to the Acquiring Entity until an Interim Agreement has been fully executed by all parties.
 - 3. Disaster Recovery Program.** CSG agrees to comply with its disaster recovery program attached hereto as Attachment A. No more than **** in any ***** (**)
***** period, Customer may request, and CSG shall provide Customer with, access to CSG facilities and certain documentation that provides evidence of CSG's disaster recovery strategies, methodologies and documentation requirements. As part of such a meeting, the Parties shall discuss communications and notice procedures in the event of a disaster.
 - 4. Non-Production ACP Services.** All Sys Prin will have data processing functionality equivalent to those Sys Prin used to provide the production ACP Services described in section 1 of this Exhibit. Each training Sys Prin shall be limited to a maximum of *** ***** (****) ***** ***** before per subscriber monthly service fees are assessed in accordance with Schedule F for subscriber counts in excess of *** ***** (****).
 - 5. Restrictions.** Customer acknowledges and agrees that transactions executed Monday through Friday between the hours of 10:00 a.m. (CST) and 4:00 p.m. (CST) that are the result of Macros or Screen Scraping will be subject to a reduction to an acceptable level by CSG if a threshold of **** ***** (***) on-line transactions within a ***** (**)
***** period is exceeded. However, such transactions shall not be terminated; rather, CSG will reduce the number of transactions completed within a ***** (**)
***** period not to exceed **** ***** (***) on-line transactions. Upon Customer's request, CSG shall provide reasonably sufficient data showing the volume of transactions due to Screen Scraping and/or Macros caused the degradation in the response time during such ***** (**)
***** period
-

Exhibit C-2

Print and Mail Services

1. Services. CSG shall provide certain services relating to Customer's requirements for the printing and mailing of monthly statements to Residential Subscribers (such services to Residential Subscribers are described in Section 1.5 of the Agreement as the ***** ***) and, as elected by Customer, for any of Customer's Connected Subscribers (whether using CSG's ACP System or a third party billing, revenue management and monetization solution) (the "Print and Mail Services").

2. Postage. CSG shall purchase the postage required to mail statements to Customer's subscribers ("Subscriber Statements"), notification letters generated by CSG, past due notices and other materials mailed by CSG on behalf of Customer. Customer shall pay CSG for all postage expenses incurred in the performance of the Print and Mail Services in accordance with Schedule F.

3. Reserved.

4. Enhanced Print and Mail Services.

(a) Advanced Enhanced Statement Presentation® Services. CSG may from time to time at the request of Customer develop a customized billing statement or use any previously existing billing statement format developed for Customer under a SOW (the "Advanced ESP® Statement") for Customer's subscribers utilizing CSG's advanced enhanced statement presentation ("Advanced ESP") services. The Advanced ESP Statements may include CSG's Intellectual Property and/or Customer's Intellectual Property with Customer's prior written permission. Customer may revoke the preceding rights upon reasonable notice to CSG in writing. Notwithstanding the foregoing, Customer may use the customized billing statement format and image, including electronic and physical copies, for any internal business purpose or function they may require at no additional cost.

(i) Development and Production of Advanced ESP® Statements. CSG will perform the design, development and programming services related to design and use of the Advanced ESP Statements, which will contain Customer's Intellectual Property and CSG's Intellectual Property, for the fees set forth in Schedule F. CSG will create the Advanced ESP Deliverables set forth in a separately executed Statement of Work.

(ii) Supplies. CSG will suggest and Customer will select the type and quality of the paper stock, carrier envelopes and remittance envelopes for the Advanced ESP Statements (the "Supplies"). CSG shall purchase Customer's requirements of Supplies necessary for production and mailing of the Advanced ESP Statements. CSG shall charge Customer the rates set forth in Schedule F for purchase of Supplies.

(b) Enhanced Past Due Notices.

(i) Development and Production of Enhanced Past Due Notices. CSG may from time to time at the request of Customer develop a customized enhanced past due notice or use a previously existing enhanced past due notice format developed for Customer under a SOW (the "Enhanced Past Due Notices") for Customer's subscribers. The Enhanced Past Due Notices may include CSG's Intellectual Property or Customer's Intellectual Property. Customer may elect to use CSG's generic Enhanced Past Due Notice format, any previously existing Enhanced Past Due Notice format developed for Customer under an SOW, or have CSG develop custom Enhanced Past Due Notices for Customer. If Customer elects to have CSG develop custom Enhanced Past Due Notices, CSG will perform the design, development and programming services related thereto pursuant to a Statement of Work. However, Customer acknowledges that CSG pricing is based on Customer utilizing only one paper stock format for all Enhanced Past Due Notices within a given month. Customer further acknowledges that it will provide CSG **** (*) ***** prior written notice of any changes to the paper stock.

(ii) Supplies. CSG shall purchase Customer's requirements of Enhanced Past Due Notices supplies necessary for production and mailing of the Enhanced Past Due Notices. Customer shall pay CSG the rates set forth in Schedule F for the purchase of such supplies. Unless Customer requests to use custom paper stock, CSG shall supply the type and quality of the paper stock for generic Enhanced Past Due Notices. Customer may elect to use custom paper stock for generic and custom Enhanced Past Due Notices. Enhanced Past Due Notices will be mailed in generic envelopes.

(c) License to Work Product. CSG grants Customer a nonexclusive, nontransferable, perpetual license to use, publish, display, modify and make derivative works of any Work Product created pursuant to this Section 4 for its own internal purposes only.

5. **Per Cycle Minimum.** Customer must have a minimum of **** billing cycles per month, but no more than ***** billing cycles per month.

6. **Right of Customer's Intellectual Property.** Customer provides to CSG a non-exclusive right to use Customer's Intellectual Property necessary to design, produce and mail the Advanced ESP Statements and Enhanced Past Due Notices, directly or indirectly, provided, that any use of Customer's name and mark shall be consistent with any guidelines issued by Customer.

7. **Deposit.** As of the Effective Date CSG maintains a security deposit (the "Deposit") previously paid by Customer to CSG for the payment of the expenses described in Sections 2 of this Exhibit C-2 (the "Disbursements"). The Deposit equals the estimated amount of Disbursements for ***** (**) **** as determined by the Parties based upon the ***** ***** ** ***** ***** ** ** ***** ***** by CSG. If Customer incurs Disbursements greater than the Deposit, Customer shall, within ***** (**) **** of receipt of a request from CSG to increase the Deposit, pay CSG the additional amount to be added to the Deposit. Upon written request from Customer, CSG will return to Customer a portion of the Deposit if the monthly Disbursements incurred by Customer are less than the Deposit for ***** (*) ***** ***** (**) *** periods. In addition to the foregoing, CSG shall have the right to apply the Deposit to the payment of any Undisputed invoice from CSG which remains unpaid following the termination or expiration of this Agreement. Any portion of the Deposit that remains after the payment of all Undisputed amounts due to CSG following the termination or expiration of this Agreement will be returned to Customer. Customer shall not be entitled to receive interest on the Deposit while it is maintained by CSG.

Exhibit C-3

Financial Services

- 1. Services.** For the fees set forth in Schedule F, Customer may elect from time-to-time to purchase from CSG, and upon such election CSG shall provide, certain services relating to Customer's requirements for the following Financial Services which may be used independently or in any combination required by Customer: One-Time and Recurring Paybill Advantage®, Risk Management Services (Equifax Interface), Recurring Credit Card Processing Services, One-Time Credit Card Processing Services, Account Updater and Cash Register Receipts as designated with reasonable notice in writing by Customer. The Financial Services are described in sub-Exhibits that immediately follow this Exhibit C-3.
 - 2. Compliance with Laws.** Customer will comply in all material respects with all Laws pertaining to consumer credit information (including the Fair Credit Reporting Act, 15 USC, §1681, et seq.), electronic processing and any other financial activity related to the Services, provided by CSG under this Exhibit. In the event of evidence of fraudulent activity by Customer, CSG may immediately discontinue all Services under this Exhibit.
 - 3. Records.** CSG shall maintain records of the transactions it performs under this Exhibit, but shall not be liable for any Damages, loss of data, delays and errors in connection with Services provided hereunder that are beyond CSG's reasonable control.
- a. **Third Party Fees.** CSG is not responsible for any fees (including, fines or penalties) or fee variances that may result from any third party processing of Customer business as charged by third parties to Customer in connection with the Financial Services.
 - b. **Liability.** CSG shall not be liable for any failure which is the result of the inoperability of networks (LANs or WANs) or any hardware or software located on Customer's or its third party vendor/merchant's premise or any services provided by Customer's vendor(s), merchant(s), or partners. CSG shall not be liable for delays in authorization response times that are a direct result of Customer's chosen third party financial services vendor, including payment gateways, merchant acquirers, merchant banks, or credit scoring institutions. Customer will compensate CSG for the reasonable costs incurred by CSG to fix or remedy problems or interruptions due to or caused by Customer's vendor(s), merchant(s), or partners; provided, if the nature of the problem or interruption presents a reasonable opportunity for CSG, prior to performing such services, to notify Customer of the nature of services to be provided and an estimate of costs to be incurred to fix such problem or interruption, CSG shall notify Customer of the nature of such services and such costs and seek Customer's written approval thereof prior to CSG commencing such services. If, in CSG's reasonable judgment, no opportunity exists to so notify Comcast before CSG must commence such services, Customer shall reimburse CSG for such costs, provided CSG (i) notifies Customer promptly after incurring such costs, and (ii) furnishes evidence to Customer specifying in reasonable detail such costs.
 - c. **Third Party Vendors.** Prior to CSG engaging in any activity with Customer's third party financial services vendors, such vendors shall be certified by CSG pursuant to a written certification agreement between CSG and either the third party vendor or Customer. Such vendor shall be certified within ***** (**) ***** **** of any implementation of services involving such third party vendor. In addition, vendors shall be re-certified due to any changes made to either the vendor's products and/or services or CSG's billing system after the initial set up. Such re-certification shall occur within ***** (**) **** of any implementation of either the vendor's new product/service or the changes in CSG's billing system, whichever occurs.
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Exhibit C-3(a)

Electronic Payment Services (Paybill Advantage)

1. Electronic Payment Services. Customer may elect from time-to-time to purchase from CSG, and upon such election CSG shall provide, certain services relating to any or all of Customer's requirements for the data processing services for the Connected Subscribers, including reasonable backup security for Customer's data, to support electronic bill paying services as set forth in Section 2 below (the "**Basic EBP Services**") for all of Customer's subscriber accounts that elect to utilize Customer's electronic bill payment services (the "**EBP Subscribers**"), whether as a recurring service or a single non-recurring transaction as designated with reasonable notice in writing by Customer.

2. Basic EBP Services

(a) Consumer Debits. Each EBP Subscriber will have the option to pre-authorize a debit to either their checking account or savings account each month for a predetermined date (to be selected by Customer from a range provided by CSG). CSG or, if applicable, its third party ACH Originator will be responsible for the disbursement, remittance and settlement of all funds. CSG will create and submit a pre-authorized payment disbursement file according to bank industry standards (National Automated Clearing House Association, "**NACHA**", or Electronic Data Interface, "**EDI**") containing a debit record for EBP Subscribers who have pre-authorized monthly debits to be made from checking or savings accounts on a day designated by Customer each month. The ACH Originator will submit to an automated clearing house data in the required form for the collection of the monthly payments from EBP Subscribers bank accounts, which will be effected on the collection date, or if that date is not a banking day, the first banking day after such date. Each debit will be submitted so as to effect the payment on the designated date.

(b) Credit of Remittances. CSG will post to EBP Subscriber's ACP® account a payment transaction for each processing EBP Subscriber on the EBP Subscriber's collection day

(c) Enrollment Process. Customer is responsible for obtaining EBP Subscriber enrollment information that authorizes his respective bank to post debit transactions to his respective bank checking account or savings account as required by NACHA. Customer will input relevant EBP Subscriber banking information into the ACP System. With respect to recurring monthly payments only, Customer has the option to allow CSG to initiate an ACH prenote the day the form is processed or the day after the form is processed if the form is entered after the daily cutoff time. A daily report will be generated for the Customer each business day for which input is processed showing that a prenote has been initiated. If the prenote process produces an error, the ACP System will automatically update the EBP Subscribers' payment status to reflect an error and add the error to a daily report. If the error was correctable by the receiving depository financial institution, the ACP System will automatically update the information on the ACP System. The first debit will be initiated on the appropriate date to effect the debit on the Customer's predetermined date.

(d) Automatic Pre-Authorized Payments. CSG and its third party ACH Originator shall provide automatic payment deduction, which will occur monthly on a predetermined date (selected by Customer from a range supplied by CSG). CSG will submit a file to the ACH Originator ***** (*) ***** prior to the date the deduction is scheduled to take place. The EBP Subscriber payment amount submitted to the ACH Originator will be the statement balance if the statement balance is less than the current balance. If the statement balance is greater than the current balance, then the current balance will be used. If the designated date for deduction falls on a weekend and/or holiday, the deduction will not occur until the next scheduled banking day. CSG will use commercially reasonable efforts to ensure that transaction files from an ACH Originator are received, validated, and successfully processed in a timely fashion. CSG also agrees that pursuant to a mutually agreed upon SOW or LOA, Customer's data will be provided in a discrete file specific to Customer's Connected Subscribers and not commingled with transactional data for other CSG customers.

(e) Record Keeping. Customer is responsible for maintaining EBP Subscriber authorization forms for a period of at least ***** (*) ***** in accordance with any applicable Laws and NACHA.

- 3. Additional Services.** If Customer desires CSG to provide other services in addition to the Basic EBP Services, the Parties agree to negotiate in good faith with respect to the terms and conditions (including pricing) on which such services shall be provided. Such services include, but are not limited to (i) special computer runs or reports, special accounting and information applications; (ii) interface with third party service providers specified by Customer for the purpose of mass enrollment of accounts or other batch payment and collection services, and (iii) data processing and related forms and supplies and equipment other than those provided as standard pursuant to this Agreement (the "Additional EBP Services"). The description of any such Additional EBP Services, and any other terms and conditions related thereto, shall be set forth in an amendment to this Agreement and/or an SOW or LOA signed by both Parties. Unless otherwise agreed in writing by the Parties in such amendment any such Additional EBP Services shall be subject to the terms of this Exhibit.
 - 4. EBP Subscriber Authorization.** Customer shall obtain from each EBP Subscriber the proper documents authorizing automatic transfers to and from such EBP Subscriber's savings account or checking account. Customer will enter only valid authorizations for processing. Customer will adhere to all NACHA requirements regarding EBP authorizations. CSG shall maintain product to support NACHA compliance, including bank account and subscriber account blocking based on EFTS return reasons.
 - 5. Collection Data.** Customer shall update EBP Subscriber account balance information to provide necessary data for the Basic EBP Services and Additional EBP Services and shall ensure through periodic checks and updates that the data is current and accurate at all times. In conjunction with this service, CSG agrees to provide Customer with any and all available reports and data required and reasonably specified by Customer for the purposes of confirming that all EBP transactions are being accurately processed. If Customer requires reporting on EBP Subscriber data and transactions that require custom programming services, CSG will provide such reports to Customer pursuant to a mutually agreed upon SOW or LOA.
 - 6. ACH Originator.** Customer acknowledges and agrees that this Exhibit is only between Customer and CSG and, that as a result, Customer gains no relationship with institutions used by CSG for ACH processing, unless they contract directly with institutions. In certain circumstances, CSG may contract with the financial institutions specified by Customer and approved by CSG, provided that CSG will not unreasonably withhold its approval. Notwithstanding the foregoing, nothing herein will prohibit or otherwise prevent Customer from establishing a relationship with any third party, including ACH Originators and Merchant Banks, for services of a similar and/or complimentary nature or for any purpose whatsoever, CSG acknowledges that Customer may use existing or future agreements with ACH originators and Merchant Banks to facilitate or supplement the Basic EBP Services and Additional EBP Services offered by CSG under this Exhibit and agrees to use commercially reasonable efforts to interface their Products and Services with such third parties pursuant to a mutually agreed upon SOW or LOA to satisfy Customer requirements as they currently exist or evolve throughout the terms of this Agreement.
 - 7. EBP Subscriber Reports.** If Customer requests that CSG provide Customer information regarding Customer's EBP Subscribers and related banking information and payment data via a mutually agreed upon transmission method, then Customer shall pay CSG's then current rates to prepare such data file.
 - 8. One Time Only Payments.** CSG agrees to provide the Basic EBP Services described in this Exhibit in a manner that enables Customer to process single period non-recurring transactions in an efficient manner and without the need to create a multi-period recurring ACH Prenote and/or a multi-period recurring ACH transaction.
 - 9. Legal and Regulatory Requirement Changes.** Customer shall communicate any changes that are required to be made by CSG as provided to Customer from its vendor. CSG shall maintain product to remain in compliance with NACHA regulations for ACH origination and ACH returns.
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Exhibit C-3(b)

Risk Management Services (Equifax Interface)

- 1. Risk Management Services (Equifax Interface).** Customer may elect from time-to-time to purchase from CSG, and upon such election, CSG shall provide, certain services relating to any or all of Customer's requirements for consumer credit information, scoring services or other data stored in CSG's vendors consumer credit reporting database, (the "Risk Management Services") as designated by Customer with reasonable notice and in writing.
 - 2. Use of Credit Information.** Customer hereby agrees that it will request credit information received from CSG solely for Customer's use in connection with (i) credit transactions between Customer and the consumers to whom the credit information relates, (ii) employment purposes, (iii) underwriting of insurance, (iv) collection activity, (v) government licensing, or (vi) for other "permissible purposes" as defined by the FCRA and applicable vendors (i.e. Equifax and Experian), and will neither request nor use any such information for any other purpose.
 - 3. Confidential Treatment.** Customer will take reasonable precautions to assure that consumer credit information will be held in strict confidence and disclosed only to those of its respective employees whose duties reasonably relate to the legitimate business purposes for which the information is requested or used to those to whom it may permissibly resell consumer reports hereunder.
 - 4. Intellectual Property.**
 - (a) No License.** Customer will not acquire any Intellectual Property Rights or other right, claim, or interest in the computer programs, forms, schedules, manuals, or other proprietary items utilized or provided by CSG in connection with the Risk Management Services.
 - (b) Restrictions on Use.** Customer will not use or permit its respective employees, agents and subcontractors to use the Intellectual Property of CSG's provider of the Risk Management Services (the "RMS Vendor") or its Affiliates, whether registered or unregistered, without the RMS Vendor's prior written consent.
 - (c) Ownership of Credit Data.** Customer acknowledges that all information contained in the consumer credit information database is and will continue to be the exclusive property of the RMS Vendor. Except for the uses specified in this Agreement, nothing contained in this Exhibit shall be deemed to convey to Customer any right, title or interest in or to the consumer credit information database or any part thereof.
 - 5. Additional Services.** Should Customer desire additional services related to this offering, the Parties agree that it shall do so under a mutually agreed upon SOW.
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Exhibit C-3(c)

One-Time Credit Card Processing

1. One-Time Credit Card Processing. Customer may elect from time-to-time to purchase from CSG, and upon such election CSG shall provide, certain services relating to any or all of Customer's requirements for those data processing services which allow subscribers to charge deposits, pre-payments, monthly services, installation fees and Pay Per View (PPV) orders via credit card (the "**One-Time Credit Card Processing Service**" or for this Exhibit only, the "**Service**") as designated by Customer with reasonable notice and in writing. Credit Card payments can be accepted online through either the order entry system or the payment entry system. This feature involves real-time credit card authorizations via an interface with a third party (including, if applicable, an Affiliate) credit card processing system. Return messages from the credit card processor, including approved authorizations, declines, and errors, will be displayed online. CSG will create and transmit a daily settlement file to the merchant banks' processing center. All settlement reporting is done by the merchant bank. "**Approved**" credit card payments will post to the subscriber's account the day it was entered, up to 9 p.m. central time. One-time credit card payments will be identified on daily and monthly production reports. The merchant processing fees will be billed directly to the Customer, per the agreement between the Customer and the merchant bank. CSG shall not be responsible for any interchange fees. In the event that CSG makes a change, which is not authorized by Customer's authorized representative (Vice President of Billing Operations or V.P. of Payment Processing), to the Service which causes a downgrade or shift in interchange qualification, upon notice to CSG from Customer of the foregoing, CSG shall be responsible for the re-imbusement equal to the difference in the rate for the affected volume from the time of notice by Customer to correction for a downgrade or shift in interchange qualification. CSG agrees to work with Customer and Customer's acquirer to identify the source of the downgrade. Customer shall be responsible for providing transaction detail supporting the downgrade or shift for calculation of the reimbursement.

2. Requirements. Allowable credit cards for the One-Time Credit Card Processing are ***** ** ** ***** ***** ***** ***** ***** ***** *****
*** ** ***** *****. Customer is responsible for establishing a merchant agreement with a CSG approved bank. The merchant bank will assign all applicable merchant ID numbers. Customer must communicate its merchant ID information to CSG prior to using the Service. CSG must make changes, enhancements, and updates as required to its merchant bank credit card processing interface(s) to continually maintain compliance with CSG approved merchant bank standards and pursuant to a mutually agreed upon SOW shall use commercially reasonable efforts to ensure that Customer's transactions qualify for the lowest available processing rates offered by those merchant banks. Online credit adjustments to a credit card can be performed for those Customers that use both Recurring and One-Time Credit Card Processing with a CSG Systems approved merchant bank.

3. Use of Credit Information. Customer and CSG agree that all information and data accessed through the One-Time Credit Card Processing Service is "Confidential Information" and as such shall be kept strictly confidential in accordance with the Agreement.

4. Intellectual Property.

(a) **No License.** Customer will not acquire any Intellectual Property Rights or other right, claim, or interest in the computer programs, forms, schedules, manuals, or other proprietary items utilized or provided by CSG in connection with the One-Time Credit Card Processing Service.

(b) **Restrictions on Use.** Customer will not use or permit its respective employees, agents and subcontractors to use CSG's Intellectual Property except in compliance with the Agreement.

(c) **Ownership of Credit Data.** Customer acknowledges that all information (except for any Customer Data) contained in the consumer credit information database is and will continue to be the exclusive property of the appropriate merchant bank. Except for the uses specified in this Exhibit, nothing contained in this Exhibit shall be deemed to convey to Customer any right, title or interest in or to the consumer credit information database or any part thereof.

Exhibit C-3(d)

Recurring Credit Card Processing

1. Recurring Credit Card Processing. Customer may elect from time-to-time to purchase from CSG, and upon such election CSG shall provide, certain services relating to any or all of Customer's requirements for those data processing services which allow subscribers to have deposits, pre-payments, monthly services, installation fees and Pay Per View (PPV) orders automatically charged to their credit card on a monthly basis (the "Recurring Credit Card Processing Service" or for this Exhibit only, the "Service") as designated by Customer with reasonable notice and in writing. When subscribers provide their credit card information to the Customer, a "pre" authorization is sent real time to a CSG approved merchant bank (see Section 2 below), to ensure that the credit card information is accurate. Customer will determine when the recurring credit card payment will be performed, either on the subscriber's cycle date or a date between 10 and 25 days after the cycle date. Customer can choose to automatically retry certain "decline" response codes from the credit card processor. CSG will send a file of credit card payments in the appropriate format to the merchant bank's processor on a nightly basis and post the payment to the subscriber's CSG account. The merchant bank is responsible for all settlement processing and reporting. Merchant processing fees will be billed directly to the Customer, per the agreement between the Customer and the merchant bank. Recurring credit card payments will be identified on daily production reports and all credit card payments will be reported together on monthly production reports. CSG shall not be responsible for any interchange fees. In the event that CSG makes a change, which is not authorized by Customer, to the Service which causes a downgrade or shift in interchange qualification Customer's authorized representative (Vice President of Billing Operations or V.P. of Payment Processing), upon notice to CSG from Customer of the foregoing, CSG shall be responsible for the re-imbusement equal to the difference in the rate for the affected volume from the time of notice by Customer to correction for a downgrade or shift in interchange qualification. CSG agrees to work with Customer and Customer's acquirer to identify the source of the downgrade. Customer shall be responsible for providing transaction detail supporting the downgrade or shift for calculation of the reimbursement.

2. Requirements. Allowable credit cards for the Recurring Credit Card Processing are ***** ** Customer is responsible for establishing a merchant agreement with a CSG approved merchant bank. Additional merchant banks may be added by CSG, at Customer's request and for additional fees, through a mutually agreed upon Statement of Work. The merchant bank will assign all applicable merchant ID numbers. Customer must communicate their merchant ID information to CSG prior to using the Service. Online credit adjustments to a credit card can be performed for those Customers that use both Recurring and One-Time Credit Card Processing with a CSG Systems approved merchant bank. CSG must make changes, enhancements, and updates as required to their merchant bank credit card processing interface(s) to continually maintain compliance with CSG approved merchant bank standards and to use commercially reasonable efforts to ensure that Customer's transactions qualify for the lowest available processing rates offered by those merchant banks. In addition to any CSG approved banks currently supported, additional merchant banks may be added by CSG, at Customer's request and for additional fees, through a mutually agreed upon Statement of Work.

3. Use of Credit Information. Customer and CSG agree that all information and data accessed through the Recurring Credit Card Processing Service is "Confidential Information" and as such shall be kept strictly confidential in accordance with the Agreement.

4. Intellectual Property.

(a) **No License.** Customer will not acquire any Intellectual Property Rights, or other right, claim, or interest in the computer programs, forms, schedules, manuals, or other proprietary items utilized or provided by CSG in connection with the Recurring Credit Card Processing Service.

(b) **Restrictions on Use.** Customer will not use or permit its respective employees, agents and subcontractors to use CSG's Intellectual Property except in compliance with the Agreement.

(c) **Ownership of Credit Data.** Customer acknowledges that all information (except for any Customer Data) contained in the consumer credit information database is and will continue to be the exclusive property of the appropriate merchant

bank. Except for the uses specified in this Exhibit, nothing contained in this Exhibit shall be deemed to convey to Customer any right, title or interest in or to the consumer credit information database or any part thereof.

Exhibit C-3(e)

Account Updater Processing Service

1. **Account Updater Processing Service.** Customer may elect from time-to-time to purchase from CSG, and upon such election CSG shall provide, certain services relating to any or all of Customer's requirements for those data processing services which allow Customer to submit a monthly file of subscriber accounts with recurring credit cards on file that are scheduled to expire during that month (the "Account Updater Processing Service"). This file is transmitted to Customer's third party vendor and updates are returned on participating accounts. These updates are automatically entered into ACP when received. Updates can include expiration dates, Association changes, or information related to lost or stolen cards. CSG provides reporting on all accounts with processed updates after each file is returned from the third party vendor. Any third party vendor fees will be billed directly to the Customer, per the agreement between the Customer and the third party vendor.
 2. **Requirements.** Allowable credit cards for the Account Updater Processing Service are Mastercard and VISA. Customer is responsible for establishing an agreement with its third party vendor.
 3. **Use of Credit Information.** Customer and CSG agree that all information and data accessed through the Account Updater Processing Service is "Confidential Information" and as such shall be kept strictly confidential in accordance with the Agreement.
 4. **Intellectual Property.**
 - (a) **No License.** Customer will not acquire any Intellectual Property Rights or other right, claim, or interest in the computer programs, forms, schedules, manuals, or other proprietary items utilized or provided by CSG in connection with the Account Updater Processing Service.
 - (b) **Restrictions on Use.** Customer will not use or permit its respective employees, agents and subcontractors to use CSG's Intellectual Property except in compliance with the Agreement.
 5. **Data Accuracy.** Customer acknowledges that the Account Updater Processing Service is only accurate to the extent a card issuer participates in the service and that many card issuers do not participate in the service. Furthermore, Customer acknowledges that CSG is not responsible in any way for the accuracy or the completeness of data which may be accessed as part of this service. At this time, **** * ** the only bankcard types offering the service of tracking and reporting replacement Bankcard numbers and expiration dates.
 6. **Termination.** **** * ** * ** may terminate Customer's participation in the Card Account Update Service (as provided by **** * ** ****), or terminate the service in its entirety, at any time. Third party vendor's bankcard processing relationship with Customer, and thus the Card Account Update Service, may be terminated at any time pursuant to the terms and conditions set forth in the Merchant Bankcard Processing Agreement Customer enters with its third party vendor. CSG assumes no liability of any kind that arises out of the termination of Customer's participation in the Card Account Update Service by either **** * ** or third party vendor.
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Exhibit C-4

CSG PRECISION ECARE - SERVICE BUREAU

1. CSG Precision eCare Services. Customer may elect from time-to-time, and upon such election, CSG shall provide certain services relating to Customer's requirements to utilize CSG's web-based software application that will allow it to perform a variety of customer care functions via the Internet as described in Attachment A (the "Precision eCare Services") as designated by Customer. Customer shall pay CSG the fees and charges associated with the Precision eCare Services as set forth in Schedule F.

2. Development, Production and Operation of CSG Precision eCare. CSG will perform the design, development and programming services related to the design and use of the Precision eCare Services pursuant to a Statement of Work. The Precision eCare Services will contain CSG's Intellectual Property and Customer's Intellectual Property set forth on the Statement of Work.

3. Ownership of the Precision eCare Services. Except with respect to Customer's Intellectual Property, all Intellectual Property Rights in or to the Work Product shall be CSG's sole and exclusive property, whether or not specifically recognized or perfected under applicable Law.

4. Customer's Intellectual Property Representations. Customer provides to CSG a non-exclusive right to use Customer's Intellectual Property necessary to design, produce and operate the Precision eCare Services and perform CSG's other rights and obligations hereunder provided that any use of Customer's name and mark shall be consistent with any guidelines provided by Customer in writing to CSG. Customer may revoke the preceding rights upon written notice to CSG.

5. Run Book. As it relates to CSG's Kiosk Product only, CSG and Customer agree to review, and as necessary revise, on * ***** basis the operational run book utilized by the Parties as of the Effective Date ("Run Book").

Attachment A to Exhibit C-4

Electronic Bill Presentment and Payment (*Module A*) and Self-Care/Account Management/Subscriber Acquisition (*Module B*).

Precision eCare is an Internet product with two separate modules, which include features and functions for Electronic Bill Presentment and Payment (*Module A*) and Self-Care/Account Management/Subscriber Acquisition (*Module B*). These modules may be implemented in conjunction with one another or as separate entities. The features and functions within each of these modules are managed through the Administration Module.

The following functionality is currently included in Precision eCare when only the Electronic Bill Presentment–and Payment (EBPP) module has been implemented:

- **Module A - Electronic Bill Presentment and Payment**
- **Administration Module – which provides twelve (12) months of on-line storage which includes the first (1st) month of XML and the remaining eleven (11) months PDF.**

Module A - Electronic Bill Presentment and Payment:

Bill Presentment

- Bills are viewable through custom presentation and content templates
- Current bill available for all subscribers immediately upon registration
- E-mail notification of bill availability sent to registered users
- Bill archive maintained for registered users

Bill Payment

- Payment methods include:
 - One-time, EFT/ACH, credit card and PIN-less debit cards
 - Registered user presented with payment authorization message at time of payment
 - Recurring credit and PIN-less debit cards
 - Recurring EFT/ACH

Subscriber Registration and Maintenance

- Internet registration for new users of Precision eCare services
- E-mail notification of successful initial registration sent to registered users
- Internet maintenance of registered user information such as E-mail address and password
- Optional setting to control the printing and mailing of paper statements

Marketing

- Support for CSG's Enhanced Statement Presentation marketing messages (Regulatory and Marketing)
- Space available for banner ads

Security

- Web site access restricted to Customer defined servers
- Data and applications restricted to authorized users only
- SSL (Secure Sockets Layer) 3.0 compliant

Additional Account Management Items

- Registered users can change "Bill-to" information
 - Registered users can change phone numbers
 - Registered users can change Internet login ids and PC equipment information
 - Registered users can enroll in recurring credit card and PIN-less debit card
 - Registered users can enroll in recurring EFT/ACH
 - Registered users can update their recurring payment information
 - Registered users can change their Precision eCare e-mail address
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- Registered users can change their Precision eCare password
-

Administration Module:

Provide end-user support

- Customer has the same view into Precision eCare as the subscriber
- Customer can retrieve account information by either account number or name

Control Customer Administrative user access level

- Secure login access path (user ID and password in SSL site)
- for Customer Administrative user (supervisor) and basic user (CSR)

- Update Customer Administrative user passwords and access/security level
- Capability to automatically unregister users who have not logged into the website for a given period of time. Customer Administrative user may set parameters to define specific period of time.

View reports

- Payment transactions by status
- Unposted payments
- Successful payments
- Registered Users
- Number of suppressed hardcopy statements
- Self-care transactions
- Selectable by date ranges
- Printer friendly version available

Customer control of various web page displays, look and feel

- Real-time web site update (add, change, delete) of services, groups of services and service descriptions
- Control available work order scheduling time slots and descriptions
- Control user-friendly error message descriptions
- Control work order rescheduling availability (# of hours before install date to disallow rescheduling)
- Changes can be made by SPA ranges for efficiency

Customer will have the ability to customize their Precision eCare, EBPP and/or Self-Care web pages to maintain consistency between the look and feel of its corporate Internet web site. The specific look & feel, colors, graphics, logo etc. will be defined by the Customer and implemented by CSG during the initial implementation. All subsequent changes to the look and feel, graphics, logos colors etc. will be executed by CSG through additional Statements of Work.

Attachment A to Exhibit C-4

The following functionality is currently included in Precision eCare for video and high speed data subscribers when only the Self-Care/Account Management/Subscriber Acquisition module has been implemented:

- **Module B - Self-Care/Account Management/Subscriber Acquisition**
- **Administration Module**

Module B - Self-Ordering/ Self-Care/Customer Acquisition:

New Subscriber Acquisition (New Connect)

- New connect consumers can view available services
- New connect consumers can select available services
- New connect consumers can establish installation date
- Includes confirmation of dwelling serviceability
- Includes user-friendly error handling
- Includes web-only service descriptions
- Internet orders include login id, password and PC equipment information
- Includes update capability for services and scheduling date

Request for Service Upgrade or Sidegrade

- Registered users can view available services
- Registered users can select available services to add to their existing accounts
- Includes user-friendly error handling
- Includes web-only service descriptions
- Includes support for no-truck and truck roll orders
- Includes update capability for services and scheduling dates

Subscriber Registration and Maintenance

- Internet registration for new users of Precision eCare services
- E-mail notification of successful initial registration sent to registered users
- Registered users can change "Bill-to" information
- Registered users can change phone numbers
- Registered users can change Internet login ids and PC equipment information
- Registered users can change their Precision eCare e-mail address
- Registered users can change their Precision eCare password
- Optional setting to control the printing and mailing of paper statements

Marketing

- Support for CSG's Enhanced Statement Presentation marketing messages (Regulatory and Marketing)
- Space available for banner ads

Security

- Web site access restricted to customer defined servers
 - Data and applications restricted to authorized users only
 - SSL (Secure Sockets Layer) 3.0 compliant
-

Administration Module:

Provide end-user support

- Customer has the same view into Precision eCare as the subscriber
- Customer can retrieve account information by either account number or name

Control Customer Administrative-user access level

Secure login access path (user ID and password in SSL site) for Customer Administrative user (supervisor) and basic user (CSR)

- Update Customer Administrative user passwords and access/security level
- Capability to automatically unregister users who have not logged into the website for a given period of time. Customer Administrative user may set parameters to define specific period of time.

View reports

- Registered Users
- Number of suppressed hardcopy statements
- Self-care transactions
- Selectable by date ranges
- Printer friendly version available

Client control of various web page displays, look and feel

- Real-time web site update (add, change, delete) of services, groups of services and service descriptions
- Control available work order scheduling time slots and descriptions
- Control user-friendly error message descriptions
- Control work order rescheduling availability (# of hours before install date to disallow rescheduling)
- Changes can be made by SPA ranges for efficiency

Customer will have the ability to customize its Precision eCare, EBPP and/or Self-Care web pages to maintain consistency between the look and feel of its corporate Internet web site. The specific look & feel, colors, graphics, logo etc. will be defined by the Customer and implemented by CSG during the initial implementation. All subsequent changes to the look and feel, graphics, logos colors etc. will be executed by CSG through additional Statements of Work.

Module C - Consolidator Services:

- This module facilitates the distribution of consumer statement information (e.g. bill), in an electronic summary record format to multiple bill aggregation points (e.g. bank website, Internet portal or other personal financial website) as requested by the consumer, and allows for payments to be made and posted back to subscriber's account residing on the CSG billing system. Consolidator Services is provided via a partnership agreement with third party providers.

Module E – Kiosk Subscription Program:

The provisions of this Module E (including the Attachments) apply to Legacy Kiosk Units (as defined in the Master Kiosk SOW); provided to the extent applicable, the terms of the Master Kiosk SOW shall also apply to such Legacy Kiosk Units as prescribed in such Master Kiosk SOW. The Parties also acknowledge that notwithstanding the Master Kiosk SOW differentiates Legacy Kiosk Units and New Kiosk Units based on the purchase date of a kiosk, kiosks purchased under the terms of this Module E (as evidenced by their configuration) shall be deemed Legacy Kiosk Units regardless of the date purchased. For clarity, the provisions of this Module E shall not apply to any New Kiosk Units purchased under the terms of the Master Kiosk SOW, which New Kiosk Units shall be subject to the terms of the Master Kiosk SOW.

- This module extends the Precision eCare® application, in an integrated fashion, to self-service kiosks. The kiosk application allows for subscribers to view and pay their bill using Cash, Credit, Debit, or Check. This is
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accomplished by extending the Precision eBPP® web application to the self-service kiosk and updates the subscribers account on the CSG billing system through a common interface. .

- Additional terms and conditions specific to Module E and the Kiosk Subscription Program are as follows:

(a) **Ownership.** Rights to the Hardware shall transfer from the manufacturer to Customer upon delivery of the Hardware. Customer assumes risk of loss upon delivery. Upon delivery Customer assumes any and all responsibility and liability for the Hardware, including: the Hardware location; installation site; accessibility; connectivity; compliance with ordinances, regulations and/or statues whether federal, state or locally imposed, except for the applicable provisions of the Americans with Disabilities Act.

(b) **Kiosk Subscription Program.**

1. **Term Commitment**

- A ***** (*) ***** fee commitment by Customer shall be required per unit which provides ***** (**) ***** of coverage under the Kiosk Subscription Program
- The Kiosk Subscription Program fees shall begin on the date the kiosk unit is delivered to Customer’s site. Placing a unit into an inactive or stored state does not suspend the warranty or shelf life timelines.
- In the event the Agreement ends while there are active subscription commitments remaining under the Kiosk Subscription Program, Customer shall pay the termination fees to CSG as set forth in the “Cancellation/Termination Policy” below.

2. **Cancellation/Termination Policy:**

- Customer may cancel the Kiosk Subscription Program for any given kiosk unit at any point during that unit’s life. The Kiosk Subscription Program termination fees will be applicable when the subscription is canceled by Customer for any given unit at any point. The Subscription Program termination fee policy requires payment by Customer of ***** (**%) of the remaining Subscription Fee which would have been due over the remaining term which is payable to CSG upon cancellation of that unit’s subscription. As ***** (*) ***** Subscription Fee payments are committed to and due over the life of the unit for each unit purchased by Customer, the fee for cancelling the Kiosk Subscription Program will be equal to *** ** * ** * ***** ***** ** * ** for the specified unit ***** ** ***** (**%). Upon cancellation of, or election not to renew, the Kiosk Subscription Program for any unit, that kiosk unit will no longer have access to CSG’s kiosk software application. Customer may sell or otherwise transfer title of the Hardware to another party, provided, however, that Customer may not sell or transfer any software provided by CSG and in order for Customer to transfer any Hardware to another party, Customer must first be compliant with the provisions of Subsection (d) of this Attachment A.
- By way of example, if the unit’s subscription fee *** ***** ***** (S*****) ***** * ** * ** * ***** ***** * ** * ** * (**) ***** * ** * ** * ***** ***** * ** * ** * ***** ***** * ** * ** * ***** ***** ***** (**%) * ** * ** * ** * ** * ** * \$***** * \$***** * \$***** ***** **% * \$***** due to CSG.
- In the event Customer chooses not to renew the subscription and replace the existing kiosk, Customer shall not incur or be invoiced any additional fees, but all fees duly invoiced shall be paid and any amounts previously paid shall be non-refundable.

3. **Life Cycle Management**

- Each kiosk unit will be assigned * ***** (**) ***** life that shall commence when the Kiosk Subscription Program fees begin.
- CSG will facilitate the life cycle management and replacement schedule of all units before or on the last day of the ***** (**) ***** mark of each unit’s life
- CSG will provide Customer with written notice of end of life of the unit and will allow Customer to select whether or not to renew its kiosk subscription for that unit no later than the last day of



8. Termination.

- Upon expiration or termination of the Kiosk Term, or upon Customer's discontinued use of CSG's Precision eCare® Payment Kiosk solution as prescribed by this Module E, all rights to the software granted under the Agreement will cease, and Customer will promptly (i) purge all terminated software, including any third party software provided by CSG as applicable, from the Hardware and all of Customer's other computer systems, storage media and other files; (ii) destroy CSG's Confidential Information and all copies thereof; and (iii) deliver to CSG an affidavit which certifies that Customer has complied with these termination obligations, as applicable.
- The provisions above and those in the Attachment 1 (which provides a pass through warranty from third party Hardware vendor and description of Hardware) attached hereto and any other terms set forth herein which expressly or by their nature are to continue after termination or expiration of the Kiosk Term shall survive and remain in effect for the Hardware and software purchased herein so long as said items are in use by Customer (including Customer's Affiliates and subsidiaries).

9. Kiosk PCI Responsibilities.

- CSG and Customer agree the provision and use of the Kiosk Product and its related Services shall be in accordance with each Party's respective responsibilities provided in the Kiosk PCI-Security document which shall be binding on the Parties, subject to the terms of this Agreement and may be updated from time to time by mutual agreement of the Parties. The Kiosk PCI-Security document (document #*****) shall be updated periodically to identify roles and responsibilities related to the Kiosk Product in a manner consistent with then-current industry standards and PCI-DSS standards. Any modification or revision of the Kiosk PCI-Security document shall be approved by the CIO of CSG and the General Counsel of Customer. In the event the Parties are unable to agree upon any modification or revision to the Kiosk PCI-Security document, the Parties shall escalate the matter as provided in the Agreement to executive management of the respective Parties for resolution. CSG acknowledges and agrees that it is responsible for cardholder data which it possesses or stores in relation to its Kiosk Product and related Services.
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ATTACHMENT 1

On-Site Field Service and Warranty Plan

Definitions

End of Life – Date at which a kiosk is considered to no longer have a useful life. This date is defined as after ** ***** from the original date in which the kiosk was shipped from Kiosk, Inc.'s ("KIOSK") manufacturing facility.

Useful Life – Period between ship date and ** ***** from ship date.

Warranty and Onsite coverage terms

(a) On-Site Field Maintenance and Warranty Services:

- (i) Under the Kiosk Subscription Program, incoming service phone calls from CSG will be received by KIOSK's Customer Service Professionals with support provided from 6:00 am to 6:00 pm Mountain Standard Time (MST), Monday through Friday for ***** phone diagnostic response. The majority of calls and incoming email requests for service will be answered in real time; response is guaranteed to within *** *****. This service is provided directly from the KIOSK factory (not outsourced).
- (ii) The KIOSK Service Representative will promptly work through a series of questions with Customer to provide basic diagnostics of the issue and determine if a replacement part and Field Service Technician needs to be sent out. If this is the case, KIOSK arranges for overnight shipment of replacement parts and schedules the Field Technician Visit to arrive typically within ***** (**) ***** of call receipt. While the Field Technician is *scheduled* as part of this same-day process, the customer site visit does not occur until the following day when the part has been delivered. For most instances KIOSK will ship the replacement part to the customer site, however, in some cases it may be necessary to ship the part directly to the Field Service Technician. KIOSK will utilize the best overnight shipping delivery available for the defined location – FedEx Priority Overnight or UPS Next Day Air. Following this chronology eliminates the cost and interruption involved with duplicate site visits. Getting the replacement parts in the Field Service Technician's hands (as part of the repair process) provides a streamlined, productive service call and has been proven to be the most effective way to minimize down-time on mission critical applications. The faulty part return and shipping cost will be the responsibility of KIOSK Field Technician.

(b) On-site Field Maintenance and Warranty Service Exceptions for the Subscription Program:

- (i) Requests for Field Service Technician service request calls must be received by 2:00 pm MST, Monday through Friday, to be eligible for *** **** * ** ***** (*****) service metric. Field Service Technician request calls received after 2:00 pm MST will be scheduled on the following business day.
 - (ii) Requests for Warranty Parts support must also be received by 2:00 pm MST, Monday through Friday to be eligible for **** * ** ***** ***** * ** **** * ** *****. KIOSK will utilize the **** ***** ***** ***** available for the specified location (i.e., ***** ***** ***** * ** **** * **). Replacement part requests received after 2:00 pm MST will be shipped ***** * ** on the next business day, as supported by the **** ***** ***** ***** for the specified location.
 - (iii) This warranty is voided by misuse, accident, modification, and unsuitable physical or operating environment, improper cleaning or maintenance by Customer or Customer's other service organizations, removal or alternation of part identification, or failure caused by product or component not supplied by KIOSK or for which KIOSK is not responsible, or any modifications or changes to components or to the kiosk without KIOSK's written approval.
 - (iv) If merchandise/component is determined to be a "non-valid warranty issue" or "no defect found" or "outside of warranty" then Customer will be charged fees associated with repairing or replacing the merchandise/component that has been returned from the field service call. Upon completion of inspection for
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components in the KIOSK lab and a “non-valid warranty” status is determined, a \$***** fee will be charged for the handling, diagnosis, and/or cleaning of the faulty component. When a faulty component is determined to be a “non-valid warranty issue”, KIOSK will provide an “out of scope” charge to Customer that will include parts and labor cost for repairs or replacement of the merchandise/component returned from the field service call. KIOSK labor cost will be invoiced to Customer at the rate of \$***** **.*

- (v) Warranty service is guaranteed for ***** (**)*s for workmanship after such warranty service is completed.
 - (vi) The warranty on part defects is not extended if replacement parts are provided in a maintenance action.
 - (vii) The warranty does not apply to expendable items (i.e. normal wear and tear of external graphics, etc.). Paint damage due to normal wear and tear is not covered under the warranty. Paint damage resulting from manufacturing defects will be covered under the warranty.
 - (viii) Damage caused by vandalism, physical abuse, or environmental acts of God are not covered under the warranty.
 - (ix) The warranty includes the original kiosk enclosure and all components as shipped from KIOSK's factory. It does not include consigned components, customer software, network, connectivity service, custom modifications or changes made to the system, or cleaning, installation or repositioning of the system.
 - (x) Customer will provide updated onsite contacts and addresses for each location and kiosk remote monitoring access required for service call management. Exceptions to fulfillment of onsite service can include holidays or events that prohibit access to the location.
 - (xi) Warranty and On-Site Maintenance services will be purchased by Customer at the time of sale (before the kiosk is shipped, installed or in active use). The warranty coverage term cannot be adjusted at a later date without a paid field inspection visit and on-site review by a KIOSK technician, except where otherwise specified in this Amendment.
 - (xii) Replacement components are not guaranteed to be new components and may come from KIOSK refurbished and tested stock (at the discretion of KIOSK).
 - (xiii) If original components are no longer obtainable through reasonable efforts, KIOSK will replace the component with an equal quality component as well as cover any cabinet modifications and labor needed to physically install equal quality component.
 - (xiv) The KIOSK Field Service Technician must be able to access the Comcast kiosk unit during the scheduled time. Keys must be available on-site prior to dispatch of a Field Service Technician. In those instances in which the KIOSK Field Service Technician is not able to access the Comcast kiosk unit or the Customer site or if keys are not onsite, all at the Customer-approved, scheduled time, such instance will result in a duplicate Field Service Technician site visit and CSG will invoice Customer an additional \$***** **.*. In the event CSG no longer provides Services related to kiosks to Customer, the invoice shall be provided by KIOSK to Customer.
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Exhibit C-5

RESIDENTIAL VOICE SERVICES

Residential Voice Services and Functionality. Customer shall receive the following Residential Voice Services and Functionality:

1. **Advanced Convergent Platform for Voice (ACPV).** ACP is required for the Telephony Services Functionality described below. The services include the infrastructure required to support a Telephony Service Offering and the required interactions with the core billing engine, ACP. ACP provides the Graphic User Interface for managing customer care functions and processes. ACSR and ACPV are licensed by CSG to Customer and are included in the BSC. ACPV is not designed for, nor is it intended for use in commercial applications. Commercial is defined as support of business customers where multiple lines are needed.
 2. **Service Delivery System (SDS).** Supports service initiation and triggering of the service order distribution API after an order is created, and supports order versioning. Utilizing a Work Flow Manager SDS creates an ordered set of tasks (work plan) and then schedules and tracks these tasks to completion. Tasks defined by the client are manual and are completely user definable. CSG shall also support the creation and installation of automatic tasks such as the initiating of the service order distribution interface to feed downstream OSS and Provisioning Systems. Support for SDS is included in the BSC.
 - a. **Telephony Features (as applicable).** ACPV can be configured to include the data structures necessary to collect the information for service providers operating in a local facilities based service offering. ACPV does not provide for automated point-to-point interfaces to 3rd party trading partners in the base package.
 - E911
 - CARE
 - LIDB/CNAM
 - Local Number Portability
 - Directory Listing
 - Directory Assistance/Operator Services
 - Calling Card
 - Switch Provisioning
 - Voice Mail
 - b. **Automated Interfaces.** The following automated interfaces are included in the Residential Voice Services:
 - Service Order Distribution – utilized by Customer to support provisioning of voice orders
 - Third Party Verification – utilized by Customer to support the third party verification process through Istonish
 - Write Back Interface – utilized by Customer to support capturing provisioning information
 - Usage Guide (Account Profile) – utilized by Customer to support the feed of customer account and order information from ACPV to Neptune

The monthly operations and support fees associated with these interfaces are included in the BSC. Installation fees may vary depending on the complexity of the interface. Fees for updates to existing interfaces and configuration changes and testing are set forth in Schedule F
 3. **Event Processing Systems (EPS).** The Event Processing System provides support for the processing of summary billing information from Neptune. Charges for EPS are set forth in Schedule F. EPS does not provide for the polling and collection of events from network elements.
 - a. **Usage Interfaces.** Daily usage processing services are included in the BSC. Call plan setups and other ancillary charges associated with usage processing are set forth in Schedule F. In addition, fees for updates to existing interfaces and configuration changes and testing are set forth in Schedule F.
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4. **Application Administration.** Provides CSG and the Customer the capability to establish, modify and maintain the additional rules tables and data structures required to operate the system. Provides a Graphic User Interface to perform these functions. Includes the following capabilities.
- a. Product Catalog Setup and Maintenance (includes voice configuration in back office and ACP)
 - b. Address parsing and storage
 - c. Management of Numbering Resources (i.e. Telephony Numbers) and their geographic availability
 - d. Management of Service Availability
 - e. SDS Application Administration (includes support to set up automated interfaces described in paragraph 2.b above)
 - f. EPS Application Administration
 - g. Interface to telephone network inventory system (separately priced as provided in Schedule F)
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Exhibit C-6

Braille/Large Print Statement Functionality

1. **Services.** For the fees set forth in Schedule F, Customer may elect from time-to-time to purchase from CSG, and upon such election CSG shall provide, certain services relating to Customer's requirements for Braille/Large Print Statement Functionality, which consists of an automated process to identify and create output files for Braille and Large Print statements. CSG will assist the Customer with identifying subscribers who have requested Braille or Large Print statements. CSG will create a file and send via a designated FTP site the PDF statement Data Frame images to the Customer's vendor as directed by Customer. The Customer's vendor will in turn convert these statements to Braille or Large Print format.
 2. **Additional Services.** Technical Services will be provided in accordance with Schedule E (Technical Services).
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Exhibit C-7

Enhanced Account Ledger

1. **Services.** For the fees set forth in Schedule F, Customer may elect from time to time to purchase from CSG, and upon such election CSG shall provide, its Enhanced Account Ledger (EAL) service, which is an upgraded account ledger system that provide Customer an online view of the statement and ledger that is more representative to the physical statements. EAL also provides expanded information and drill down capability for details posted to the ledger. New search filters are available that allow Customer to search on telephone number, leaf account number, control account number, user ID, etc. The functionality also expands the amount of detail records from 89,000 in legacy to 999,999,999 records.
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Exhibit C-8

CSG ACP COMMERCIAL UPGRADE

1. ACP Commercial Upgrade Definition. The ACP Commercial Upgrade is a series of operational and functional enhancement projects packaged as a onetime platform upgrade. It is an upgrade to the existing ACP and ACP-V platform on which residential services are provided and, therefore, Customers obtaining the Upgrade platform will continue to be subject to the terms, conditions and pricing of the ACP platform services. Commercial accounts shall mean an account with **** (*) telephone lines or more. Commercial accounts with *** telephone lines, Video or HSD services will not be counted towards the capacity license and, will, instead, be treated as though they were a residential account for purposes of the Agreement. For clarification purposes, Risk Management and Data exchange for collection interfaces listed in the Agreement are services that are not be provided for commercial accounts. In addition, Precision eCare® Self-Care is functionality that is excluded for commercial services.

2. ACP Commercial Upgrade Description. The solution will add the necessary operational efficiency improvements and new features to support CSG customers wanting to offer commercial services to the market place. The solution is built atop the existing ACP and ACP Voice infrastructure and will, therefore, provide comparable functionality as ACP and ACP Voice but will be tuned to appropriately scale to meet the more demanding needs of larger commercial account structures. Additionally, there are a number of commercial specific functional enhancements that are incremental to the existing solution capabilities. The solution is tailored to meet the unique needs of the Very Small Business (VSB), Small Offices Home Offices (SOHOs), and Small to Medium Businesses (SMBs) customer segments.

The ACP Commercial Upgrade is intended to support a single Customer/Location structure capable of supporting *** ** ***** (* ** **) voice lines and/or trunking service(s) at a maximum of *** provisionable service codes. Further, CSG will limit the number of CSG Supported Inventory Items per customer location (i.e. Logical Inventory Items controlled via CSG's Inventory System - e.g. Telephone Numbers, Calling Cards, and User Defined Logical Inventory for Wireless) via application governors. Larger account structures can be achieved via CSG's current Account Hierarchies functionality in which multiple individual accounts can be aggregated into a larger account structure. Within ACSR, CSG's OWF is required for Commercial Services.

The ACP Commercial Upgrade includes the following:

- Performance Tuning and Operational Engineering
 - Enhancements and refactoring of the following application components:
 - Order Management-Better management of the order items and efficient order processing
 - Interfaces – Interface message sizes will increase for larger commercial Accounts and therefore changes to the message buffer size and processing time out values will be adjusted to accommodate the larger Order payloads.
 - Database Model – Modifications to the data model, changes to trigger logic, and use of latest efficient database constructs and technology
 - Account Inventory Item Governors – Provides the ability to limit the number of inventory items (e.g. Telephone Numbers) supported for a given account type (i.e. Residential vs. Commercial):
 - Service Code enhancements
 - Rate changes will be supported for Bulk Services where the rate does not differ from *new* default rate
 - Security support for Individual Case-based Pricing (ICP) for situations that call for contracted rates that vary from *new* standard default rate
 - New Commercial Services filter will be implemented to filter the list of available service (i.e. present residential services or commercial services or both)
 - Distinct Residential and Commercial workflows
 - Customer Records will be identified and tagged in the Customer/Account setup process as either Residential or Commercial
 - Commercial specific ACSR® OWF modifications will be made to expose the new 50 character Company Name, and Responsible Party fields.
 - Service Classification and Availability rules will be enhanced to account for new Customer/Account Type filter values (i.e., present residential services, commercial services, or both)
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- Invoice and Statement requirements to support up to ** unique statement form types and additional commercial information
 - Support for up to ** unique Statement Form Types
 - Client driven Statement Form Types will support custom and tailored invoice formats for different business segments and verticals; provided, however, that efforts to develop a client driven Statement Form Type will be covered in a separate statement of work, signed by CSG and Customer
 - The ** statement formats apply to Account Hierarchy leaf accounts. Control accounts do not support statement form types
 - Support for new ** character Company Name and Responsible Party attributes in Commercial Account setup workflow, and provide options for new Envelope Name/Address Block
 - **Note** – may require invoice and envelope design changes with CSG’s Output Solutions Center which will be covered in a separate statement of work signed by CSG and Customer
 - Ability to summarize and prioritize the statement display of services, packages, installs, deposits and prorates
 - CSG currently supports and will continue to support detailed Account Hierarchy Control Account statements summary of Services, Packages, Installs, Deposits, and Prorates
 - Provide the ability to capture an “Alternate Service Descriptor” on a per account or account item basis for customer charge reconciliation for Account Hierarchy leaf accounts only
 - The “Alternate Service Descriptor” applies to Account Hierarchy leaf accounts. Control accounts do not support the “Alternate Service Descriptor.”
 - Examples include Purchase Order Numbers, Contract IDs, Sales Channel Identifiers, etc.
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Exhibit C-9

CSG ACP Wireless Module

ACP Wireless Module Definition. CSG's ACP Wireless Module is a substantive modular addition to CSG's ACP/® which allows Customer to provide wireless data services through CSG's Provisionable Data Base ("PDB") (previously only applicable to residential voice services) to all of Customer's lines of business for the fees set forth in Schedule F. The ACP Wireless Module permits Customer to define and tax complex wireless data services with extensible data attributes, which will support the collection and storage of complex information. In addition, Customer can use the module to pass information to provisioning partners as well as retrieve data for future ordering scenarios.

- The Wireless Module will support both residential and commercial accounts.
 - Multiple pieces of equipment allowed via Parent -Child Relationships for other lines of business. Enables ordering of multiple services associated to a single piece of equipment and multiple pieces of equipment from order entry. This equipment association is a logical association to equipment by filling out a parameter value with equipment information that designates that the parent service belongs to the MAC or ESN identified and is propagated to child services via CSG. Functionality to allow services to be mapped to equipment. Reduces customer service errors in adding equipment to account with no services or services to an account with no valid equipment. This provides for the service to equipment link.
 - Allows wireless equipment to be seen as separate and distinct entity from other pieces of equipment.
 - Wireless Module will support wireless as a separate Line of Business for ordering, scheduling, financials, A/R, and Jobs. In addition, SLBOS, SODI, ENI and VAPI will support the Wireless Line of Business.
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Exhibit C-10

Precision eMail

A. PRODUCT DESCRIPTION

CSG's Precision eMail® is a web based email application that allows for real-time trigger or batch sends for transactional or campaign based email messages while providing real-time reporting on each send. In addition, the application offers a business rules engine in order to create dynamic targeted content within the email message in order to deliver unique content to each subscriber. Precision eMail and any supplemental components ("Modules") will be implemented in a mutually agreed upon statement of work.

B. BASIC COMPONENTS OF PRECISION eMAIL

Content Management:

Emails - Precision eMail is a type of message delivered to Customer's Precision eMail subscriber. Customer can create batch and triggered email interactions.

Templates - A template is a defined layout to be used when creating a Precision eMail message.

Subscriber management:

Lists - A list of Customer's subscribers who have subscribed to receive Precision eMail.

Groups - A group is a segment of a list.

Profile Management - The attributes file contains the attributes associated with Customer's subscribers in an account (up to *** per account)..

Dynamic Content - Templates can be developed such that the version a Customer's subscriber sees in the Precision eMail depends on the Customer's subscriber's attributes.

Send Management:

Sender Profiles - Sender profiles allow Customer to create specific "from" name and email addresses (subject to domain sender rules) to be used when sending Precision eMail.

Delivery Profiles - Create specific delivery profiles that set the footer and header message to be applied to a Precision eMail message.

Private IP & Domain - Each Precision eMail account allows Customer to specify one domain name to use with Customer's account as well as establishing Customer's own IP address.

Tracking & Reporting - Provides real-time reporting of Precision eMail deliverability and tracking of user interaction per Precision eMail message.

API - Set of web services that allows Customer to pass real-time triggers and batch sends via an external source.

C. DESIGNATED ENVIRONMENTS

"Designated Environment" means the current combination of other computer programs and hardware equipment that CSG specifies for use with the Precision eMail Services, as identified on CSG's website at *****. Customer will use commercially reasonable efforts to keep its hardware and software in conformance with the Designated Environment specifications that CSG may provide from time to time.

D. OPERATING INFORMATION

Information regarding the Services, including information about use, availability and service levels, can be found at CSG's website at https://***** or *****.

ATTACHMENT 1 TO EXHIBIT C-10

PRECISION eMAIL® TERMS AND CONDITIONS

Subject to the terms and conditions of the Agreement, as modified by Exhibit C-10 (including this Attachment 1 and Attachment A to Attachment 1), CSG will provide Precision eMail to Customer, and Customer engages CSG to provide such Product for Customer's use. In the event of a conflict between this Exhibit and the Agreement, the terms and conditions of this Exhibit only with respect to CSG's provision and Customer's use of Precision eMail, shall prevail.

1. Definitions.

a. "**Product**" for purposes of this Exhibit, shall mean Precision eMail, an electronic access to CSG's vendor's email marketing software over a computer network and related technical support services.

2. Customer Use. Customer's use of Precision eMail shall comply with the CSG Messaging Policy and is limited to Customer's internal business purposes and operations. Customer may not use Precision eMail in any manner for any third party (other than for Customer's customers as provided herein). No license or right to use, reproduce, translate, rearrange, modify, enhance, display, sell, lease, sublicense or otherwise distribute, transfer or dispose of Precision eMail accessed by Customer, in whole or in part, is granted, except as expressly provided in these terms and conditions. Customer shall not reverse engineer, decompile, or disassemble the Precision eMail application software. Nothing in this Exhibit will entitle Customer to access or use the source code of Precision eMail.

3. Pricing. Precision eMail will be provided by CSG to Customer for the fees set forth in Schedule F.

4. Indemnification.

a. ***** ** ***** ** ** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** *****
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5. Certifications and Acknowledgements. Customer certifies that it understands and acknowledges that:

- a. Customer has read and agrees to comply with the CSG Messaging Policy. CSG or its vendor(s) may, at its sole discretion, refuse to distribute any Precision eMail that does not comply with CSG's Messaging Policy. In the event of a refusal to distribute, CSG shall promptly notify Customer of such refusal, stating with specificity the reasons for such refusal. Customer shall incur no charges for any email that CSG or its vendor(s) fails to distribute.
 - b. Neither CSG nor its vendor(s) has an obligation to review Precision eMail content, email addresses or related information provided by Customer to ensure that such comply with applicable Laws, and Customer accepts full responsibility for its compliance with such Laws.
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- c. All email addresses shall be supplied solely by Customer. Neither CSG nor its vendor(s) have any obligation to supply, “scrub,” or otherwise verify the legal compliance of any email list.
 - d. CSG and its applicable vendor(s) are electronic mail service providers. Precision eMail’s purpose and function is to enable Customer to send and/or receive emails. CSG is only an intermediary in sending and/or receiving electronic mail.
 - e. Customer is solely responsible for the creation, initiation and transmission of its digital messages via Precision eMail, including the content of such Precision eMail, the recipients of such Precision eMail and the timing of such Precision eMail.
6. **Outage Policy.** Except for routine maintenance and systems upgrading that is managed by CSG or its vendor(s) to provide Customer's products and services, Precision eMail shall be fully functional and operational not less than ***** (**%) ** ***. THE FOREGOING NOTWITHSTANDING, CUSTOMER ACKNOWLEDGES AND UNDERSTANDS THAT CSG DOES NOT WARRANT THAT TRANSMISSION OF EMAILS VIA PRECISION eMail WILL BE UNINTERRUPTED OR ERROR FREE AND THAT CSG AND ITS VENDOR(S) MAY OCCASIONALLY EXPERIENCE “HARD OUTAGES” DUE TO INTERNET DISRUPTIONS THAT ARE NOT WITHIN THEIR CONTROL. ANY SUCH HARD OUTAGES SHALL NOT BE CONSIDERED A BREACH OF THIS AGREEMENT.
7. **Termination.** Any other provision to the contrary notwithstanding, CSG or its vendor shall have the right to terminate Customer’s access to and use of Precision eMail by providing Customer with reasonable advance notice of such termination in the event that Precision eMail is no longer available to CSG, unless and excluding the extent to which such unavailability is caused by CSG’s failure to comply with its contractual obligations or its obligations under applicable Law, provided such unavailability is not a result of Customer’s failure to comply with its obligations hereunder. Any other provision to the contrary notwithstanding, Customer shall have the right to terminate use of Precision eMail and incur no additional charges upon (**) ***** written notice to CSG. Upon the effective date of the termination, ***** (***) *****. Additionally, no additional Subscription Fee or any other amounts will become due or payable after the date of the notice of termination. Upon such termination, Customer’s use of Precision eMail will terminate. Promptly upon termination for any reason, Customer must return or destroy, as requested by CSG, all materials pertaining to Precision eMail (including all copies thereof) and CSG (including its vendors), must return or destroy as requested by Customer, all Confidential Information of Customer.
8. **Ownership.** All Intellectual Property Rights in or related to Precision eMail are and will remain the sole and exclusive property of CSG and/or its vendor(s), as applicable, whether or not specifically recognized or perfected under applicable Law. CSG and/or its vendor(s), as applicable, shall own all rights, title and interest, including all Intellectual Property Rights, in and to any improvements to Precision eMail or to any new programs, upgrades, modifications or enhancements thereto, even when such refinements and improvements result from Customer’s request. To the extent, if any, that ownership in such refinements and improvements does not automatically vest in CSG and/or its vendor(s) by virtue of this Agreement or otherwise, Customer hereby transfers and assigns to CSG and/or its vendor(s), as applicable, all rights, title and interest which Customer may have in and to such refinements and improvements.
9. **Limitation of Liability.** WITH RESPECT TO PRECISION eMAIL, NO PARTY SHALL BE LIABLE TO ANY OTHER PARTY HERETO OR TO ANY THIRD PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOSS OF DATA, OR FRUSTRATION OF BUSINESS EXPECTATIONS, WHETHER ARISING OUT OF SUCH PARTY’S BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHERWISE (EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE). NO PARTY SHALL ASSERT ANY SUCH CLAIM AGAINST ANY OTHER PARTY OR THEIR SUBSIDIARIES OR AFFILIATED COMPANIES OR THEIR RESPECTIVE OFFICERS, DIRECTORS OR EMPLOYEES. THE MAXIMUM LIABILITY OF CSG OR ITS VENDOR(S) HEREUNDER FOR ANY CLAIMS WHATSOEVER RELATED TO PRECISION eMAIL WITHIN THE SCOPE OF THIS EXHIBIT IS
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EXPRESSLY LIMITED TO *** ***** ** (*) *** ***** ***** ** ***** ** * * * * * ** ***** ** ***** ***** ** ***** ** ***** (**) ***** *****
***** ***** ***** ***** ** * * * * * ***** ** * * * * * (*) *** ***** ***** ** (S*****). CLAIMS MAY BE BROUGHT UNDER THIS
EXHIBIT NO LATER THAN *** ***** ** (*) *** (*) ***** ***** ***** ** * * * * * ** ***** ** (*) ***** (**) ***** ** ***** AFTER THE
ACCRUAL OF THE CLAIM.

- Disclaimer of Warranties.** EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED HEREIN, PRECISION eMAIL IS PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND. EXCEPT AS OTHERWISE SPECIFICALLY PROVIDED HEREIN, TO THE MAXIMUM EXTENT PERMITTED BY LAW, CSG EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, CONDITIONS, REPRESENTATIONS AND GUARANTEES WITH RESPECT TO PRECISION eMAIL WHETHER EXPRESS OR IMPLIED, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS, OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. NO REPRESENTATION OR OTHER AFFIRMATION OF FACT, INCLUDING, WITHOUT LIMITATION, STATEMENTS REGARDING CAPACITY, SUITABILITY FOR USE OR PERFORMANCE OF PRECISION eMAIL WHETHER MADE BY EMPLOYEES OF CSG OR OTHERWISE, WHICH IS NOT CONTAINED IN THIS EXHIBIT, SHALL BE DEEMED TO BE A WARRANTY BY CSG FOR ANY PURPOSE, OR GIVE RISE TO ANY LIABILITY OF CSG WHATSOEVER.
 - Customer Trademarks.** Upon receipt of written authorization from the designated Authorized Customer Representative in Schedule I, CSG may use the trademarks and trade names of Customer in connection with its provision of Precision eMail as contemplated in this Exhibit and its marketing of Precision eMail to third parties (if and as approved by the designated Authorized Customer Representative).
 - Third Party Beneficiary.** Customer understands and agrees that CSG’s vendors, if any, are third party beneficiaries to this Exhibit for Precision eMail.
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**ATTACHMENT A TO
ATTACHMENT 1 TO EXHIBIT C-10**

CSG Precision eMail Messaging Policy

This CSG Messaging Policy (the "Messaging Policy") applies to Precision eMail service, which includes the sending of digital messages and related digital messaging services (as used solely in this Attachment A, the "Services") offered by CSG or its authorized vendor, ("CSG," "we," "us" or "our") to Customer ("Customer" "you" or "your"). Any capitalized terms used but not defined in this Messaging Policy will have the meaning given to such terms in the Terms and Conditions, or your Order.

YOU AGREE TO CREATE, STORE, AND SEND ALL DIGITAL MESSAGES USING PRECISION EMAIL IN STRICT COMPLIANCE WITH THIS MESSAGING POLICY. YOUR CONTINUED USE OF OR ACCESS TO PRECISION EMAIL CONSTITUTES ACCEPTANCE OF THIS MESSAGING POLICY. IF YOU ARE NONCOMPLIANT WITH THIS MESSAGING POLICY, CSG OR ITS VENDOR HAS THE SOLE DISCRETION TO TAKE ANY ACTION IT DEEMS APPROPRIATE REGARDING YOUR ACCESS TO PRECISION EMAIL, INCLUDING WITHOUT LIMITATION, IMMEDIATE SUSPENSION OR TERMINATION OF YOUR ACCESS TO PRECISION EMAIL.

1. **Compliance with Digital message Sending Best Practices.** We require you to follow these best practices when sending digital messages using the Services:
 1. Use only permission-based marketing digital message lists (i.e., lists in which each recipient has explicitly granted permission to receive digital messages from you by affirmatively opting-in to receive those digital messages).
 2. Always include a working "unsubscribe" mechanism in each marketing Digital message that allows the recipient to opt out from your mailing list (receipt/transactional messages that are exempt from "unsubscribe" requirements of applicable law are exempt from this requirement).
 3. Comply with all requests from recipients to be removed from your mailing list within 10 days of receipt of the request or the appropriate deadline under applicable law.
 4. Maintain, publish, and comply with a privacy policy that meets all applicable legal requirements, whether or not your organization controls the sending of the Digital messages.
 5. Include in each Digital message a link to your then-current privacy policy applicable to that Digital message.
 6. Include in each Digital message your valid physical mailing address or a link to that information.
 7. Do not send to addresses obtained from purchased or rented Digital message lists.
 8. Do not use third party message addresses, domain names, or mail servers without proper permission.
 9. Do not routinely send Digital messages to non-specific addresses (e.g., webmaster@domain.com or info@domain.com).
 10. Do not send Digital messages that result in an unacceptable number of spam or similar complaints (even if the Digital messages themselves are not actually spam).
 11. Do not disguise the origin, or subject matter of, any Digital message or falsify or manipulate the originating message address, subject line, header, or transmission path information for any Digital message.
 12. Do not send offers for the purpose of obtaining personal information or generating leads for third parties.
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13. Do not send “chain letters,” “pyramid schemes,” or other types of messages that encourage the recipient to forward the content to strangers.
 14. Do not send to lists of addresses that are programmatically generated or scraped from the Web.
 15. Do not employ sending practices, or have overall message delivery rates, which negatively impact the Services or other users of the Services.
 16. Do not use the Services to send messages that may be considered junk mail. Some examples of this type of messages include messaging related to: affiliate marketing, penny stocks, gambling, multi-level marketing, direct to consumer pharmaceutical sales, and payday loans.
2. **Compliance with Law.** Your use of the Services must comply with all applicable laws, rules, regulations, and court orders of any kind of any jurisdiction applicable to you, us, and any recipient to whom you use the Services to send Digital messages (“Applicable Law”). You have the responsibility to be aware of and understand all Applicable Laws and ensure that you and all Users of your Account comply at all times with Applicable Law. Some examples of Applicable Laws include: the U.S. CAN-SPAM ACT, The E.U. Directive of Privacy and Electronic Communications, the U.K. Privacy and Electronic Communications (EC Directive) Regulations 2003; the Canada Anti-Spam Law (CASL) and/or any similar law, laws relating to intellectual property, privacy, security, terrorism, corruption, child protection, or import/export laws.
3. **Commitment Against Harassment and Interference with Others.** You must not use the Services to:
1. Store, distribute or transmit any malware or other material that you know, or have reasonable grounds to believe, is or may be tortious, libelous, offensive, infringing, harassing, harmful, disruptive or abusive; or
 2. Commit (or promote, aid or abet) any behavior, which you know, or have reasonable grounds to believe, is or may be tortious, libelous, offensive, infringing, harassing, harmful, disruptive or abusive. Examples may include Digital messages that are themselves are or promote racism, homophobia, or other hate speech
4. **Sensitive Information.** You will not import, or incorporate into, any contact lists or other content you upload to the Services or the Site, any of the following information: social security numbers, national insurance numbers, credit card data, passwords, security credentials, bank account numbers, or sensitive personal, health or financial information of any kind.
5. **Modifications to this Policy.** We may modify this Messaging Policy prospectively at any time by posting the revised version on the Site (******* **
**** ***** ** ***) and/or sending you a copy of the modified document through other reasonable means. Your continued use of the Services will be considered acceptance of any such modification. All modifications to this Policy will be effective immediately upon posting, unless otherwise noted by us.**
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Exhibit C-11

CSG's Event Management

CSG's Event Management. CSG's Event Management is comprised of CSG Interactivate which provides the basis for custom APIs, workflows and business rules to be developed as part of the implementation project or follow-on projects to enhance messaging capabilities.

Exhibit C-12

Product Configurator Billing Configuration Edition

Product Configurator Billing Configuration Edition. The Product Configurator Billing Configuration service will define certain of Customer's service and package billing code tables that will allow Customer, using the ACPx interface, to perform near real time updates of the applicable code tables provide a more robust definition and validation for certain of CCS® Product Configurator code tables, including 9xx, TM, TR, TT, 03 and CT44.

Exhibit C-13

Product Configurator - Enhanced Sales Edition

Product Configurator (PC) – Enhanced Sales Edition (ESE). CSG Product Configurator – Enhanced Sales Edition is a centralized application supporting the definition of attributes required to operate and customize products that are sold and delivered within a CSG Customer’s business. ESE provides the ability to define marketing products and bundle those products into marketable offers, which are in turn sold through ACSR.

Exhibit C-14

Mass Change Platform (MCP)

Mass Change Platform (MCP). Mass Change Platform (MCP) is an application that provides the user with the flexibility to enter, schedule, submit, execute, and monitor requests for mass changes to fields that are normally editable in the account, customer, house miscellaneous adjustments and order objects of the CSG System.

MCP can create requests to generate new orders, complete, cancel, or update existing open orders, apply miscellaneous adjustments, update account, customer and location attributes, for both ACSR and ACSR with Enhanced Sales Edition (ESE) enabled environments.

For ACSR orders, MCP can add, remove, or update provisionable and non-provisionable services and packages. For ACSR with Offer Management orders, you can add, remove, or update offers, bundles, standalone and provisionable products.

MCP can be used to add or edit a template and use that template to immediately schedule a request. Scheduled requests become eligible for execution by MCP when the requested date and time for execution arrives and the request is approved by an administrator. An administrator can create requests for auto-approval. MCP can set a request to an inactive status to stop it from being executed.

MCP can run requests in verify or update mode for the following entity type and entity action combinations:

- Location and Update Existing Location
- Location and Update Existing Location - Variable Input
- Order - ACP and Create New Order
- Order - ACP and Create New Order - Variable Input
- Order - ACP and Update Open Order - Variable Input
- Order - Offer Management and Create New Order
- Order - Offer Management and Create New Order - Variable Input
- Order - Offer Management and Update Open Order - Variable Input

Verify mode requests do not change any data and are used to verify that the changes will process without any errors. After reviewing and verifying the output reports, the same MCP request can be scheduled to run in update mode to apply all changes.

Exhibit C-15

Configurable Line of Business Functionality (C-LOB Functionality)

Configurable Line of Business Functionality (“C-LOB Functionality”). The C-LOB Functionality, which is distinguished from C-LOB, allows the Customer the ability to configure services and business rules within CSG’s Product Configurator. These configured lines of business will enable Customer to pass data specific to such line(s) of business to interfaces and statement and usage processing systems. The C-LOB Functionality however, does not include implementation into CSG’s CCS or Print and Mail Services which would require the Customer to enter into a Statement of Work in order to allow CSG to provide analysis and review of the configured line of business to make a determination as to whether CSG will be able to process on CCS or through their Print and Mail.

Exhibit C-16

Check Verification

Check Verification. CSG’s Check Verification routes Automated Clearing House (“ACH”) transactions to CSG’s approved check verification provider (“CVP”). Check Verification also receives responses from CVP and provides appropriate dispositions to CSG’s respective payment applications. For responses to other payment applications, Customer will be responsible for integration and implementation of its front-end applications utilizing CSG’s standard XML protocol for the service.

Responsibilities and Representations:

Customer acknowledges and agrees that the provision of Check Verification services by CSG is contingent upon the following:

Customer Responsibilities:

Customer certifies that it has a legitimate business need for the information provided by CSG and its third party suppliers (“Suppliers”) related to checks and ACH transactions payable to Customer.

Customer further represents, warrants, and certifies that it will: (i) use the response information solely in accordance with the federal Fair Credit Reporting Act (“FCRA”) and all other applicable Laws; and (ii) use response information solely for a permissible purpose under section 604(a) of the FCRA, 15 U.S.C. § 1681b(a), and for no other purpose. CSG and its Suppliers reserve the right to decline to provide response information to Customer if, in CSG and its Suppliers’ sole opinion, it/they believe that such information will be used for a purpose other than a permissible purpose under Section 604(a) of the FCRA, 15 U.S.C. §1681b(a), or in violation of the terms of this Amendment.

Customer acknowledges that it has received and read the notice information prepared by the Federal Trade Commission that is located at <http://www.ftc.gov/os/2004/11/041119factaaph.pdf> describing obligations under law when using customer information. Customer acknowledges that verification services will apply to transactions originating solely within the United States and in U.S. currency.

Customer agrees that CSG and its Suppliers verification information will not be used for employment purposes, for the extension of credit, for insurance purposes or for any purpose which is prohibited by the Fair Credit Reporting Act (Public Law 91-508), or any other Law presently governing such information supplied by CSG and its Suppliers or any Law which subsequently shall govern said information. Customer further agrees that the information furnished by CSG and its Suppliers will be used only for the exclusive use of the Customer and will not be made available to any third parties.

Indemnification.

***** Customer agrees that there will be no payment to Customer by CSG or its Suppliers for any loss from check transactions processed through the verification service. Customer assumes all risk that checks accepted by it may be dishonored. *****

Severability.

In the event any provision of this Exhibit C-16 is held to be unenforceable or invalid by a court of competent jurisdiction, the validity and enforceability of the enforceable portion of any such provision and/or the remaining provisions of this Exhibit C-16 shall not be affected thereby; provided that with respect to any material provision declared non-enforceable or invalid, the parties shall negotiate in good faith to define a legally enforceable provision which most closely approximates the original intent of the provision declared unenforceable or invalid.

No Warranty.

CSG AND ITS SUPPLIERS MAKE, AND CUSTOMER RECEIVES, NO WARRANTY, EXPRESSED OR IMPLIED, AND THERE ARE EXPRESSLY EXCLUDED ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NEITHER PARTY SHALL HAVE LIABILITY WITH RESPECT TO ITS OBLIGATIONS UNDER THIS EXHIBIT C-16 FOR CONSEQUENTIAL, SPECIAL, DIRECT, EXEMPLARY, OR INCIDENTAL DAMAGES TO THE OTHER PARTY, THEIR SUPPLIERS, MERCHANTS OR THIRD PARTIES DEALING WITH THE OTHER PARTY EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. CONSEQUENTIAL DAMAGES SHALL INCLUDE LOST PROFITS, LOST BUSINESS OPPORTUNITY, LOST GOODWILL, LOST REPUTATION AND OTHER SIMILAR DAMAGES OR ECONOMIC LOSS.

Conflict

In no event will any terms, conditions or fees set forth in this Exhibit C-16 apply to Customer's performance under the Agreement other than with respect to CSG's provision and Customer's use of CSG's Check Verification Services. Except as provided in this Exhibit C-16, all other terms of the Agreement which are not in conflict with this Exhibit C-16 for the use of CSG's Check Verification shall be given full force and effect. In the event of a conflict between the terms of the Agreement and the terms of this Exhibit C-16, the terms of this Exhibit C-16 shall control and take precedence with respect to CSG's provision and Customer's use of CSG's Check Verification.

Exhibit C-17

AFP Statement Image File Transfer

AFP Statement Image File Transfer. CSG will provide AFP Statement Image File Transfer to Customer's chosen third party archives service provider. Archived statements processed are available for view, excluding statement backers and advertisement pages. The daily AFP statement file will be available to Customer and/or its third party archives service provider in the outgoing directory for a period of ***** (**) ****. Thereafter, files are archived.

Advanced Function Printing (AFP) is an architecture and family of associated printer software and hardware that provides document and information presentation control independent of specific applications and devices. The AFP architecture-based system of hardware and software allows for creating, formatting, viewing, retrieving, printing, and distributing information on a wide variety of printer and display devices. It is an integrated data stream for generating fully composed pages of data. Traditional line-mode print applications compose a line at a time down the page (typically continuous form pages), whereas AFP composes the entire page before printing. In AFP, page elements such as text, images, bar codes, page segments, and overlays, can be specified in any order at any position in the page. This is called all points addressability. Advanced Function Presentation data stream (AFPDS) is a printer-independent data stream that composes full pages within a document. Many of the page elements that can be used with AFP are special objects called resources.

Exhibit C-18

FSM Scheduling and FSM Resource Allocation Manager

FSM Scheduling. FSM Scheduling is an independent, standalone solution that consolidates and manages all scheduling information generated from CSG Workforce Management® and seamlessly integrates the information into any upstream order or billing system to maintain a single source of truth of jobs, scheduling, and technician availability. FSM Scheduling (i) allows Customer's field technicians to be scheduled by Customer based on multiple order entry systems and a quota entry by date, route area, timeslot, and any job type group; (ii) includes an open API framework to enable integration into any order entry system and return available timeslots; and (iii) enables shift management in a single location allowing work orders from multiple systems to consume the capacity, whether from the billing system, network or plant maintenance work order.

FSM Resource Allocation Manager. FSM Resource Allocation Manager integrates with FSM Scheduling to generate available appointment times based on Customer's field resource scheduling capacity and passes those appointment times to FSM Scheduling. FSM Resource Allocation Manager has the ability to allocate Customer's field resource scheduling capacity based on Customer's existing technician shift data within CSG Field Service Management ("FSM") and to facilitate Customer's scheduling adjustments as necessary to meet Customer's field resource operational demands (for example: promotional campaigns, time to install and repair, regulatory) and other business factors.

Exhibit C-19

Reporting Services

The Reporting Services are described in the sub-Exhibits that immediately follow this Exhibit C-19.

Exhibit C-19(a)

CSG Vantage®

CSG Vantage®. CSG Vantage is a database that enables customers to evaluate product and service performance, conduct customer analysis and lifetime values, and transform raw data into real-time reports and graphs.

Exhibit C-19(b)

CSG Vantage® Near-Real Time VNRT

CSG's Vantage® Near-Real Time VNRT. CSG's Vantage® Near-Real Time VNRT reporting application will provide updates from the order, job, item, subscriber, scheduling calendar, voice, outage detection, and equipment systems. CSG will build out the Near-Real Time tables for Customer's access. Additional Near-Real Time data feeds from ACP will also be made available through future software releases including house updates.

Exhibit C-19(c)

CSG Vantage® Plus

CSG Vantage® Plus. CSG Vantage Plus is a reporting application that parses CCS® production reports and makes the report data available in Vantage tables for query and analysis purposes. Relational report tables are retained in the Vantage environment for ***** (*)* ***** (**)* ** ***** (**) **** ** ***** ***** **
***** generated reports, respectively.

Exhibit C-19(d)

CSG Vantage® Direct

CSG Vantage® Direct is a reporting tool, which is a statement messaging tool, that offers selectivity from the CSG Vantage® database.

Exhibit C-19(e)

Financial Forecaster in CSG Vantage®

CSG Financial Forecaster. CSG Financial Forecaster is a service that offers a flexible distribution of "Financial Snapshot" summary production reports and files that can be delivered in accordance with Customer's chosen schedule (daily, weekly, custom e.g. 3 days a month) or On Demand.

Financial Snapshot Reports: Financial snapshot reports are a collection of financial reports that are run in accordance with the customer's defined reporting schedule. Please note that Financial Snapshots are used to facilitate forecasting efforts. Financial Snapshot reports cannot be run on customer's actual month end.

Customer shall have access to the eleven (i.e. CPSM-318 Financial Summary Report CPSM-300 Accounts Receivable Journal, CPSM-302 Monthly Monetary Transaction Journal, CPSM-304 Monthly Adjustment By Reason Report, CPSM-306 Payment Adjustment Composition Report, CPSM-308 Monthly Earned and Unearned Revenue Report, CPMM-504 Total Service Code Statistics Report, CPMM-506 Ala Carte Statistics Report, CPMM-508 Package Code Statistics Report, CPRM-006 Royalty Account Report and CPPM-010 Event Order Royalty Report) Financial Snapshot summary reports, files, and Vantage tables via CSG Vantage Plus®, Vantage Tables® or through the delivery of SFTP files.

All files will be delivered via FTP. CSG maintains the extracted data on the FTP directory until the earlier of pick up by Customer or ***** (**). CSG also maintains a backup copy of each extracted dataset for *** ***** (**). At Customer's request, CSG will restore a backup copy of an extracted dataset. File restoration charges are included in Schedule F.

All Financial Snapshot reports will be retained for ** ***** in the Vantage Plus® application.

Exhibit C-19(f)

InfoCast Files

InfoCast Files are scheduled applications that create data extracts which are compressed, (if necessary) encrypted, and sent to an FTP directory maintained by CSG on behalf of Customer (“InfoCast Pick Up Site”). CSG authors the logic to create the report files from Vantage data and enhances or modifies the logic in the event the Vantage data objects change. InfoCast Files applications can be scheduled to run intraday, daily, weekly, monthly, or at specific intervals. Customer accesses the InfoCast Pick Up Site to retrieve the extracted data. CSG maintains the extracted data on the InfoCast Pick Up Site until the earlier of pick up by Customer or ***** (**) *****. CSG also maintains a backup copy of each extracted dataset for *** ***** ***** (**) *****. At Customer’s request, CSG will restore a backup copy of an extracted dataset to the InfoCast Pick Up Site. See Schedule F for applicable service fee per restoration.

Exhibit C-19(g)

CSG Vantage® Optional Tables

Customer Value Optional Table in CSG Vantage®. Customer shall have access to CSG's Customer Value Optional Table in CSG Vantage. The Customer Value Optional Table in CSG Vantage provides Customer with the ability to query the monthly recurring value associated with its customers, accounts, and services. This feature in CSG Vantage allows Customer to query *** (*) ***** of historical item value records once history has been built, as well as forecasting the monthly recurring value of items up to ***** (**) ***** into the future. Implementation services and lead times will be set forth in a mutually agreeable Statement of Work.

UDF Cards 1-143 Vantage Optional Table in CSG Vantage® Customer shall have access to CSG's current UDF Cards 1-143 Vantage Optional Table in CSG Vantage. The current UDF Cards 1-143 Vantage Optional Table in CSG Vantage provides Customer ad hoc reporting capabilities against User Data File settings defined on cards 1- 143. Implementation services and lead times will be set forth in a mutually agreeable Statement of Work.

Total Service Code Statistics Optional Table in CSG Vantage®. Customer shall have access to CSG's Total Service Code Statistics Optional Table in CSG Vantage. The Total Service Code Statistics Optional Table in CSG Vantage provides Customer with the ability to query detailed item and order activity that can be queried and summarized to reconcile to the CPPM-504 Total Service Code statistics report. Implementation services and lead times will be set forth in a mutually agreeable Statement of Work.

AIU Optional Table in CSG Vantage®. Customer shall have access to CSG's AIU Optional Table in CSG Vantage®. The AIU Optional Table in CSG Vantage® provides Customer with the ability to query authorization profile details from the AIU screen in CCS. The AIU Screen contains authorization profiles for services, service groups, events and statuses.

Pending UDF Cards and 9XX Service Changes Optional Tables in CSG Vantage®. Customer shall have access to CSG's Pending UDF Cards and 9XX Service Changes Optional Table in CSG Vantage®. The Pending UDF Cards and Service Changes Optional Table in CSG Vantage® provides Customer with the ability to query ad hoc reporting capabilities of pending changes defined on UDF cards 1-143 as well as all service pending code changes.

Query OJC Optional Table in CSG Vantage®. Customer shall have access to CSG's Query OJC Data Optional Table in CSG Vantage®. The OJC Data Optional Table in CSG Vantage® provides Customer with the ability to query on Order Job Creation logic used to assign job types based on the type of orders and Items entered on an order.

Order, Job and Item Updates Optional Tables in CSG Vantage®. Customer shall have access to CSG's Order, Job and Item Updates Optional Tables in CSG Vantage®. The Order, Job and Item Updates Optional Table in CSG Vantage® provides Customer with a set of tables that reflect only changes to Orders, Jobs, and Items that were processed for a given day. Each record is tagged with an identifier (Insert, Change, or Delete). These tables may be queried to extract records for feeding data warehouses, or may be queried in Vantage to identify activity pertaining to that particular day. These transactions will be retained in Vantage for ***** (*) *****. Pricing for Order, Job, and Item updates applies up to *** (*) ***** ***** ** *****. Additional fees may apply beyond * ***** ***** ** *****.

Exhibit C-20

Message Manager

Message Manager. Message Manager is a fully CSG-hosted web application that provides Customer with the ability to compose and maintain document messages and provide robust statement message composition with prioritization, rich text, basic selectivity, preview and reporting capabilities to facilitate Customer's communication with Subscribers. The specific Message Manager capabilities that will be implemented for Customer will be set forth in a mutually acceptable Statement of Work.

Exhibit C-21

CSG StatHub

CSG StatHub. CSG StatHub (“StatHub”) is a CSG web application that provides Customer with the ability to view operational statistics related to CSG Products and Services transactions. StatHub will provide Customer with access to view the data and queries that are part of the Service. Customer will not have direct access to Customer’s Subscriber data from StatHub. **** (*) ***** ***** will be allowed StatHub access at any given time.

StatHub is not subject to the standard CSG change management process and as such, CSG reserves the right to make changes to StatHub at any time without prior notification to Customer.

StatHub supports the Google Chrome and Mozilla Firefox browsers.

Exhibit C-22

CSG Traffic Data Service

CSG Traffic Data Service. The CSG Traffic Data Service is an optional subscription-based data service leveraging real-time traffic data (the “Traffic Data”) CSG *****
**** * ***** *****. CSG utilizes the Traffic Data where and when available (**** ***) to ***** ***** ***** ***** that the *****
***** considers that will ***** in ***** ** *****. Examples of the types of Traffic Data include **** ***** ***** ***** *****
***** to determine ***** ** ***** ***** ***** *****. The CSG Traffic Data Service also leverages the Traffic Data to ***** ***** **
***** to ***** ***** and to ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** *****
***** ***** *****. Note: CSG Workforce Management is a pre-requisite to use this optional data service and Customer ***** ***** ***** ***** *****
***** ** ***** ** ***** optional data service, as set forth in the “CSG Traffic Data Services” section of Schedule F.

- 1. Availability.** The Traffic Data may not be available *** ** ***** ***** ** ** * ***** and is subject to change based upon *** ** *****
***** ** ***** ***** ***** ***** ***** ***** Customer acknowledges CSG has provided Customer ***** to the ***** ***** ***** by
the CSG Traffic Data Service (including available Traffic Data) and upon Customer’s reasonable request from time-to-time, CSG agrees to provide Customer
reasonable ***** ***** to ***** the ***** ***** ***** ***** and the ***** applicable ***** ***** ***** by the CSG Traffic Data Service.
- 2. Attribution.** The visual map displays viewed by desktop users and technicians may contain proprietary notices, logos and website links ** ***** *****
***** Customer will not use any logo or trademark * ***** ***** ***** ***** in any manner or for any purpose without the prior written consent of CSG.
- 3. Confidentiality.** Customer agrees that information received through the CSG Traffic Data Service is “Confidential Information” under the Agreement and as such shall
be kept strictly confidential in accordance with the Agreement. Upon the termination of the CSG Traffic Data Service by CSG or Customer and in accordance with
Article 10 of the Agreement, Customer will cease using and upon request from CSG will return to CSG or, alternatively, destroy all information received by Customer
through the CSG Traffic Data Service from all of Customer’s on-line and off-line storage media (with the exception of any copies created as part of its regular back-up
procedures).
- 4. Ownership.** CSG ** ** ***** ***** ***** shall own all right, title and interest (including all associated Intellectual Property Rights) in and to the CSG
Traffic Data Service and the Traffic Data including all customizations, enhancements, modifications, improvements, derivations or other changes thereto made for or by
Customer (alone or with others) and relating to the CSG Traffic Data Service provided by CSG. Customer will execute any instruments that may be appropriate or
necessary to give full legal effect to the ownership rights granted to CSG ** ** ***** ***** ***** herein. Without limiting the foregoing, Customer is
prohibited from syndicating, redistributing or acting as a service bureau for the CSG Traffic Data Service and the Traffic Data. Customer will not modify the Traffic
Data or any portion thereof, or merge, incorporate or combine it with any traffic-related data not provided hereunder by CSG. If the Traffic Data or any portion thereof
is modified, merged, incorporated or combined into any software, hardware, or other data, it will continue to be subject to the provisions of this Agreement, and CSG
***** ***** ***** ***** will retain ownership of all such Traffic Data and all portions thereof.
- 5. Disclaimer of Warranties.** NEITHER CSG ** ** ***** ***** ***** WARRANT THE ACCURACY OR TIMELINESS OF DATA PROVIDED BY THE
CSG TRAFFIC DATA SERVICE. EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT (A) THE DATA PROVIDED BY THE CSG TRAFFIC DATA
SERVICE IS PROVIDED BY CSG ** ** ***** ***** ***** “AS IS”, “WITH ALL FAULTS”, “AS AVAILABLE” AND WITHOUT WARRANTY OR
COMMITMENT OF ANY KIND, AND (B) TO THE MAXIMUM EXTENT PERMITTED BY LAW, ANY AND ALL REPRESENTATIONS, WARRANTIES OR
CONDITIONS OF ANY KIND WHATSOEVER (INCLUDING EXPRESS, IMPLIED OR STATUTORY WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, ACCURACY OR SATISFACTORY QUALITY), WHETHER DEALING WITH DATA OR
OTHERWISE, ARE EXPRESSLY EXCLUDED. NO ORAL OR WRITTEN ADVICE OR INFORMATION

CUSTOMER RECEIVES FROM THE DATA PROVIDED BY THE CSG TRAFFIC DATA SERVICE WILL CREATE A WARRANTY, AND CUSTOMER IS NOT ENTITLED TO RELY UPON ANY SUCH ADVICE OR INFORMATION.

Exhibit C-23

CheckFree API

CheckFree API Precision eCare will provide a web service to process a transaction at a time for inactive, active, and changed records that Customer generates from the file processing with Fiserv (f/k/a CheckFree) directly.

- The web service will update the required fields in ACP and in Precision eCare®.
 - Precision eCare® to provide schema for interaction.
-

- Except as otherwise set forth in a Services Commitment SOW, Customer requests for services using the CY Committed Dollars under the CY Services Commitment are subject to CSG's reasonable and practicable business considerations, including resource availability and cost of resources.
- Services Commitment Order (each, an "SCO") (as described on Exhibit A to the 2020 Services Commitment SOW) will document each eligible product and services to apply against the CY Committed Dollars under the CY Services Commitment.
 - a. An SCO will:
 - i. have an identifying number that associates it with the individual services commitment scope documents that define the Description/Scope of Services, CSG Responsibilities, Customer Responsibilities, Deliverables and Key Target Milestones of said services for that SCO;
 - ii. will govern the aforementioned scope documents;
 - iii. ***** ** ***** ***** * ***** ***** ** ***** * ***** ***** ** ***** ("***** * ***** *****");
 - iv. the hourly rate to be used for the Fees for time and material projects;
 - v. contain the level of effort for CSG resource roles for time and material projects;
 - vi. contain a brief description of the services; and
 - vii. be mutually executed by both a Customer Representative(s) and a CSG Representative.
- The SCO process, including execution of an SCO document, will apply to all Services rendered by CSG regardless of the CSG group providing the services (i.e. – ACP Development team, PSG team, Interactive messaging team, consulting team, etc.).
- Customer will not be liable for paying for any services rendered by CSG, which is intended to apply to the CY Committed Dollars, which does not have a corresponding SCO that is executed by an authorized Customer Representative (initial authorized Customer Representatives are outlined below, with any additional and/or future authorized Customer Representatives to be identified in writing by an authorized Customer representative (as identified in the Agreement)).

Customer Representative(s)

Name: *****
 Email:*****@cable.comcast.com
 Name: *****
 Email:*****@cable.comcast.com

CSG Representative

Name: *****
 Email: *****@csg.com

- On a ***** basis, CSG will furnish Customer with a written report detailing the services provided under the CY Services Commitment decremented against the CY Committed Dollars. The report will be able to track all of the SCOs that have been executed, along with the effort consumed to date under those SCOs. Such report shall also track (i) all of the data within an SCO, including the name of the projects and the relevant CSG document number applicable to such projects, if any, and (ii) for projects that are provided on a time and materials basis, the hourly rate applicable to such projects.
 - With respect to any projects that are supported by an SCO, Customer mandated changes, variances, delays and contingencies shall result in a Change Order as mutually agreed to by CSG and the Customer. Each Change Order will be scoped, priced and billed on a fixed fee or time and materials basis and will be mutually agreed upon by Customer and CSG.
 - If Customer cancels a project after work has begun, the Parties agree that any services performed by CSG prior to the effective date of cancellation shall be applied against the CY Committed Dollars under the CY Services Commitment.
 - In addition, CSG may not charge Fees or consume any of the CY Committed Dollars to Customer, for creation and updating of proposals / quotes for potential Services or any pre-activities prior to the finalized *****.
-

receives SOW Response Document from CSG within ** ***** **** of the mutually agreed upon requirements completion submitted by Customer.

In any case where CSG fails to perform according to the above standards, Customer may issue written notice to CSG specifying the non-performance and request immediate corrective action to remedy the non-performance. If CSG fails to remedy the non-performance within ** **** of receipt of Customer's notice specifying the non-performance, then CSG agrees to provide Customer with Technical Service credits of *** ***** (***) *****, at a senior consultant level, applicable to any outstanding or future LOA or SOW.

2) Requests for Software Development

For each project that Customer desires CSG to undertake, Customer will complete the CSG Business Requirements Specification Document ("BRD") in the form approved by the Parties from time-to-time. This document will be validated and submitted to CSG by Customer's Contract Administrator, Technical Coordinator, or other Authorized Customer Representative.

- BRD – The Customer will define the project scope, background, and objectives, along with use cases for the requested software development or customization project(s).

In response to receiving a BRD Trigger Document, CSG will complete the following Response Document:

- Initial Project Analysis ("IPA") in the form approved by the Parties from time-to-time
- IPA- After trigger document is submitted, CSG may need to engage Customer in additional information collection, fact-finding, and clarification activities as required to fully comprehend Customer's intended usage and implementation plans. After such activities are complete, CSG will respond to Customer with an IPA. The purpose of the Initial Project Analysis (IPA) is to provide a proposed solution to a BRD that can be used to develop a detailed design, and to provide CSG and Customer an overall estimate of the size of the development request. This document will be provided to Customer for approval and signature.

Upon the Customer approval of the IPA, CSG will complete the following Response Documents:

- D-SOW
 - SOW
 - D-SOW - The purpose of the D-SOW is to produce a detailed functional specification for development of the CSG proposed solution to Customer requirements, as specified in the BRD and further clarified in the IPA. If the size of the estimate provided in the IPA is greater than **** *****, a D-SOW is created for completion of the design phase and then after D-SOW Customer approval, an SOW is created once the design is completed. If the size of the estimate is less than **** *****, an SOW only is created for the complete development life cycle.
 - SOW – The purpose of the SOW is to provide formal acceptance by the Customer of the project design, cost and implementation schedule. The SOW will provide reliable cost and schedule estimates along with a description of the tasks to be completed and the deliverables to be produced. Upon Customer's execution of the SOW, CSG will commence providing the requested services. An SOW will be used for reoccurring services regardless of the dollar amount. Except as otherwise specifically provided in a Statement of Work, CSG shall own all right, title and interest to any Deliverable. Each such Statement of Work agreed upon by the parties shall include a designation by Customer of whether the development project is deemed "strategic" or "non-strategic", provided that Customer shall not designate any development project as "strategic" unless the aggregate fees payable to CSG in connection therewith are ** ***** \$*****, and provided further, that any development project with aggregate fees payable to CSG of **** **** \$***** shall be deemed neither "strategic" nor "non-strategic" for purposes of this Schedule E. With respect to any project set forth in an agreed upon Statement of Work that is designated by Customer as "strategic", Customer shall fund the cost thereof, and CSG shall be restricted for a period of ** ** * ***** from the date the Deliverables are made available to Customer (as agreed to by the parties in such Statement of Work) from using or distributing, or permitting the use by any third party of, the Deliverables and related intellectual property. With respect to any project set forth in an agreed upon Statement of Work that is designated by Customer as "non-strategic", CSG may (i) elect to charge Customer for its development costs, in which case CSG may not itself use, or make the
-

Deliverables or related intellectual property available for the use by other customers or third parties for * * * * * from the date the Deliverables are made available by CSG (as agreed to by the parties in such Statement of Work); provided, however, that CSG may at any time elect to use the Deliverables or intellectual property without Customer's permission in which case it shall refund to Customer the development fees paid to it by Customer under the applicable Statement of Work; or (ii) elect not to charge Customer for its development costs, in which case CSG may use the Deliverables and related intellectual property without restriction.

CSG agrees to provide their Response Documents to Customer in a timely manner after receipt of Customer Trigger Documents, and in the aggregate, they will be provided to Customer according to the following standards:

- Within any * * * * * period, CSG will submit their response document no * * * * * of the mutually agreed upon requirements completion submitted in the Customer Trigger Documents, in * * % * * * * *. CSG will use commercially reasonable efforts to respond to all Trigger Documents as soon as possible.
- In * * % * * * * *, Customer receives Response Document from CSG * * * * * of the mutually agreed upon requirements completion submitted by Customer.

In any case where CSG fails to perform according to the above standards, Customer may issue a written notice to CSG specifying the non-performance and request immediate corrective action to remedy the non-performance. If CSG fails to remedy the non-performance within * * * * * receipt of Customer's notice specifying the non-performance, then CSG agrees to provide Customer with Technical Service credits of * * * * * at a senior consultant level, applicable to any outstanding or future SOW or D-SOW.

3) Change Orders

If Customer desires a change to the Technical Services or work to be performed under any executed LOA, SOW, or D-SOW, Customer shall issue an amended SRF or BRD to CSG which shall specify that it is a request for a change in a specified LOA, SOW or D-SOW. CSG shall respond with the appropriate Response Document, which shall include a change order cost and schedule estimate to the original LOA, D-SOW or SOW. Upon receipt of the change order LOA, SOW or D-SOW, Customer shall have the option to execute the change order LOA, SOW, or D-SOW, complete the work specified in the previously executed LOA, SOW, or D-SOW, or provide written notice terminating the previously executed LOA, SOW or D-SOW. In the event that Customer terminates any previously executed LOA, SOW, or D-SOW, Customer will be obligated to pay only for work performed by CSG, or other third party performing work, up to the date that CSG receives the termination notification, or as otherwise specified in the LOA, SOW, or D-SOW. Requested changes may affect the delivery and cost of the specified service or development.

4) Authority to Approve Technical Services

Customer execution of an LOA, SOW or D-SOW requires the signature of the applicable Customer authorized representative set forth in Schedule P.

5) Customer Obligations

Customer agrees that it shall execute or notify CSG that it shall not execute the SOW within * * * * * of delivery of a final negotiated SOW from CSG. Customer will pay CSG the fee(s) set forth in a Statement of Work, as well as any previously approved Reimbursable Expenses incurred in connection with the Technical Services performed by CSG, consistent with the terms of such Statement of Work.

The Parties acknowledge that all executed LOAs, SOWs, and D-SOWs, shall form an integral part of this Agreement. Without limiting the foregoing, the Parties agree to negotiate in good faith a mutually agreeable Statement of Work for any Technical Services requested by Customer which relate to (i) the building of any interface between the Products and the systems used by CSG to provide the Services and any other system or product designated by Customer ("Interface"), and (ii) the development of any modifications to the Products or the systems used to provide the Services requested by Customer for the purpose of facilitating Customer's compliance with the Laws to which it is subject. The terms and conditions for certification of any Interface implemented by Customer pursuant to this Schedule E are set forth in Exhibit E-1 and are hereby incorporated into any LOA, SOW or D-SOW for such implementation.

6) CSG Obligations

In the event that CSG has not completed the work specified in the LOA or SOW within the maximum period of performance or the period of performance otherwise specified in the LOA or SOW, as described above in Sections 1 and 2, Customer will have the option of providing written notice terminating the SOW at no cost. Upon receipt of such notice of termination, CSG shall be released of any obligation to deliver any of the work outlined in the referenced SOW or LOA or applying the following discounts based on late delivery:

Delivery Delay

**0%
**0%
**0%
**0%
**0%

Exhibit E-1

Interface Certification Process

For the purposes of this Exhibit E-1, "Certification" refers to the process undertaken by CSG to ensure that an external application and / or hardware device ("Application") to be integrated through an API and used with the Product(s) and Service(s) by Customer are compliant with the format and protocol conventions as specified in the interface specification document ("Interface Spec") and to the extent reasonably possible, will not have a detrimental impact on the Product(s) and Service(s) in Customer's production environment. An Application that has gone through the Certification process (and, if applicable below, re-Certification) is deemed "Certified".

(a) All Applications that are to be integrated with the Products and Services that have not been previously Certified by CSG must be Certified by CSG prior to use for production purposes. Cost of Certification is the responsibility of Customer when Customer requests to use a new Application with a Product and or Service.

(b) An Application, to the extent it is exposed by the Interface, must be Certified by CSG as compliant with a specific version of CSG's API, such Certification not to be unreasonably withheld by CSG. Customer is restricted to sending only those messages (from the Interface Spec) Certified for use with the Application. Use of additional messages shall require additional Certification prior to use in a CSG production environment. Customer assumes all liability for CSG's direct Damages solely relating to the transmittal of any non-Certified messages to CSG's billing system; subject to and provided that CSG has made and implemented reasonable commercial efforts to identify and reject non-Certified messages sent by Application.

(c) An Application may be subject to re-Certification if the integration is modified by or on behalf of Customer to comply with a different version of an API. Cost of such re-Certification is the responsibility of Customer, except in cases where such modification was made by CSG in its sole discretion. Customer may in its sole discretion direct CSG to not proceed with such re-Certification and further implementation.

(d) An Application that has not been implemented into production within ***** (**) **** of its Certification date may be subject to re-Certification if CSG has performed a major upgrade of the Product since the Certification was granted. CSG shall notify Customer of such requirement and shall include in said notice the expense of said re-Certification, which shall be limited to CSG's direct out-of-pocket costs. Upon receipt thereof, Customer may in its sole discretion direct CSG to not proceed with such re-Certification and further implementation. Customer shall be responsible for the costs of Certification set forth in the notice or as otherwise agreed.

SCHEDULE F

FEES

INDEX

I. Processing

- A. ***** (***** ***) *****
- B. ***** **
- C. ***** **
- D. ***** **

II. Threshold Usage Items

- A. ***** ("****") *****
- 1. ***** **
- 2. ***** ("****")
- B. ***** **

III. Direct Solutions (Print and Mail Services)

- I. *****
 - A. *****
 - B. *****
 - C. *****_ *****
 - D. *****
 - E. *****
- *****
 - A. *****
 - B. *****
- *****
 - A. *****
 - B. *****
 - C. *****
 - D. *****
- *****
 - A. *****
 - B. *****
 - C. *****
 - D. *****
 - E. *****
 - F. *****
 - G. *****
 - H. *****
- **
 - A. *****
 - B. *****
 - C. *****
 - D. *****
 - E. *****
 - F. *****
 - G. *****
- *****
 - A. *****
 - B. *****
 - C. *****

VII. *** **

*** **

IV. Ancillary Products and Services

- A. ****
- B. **** (***)
- C. ****
- D. ****
- E. ****
- F. **** ("****")
- G. ****
- H. ****
- I. ****
- J. ****
- K. **** ("****")

V. Technical Services/ Implementation Services/Training

- A. ****
 - 1. ****
 - 2. ****
- B. Implementation and Startup Services
- C. ****
 - 1. ****
 - 2. ****
 - 3. ****
 - 4. ****
 - 5. ****
- D. Equipment Installation /Technical and Engineering Support Services

***** ** **

- I. ****
- II. ****
- III. ****
- IV. ****
- V. ****
- VI. ****
- VII. ****
- VIII. ****
- IX. ****
- X. ****

***** ** **

- A. ****

Schedule F-3: SUPPORTING EXAMPLES FOR SECTIONS I & II OF SCHEDULE F

DEFINITIONS

Definitions provided in this Schedule may be captured elsewhere in the Agreement or in this Schedule, but in the event they are not defined in this Schedule F, they shall still have the meaning provided in the Agreement.

1. *****
2. ***** (*****) *****
3. *****) *****
4. *****) *****
5. ***** % *****) *****) *****
6. *****
7. *****
8. *****
9. *****
10. *****) *****
11. ***** (*****) *****
12. *****
13. ***** _ ***** (*****) ***** (*****) ***** (*****) ***** (*****) ***** (*****) *****



14. ***** (*****)*****
*****)*
15. ***** (*****)*****
*****)*****
16. *****

17. ***** (*****)*****
*****)*
18. ***** (*****)*****
*****)*****
19. *****

20. *****

21. ***** (*****)*****
*****)*****
22. ***** (*****)*****
*****)*****
23. *****
24. ***** (*****)*****
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25. ***** (*****)*****
*****)*****
26. ***** (*****)*****
*****)*****

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*****	*****	*****	*****	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****	*****	*****

***** () ***** () *****
***** () *****

1. ***** () *****

a. ***** () *****

b. ***** () *****

2. *****

a. ***** () *****

b. ***** () ***** () ***** () *****

***** S*****
S***** (***** S*****)*

***** S*****

***** S***** S***** (***** S*****)*

***** S***** (***** _ *****)* S***** (***** S*****)*

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(*****)*

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S***** S***** (S***** S*****)*

***** (*****)*

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S***** (***** _ *****)*
***** S***** (***** S*****)*

***** S***** (S***** S*****)*

***** S***** (***** S*****)*
***** S*****

II.Threshold Usage Items

A. ***** (“*****”)

1. *****

***** S*

2. ***** (“*****”)

***** ** ** ** *	*****	**
A. ***** ** ** ** *		
***** (***** ** ** ** *)	*****	\$*****
***** ** ** ** ** (***** ** ** ** *)	*****	\$*****
B. ***** ** ** ** * (***** ** ** ***) (**)	*****	\$*****
***** ** ** ** * (***** ** ** ***) (** ** *)		
C. ***** ** ** ** * (***** ** ** ***) (** ** *)	*****	\$*****
D. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
IV.*****		
A. ***** ** ** ** *		
1. *****	*****	****
2. *****	*****	****
B. ***** ** ** ** * (***** ** ** ***)		
1. ***** (***** ** ** ** *)		
*****	*****	\$*****
***** _ *****	*****	\$*****
***** _ *****	*****	\$*****
***** _ *****	*****	\$*****
2. ***** (***** ** ** ** *)		
*****	*****	\$*****
***** _ *****	*****	\$*****
***** _ *****	*****	\$*****
***** _ *****	*****	\$*****
3. ***** (***** ** ** ***)	*****	**
C. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
D. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
E. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
F. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
G. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
H. ***** ** ** ** * (***** ** ** ***)	*****	\$*****
V.*****		
A. ***** ** ** ** * (***** ** ** ***)		
1. *****	*****	****
2. *****	*****	****
B. ***** ** ** ** * (***** ** ** ***)		
1. ***** (***** ** ** ***)	*****	\$*****
2. ***** (***** ** ** ***)	*****	\$*****
3. ***** (***** ** ** ***)	*****	\$*****
C.*****		
1. ***** (***** ** ** ***)	*****	****
2.*****	***** ** ** **	*****
D.*****		
1.*****		
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b. ***** (***** ** ** ***)	*****	\$*****
c. ***** (***** ** ** ***)	*****	**
d. ***** (***** ** ** ***)	*****	\$*****
e. ***** (***** ** ** ***)	*****	****
f. ***** (***** ** ** ***)	*****	\$*****
2.*****		
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E.*****		
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IV.Ancillary Products and Services

A.

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1.*****	*****	*****
a)***** (***** (*****))	*****	*****
b)***** (***** (*****))	*****	*****
2.***** (***** (*)	*****	*****

*****	*****	*****
3.*****	*****	*****
a)*****	*****	*****
• ***** (***** (*****))	*****	S*****
• ***** _*****	*****	S*****
•*****	*****	*****

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4.*****	*****	*****
a)***** (***** (*) (*****))	*****	S*****
b)***** (*****)	*****	S*****

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*****	*****	***
7.***** (**)		
a)*****	*****	*****
b)***** (**)	*****	§ *****

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***** (**)

- *****
- *****
- *****

*****	*****	***
8.*****		
1.***** (**)	*****	§ *****
2.***** (**)	*****	*****

***** “*****” *****
***** “*****” *****
***** “*****” *****

***** (“*****”)
***** (“*****”)
***** (“*****”)

*****	*****	***
9.*****		
a)***** (**)	*****	§ *****
b)***** (**)	*****	§ *****

***** “*****” *****

**** * ***** (******) ***** ** ** ** **
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B. *****

*****	*****	*****
a) ***** (*)	*****	§ *****
***** (*) (*)	*****	*****
***** (*)	*****	§ *****
***** (*)	*****	§ *****
***** (*)	*****	§ *****
a) ***** (*)	*****	§ *****

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 ***** (*) ***** ** ** **

*****	*****	*****
a) *****	*****	*****
b) ***** (*)	*****	§ *****

***** (*) ***** ** ** **

C. *****

*****	*****	****
*) ***** (****)	*****	§ *****
*) ***** (****) (****)	*****	§ *****

***** (**) *****
 ***** § *****
 ***** (**) *****

*****	*****	****
*) ***** (****) (****)	*****	§ *****

***** (**) *****

*****	*****	****
*) ***** (****) (****)	*****	§ *****

***** (**) *****

*****	*****	****
A. ***** (****) (****)	*****	****
B. ***** (****) (****) (****)	*****	§ *****

***** * (**) *****

***** ***** (**) *****

***** ***** (**) *****

***** ***** (**) *****

***** ***** (**) *****

***** ***** (**) *****

F. *****

1. ***** (*)	*****	***
a) ***** (*)	*****	*****
b) ***** (*)	*****	Σ *****
2. ***** (*)	*****	Σ *****

***** _ *****

- ***** ***** (*) *****
- ***** ***** (*) *****
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- ***** ***** (*) *****
- ***** ***** (*) *****
- ***** ***** (*) *****
- ***** ***** (*) *****

G. ***** (*)

1. *****	*****	***
a) *****	*****	*****
a) ***** (*)	*****	Σ *****
_ ***** (*)	*****	Σ *****
_ ***** (*)	*****	Σ *****
_ ***** (*)	*****	Σ *****

I. *****

 ***** (*****)

J. ***** (“*****”)

*****	*****	***
1. ***** (*****)	*****	*****
*****	*****	\$ *****

V. Technical Services/ Implementation Services/Training

A. Technical Services/Professional Services

1. Technical Services/Professional Services

The hourly rates listed in the table below are for general guidance only. Actual fees may vary depending on the project requested by Customer via a Service Request Form. All projects and the associated fees shall be set forth in a mutually agreed upon Statement of Work.

*****	*****	\$**	\$**
*****	\$*****	\$*****	\$*****
***** (*****)	\$*****	\$*****	\$*****

*****	***** (*****)	\$**	\$**
*****	\$*****	\$*****	\$*****
***** (*****)	\$*****	\$*****	\$*****

		***** (*****)		
*****	*****	\$**	\$**	\$**
*****	(*****)	\$*****	\$*****	\$*****

 ***** (*) *****
 ***** (*) *****

**** * * * * * "*****" * * * * *
***** * * * * *
**** * * * * *

B. Implementation and Startup Services

- * * * * *
- * * * * *

C. Additional training and documentation

1. *****

*****	*****	***
1. ***** (*****)	***	\$*****

- *****
- *****
- *****
- ***** % (*) *****

2. *****

*****	*****	***
1. *****	***	\$*****
2. ***** (*****)	***	\$*****
3. ***** (*****)	***	\$*****

- *****
- *****
- ***** % (*) *****

3. *****

- ***** \$*****
- ***** (*) ***** (*) ***** (* * * * *) *****
- *****
- ***** % (*) *****
- ***** (*) ***** (*) *****

4. *****



	*****	**** (*****)	*****	**** (*****)
*****	*	\$*****	\$*****	\$*****
*****	*	\$*****	\$*****	\$*****
*****	**	\$*****	\$*****	\$*****

5. *****

*****	*****	***
***** (*****)	*****	\$*****

***** (*) *****
 ***** (**) *****

D. *****

1. *****

 ***** \$***** (*) *****

2. *****

- ***** \$***** (*) *****
- ***** \$***** (*) *****
- ***** \$***** (*) *****
 - ***** \$***** (*) *****

The below table in this Schedule F.1 identifies: (*) **

Table with 3 columns: Description, Status 1, Status 2. Rows include sections I, A, 1-10, a-g, h, and B.

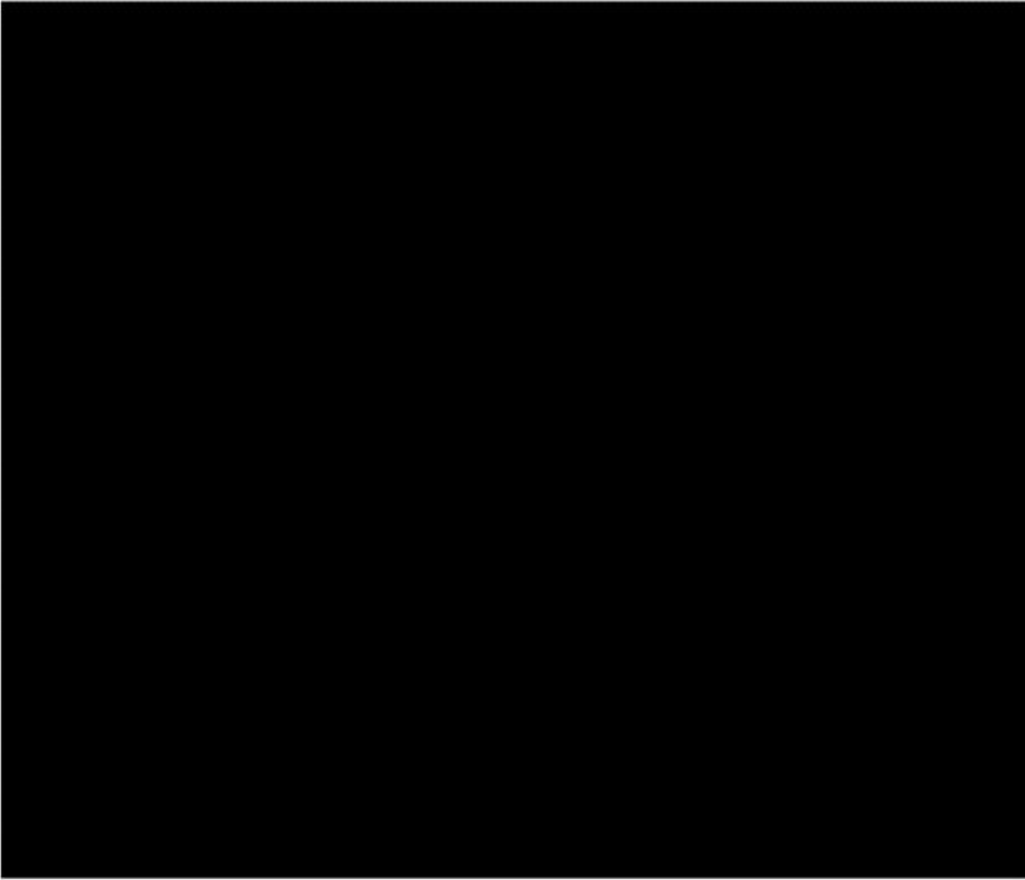
<p style="text-align: center;">*** *****</p>	<p>*** ***** ***** ** * ***** (*****)</p>	<p>***** ** * ***** ** * (** *****)</p>
<p>a) ***** ***** (**) ***** ***** (*****) (*****) (*****) ***** ***** (**) ***** ***** (***) ***** ***** ■ ***** ***** ■ ***** ***** ■ ***** ***** ■ ***** ***** ■ ***** (***** *****) ■ ***** ■ ***** ■ ***** ■ ***** ■ ***** ■ ***** (**) ***** ■ *****</p>	<p>***</p>	<p>*****</p>
<p>b) ***** ■ ***** ***** ■ ***** ***** (*****) ***** ***** ■ ***** ***** (***** *****)</p>	<p>**</p>	<p>**</p>
<p>c) ***** ■ ***** (*) ***** ***** (*****) ***** ***** ■ ***** (**) ***** (**) *****</p>	<p>**</p>	<p>**</p>

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I.***** ** (**) ** _ ***** ** (**)	**	**
J.***** ** (**) **	**	**
K.***** ** ** ** **	**	**
L.***** ** **	**	**
M.***** ** (** ** ***) ** ** ** ** (** ** *)	**	**
N.***** ** ** ** ** ** ** ** (**) ** ** ** ** (**)	**	**
O.***** ** ** ** ** ** ** (** '****') ** ** ** ** ** ** **	**	**
II.*****		
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B.*****		
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2.***** ** ** ** *	**	**
C.***** **		
1.***** ** ** ** *	**	**
2.***** ** ** ** *	**	**
D.*****	**	**
III.*****		
A.***** ** ** ** (** ** *)		
1.***** ** ** ** *	**	**
2.***** ** ** ** *	**	**
3.***** ** ** ** *	**	**
4.***** ** ** ** * (**) ** ** ** (** ** *)	**	**
B.***** ** ** ** ** (***** ** ** ***) ** ** ** *	**	**
C.***** ** ** ** *	**	**
D.***** ** ** ** (***) ** ** ** (***) ** ** ** *	**	**

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E. ***** (***** ***) *****	**	**
F. ***** ** (***** ***) *****	**	**
G. *****	**	**
H. ***** (***) *****	**	**
I. ***** (***** ***) *****	**	**
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IV. *****	**	**
V. *****		
A. *****	**	**
B. *****	**	**
VI. *****		
A. ***** (***** ***) *****	**	**
VII. *****		
A. ***** (***) *****	***	****
B. ***** (**) *****	***	****

*** *****	*** ***** ***** (*****)	***** ***** (*****)
<p>C. ***** ***** (**) ***** ***** ***** ***** *****</p>	***	*****
<p>D. ***** ***** (**) ***** ***** ***** ***** *****</p>	***	*****
<p>VIII. *****</p>		
<p>A. *****</p>		
<p>1. ***** ***** (*) ***** ***** *****</p>	**	**
<p>2. ***** ***** (*) ***** *****</p>	**	**
<p>3. ***** *****</p>	**	**
<p>4. ***** *****</p>	**	**
<p>5. ***** ***** (*)</p>	**	**
<p>6. ***** ***** ***** ***** *****</p> <p>***** ***** ***** (*) ***** ***** ***** ***** ***** ***** ***** *****</p> <p>***** ***** (*) ***** ***** ***** ***** ***** *****</p>	**	**

Schedule F.3



SCHEDULE G

**AGREEMENT IN RELATION TO THE TRANSFER OF SUBSCRIBERS
FROM CSG/DISPOSING ENTITY AGREEMENT TO ACQUIRING ENTITY
(The "Interim Letter Agreement")**

CSG Systems, Inc. ("CSG") has been informed that _____, (the "Disposing Entity") desires to sell, divest or otherwise transfer, or has sold, divested or otherwise transferred subscribers, as specifically set forth in the attached Schedule A (the "Transferred Subscribers") to _____, (the "Acquiring Entity"). The Transferred Subscribers are currently processed subject to the terms and conditions of the Disposing Entity's CSG Master Subscriber Management System Agreement dated _____, together with the amendments thereto, which constitute the "CSG/Disposing Entity's Agreement".

This Interim Letter Agreement dated this ___ day of _____, 202_, (the "Agreement Date") sets forth the interim terms and conditions of the Disposing Entity's and the Acquiring Entity's use of the CSG Products and Services and shall be executed by the Disposing Entity, the Acquiring Entity, and CSG. This Interim Letter Agreement shall remain in effect until such time as one of the following occurs: (1) execution of a CSG Master Subscriber Management System Agreement (a "CSG Master Agreement"), or (2) de-conversion of the transferred Subscribers off of CSG's ACP System and discontinuance of all use of CSG Products and Services. However, a CSG Master Agreement must be executed, (number (1) herein), or de-conversion, (number (2) herein), will occur within *** (*) ***** from the date of the closing of the transfer to Acquiring Entity (such *** (*) ***** period from the Effective Date of Transfer (as defined in Section 4 below) is hereafter referred to as the "ILA Term"). CSG is under no obligation and has no responsibility to accommodate the transfer of any subscribers from the Disposing Entity to the Acquiring Entity until this Interim Letter Agreement has been fully executed by all parties.

1. TERMS AND CONDITIONS.

During the ILA Term, except as set forth herein, all other provisions, conditions and representations for Acquiring Entity's use of the Products and Services and Acquiring Entity' and CSG's related rights and obligations shall be governed by and subject to CSG's current standard CSG Master Subscriber Management System Agreement.

With respect to the Products and Services for the Transferred Subscribers during the ILA Term, Acquiring Entity accepts and hereby acknowledges that ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE CSG PRODUCTS, ANY THIRD PARTY SOFTWARE, AND THE CSG SERVICES, WHETHER EXPRESS OR IMPLIED, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY CSG, ITS AGENTS OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY, SATISFACTION, OR FITNESS FOR PARTICULAR PURPOSE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED. IN NO EVENT WILL THE AGGREGATE LIABILITY WHICH CSG, ITS LICENSORS OR ITS VENDORS MAY INCUR IN ANY ACTION OR PROCEEDING EXCEED THE AMOUNT ACTUALLY PAID BY DISPOSING OR ACQUIRING ENTITY ALLOCABLE TO THE SPECIFIC PRODUCT OR SERVICE INVOLVED THAT DIRECTLY CAUSED THE DAMAGE.

Unless the Acquiring Entity has executed a CSG Master Agreement by the end of the ILA Term, Acquiring Entity must de-convert off of the CSG Products and Services and therefore shall be responsible for and hereby agrees to pay to CSG all then current de-conversion costs, including the per set de-conversion data file fees and the fees for processing and de-converting subscribers, including on-line access fees, which amounts shall be due and payable ***** (**) **** prior to the intended de-conversion. CSG shall be under no obligation or liability to provide any de-conversion files or records until all amounts due hereunder, and as otherwise provided in this Interim Letter Agreement, shall have been paid in full.

2. NO TRANSFERABLE LICENSES.

Disposing Entity's license to use the Products and any Embedded Third Party Software as set forth in the CSG/Disposing Entity's Agreement is nontransferable and nonassignable. Nothing herein shall be deemed as sublicensing, granting, assigning or otherwise transferring to Acquiring Entity any of the licenses granted to Disposing Entity by CSG for any of the Products. Acquiring Entity's use of the Products during the ILA Term shall be subject to the limited use license and maintenance fees set forth in the attached Schedule B and Acquiring

Entity's use of the Products shall be considered a non-exclusive, non-transferable license to use the Products in object code form for the limited duration of the ILA Term so long as Acquiring Entity pays the limited use license and maintenance fees set forth in Schedule B. Acquiring Entity specifically acknowledges that it is bound by any and all other terms and conditions set forth in CSG's current standard CSG Master Subscriber Management System Agreement, including those related to any third party products which may be provided with or incorporated into the Products. Nothing in this Agreement will entitle Acquiring Entity to receive the source code related to the Products, in whole or in part, for any reason.

3. CONFIDENTIALITY.

With respect to the subject matter of this Interim Letter Agreement, Disposing Entity hereby agrees to be bound by the same confidentiality restrictions set forth in the CSG/Disposing Entity's Agreement. Acquiring Entity hereby agrees to the following confidentiality restrictions with respect to the subject matter of this Interim Letter Agreement:

(a) Definition. Acquiring Entity and CSG may reveal information relating to each other's business, the Products, Services and any third party software provided hereunder, which is confidential (the "Confidential Information"), and Acquiring Entity acknowledges that confidentiality restrictions are imposed by CSG's licensors or vendors. Confidential Information shall include all of Acquiring Entity's and CSG's trade secrets, and all know-how, design, invention, plan or process and Acquiring Entity's data and information relating to Acquiring Entity's and CSG's respective business operations, services, products, research and development, CSG's vendors' or licensors' information and products, and all other information that the receiving party should reasonably know from the markings or the circumstances of disclosure to contain confidential or proprietary information, or which, if disclosed orally, is identified by the disclosing party at the time as being confidential or proprietary and is confirmed by the disclosing party as being Confidential Information in writing within ***** (**) **** after its initial disclosure.

(b) Restrictions. Each party shall use its reasonable best efforts to maintain the confidentiality of such Confidential Information and not show or otherwise disclose such Confidential Information to any third parties, including independent contractors and consultants, without the prior written consent of the disclosing party. Each party shall use the Confidential Information solely for purposes of performing its obligations under this Agreement. Each party shall indemnify the other for any loss or damage the other party may sustain as a result of the wrongful use or disclosure by such party (or any employee, agent, licensee, contractor, assignee or delegate of the other party) of its Confidential Information. Acquiring Entity will not allow the removal or defacement of any confidentiality or proprietary notice placed on any CSG documentation or products. The placement of copyright notices on these items will not constitute publication or otherwise impair their confidential nature.

(c) Disclosure. Neither party shall have any obligation to maintain the confidentiality of any Confidential Information which: (i) is or becomes publicly available other than by unauthorized disclosure by the receiving party; (ii) is independently developed by the receiving party; or (iii) is received from a third party who has lawfully obtained such Confidential Information without a confidentiality restriction. If required by any court of competent jurisdiction or other Governmental Authority, the receiving party may disclose to such authority, data, information or materials involving or pertaining to Confidential Information to the extent required by such order or authority, provided that the receiving party shall first have used its best efforts to obtain a protective order or other protection reasonably satisfactory to the disclosing party sufficient to maintain the confidentiality of such data, information or materials. If an unauthorized use or disclosure of Confidential Information occurs, the parties will take all steps which may be available to recover the documentation and/or products and to prevent their subsequent unauthorized use or dissemination.

(d) Limited Access. Each party shall limit the use and access of Confidential Information to such party's bona fide employees or agents, including independent auditors and required governmental agencies, who have a need to know such information for purposes of conducting the receiving party's business and who agree to comply with the use and non-disclosure restrictions applicable to the products and documentation under this Agreement. If requested, the receiving party shall cause such individuals to execute appropriate confidentiality agreements in favor of the disclosing party. Each party shall notify all employees and agents who have access to Confidential Information or to whom disclosure is made that the Confidential Information is the confidential, proprietary property of the

disclosing party and shall instruct such employees and agents to maintain the Confidential Information in confidence.

4. PAYMENT OF FEES AND EXPENSES.

Subject to the terms and conditions of the CSG/Disposing Entity’s Agreement, Disposing Entity shall be fully responsible to CSG for any and all outstanding fees and expenses (and related taxes, where applicable) that were incurred for the Products and Services in relation to the Transferred Subscribers prior to, and through the first full CSG billing period, subsequent to the closing date of the transfer (i.e., the “Effective Date of Transfer” as listed on Exhibit A) of the Transferred Subscribers to Acquiring Entity.

For the ILA Term, Acquiring Entity is responsible for payment for the Products and Services (and related taxes, where applicable) and hereby agrees to pay CSG for the Products and Services used and incurred subsequent to the Effective Date of Transfer of the Transferred Subscribers from the Disposing Entity at the rates set forth in Exhibit B. Acquiring Entity shall pay amounts due within ***** (**) ***** after the date of invoice therefor. Any amount not paid when due shall thereafter bear interest until paid at a rate equal to *** **** * * * * * (**%) *** **** * * * * *

The parties hereby agree that the fees set forth in this Interim Letter Agreement are only valid for the ILA Term and have been provided by CSG for the purpose of accommodating both the Acquiring Entity and the Disposing Entity in regard to the transfer of the Transferred Subscribers.

THIS INTERIM LETTER AGREEMENT IS NOT EFFECTIVE UNTIL SIGNED ON BEHALF OF EACH PARTY.

This Interim Letter Agreement is agreed to by the parties as of the Agreement Date set forth above.

CSG SYSTEMS, INC. (“CSG”)

By:

Date:_____

Name:

Title:

(“ACQUIRING ENTITY”)

By:

Date:_____

Name:

Title:

(“DISPOSING ENTITY”)

By:

Date:

Name:

Title:

SCHEDULE H
SUPPORT SERVICES

I. Customer Business Unit

CSG will assign a dedicated team exclusively for the support of Customer (i.e., the Comcast CBU). The CBU will have the overall responsibility for Customer satisfaction with all Products and Services. CSG will assign and maintain personnel in the CBU that have the appropriate skills and adequate resources to support Customer throughout the Term and any De-conversion Period. The make-up of the CBU may change from time to time to meet the changing needs of Customer. The CBU shall distribute copies of CSG’s current escalation process to all Customers and agrees to provide timely updates to reflect any material changes to the escalation process. The CBU will participate in periodic conference calls and meetings with Customer to gain direct feedback on user satisfaction, industry trends and Customers’ short- and long-term plans.

CSG and Customer agree to hold monthly executive review meetings with attendance by those senior executives agreed by the Parties. In addition, CSG and Customer agree to meet * * * * * with CSG and Customer’s * * * * * in attendance. The meetings may include, but not be limited to, such things as progress related to CSG’s operational performance, and CSG’s product road map and general business direction.

II. Support Services (excluding Vantage):

International Support Desk

The International Support Desk (“ISD”) provides Customers with advice, consultation and assistance to use Products and receive Operational and Systems Management Services and diagnose and correct problems, including any failure of a Product to perform substantially as described in the Documentation for such Product (“Problems”), that Customer may encounter with the Products and Services. CSG will offer the ISD remotely by toll-free telephone, fax or other electronic communication * * * * *. * * * * * Customer will bear all fax and other expenses that it may incur in connection with the ISD. The terms and conditions set forth in this Schedule H shall also apply to any Deliverables with respect to which a Customer has purchased support and maintenance services from CSG.

When contacting the ISD, the caller should be prepared to provide detailed information regarding the Problem and the impact on the operation and the end user. In certain situations, Customer will need to provide CSG with adequate examples and details to assist with Problem identification. A Customer shall describe the urgency of the Problem when it is initially reported. Every Customer Problem is assigned a tracking number and CSG will assign a priority/severity level to all Problems reported by Customer in accordance with mutually agreed upon prioritization criteria. Problems are resolved according to their assigned priority/severity. CSG may, upon notice to Customer, change a designated priority/severity level of any Problem if, after investigation, the impact of the Problem on Customer’s business operations is determined to be more or less severe than the initial designation.

The priority/severity levels are described below:

- **CRITICAL (PRIORITY/SEVERITY 1):** * * * * *. Once control has been regained, efforts are then made to determine the “root cause” of the problem. Considering the nature of the cause, the Problem is adjusted to one of the other priorities and processed accordingly. While a Critical (Priority/Severity 1) Problem exists, the ISD shall provide around-the-clock support until such Customer’s system/network/application is restored to operational status.



- **SERIOUS (PRIORITY/SEVERITY 2):** * * * * * The ISD’s goal is to ensure that control of the system is not jeopardized and to work with such Customer to gather information in order to resolve the issue. While a Serious (Priority/Severity 2) Problem exists, the ISD shall provide around-the-clock support until such Customer’s system/network/application is restored to operational status.

- **OPERATIONAL (PRIORITY/SEVERITY 3):** * * * * * A user may be a CSR or the Customer’s operation staff running the system. CSG’s ISD goal is to respond within * * * * * This Priority/Severity level includes those issues not designated as Serious or Critical as described above.

Problem start time will begin upon Customer’s notification to CSG of a Problem or non-conformance. Problem resolution will occur at such time the Problem or non-conformance has been fixed. After such correction of the reported Problem or non-conformance, if Customer discovers that the Problem still exists, Customer will promptly notify CSG and CSG will re-open the original ticket and re-initiate efforts to provide resolution. Should the Customer wish to check the status of a Problem, such Customer may contact the ISD desk representatives or Customer’s CBU. In either case, the Customer should reference the tracking number.

During the Term of the Agreement, for each Priority/Severity 1 issue that CSG does not resolve within * * * * *, CSG will provide Customer with on-site user training credits sufficient for * * * * *, as specified in Schedule F, on the use of the Software or Products at no charge, to be used at Customer’s sole discretion.

Reports. At the conclusion of each calendar month, CSG will provide a report to Customer identifying all Priority/Severity 1 and Priority/Severity 2 tickets that were initiated during that month. Such report will be delivered to Customer no later than the tenth business day following the conclusion of the month for which the report is being produced, and such report will contain the ticket number, open date and time, a brief description of the situation causing the initiation of the ticket and close date and time (or current status if such ticket has not yet been closed).

III. CSG Vantage Support Services (which for purposes of this subsection shall include VNRT)

Standard Support Services for CSG Vantage

Customer support of CSG Vantage is provided as part of the Support Services during CSG’s customer service hours for support of questions, functionality, workflow, training, and non-catastrophic software defects. System support of CSG Vantage is provided as part of the Support Services for Problems resulting from defects in CSG Vantage.

The following services for the then-current and prior version will be provided by CSG as part of the CSG Vantage Support Services:

1. Telephone consultation for trained users for questions and problems regarding CSG Vantage.
2. Up to * * * * * of telephone consultation for troubleshooting a previously certified hardware/software environment.
3. Attendance at regularly scheduled basic and advanced CSG Vantage training classes offered in Omaha or at a scheduled regional training location, as space permits.
4. Daily updates to the CSG Vantage database.
5. Storage of t * * * * * financial data; Work Order Table storage for * * * * *; Subscriber Table storage dependent upon UDF settings.

Optional Services for Vantage:

Upon a Customer’s request, and subject to payment of the applicable fee set forth in Schedule F, the following additional services are also available to a CSG Vantage Customer:



3. ***** ** ** ***** ** ***** ** ** ***** ***** ***** ** ** ***** ***** ***** ** ** ***** ***** ***** ***** *****
***** ***** ** ** ***** ***** ** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** *****
4. ***** ***** ** ** ***** ***** ** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** *****
5. ***** ***** ** ** ***** ***** ** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** ***** *****
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VI. Customer/CBU Review of Support Services. The Comcast CBU will meet with Customer on a scheduled monthly basis to review CSG’s Support Services and to gain Customer’s insight and suggestions. This review will include senior level representatives from the CBU, ISD as well as any other individuals necessary to provide any additional information. Senior level representatives from Customer, such as the Contract Administrator or Technical Coordinator, shall be available at this meeting.

VII. Non-production Customer Test Environment Support

The following support will be provided for the non-production Customer Test Environments:

- Customer test systems are active 24x7 excluding published maintenance windows and communicated exceptions*
- Issues can be reported to the ISD anytime but will only be worked between the hours of 8:00 a.m.-5:00 p.m. CT, Monday through Friday, unless otherwise outlined in a different agreement
- CSG will communicate information to Customer related to changes occurring in the non-production Customer Test Environment
- Non-production Customer Test Environments run the current production software codebase except during the period known as ‘pre-release’, which occurs approximately **** (*) ***** prior to production releases. During the ‘pre-release’ time period, non-production customer test environments will be updated with the development testing codebase.

*There will be no on-call, after hours or holiday support unless otherwise agreed to by the Parties. In the event internal CSG resources are working on Customer’s production environment items, production matters will take priority over non-production test systems

SCHEDULE I

AUTHORIZED CUSTOMER REPRESENTATIVES

Comcast Billing Technology

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Comcast IS Solutions

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Customer Trademark Approval

*** *****

SCHEDULE J

OUTSTANDING ANCILLARY AGREEMENTS

Attached.

SCHEDULE K

GUIDELINES FOR PASSER AND AGENT TRANSFER PROGRAM REQUESTS

Passer Definition

A “Passer” is a programmatic process that can be used to make bulk changes to key data residing on CSG’s billing system such as House, Equipment and Subscriber data without creating a work order. There are multiple types of Passers that are defined below:

Item Passer - An Item Passer is used to change, delete, or add non-provisionable Items (service codes) that are currently on Subscriber accounts or pending on Subscriber accounts without disrupting Subscriber service or order activity. This process bypasses all Billing System edits/restrictions, does not create statement changes, and will not create prorates

NAS to DAC Passer - The purpose of a NAS to DAC launch is to change from using the HITS (TD) protocol to using the Jerrold Digital (JD) protocol. With the HITS interface, transactions are processed by the ‘HITS’ national addressable controller, which is the origin of the term NAS. The Jerrold Digital protocol the addressable controller is called a DAC. Therefore, the process is called a NAS to DAC Passer. A crucial component is that live Equipment on subscriber accounts will undergo this change, as well as Equipment in stock status. This involves three separate equipment Passers, the “Add”, “Delete” and “Key”, to be run to update the equipment type and model. The purpose of the Add Passer is to put a copy of the inventory, as it will look like under JD control, into the billing system. It is then downloaded into the DAC, using the “WRITE FULL” command. At this point, the DAC is now populated with the Equipment that is in use by the site. These set tops only exist in the CSG master file (in inventory) and are not on customer accounts. Once the inventory is successfully downloaded, the JD inventory can be deleted from the billing system, with the Delete Passer. When the Key Passer is run, specific fields are updated on the Equipment, allowing it to be controlled by the DAC.

Equipment Passer - An Equipment Passer may be used by Customer to change, remove, or add Equipment information on the Equipment master file. The Customer provides the criteria necessary to select the Equipment records eligible for a passer. There are two types of Equipment Passers: a ‘Non Key Change’ and a ‘Key Change’.

•*Non Key Change*

A Non Key Change Equipment Passer only involves changes to the Equipment master file from DAC to DAC Passers.

•*Key Change*

A Key Change Equipment Passer can involve modification of the serial number, type, CID, rent-purchase-flag and requires an update to the Equipment, Location, and equipment history master files.

House Passer - A House Passer may be used by Customer to change, remove, and add settings on the House record and/or the Equipment and House Master file when head end changes are required. The Customer provides the criteria necessary to select the House records and/or to select the Equipment records eligible for a passer.

PDB (Provisionable Data Base) Item Passer - An Item Passer is considered a PDB Item Passer if changes are being made to PROVISIONABLE services. In a PDB Item Passer CSG would need to manipulate a second Master File or PDB.

NPA_NXX Passer - An NPA/NXX Passer may be used by Customer to change NPA (area code) NXX (prefix) and/or line numbers. The Customer provides the criteria necessary to select the NPA/NXX records for the Passer.

PDB Only Passer – A PDB Only Passer may be used by a Customer to mass change configuration in the PDB that does not reside in the billing system (CCS). For example, this includes Availability Group and Parameters.

Subscriber Passer – A Subscriber Passer includes non-monetary updates such as credit limit, custom fields and VIP.

Configurable Line of Business (CLOB) Passer – A Configurable Line of Business Passer is a House Passer to add a new line of business that is not a CSG pre-defined line of business and updates the status accordingly. The Customer will use a CLOB Passer to launch new lines of business such as home security.

Agent Transfers:

Transfer Type	Lead Time	Charge (Note 3) (**** *)
***** (**** *)	*** ***** **	\$*****
*****	** ****	
**** *****	** ****	*****

Note 3: These services and associated fees shall be set forth in a mutually agreed upon Statement of Work. CSG will charge the standard Professional Services fees as set forth in Schedule F. In the event of termination of an executed Statement of Work by Customer, Customer shall pay all fees for work performed up to the termination date of the SOW. If Customer requests an expedited service to be performed Customer understands there may be an additional cost in the SOW that would exceed the standard hourly rate provided herein.

Note 4: See Exhibit K.2 - SPA Management and Reassignment Tool (SMaRT) for the requirements for an Agent Transfer to qualify for SMaRT pricing.

***** (***** ** ***)*

CSG Responsibilities

CSG will perform the following activities in support of Customer Passer/Transfer activity:

- w An analyst will be assigned to each project to work with the Customer and coordinate internal CSG activity.
- w Provide the Customer with a current "Passer/Transfer Packet". This packet will include basic information regarding the Passer/Tracker, a request form, a spec matrix and a project plan.
- w Weekly meetings will be held with the CSG Analyst and the site contact.
- w A project tracker that includes deliverable dates and an issues tracking log will be published weekly.
- w Output will be provided to the Customer after each test run and for live production.
- w CSG will identify and manage any impacts to ancillary products (like Precision eCare, FSM).
- w CSG will arrange for statement checkers, if needed.
- w CSG will arrange for Cycle Freeze/Force and/or Statement Holds, if needed.
- w On the day of implementation, CSG will provide updates throughout the day on any identified issues until an 'all clear' is agreed upon with the site.

Customer Responsibilities

The Customer will perform the following activities in support of Customer Passer/Transfer activity:

- w Identify a primary and secondary/escalation contact at the site. The primary contact will be considered the project lead on the Customer side.
- w Attend weekly meetings with CSG and review the project tracker for upcoming deliverables.
- w Identify and manage all configuration changes such as 9xx, Code Tables, OJC, Customer Discounts, SVP, etc.
- w Provide detailed specifications for the Passer/Transfer.
- w Review output and provide approval
- w Inform CSG of all ancillary products the site is using.
- w Participate in calls on implementation day.
- w Provide approval for Cycle Force and/or Statement Release.

Milestone Dates

The following activities are considered 'milestones' in the project life cycle. If these activities are not completed as scheduled, the Passer/Tracker may be delayed.

- w Final Specifications submitted – Customer responsibility
- w UDF changes and pre-edit run – Customer responsibility
- w Test Output delivered to Customer – CSG responsibility
- w Approval of test output – Customer responsibility
- w Approval of project implementation – Customer responsibility

Changes to the final specifications may increase the implementation timeline. The addition of new specification after coding has started will result in an increased implementation timeline.

 ** ("****")* *****

- PDB-only Passers - ***** ***(**)
 - ACP Commercial Passers - ***** (***)
 - PDB Item Passers - ***** (***)
 - Job Passers - ***** (***)
 - ***** (***)
 - ***** (***)
 - ***** (***)
 - Subscriber Passers - *****
 - Configurable Line of Business Passers - *****
 - ***** (***)** Vantage
-

Exhibit K.2 SPA Management and Reassignment Tool (SMaRT)

This exhibit sets forth the requirements for an Agent Transfer to qualify for SMaRT pricing.

Restrictions: The following are the restrictions for an Agent Transfer to qualify for SMaRT:

- *****
- *****
- *****
- ***** (***) *****
- *****
- *****
- *****
- *****
- *****

Requirements: The following are the requirements needed from Customer:

- *****
- *****
- *****
- *****
- ***** (***)
- ***** (***)

Table K.2 Finalized Milestones below outlines the milestone dates that must be met by Customer to qualify for SMaRT

Table K.2 Finalized Milestone

Proposed Imp date:	Agent Transfer
Task	Agent Transfer
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***** (***)	***

SCHEDULE L

PERFORMANCE STANDARDS AND REMEDIES

During the Term and any De-conversion Period, CSG shall provide the Products and Services to Customer in accordance with the performance standards *****
(*) (***) (***)

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(i) *****
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1. *****
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- ***** (***) - *****
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(iii) *****

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B. ***** (*****)* *****

(iv) ***** (*****)* *****

e. ***** (*****)* *****

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f. *****

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SCHEDULE M

SAMPLE ENTITY ADDENDUM

1. Agreement Reference. This Entity Addendum is as of the ___ day of ___, 202_ pursuant to that certain CSG Master Subscriber Management System Agreement (the "Agreement") effective as of January 1, 2020 by and between CSG and Customer, and [insert name of Entity] ("Purchasing Entity"). The undersigned Purchasing Entity agrees to be bound by the terms and conditions of the Agreement as though it were Customer, which are hereby incorporated by reference into this Addendum. All capitalized terms not defined herein shall have the meanings set forth in the Agreement, except the Purchasing Entity shall be Customer.
2. Term. The term of this Agreement shall commence on the date hereof and shall be coterminous with the Service Specific Terms and Term set forth in Section 1.2 of the Agreement.
3. Effect of Addendum. The undersigned Purchasing Entity agrees to be bound by the terms of the Agreement as a Customer thereunder. If the terms and conditions set forth in this Addendum shall be in conflict with the Agreement, the terms and conditions of this Addendum shall control
4. Additional Products. Pursuant to the terms and conditions of the Agreement, for the fees set forth in Schedule F, CSG agrees to license to Purchasing Entity Additional Products set forth in Attachment A to this Entity Addendum, limited to the number of Workstations identified on Attachment A to this Entity Addendum, and exclusively for use at the System Sites set forth in Attachment A.
5. Additional Services. Pursuant to the terms and conditions of the Agreement, for the fees set forth in Schedule F thereto, CSG will provide to Purchasing Entity, and Purchasing Entity or Comcast on its behalf will purchase from CSG, the Additional Services set forth in Attachment A.
6. Notices. All notices that may be required or permitted to be given to the undersigned Purchasing Entity pursuant to the Agreement shall be given in accordance with the terms of the Agreement and addressed as follows:

Attn.: _____
Fax: _____

With a copy to:
Comcast as provided in the Agreement

The Parties have executed and delivered this Entity Addendum on the ___ day of ___, 202_.

**COMCAST CABLE COMMUNICATIONS
MANAGEMENT, LLC ("CUSTOMER")**

CSG SYSTEMS, INC. ("CSG")

By: _____
Name: _____
Title: _____
Date: _____

By: _____
Name: _____
Title: _____
Date: _____

Purchasing Entity

By: _____
(signature)

(print name)

Title: _____

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4. Audit Rights; Cooperation.

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(g) Conflicts. To the extent this Schedule N conflicts with Exhibit A or B to this Schedule N, the applicable Exhibit shall control.

Exhibit B to Schedule N

Information Security Requirements

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I. *****

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16. *****
a. ***** (“*****”)
b. *****
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b. *****
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II. *****

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- G. **** **
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- H. **** **
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10. **** **
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III. ***** *****

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IV. ***** *****

V. ***** *****

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- B. *****
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- C. *****
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h. *****
i. *****
j. *****
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VI.

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SCHEDULE O

Examples Illustrating Application Of Subsection (*) (*) Of Schedule * (*** ** ***** ***** ***** ** ***** (*) (*)**

Attached.



Schedule C:

Task ID	Start Time	End Time
1	0:00	0:15
2	0:00	0:30
3	0:00	0:45
4	0:00	1:00
5	0:00	1:15
6	0:00	1:30
7	0:00	1:45
8	0:00	2:00
9	0:15	0:30
10	0:30	0:45
11	0:45	1:00
12	1:00	1:15
13	1:15	1:30
14	1:30	1:45
15	1:45	2:00

SCHEDULE P

CUSTOMER AUTHORIZATION SCHEDULE

<u>CSG Document</u>	<u>Comcast Personnel</u>	<u>Title</u>	<u>Comment</u>
Master Agreement & Amendments (and all categories listed below) SOW/DSOW	***** **** **** *****	*** ** *** *** **	
LOA	***** ** ***** *****	***** *** ** *****	Approver, Signor Approver, Signor Approver, Signor Approver
SRF	** ***** ***** **	*** ***** ***** ***** *****	Approver Approver Approver
IPA	** *****	*** *****	Approver Approver
BRD	*** *****	***** *****	Approver
Billing Disputes	***** *****	** ***	

THIS DOCUMENT CONTAINS INFORMATION WHICH HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED. SUCH EXCLUDED INFORMATION IS IDENTIFIED BY BRACKETS AND MARKED WITH (*)**.

**AMENDED AND RESTATED
ASCENDON ADDENDUM
TO
CSG MASTER SUBSCRIBER MANAGEMENT SYSTEM AGREEMENT
BETWEEN
CSG SYSTEMS, INC.
AND
COMCAST CABLE COMMUNICATIONS MANAGEMENT, LLC**

This **AMENDED AND RESTATED ASCENDON ADDENDUM** (this “**Ascendon Addendum**”) is made by and between **CSG Systems, Inc.**, a Delaware corporation (“**CSG**”), and **Comcast Cable Communications Management, LLC**, a Delaware limited liability company (“**Comcast**”), on behalf of itself and its Affiliates (collectively, “**Customer**”). This Ascendon Addendum is made and entered into this ___ day of December 2019 but shall be effective as of January 1, 2020 (the “**Ascendon Addendum Effective Date**”). CSG and Customer entered into a certain CSG Master Subscriber Management System Agreement (Document #*****) effective as of January 1, 2020 (the “**Agreement**”), and now desire to describe the terms and conditions under which CSG will make available certain specialized products and related services to Customer, as further set forth in this Ascendon Addendum and Order Documents (as defined below) executed hereunder. Any terms in initial capital letters or all capital letters used as a defined term but not defined in this Ascendon Addendum shall have the meaning set forth in the Agreement. Upon execution of this Ascendon Addendum by the Parties, any subsequent reference to the Agreement between the Parties shall mean the Agreement as amended by this Ascendon Addendum. Except as amended by this Ascendon Addendum, the terms and conditions set forth in the Agreement shall continue in full force and effect according to their terms.

WHEREAS, Customer and CSG previously executed that certain CD Addendum (CSG document no. *****) effective as of September 1, 2013 (the “**Original CD Addendum**”), which Original CD Addendum supplemented and amended that certain CSG Master Subscriber Management System Agreement (CSG document no. *****) effective as of March 1, 2013, as amended (the “**Original MSA**”);

WHEREAS, effective January 1, 2020, the Parties entered into the Agreement, which Agreement superseded and replaced the Original MSA;

WHEREAS, prior to the Ascendon Addendum Effective Date, CSG rebranded its Content Direct offering to the Ascendon offering, and now commonly refers to the Content Direct System and Content Direct Services as the “Ascendon System” and “Ascendon Services”, respectively;

WHEREAS, CSG provides via CSG’s Affiliate, CSG Media, LLC (“**Media**”), certain proprietary content monetization and management software known as the “Ascendon System,” which software is made available as a Software as a Service (commonly known as “**SaaS**”);

WHEREAS, Customer has requested that CSG make available to Customer under the Agreement the Ascendon System and certain services related to the Ascendon System; and

WHEREAS, the Parties are entering into this Ascendon Addendum to prescribe the terms and conditions by which CSG shall make available to Customer the Ascendon System and related services pursuant to one or more Ascendon Service Orders (as defined below), Letters of Agreement and/or Statements of Work, and conform the form and terms of this Ascendon Addendum to the form and terms of the Agreement and re-branded Ascendon offering.

NOW THEREFORE, in consideration of the mutual covenants and agreements herein contained, CSG and Customer agree to the following as of the Ascendon Addendum Effective Date:

Ascendon System Specific Terms:

1. Attachment A: Scope and Conflict. This Ascendon Addendum, including but not limited to, the terms of Attachment A hereto and its attached Schedules and Exhibits (collectively, “**Attachment A**”) specifically applies to CSG’s performance and/or provision of Ascendon Services (as defined in Attachment A) to Customer, which Ascendon Services shall be deemed an optional and ancillary service and product under Schedule F of the Agreement. Unless otherwise expressly provided in this Ascendon Addendum, in no event will any terms, conditions or fees set forth in this Ascendon Addendum apply to CSG’s performance of the Agreement other than with respect to Ascendon Services, or to CSG’s provision and/or performance of Recurring Services or any optional and ancillary services or product under the Agreement that are not Ascendon Services. Except as provided in this Ascendon Addendum, all other terms of the Agreement which are not in conflict with this Ascendon Addendum shall be given full force and effect (including with respect to each party’s performance under this Ascendon Addendum). In the event of a conflict between the terms of the Agreement and the terms of this Ascendon Addendum, the terms of this Ascendon Addendum shall control and take precedence with respect to CSG’s provision of Ascendon Services. In the event of conflict between the terms of an Order Document (as defined below) and the terms of the Agreement and/or this Ascendon Addendum, the terms of the Order Document shall control and take precedence with respect to CSG’s provision of Ascendon Services.
2. Agreement Remains in Effect. Except as expressly provided in this Ascendon Addendum, including all Attachments, Schedules and Exhibits hereto, the Agreement shall continue in full force and effect.
3. Miscellaneous. This Ascendon Addendum shall be governed by the laws of the State of New York, without reference to (i) conflict of laws principles or the choice of law doctrine, (ii) the UN Convention for Contracts for the International Sale of Goods, (iii) the Uniform Commercial Code, as currently or as may be enacted, codified or amended in any jurisdiction, and (iii) the Uniform Computer Information Transactions Act (prepared by the National Conference of Commissioners on Uniform State Laws) as currently or as may be enacted, codified or amended in any jurisdiction. Customer and CSG agree that any dispute and/or action at law or in equity arising out of or relating to this Ascendon Addendum shall be subject to Sections 11.2 and 11.5 of the Agreement. This Ascendon Addendum may be executed in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute a single instrument.

Attachment A – General Terms and Conditions – Ascendon Services

Ascendon Schedule A – Form of Ascendon Service Order

Ascendon Schedule B – Ascendon SaaS Services

Ascendon Schedule C – Ascendon Hosting, Ascendon Support Services, Performance Standards and Remedies

IN WITNESS WHEREOF the Parties have executed this Ascendon Addendum as of the date first above written, effective as of the Ascendon Addendum Effective Date.

**COMCAST CABLE COMMUNICATIONS
MANAGEMENT, LLC (“CUSTOMER”)**

CSG SYSTEMS, INC. (“CSG”)

By: /s/ Peter Kiriacoulacos

By: /s/ Bret C. Griess

Name: Peter Kiriacoulacos

Name: Bret C. Griess

Title: Executive Vice President &
Chief Procurement Officer

Title: President & CEO

Managed Services but does not include the Ascendon SaaS Services or the Ascendon Support Services.

“Ascendon Web Services” means the set of application programming interfaces (“**APIs**”) exposing capabilities of the Ascendon Application Service Modules that enable Customer to build Customer Applications and integrate into the Ascendon System. The Ascendon Web Services APIs are accessible via either SOAP, POX over HTTP or JSON over HTTP. Not all Ascendon Web Services APIs are available via all access mechanisms; the Ascendon Online Web Services Guide (password protected with user credentials and accessible at *****) provides complete information on the availability of the Ascendon Web Services.

“Billing Period” means the approximately ***** (**) *** period for which CSG bills Customer for certain Ascendon SaaS Services provided under an Ascendon Service Order. As of the Ascendon Addendum Effective Date, the Billing Period is measured from ***** ***** **** on the **** of a given ***** ***** to ***** ** ***** **** on the **** of the following ***** ***** . CSG may alter the specific days and duration of the Billing Period by providing Customer not less than (**) **** advance written notice of such change; provided, in no event shall a Billing Period be less than ***** (**) ****.

“Comcast Subscribing Entity” means the specific Comcast entities (including Customer Affiliate(s)) identified in an Order Document that are granted rights to use the Ascendon System and related Ascendon SaaS Services prescribed under such Order Document.

“Compatible Interfaces” shall have meaning assigned to such term in Ascendon Schedule B.

“Consumer” means an end user client of a Customer Service or any other individual, officer, employee or contractor of Customer who accesses and/or uses the Ascendon System for other than administrative or operational purposes.

“Consumer Experience” means a Consumer – facing implementation of the Ascendon System, such as a Player, Storefront (including HTML storefront “widgets”), redemption site, local media manager/download manager, and streaming application. The specific Consumer Experiences CSG will make available to Customer shall be identified in an executed Ascendon Service Order.

“Consumer Information” means (a) any PII (as defined in Section 10.4 of the Agreement) regarding a Consumer, (b) to the extent applicable, any Customer Proprietary Network Information (“**CPNI**”), as defined in 47 USC Section 222, or (c) Personal Information data that is provided to or collected by CSG in connection with a Consumer’s use of the Ascendon System.

“Customer Application” means a Customer-owned application developed by Customer or its third party agent or subcontractor that either accesses the features and functions of the Ascendon System through the Ascendon Web Services or otherwise integrates with the Ascendon System.

“Customer Content” means that data, proprietary content and content owned or licensed by Customer, including Customer Intellectual Property, that is published on or displayed through the Ascendon SaaS Services by Customer (or at Customer’s request) or is provided by Customer to CSG so that CSG may configure the Ascendon System for Customer’s use. To the extent identified in an Order Document, Customer Content will also include Digital Entertainment Content owned by Customer or licensed by Customer from a Third Party Content Owner (as

defined in Section 10(c) of this Ascendon Addendum). For the avoidance of doubt, Customer Content does not include any Consumer Information or Usage Data.

For clarity, “**Customer’s Intellectual Property**” has the same meaning that it has in the Agreement, and includes, but is not limited to, Customer Site(s) and Customer Content.

“**Customer Services**” means any goods, products or services (digital or physical), including, if and as prescribed by an Order Document, Digital Entertainment Content, promoted or made available for trial, rental, sale, redemption or license by or through Customer or its Affiliate that access or use any feature or function of, on or through the Ascendon System or related Services for purposes of processing, selling, redeeming, or managing any of such goods, products or services. Customer Services may be sold or licensed in a variety of forms and models, including by way of example only, subscriptions (daily, weekly, monthly, quarterly, etc.), on demand, electronic sell-through, redemption and digital download.

“**Customer Site**” means any Customer device (including a Set-Top Box (“STB”)), website, application, software, product or service on which the Ascendon System is embedded and/or provided to Consumers, but excludes all elements of the Ascendon System, including without limitation all Ascendon User Applications.

“**Digital Entertainment Content**” means digital versions of audiovisual works, sound recordings, literary works, and/or pictorial works as those terms are defined in 17 U.S.C. § 101, commercially distributed to the public as entertainment, together with any (i) associated information input into the Ascendon System and (ii) other data or information published with such works. Non-exclusive examples of Digital Entertainment Content include movies, television titles, sporting events and original programming.

“**Documentation**” means the published online user manuals and documentation located at ***** as of the Ascendon Addendum Effective Date and as updated by CSG from time to time in connection with the release of Fixes to the Ascendon System. CSG shall provide notice to Customer of any changes to the Documentation and, if a Fix included in a quarterly release (versus a Fix released to address an Exception) requires Customer to modify its configuration of the Ascendon System, or change the method by which Customer configures the Ascendon System, CSG shall provide Customer reasonable advance notice to Customer of such configuration modification, whether through actual notice to Customer’s project manager(s) (via release notes or other communication) or revised Documentation.

“**Exception**” means any problem, defect, or failure of a Deliverable to conform to any applicable acceptance criteria defined in a SOW or the Documentation. For purposes of clarification, a problem, defect or failure of a Deliverable shall not be deemed an Exception if such problem, default or failure of such Deliverable to conform to the acceptance criteria is caused by Customer’s failure to comply with its obligations or responsibilities as set forth in an Order Document, the Documentation or the Agreement.

“**Go-Live Date**” means the first to occur of: (i) date on Customer deploys or causes to be deployed a given deployment of the Ascendon System (or, if the relevant application is only a portion of the Ascendon System, then the applicable portion thereof) into the Production Environment and (ii) ***** (**) ***** after CSG tenders the prescribed Ascendon System to Customer in the form and manner consistent with the terms of such SOW.

“Order Document” means an Ascendon Service Order, Statement of Work or LOA executed under the Agreement solely related to CSG’s provision of the Ascendon SaaS Services or any Ascendon Technical Services related to the configuration, use or discontinuance of the Ascendon SaaS Services.

“Performance Testing Environment” means an optional, dedicated and secured environment of the Ascendon System separate and distinct from the Sandbox Environment and Production Environment whereby Customer can execute performance testing (i.e., stress testing or high volume transaction tests) against the Ascendon Web Services.

“Production Environment” means the shared, live production environment on which the Customer may utilize the Ascendon System with Consumers.

“Sandbox BU” means a secured and partitioned instance (referred to as a business unit or “BU”) of the Sandbox Environment of the Ascendon System.

“Sandbox Environment” means a shared non-production environment made available by CSG to allow Customer to develop and/or test Ascendon System updates or releases that are pre-production, or for such other required configurations or designs to be determined between the Parties. The Sandbox Environment, at the discretion of CSG, may maintain a smaller hardware foot-print, or be virtualized within a CSG datacenter, but will at a minimum make available the then-current release of the Ascendon System available on the Production Environment.

“Storefront” means one or more of the Consumer Experiences identified in an Ascendon Service Order, which indicates the Storefront solution(s) included in the Ascendon SaaS Services made available under such Ascendon Service Order.

For the avoidance of doubt, **“Usage Data”**, as defined in Section 10.6 of the Agreement, shall include statistics and data (i) provided to or collected by CSG in connection with a Consumer’s use of the Ascendon System, and (ii) relating to a Consumer’s account activity, including the browsing, accessing and/or purchasing of Customer Services or other information collected from or about or otherwise regarding Consumers, whether in individual or aggregate form, that is sufficient to personally identify a Consumer or to identify such Consumer as an end user client of Customer. Usage Data may include Consumer Information.

2. Ascendon Service Order; Customer Rights under Ascendon Service Order

(a) This Ascendon Addendum and the applicable terms of the Agreement prescribe the general terms and conditions of CSG’s performance and provision of the Ascendon Services to Customer. Customer’s right to access and utilize the Ascendon System and Ascendon Services requires Customer to execute with CSG an Ascendon Service Order under this Ascendon Addendum. As used herein, a **“Ascendon Service Order”** means a document that specifies the fees, terms and conditions of Customer’s rights and obligations to use, and CSG’s obligation to provide, the Ascendon System and Ascendon SaaS Services as made available by this Ascendon Addendum, executed by CSG and Customer as sequentially numbered orders to this Ascendon Addendum (i.e., Ascendon Service Order No. 1, Ascendon Service Order No. 2, etc.). Each Ascendon Service Order shall be in the form mutually agreed by the Parties, but shall follow the form attached hereto as Ascendon Schedule A and at a minimum include the following provisions: (i) the specific Comcast Subscriber Entities granted rights to use the Ascendon System under such Ascendon Service Order, (ii) the specific project and purpose for which such Ascendon System may be used, (iii) the Ascendon System modules and applications to be utilized by Customer for

a given deployment, (ii) the grant of rights to Customer to utilize the configured Ascendon System, which grant of rights shall apply in lieu of the grant of license(s) set forth in Section 3.9 and Schedule B of the Agreement, (iii) the fees applicable to Customer's use of the Ascendon System and the related Ascendon Services (which fees may, for the avoidance of doubt, be increased pursuant to Section 5.4 of the Agreement), and (iv) the Ascendon Order Term.

(b) Notwithstanding any provision to the contrary in the Agreement, but subject to Section 12.7 of the Agreement, the Ascendon System and Ascendon SaaS Services described in an Ascendon Service Order may be only be used and accessed (i) by the specific Comcast Subscriber Entities and (ii) for the specific commercial project or Customer Services, in each case identified in such Ascendon Service Order. Customer acknowledges that the fees prescribed in an Ascendon Service Order for a given Ascendon System are unique to that deployment, and a separate Ascendon Service Order (which may include the same, additional or different fees) is required to be executed for each Ascendon System deployment. Nothing in the foregoing shall preclude the Parties from amending an Ascendon Service Order to add additional elements of the Ascendon System or Third Party Products or, by way of example, to require the Parties to execute separate Ascendon Service Orders to add additional Campus Properties (as defined in that certain Amended & Restated Ascendon Service Order No. 1 (CSG document no. *****) effective as of even date herewith).

3. Reserved.

4. Media as Provider of Ascendon Services.

The Ascendon Services performed under this Ascendon Addendum and any Order Document executed under this Ascendon Addendum shall be performed by Media, on behalf of CSG. Consistent with Section 12.5 of the Agreement, CSG acknowledges and agrees that it is responsible for Media's compliance with the terms and conditions of the Agreement (including, but not limited to, this Ascendon Addendum and any Order Document executed hereunder). Accordingly, CSG shall be liable to Customer for the acts and omissions of Media to the same extent that liability to Customer would accrue under the Agreement (as supplemented or modified by this Ascendon Addendum) as if such acts or omissions had been performed or made by CSG. As used in this Ascendon Addendum, "CSG" shall be deemed a reference to both CSG and Media.

5. Ascendon SaaS Services and Ascendon Maintenance Services; Restrictions.

This Section 5 shall apply to the Ascendon Services in lieu of Sections 2 through 4 of Schedule B of the Agreement.

Subject to the terms and conditions of an Ascendon Service Order and the Agreement (including this Ascendon Addendum) and for the fees described in an applicable Ascendon Service Order, Customer agrees to procure from CSG, and CSG agrees to provide to Customer:

(a) the Ascendon SaaS Services as described in and made available under an Ascendon Service Order executed by CSG and Customer pursuant to this Ascendon Addendum. CSG shall provide Customer with unique and confidential access codes permitting remote access to utilize the Ascendon System via the Ascendon Web Services, or web-enabled user interface. Customer shall not and shall not authorize or permit any third party to, (i) disclose Customer's unique access codes to any entity other than Customer's authorized employees and contractors, and (ii) use the Ascendon System for purposes other than permitted in this Ascendon

Addendum. Customer shall be responsible for the improper use or disclosure of any of Customer's unique access codes by Customer's employees, contractors or any third party that accesses the Ascendon System through the Customer's unique access codes; provided Customer shall not be responsible for such improper use or disclosure, including but not limited to any third party access, resulting from the acts or omissions of CSG, CSG's subcontractors or another CSG client. Unless otherwise provided in an Ascendon Service Order, the Ascendon SaaS Services are provided in the English (US) language.

(b) maintenance and support for the Ascendon System and Ascendon SaaS Services in accordance with the terms set forth in Ascendon Schedule C and this Section 5(b) of this Ascendon Addendum ("**Ascendon Support Services**"). Ascendon Support Services include any fixes, updates, upgrades or modifications to the Ascendon System made during the term of this Ascendon Addendum to the Ascendon System pursuant to Ascendon Schedule C ("**Fix(es)**"). However, unless specifically provided in an Order Document, Ascendon Support Services do not include and CSG shall have no obligation to provide (i) custom modifications to the Ascendon System as requested by Customer, (ii) maintenance and support of, or the required implementation of updates to, any customization to the Ascendon System deployed by Customer, where such customizations are not specifically identified in an Order Document as being "supported" by CSG, (iii) maintenance and support of any third-party products not provided by CSG that are utilized by Customer in connection with its use of the Ascendon System, (iv) modifications to the Ascendon System required to enable it to function properly with updates, upgrades or modifications to Customer or its third party vendor and agent system, (v) maintenance and support (including configuration, monitoring, or backup) of any systems, equipment, hardware, software and networks of Customer or its Affiliates regardless of whether each of the foregoing are owned and operated by such party or owned and operated by a third party on such party's behalf, or (vi) any new product, service or application that is not a Fix of the Ascendon System that CSG makes generally available as a separately priced item. Ascendon Support Services do not include management of Customer's day-to-day operational issues such as (x) software and system configuration, (y) monitoring and maintaining Customer's hardware, network and Third Party Software, and (iii) performing necessary backups of Customer's data. In addition, CSG shall not be obligated to fix any problem with the Ascendon Service or be responsible for a Service Interruption (as defined in Section 1 of Ascendon Schedule C of this Ascendon Addendum) if such Service Interruption is caused by the following circumstances:

- i. Customer has used the Ascendon Service other than for its intended purpose as indicated in the Agreement, this Ascendon Addendum, an applicable Order Document and/or Documentation;
 - ii. Customer has altered, damaged, modified or incorporated the Ascendon Service into other software in a manner not approved by CSG;
 - iii. The problem was caused by Customer's or a third party's software, equipment or systems (including, if applicable and by way of example only, a Customer Application, but excluding any software or equipment of CSG's permitted subcontractors), not provided or approved by CSG;
 - iv. The problem was caused by Customer's accessing of the Ascendon System or Ascendon SaaS Services on any hardware, operating system or network environment not supported by CSG, as defined by the Documentation; and/or
 - v. The problem is attributable to the Customer's failure to use Compatible Interfaces (as defined on Ascendon Schedule B).
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If Customer requests that CSG provide maintenance and support or similar services that are excluded from the above definition of Ascendon Support Services, the Parties may enter into a SOW authorizing CSG to provide the additional maintenance and support and similar services.

(c) Customer shall not, nor authorize or permit any third party to (i) disclose Customer's unique access codes to any entity other than Customer's authorized employees and contractors, (ii) use the Ascendon System for purposes other than permitted in this Ascendon Addendum or an applicable Order Document, (iii) perform any of the acts set forth in Section 8 of Schedule B of the Agreement, unless explicitly provided herein, (iv) alter, enhance or otherwise modify or create derivative works of or from the Ascendon System; (v) attempt to derive the source code of the Ascendon System; (vi) remove or destroy any proprietary markings, confidential legends or any trademarks or trade names of Media or its licensors placed upon or contained within the Ascendon System, Software, Documentation or Deliverables; or (vii) knowingly insert, or knowingly allow to be inserted, and will use all commercial efforts to prevent insertion into the Ascendon System, and the medium in which Customer Content is provided to CSG by Customer or its agents, any program, information, code and commands, including viruses, bombs, worms, backdoors or Trojan horses, (x) that are designed to cause the Ascendon System or any Third Party Products to malfunction, self-destruct or deny services, (y) that are designed to cause damage to or degrade performance of any computer, network or any information, program or data contained therein or (z) that are designed to enable unauthorized access to the Ascendon System, any Ascendon Software, any Third Party Products or any hardware systems containing the foregoing. Customer shall be responsible for the improper use or disclosure of any of Customer's unique access codes by Customer's employees, contractors or any third party that accesses the Ascendon System through the Customer's unique access codes; provided Customer shall not be responsible for any third party access resulting from the acts or omissions of CSG, Media, CSG's subcontractors or another CSG client.

(d) Customer will comply with the Ascendon Web Services Standards. As used herein, "Ascendon Web Services Standards" mean those rules, specifications and standards that relate to Customer's use of the Ascendon Web Services to integrate with the Ascendon System, as referenced in the Documentation.

(e) Customer acknowledges that neither the Production Environment nor the Sandbox Environment are intended or engineered to perform high volume "stress" or performance testing against the Ascendon System and absent CSG's prior written approval (which approval shall not be unreasonably withheld but may, for the avoidance of doubt, take into account CSG's other customers' known and/or anticipated use of such environments) Customer shall not, nor authorize or permit any third party to perform Performance Testing. "Performance Testing" in the Sandbox Environment or the Production Environment shall mean greater than ***** (**). ***** ***** ** ***** ****. Customer may request that CSG make available a dedicated environment for Performance Testing (a "Performance Testing Environment"), which environment shall be made available at (i) ***** (**) increments, (ii) a fee of US\$***** ** ***** (**) per period (use for less than ***** (**) shall not result in any proration of fees) and (iii) delivered pursuant to the dates, terms and conditions set forth in an SOW executed by the Parties. Customer acknowledges that any conduct of Performance Testing within the Production Environment or Sandbox Environment is a breach of this Addendum, but shall not constitute a breach under the Agreement giving rise to CSG's right to terminate the Agreement, and can adversely affect the Ascendon System, which may also affect third parties. ** ***** ***** ***** ***** *(**)* ***** ***** ***** ** ***** ** ***** *****

***** (*) *****
***** (*) *****

If Customer CSG discovers unauthorized Performance Testing conducted by Customer or any third party using Customer’s business unit(s), CSG agrees to (A) use its commercially reasonable best efforts to promptly mitigate any adverse consequences on the Ascendon System and any Damages (to CSG, Media or any third party using the Ascendon System) as a result of such Performance Testing, and (B) promptly notify Customer of such Performance Testing and explain CSG’s efforts to mitigate the consequences and Damages resulting therefrom.

(f) CSG will host (directly or indirectly) the Ascendon System (excluding any Consumer Experiences deployed by Customer) and will perform those services and functions and provide the infrastructure (including datacenters) to host and make operational the Ascendon System as prescribed by this Ascendon Addendum and each Order Document. Customer is solely responsible for (including, but not limited to, the costs of procuring, installing, operating and maintaining) its own Internet access and all necessary computer hardware, software, peripherals and communications equipment that are necessary in order for Customer and its authorized users to access the Ascendon System and utilize the Ascendon Services (“**Customer Equipment**”). CSG shall, in connection with Customer’s use of the Ascendon SaaS Services, consult with, assist and advise Customer regarding Customer environment requirements.

After a given Ascendon SaaS Services deployment has been deployed to Consumers in a Production Environment, Customer is principally responsible to manage the day-to-day configuration and use of such deployment, including, by way of example only, Storefront changes, refreshing or adding new Customer Content and controlling Customer Content availability windowing. Customer may discharge such responsibility itself, through a third party designee permitted with the terms of the Agreement or by requesting CSG to provide such support. CSG may provide support to Customer on an Ascendon SaaS Services deployment either pursuant to an Order Document entered into by the Parties that specifies the specific Ascendon Technical Services or support to be provided or, Customer may request, in writing (email acceptable), and CSG shall provide such Ascendon Technical Services or support on an ad hoc, “as-needed basis”. Any Ascendon Technical Services or support requested by an Authorized Customer Representative in writing (email acceptable) that are not covered by an effective Statement of Work or do not otherwise qualify as Ascendon Support Services, shall be deemed a request by Customer for CSG to provide “Managed Services”. Unless a minimum term and hour commitment for the provision of Managed Services (a “**Managed Services Quota**”) is otherwise included in an Ascendon Service Order, CSG shall provide Managed Services on an ***** basis (billed in ***** (**)) ***** increments) at the ***** basis, and shall invoice Customer on a ***** basis.

6. CSG Grant of Rights.

This Section 6 shall apply to the Ascendon Services in lieu of Sections 2 and 3 of Schedule B of the Agreement.

Subject to the terms, conditions and restrictions of the Agreement (including this Ascendon Addendum) and pursuant to the terms of an Ascendon Service Order executed by CSG and Customer, CSG hereby grants Customer a non-exclusive, non-transferable (except as provided



in Section 12.7 of the Agreement), worldwide, non-sublicensable (except to the extent that, under applicable Law, the use of Consumer-facing Customer Experiences by a Consumer is deemed a sublicense), limited right during the Ascendon Order Term (as defined in the relevant Ascendon Service Order) for it, its employees and authorized contractors to access and use the Ascendon System as described in and configured pursuant to such Ascendon Service Order, Documentation and (upon making such available to Customer) the Deliverables in the Sandbox Environment and the Production Environment for the sole purposes of receiving and using the Ascendon SaaS Services for Customer's own business purposes and operations in connection with its provision of its Customer Services. Customer shall have the right to copy and distribute internally the Documentation as reasonably required to support its use of the Ascendon System.

7. Hosting and Fulfillment Rights; Customer's Limited Grant of License.

Customer acknowledges that the Ascendon SaaS Services do not include any content delivery network ("CDN") services, signal or encoding of Customer Content, and that vis-à-vis CSG, Customer is responsible (directly or through a third party designee) to provide CDN services and encoding for its Customer Content. As such, Customer is solely responsible to obtain from Third Party Content Owners and third party Retailers all necessary rights for Customer to host, distribute and fulfill (as applicable) Customer Services to Consumers. In connection with CSG's performance of Ascendon Services, and subject to CSG's performance of its obligations under the Agreement, this Ascendon Addendum and as specifically prescribed in an Order Document, Customer grants to CSG a limited, worldwide, non-exclusive, non-transferable (except as provided in Section 12.7 of the Agreement), non-sublicensable (except to a permitted subcontractor, as provided in Section 12.5 of the Agreement), revocable, fully-paid and royalty-free license (and, with respect to any Customer Content or other material owned by third parties, a sub-license) to use, translate, restructure, modify, copy, distribute, display and fulfill Customer Services and Ascendon System Data, and any other materials supplied by Customer or its Consumers, solely to the extent required by CSG to perform the Ascendon Services and, if applicable, fulfill a Customer Service. This limited grant of license shall terminate upon the later of (i) the termination of an applicable Order Document, and (ii) the last date on which CSG provides Customer any Ascendon Transition Services.

8. Proprietary Rights.

(a) The Ascendon System, Ascendon SaaS Services, Ascendon System Data, CSG Confidential Information and CSG Intellectual Property, and any improvements, adaptations and other such modifications of the same that are developed by or for CSG shall be deemed Work Product and will be the exclusive property of CSG.

(b) As between Customer and CSG, Customer is and shall remain the sole and exclusive owner of all rights, title and interests (including all intellectual property rights) in and to the Consumer Information, Usage Data, Customer Content, Customer Confidential Information, Customer Intellectual Property, Customer Site(s) and any improvements, adaptations and other such modifications of the same that are developed by or for Customer, and any Customer Service.

(c) As between Customer and CSG, unless otherwise agreed in an effective Statement of Work, CSG will own all rights, title and interests (including all intellectual property rights) in and to any Deliverables developed pursuant to a Statement of Work, subject always to Customer's ownership of any Consumer Information, Usage Data, Customer Content, Customer Confidential Information, Customer Intellectual Property, and any portions or derivatives thereof that may be reproduced, stored, displayed, performed or otherwise contained within any part of the

Deliverables. Consistent with Schedule E of the Agreement, if CSG is the owner of Deliverables developed and/or delivered under an SOW, Customer and CSG agree to identify in such SOW whether one or more of the Deliverables delivered under an SOW is “*****”, “*****” ** “***** ***** ** *****”, and identify any applicable terms in connection with such designation. The Parties acknowledge that nothing in the Agreement or this Ascendon Addendum shall require CSG to enter into an SOW that (i) restricts CSG’s right to use any SOW Deliverables (and related intellectual property) with CSG’s third party customers, (ii) requires CSG to fund the Technical Services of such SOW if CSG wishes to use the SOW Deliverables (and related intellectual property) with CSG’s third party customers or (iii) requires CSG to refund Customer the Technical Services fees previously paid by Customer for a given SOW Deliverable if CSG wishes to use such Deliverable (and related intellectual property) with CSG’s third party customers. Customer acknowledges that in lieu of the license grant in Section 3.9 of the Agreement, Customer’s sole and exclusive right to use a Deliverable shall be as prescribed in the applicable Order Document.

9. Termination Assistance.

In lieu of the provisions of Section 6.2 of the Agreement, the following provisions shall apply following the termination or expiration of an Ascendon Service Order:

(a) Within *** (**) **** of Customer’s written request (email acceptable) in connection with the expiration or termination of the Agreement or a CSG Service Order, or the expiration of an Ascendon Transition Period as described in Section 9(b) below, CSG shall provide to Customer reasonable assistance and cooperation ** ** ***** to transfer and transition to Customer (or Customer’s designee, PCI-certified, if applicable) any Customer Content, Consumer Information, Usage Data, Customer Confidential Information, and Customer Intellectual Property in CSG’s possession, including the data elements set forth in Ascendon Exhibit A attached hereto. The Parties may update the data elements set forth in Ascendon Exhibit A from time-to-time to reflect the provision of new or different data elements or may identify in an Ascendon Service Order those additional data elements that are subject to this Section 9(a). If Customer requests that CSG provide the foregoing information (including that identified in an Ascendon Service Order) in a form different than that held by CSG in the Ascendon System and the requested format requires CSG to perform additional services beyond a “programmatic data conversion”, such conversion services shall be provided at the ***** ***** **** and the Parties will enter into a Statement of Work or other agreement to document the specific conversion services to be provided.

(b) If requested by Customer in its sole discretion, by providing CSG written notice (i) if the Agreement or an Ascendon Service Order expires as per its stated term, no less than ***** (**) ***** prior to the effective expiration date of this Ascendon Addendum or such Ascendon Service Order or (ii) if this Ascendon Addendum or an Ascendon Service Order is terminated pursuant to Section 6.1 of the Agreement, within *** (**) **** of the effective date of termination of this Ascendon Addendum or such applicable Ascendon Service Order, Customer may request a transition period up to but not to exceed ***** (**) **** following the effective date of expiration or termination date (the “**Ascendon Transition Period**”) to allow the Parties to effect an orderly transition of services to a third-party or an internal Customer solution. In the event that Customer requests an Ascendon Transition Period, CSG will provide the then-contracted Ascendon Services as requested by Customer during the Transition Period (“**Ascendon Transition Services**”). To the extent CSG provides Ascendon Transition Services during the Ascendon Transition Period, all applicable fees and terms under the Agreement and the applicable Order Document shall apply; *****
***** ** ** ** ***** ** ** ***** ** ** ***** ** ** ***** ** ** ***** ** ** ***** **



Ascendon System or (z) re-performance of the Ascendon Services (i.e., transactions), CSG shall be afforded an opportunity of no less than *** (***) ***** ***** (or, such other period mutually agreed upon and, if such claim relates to a Deliverable subject to a pending Statement of Work, the period set forth in such Statement of Work or otherwise agreed upon by the Parties) to remedy such Exceptions or errors. If within such *** (***) or other applicable period CSG cannot remedy such Exceptions or errors or re-perform such Ascendon Services, then Customer may seek other remedies available under this Ascendon Addendum and the Agreement with respect to such claims.

(c) CSG provides any Third Party Software that is not Embedded Third Party Software AS IS. Other than as expressly set forth in an Order Document and this Section 10, Customer acknowledges that the Ascendon System, Ascendon SaaS Services and any such Third Party Software may not satisfy all of Customer's requirements and the use of the Ascendon System, Ascendon SaaS Services and such Third Party Software may not be uninterrupted or error-free. CSG further represents and warrants that it has not knowingly inserted, or knowingly allowed to be inserted, and will use all commercial efforts to prevent insertion into the Ascendon System, and the medium in which the Ascendon System and other materials are provided to Customer by CSG, any program, information, code and commands, including viruses, bombs, worms, backdoors or Trojan horses, (i) that are designed to cause the Ascendon System or any of Customer's software or hardware systems to malfunction, self-destruct or deny services, (y) that are designed to cause damage to or degrade performance of any computer, network or any information, program or data contained therein or (z) that are designed to enable unauthorized access to any of Customer's software or hardware systems.

11. ***** ***** ***** *****.

***** (*****
*****)* *****
***** (*****
***** *****

12. **Limitation of Liability.** The terms provided in this Section 12 are exclusive to the provision of Ascendon Services under the Agreement and each Order Document and will apply in lieu of Section 9.2(b) of the Agreement.

(B) except for fees payable or due and owing, damage or liabilities related to (*) * *****
* of the agreement with respect to a claim *****

preclude Customer from seeking injunctive or other equitable relief pursuant to Section 11.2 of the Agreement). For the avoidance of doubt, nothing in this Ascendon Addendum shall impact, limit, restrict or impair CSG's general obligations with respect to Confidential Information of Customer under Article 10 of the Agreement or CSG's obligations under Schedule N of the Agreement, including the exhibits attached thereto.

(b) The Parties acknowledge that in order for CSG to provide Customer with the Ascendon Services, it will be necessary for Customer to disclose to CSG certain Consumer Information, which Consumer Information will be processed, transmitted and stored (subject to the terms of this Ascendon Addendum and applicable Law) in the United States. The Parties further acknowledge that with respect to the Consumer Information, (i) Customer acts as a "data controller" (or an equivalent term under applicable Law) with respect to all Consumer Information and (ii) CSG acts as a "data processor" (or an equivalent term under applicable Law), on behalf of and pursuant to, the instructions of Customer in order to comply with its obligations under this Ascendon Addendum and under applicable Law.

(c) CSG represents that Media adheres to the EU- U.S. Privacy Shield Framework as set forth by the U.S. Department of Commerce ("**EU-U.S. Privacy Shield** ") that protects the transfer of certain Consumer Information from the EU and Switzerland, respectively, to the U.S, and that Media has received acknowledgment from the U.S. Department of Commerce that Media is self-certified under the EU-U.S. Privacy Shield (the "**Privacy Shield Certification**"). CSG agrees that Media shall maintain and adhere to such Privacy Shield Certification during the Term. If at any time CSG no longer participates in, or meets the requirements of, EU-U.S. Privacy Shield, CSG shall provide Customer with prompt written notice, at which time the Parties shall engage in good faith negotiations to execute an amendment to this Ascendon Addendum that incorporates terms and conditions that protect Consumer Information to the same extent as EU-U.S. Privacy Shield and complies with the Privacy Laws applicable to the Ascendon Services.

(d) CSG shall use Ascendon System Data internally to monitor, support, maintain and improve the Ascendon SaaS Services and the Ascendon System, and shall not lease, sell or otherwise commercially exploit the Ascendon System Data.

(e) If Customer wishes CSG to adopt, implement or comply with a new Customer business practice standard (including the proposed deployment of new or additional security measures, equipment, software and internal processes or procedures) that is not otherwise required by the Agreement, including Section 14 of this Ascendon Addendum, Customer shall provide CSG written notice (which may include an email) of such proposal and include in same notice the nature of such Customer proposed revision, modification or addition (a "**Customer Policy Modification**"). If CSG does not object to a Customer Policy Modification, CSG shall comply with the Customer Policy Modification as soon as commercially practicable after CSG receives written notice thereof. Except for compliance with applicable Law and the PCI Standards, with which CSG is required at its cost and expense to comply, in the event CSG objects to a Customer Policy Modification, (a) CSG shall send written notice (which may include an email) of objection to Customer within thirty (30) days after receipt of such Customer Policy Modification from Customer, and (b) such notice will describe in reasonable detail the nature of CSG's objection. If CSG objects on the basis that such Customer Policy Modification is (x) prohibited by CSG's certification with the PCI Standards, (y) inconsistent with applicable Law or (z) CSG's network architecture and controls, then the Parties will engage in good faith discussions to develop an alternative solution that addresses the substantive effect of the Customer Policy Modification and CSG's concerns with such proposal. If CSG objects to the Customer Policy Modification for any

other reason, including, without limitation, on the basis of CSG having to incur material out-of-pocket costs in connection with implementing the Customer Policy Modification, then the Parties will negotiate in good faith for Customer to reimburse CSG for the costs to implement such Customer Policy Modification, and, upon the agreement of which, CSG shall promptly comply with such Customer Policy Modification as soon as commercially practicable. Upon receipt of any notice of objection from CSG as noted above, the Parties will work together in good faith to mutually agree on a resolution of such objection.

15. Destruction/Return of Information

The Parties acknowledge that CSG may comply with Section 10.8 of the Agreement with respect to Consumer Information and Usage Data if such data is permanently (a) purged (i.e., deletion using random data overwrite) or (b) anonymized (i.e., within CSG's structured data construct, to delete or obfuscate the particular fields containing Consumer Information and Usage Data while preserving the record of the audiovisual materials (including the title, description or subject matter of such materials) acquired by a Consumer), using industry standard practices, thereby permanently preventing anyone (including CSG, its permitted subcontractors and any third party) from accessing any PII and/or reconstructing from such information retained in the systems of CSG and its subcontractors which audiovisual materials were acquired by a Consumer through such systems.

16. Discontinuance

*** ***** * * * * *

17. Business Continuity/Disaster Recovery Plan

The CSG Systems, Inc. Business Continuity/Disaster Recovery Plan set forth in Attachment A to Exhibit C-1 of the Agreement is hereby amended to add the Ascendon Services to the list of * * * * * services.

18. Ascendon Services Performance Standards and Remedies

The terms of Ascendon Schedule C attached hereto shall apply to the Ascendon Services in lieu of Schedule L of the Agreement.

Ascendon Schedule A

Form of Ascendon Service Order

Ascendon Service Order No. __

[Insert Ascendon Service Order Title]

This Ascendon Service Order No. __ (this “Ascendon Order”) is entered into effective as of [Insert Date] (the “Ascendon Order Effective Date”) and shall be governed by the terms and conditions of the CSG Master Subscriber Management System Agreement (Document #*****) effective as of January 1, 2020 between CSG Systems, Inc. (“CSG”) and Comcast Cable Communications Management, LLC (“Customer”), as amended to date (the “Agreement”). This Ascendon Order is an “Ascendon Service Order” subject to the terms of the Ascendon Addendum to the Agreement and is entered into by CSG and [Insert Signatory, whether Customer or an Affiliate] (“Customer”). CSG and Customer are sometimes individually referred to herein as a “Party” and collectively as the “Parties”. All capitalized terms used but not defined in this Ascendon Order shall have the meaning assigned to such terms in the Agreement.

The following documents are attached to this Order and made a part hereof:

- Schedule 1 – Ascendon System and Ascendon SaaS Services Description
- Schedule 5 – Fees

1.0 Comcast Subscriber Entity(ies): Ascendon System and Ascendon SaaS Services.

(a) The following Comcast Subscriber [Entity(ies)] are authorized to utilize the Ascendon System, Ascendon SaaS Services and Third Party Products prescribed by this Ascendon Order:

[insert entities]

(b) Subject to the Fees, terms, conditions and restrictions of the Agreement and this Ascendon Order, Customer agrees to procure from CSG, and CSG agrees to provide Customer the Ascendon SaaS Services and Third Party Products prescribed on Schedule 1 hereto. If Customer wishes to utilize additional (or less) Ascendon SaaS Services and/or Third Party Products during the Ascendon Order Term (as defined in Section 2.0 below), the Parties shall enter into an amendment or Change Order to this Ascendon Order to reflect the actual Ascendon System functionality, Ascendon SaaS Services and/or Third Party Products in use by Customer under this Ascendon Order and to clarify the Fees applicable thereto.

2.0 Ascendon Order Term. The initial term of this Ascendon Order shall commence on the Ascendon Order Effective Date and expire __ (__) years from the Go-Live Date of the Ascendon SaaS Services prescribed under this Ascendon Order (the “Initial Ascendon Order Term”). Upon expiration of the Initial Ascendon Order Term, this Ascendon Order shall automatically renew for successive *** (*) **** periods on identical terms and conditions (each a “Renewal Ascendon Order Term”; the Initial Ascendon Order Term and any applicable Renewal Ascendon Order Term(s) are collectively referred to as the “Ascendon Order Term”), unless either of CSG or Customer notifies the other Party in writing of its intent to not renew such Ascendon Order Term no less than ***** (**) **** prior to the expiration of the then-current Ascendon Order Term.

- 3.0 Initial Statement of Work. In connection with Customer’s initial configuration of the Ascendon System, CSG shall perform the configuration, setup, application training and other services as identified in Statement of Work No. __ with a project title of “_____” (CSG Document No._____) (“SOW No. _”).
- 4.0 Projected Project Start Date and Targeted Go-Live Date. As described in SOW No. __, the Parties estimate the project described by SOW No. __ to commence as of [insert date] and the Targeted Go-Live Date is [insert date].
- 5.0 Fees; Payments. Customer agrees to pay CSG the Fees prescribed by this Ascendon Order, including those Fees set forth in Schedule 5 hereto. Amounts due under this Ascendon Order shall be paid by Customer in accordance with Article 5 of the Agreement.
- 6.0 Transfer of Consumer Information. Subject to the provisions of the Agreement, including, without limitation Section 14 of the Ascendon Addendum, CSG may transfer Consumer Information to ***** *****, CSG’s current ***** *****, solely for the purpose of allowing ***** to process credit card transactions under this Ascendon Order.
- 7.0 Identification of Additional Excluded Systems. As provided in Section 4 of Ascendon Schedule C of the Ascendon Addendum, the Parties agree that the following shall be deemed “Excluded Systems”:
- 8.0 Customer Contact Information; Notices. Section 12.10 of the Agreement is hereby supplemented by providing the following contact persons for Customer:

<u>Customer Project Manager:</u>	[Name]	
		[Telephone]
		[Email]
 <u>Customer Billing Contact:</u>	 [Name]	
[Telephone]		[Email]

IN WITNESS WHEREOF, the Parties have executed this Order by their duly authorized representatives, effective as of the Ascendon Order Effective Date.

CSG SYSTEMS, INC.

**COMCAST CABLE COMMUNICATIONS
MANAGEMENT, LLC**

By: [SAMPLE—DO NOT EXECUTE]

By: [SAMPLE—DO NOT EXECUTE]

Name:

Name:

Title:

Title:

Date:

Date:

Schedule 1 to Ascendon Service Order No. __

Ascendon System and Ascendon SaaS Services

CSG will provide the Ascendon System, Ascendon SaaS Services and Third Party Products described in this Schedule 1.

[Insert Description of Ascendon System, Ascendon SaaS Services and Third Party Products provided under this Ascendon Order.]

(End of Schedule 1)

Schedule 5 to Ascendon Service Order No. __

Fees

Customer's use of the Ascendon System and Ascendon SaaS Services, as prescribed on Schedule 1 of this Ascendon Order, is subject to the following Fees:

[Insert applicable Fees and if Payment Processor Gateway Service, specify CSG Gateway Transactions or Customer Gateway Transactions.]

(End of Schedule 5)

*****End of Ascendon Schedule A*****

Ascendon Schedule B

Ascendon SaaS Services

The Ascendon System is packaged as a set of Ascendon Application Server Modules that provide their capabilities through a set of Ascendon Web Services to Ascendon User Applications. The Ascendon System is more specifically defined in the Documentation, and the below general descriptions are qualified in their entirety by reference to the Documentation. The specific Ascendon System configuration made available by CSG to Customer shall be as set forth in each Ascendon Service Order executed by the Parties. Customer acknowledges that the Ascendon System shall not include the telecommunications connections to and from the Internet, the Compatible Interfaces (as defined below), the Customer Site and, if provisioned, a Performance Testing Environment.

CSG shall provide the Ascendon System and Ascendon SaaS Services to Customer in English (U.S.). If Customer requests the Ascendon System or Ascendon SaaS Services to be provided in a language other than English (U.S.), such provision shall be subject to ***** ***, and the Parties will specify the fees, terms and conditions of such implementation(s) in the applicable Order Document(s).

The Ascendon Application Server Modules deployed for a given Ascendon System deployment shall be described in the applicable Ascendon Service Order.

The Ascendon Web Services made available for a given Ascendon System shall be described in the applicable Ascendon Service Order.

The Ascendon Back-Office User Applications made available for a given Ascendon System shall be described in the applicable Ascendon Service Order.

Embedded Third Party Software

Payment Processor Gateway Service. The Ascendon SaaS Services are integrated with a payment processor gateway partner for effective and secure credit card payment processing. The payment processor gateway encrypts Consumer Information to ensure that information passes securely between the Ascendon SaaS Services and Customer's credit card processing partner to authorize credit cards and settle credit card transactions for deposit of funds with the Customer's designated merchant bank (the "Payment Processor Gateway Service"). CSG will provide the Payment Processor Gateway Service to Customer as part of the Ascendon SaaS Services; provided Customer must establish its own relationship with its merchant bank.

Customer has two (2) options to process authorization, reversal, refund and settlement transactions attempted and processed through the Payment Processor Gateway Service for bank/credit cards, debit cards and similar payments (each, a "Gateway Transaction"): (i) Customer may use CSG's payment processing relationship with ***** , in which case each Gateway Transaction shall be referred to as a "CSG Gateway Transaction", or (ii) Customer may establish and use its own payment processing relationship with ***** , in which case each Gateway Transaction shall be referred to as a "Customer Gateway Transaction". Each Ascendon Service Order shall specify whether Customer is processing CSG Gateway Transactions or Customer Gateway Transactions, and any change shall require the Parties to execute an amendment to such Ascendon Service Order.

Each CSG Gateway Transaction shall be subject to * ** ***** ***** ** * ***** ** * ***** ***** *****, and ** ** shall be charged for Customer's processing of a Customer Gateway Transaction.

Payment Processor and bank interchange fees and other related card and bank processing fees are not included in the fees for CSG Gateway Transactions and are additional charges billed by third parties. CSG Gateway Transactions will be invoiced to Customer on a ***** **** basis.

Customer acknowledges that if it processes Customer Gateway Transaction and the Payment Processor Gateway Service is unable to process a Customer Gateway Transaction caused by ***** or any party other than CSG (a "**Payment Processing Interruption**"), then CSG shall have no responsibility or liability to Customer for such Payment Processing Interruption, and Customer's sole and exclusive remedy shall be with ***** .

Taxing. The Ascendon SaaS Services are integrated with taxing software from ***** . Customer will not be charged for the use of the standard ***** . If Customer needs taxing capabilities other than the standard ***** , or Customer requests to utilize taxing software from a provider other than ***** , the Parties will negotiate the fees, terms and conditions applicable to such additional taxing software and configuration.

Compatible Interfaces

The means by which Customer can access the Ascendon System and Ascendon SaaS Services, including the Ascendon Web Services, are identified in the Documentation (the "**Compatible Interfaces**"). CSG may update the Compatible Interfaces from time to time in its reasonable discretion by providing Customer advance notice consistent with good industry practices, provided CSG shall not cease supporting any item identified below without providing at least ***** (**) ***** prior written notice to Customer.

*****End of Ascendon Schedule B*****

Ascendon Schedule C

Ascendon Hosting, Ascendon Support Services, Performance Standards and Remedies

1. Definitions.

“Availability SLA” means the Production Availability SLA (as defined in Section 3 below) and the Sandbox Availability SLA (as defined in Section 5 of this Ascendon Schedule C).

“Excluded Problems” means any interruptions, degradation or problems with the Ascendon System that are the result of (*) ***** **

“Interrupted Service Time” means the number of minutes in a calendar month during which the Customer experiences a Service Interruption. The number of minutes of a Service Interruption shall be measured (a) beginning on the earlier of the date and time that a Service Interruption is reported on a Service Ticket to the International Services Desk (“ISD”) or detected by the Monitoring Software and (b) ending upon the date and time (as confirmed by Customer or verified through the Monitoring Software) when (i) the Service Interruption has been resolved (through full resolution or a work-around) or (ii) with respect to a Service Interruption caused by a ***** * _ ***** ** ***** ***** * - **** problem, the problem reported on the Service Ticket has been downgraded to a ***** ***** ** *****.

“Interruption Time Percentage” is equal to (a) the Interrupted Service Time for a given calendar month less the Permissible Interrupted Minutes for such calendar month, divided by (b) the System Availability, as expressed in number of minutes for that calendar month.

“Monitoring Software” means internal software and/or third party service that simulate and/or measure transactions for purpose of determining the Availability SLA.

“Qualified Revenue Stream” means the aggregate amount of Transaction Fees identified as the “Qualified Revenue Stream” in an executed Ascendon Service Order billed to Customer in the calendar month affected by a Service Interruption.

“Permissible Interrupted Minutes” means with respect to each Availability SLA, the number of minutes for a given calendar month the Ascendon System may experience a Service Interruption before a Service Interruption Credit is due for such Availability SLA. The Permissible Interrupted Minutes is equal to the (a) Total Available Minutes available in a calendar month less (b) the product of Total Available Minutes times the applicable Availability SLA (i.e., ****% *** ** ***** ***** ***** ** ** **% *** ** ***** ***** ***** **).

“Sandbox Availability” means the time during a given calendar month the Sandbox Environment is available to Customer, excluding interruptions caused by Excluded Problems.

“Scheduled Maintenance” means the qualifying (in accordance with the second sentence of this “Scheduled Maintenance” definition) time the Ascendon System is not available to Consumers

during which CSG will provide maintenance on such system. To qualify as Scheduled Maintenance, (i) CSG must have provided Customer notice (email acceptable) of such downtime not less than ***** (*) ***** prior to the commencement thereof, (ii) such maintenance time must occur during ***** ***** *****; (iii) such maintenance must not exceed ***** (*) ***** in the aggregate during a ***** ***** ***** and (iv) such maintenance will generally occur on ***** ***** between **** * ***** and **** * *****. In the event that CSG exceeds ***** (*) ***** of Scheduled Maintenance during a ***** ***** ***** , each minute in excess of ***** (*) ***** shall be deemed Interrupted Service Time for the specific calendar month in which such threshold was exceeded.

“**Service Interruption**” means with respect to an Availability SLA, the occurrence of a ***** ***** * – ***** or ***** ***** * – **** problem, excluding an occurrence or failure resulting from an Excluded Problem.

“**Service Interruption Credit**” means with respect to (i) the Production Availability SLA in a given calendar month the product of the (A) Qualified Revenue Stream of an affected Ascendon Service Order received by CSG during such calendar month and (B) Interruption Time Percentage for such Production Availability SLA and (ii) the Sandbox Availability SLA, as defined in Section 5 below.

“**Severity Level**” shall refer to the level of severity of a problem in respect of the Ascendon SaaS Services, as defined in Section 3 below.

“**Service Ticket**” means (a) a documented service request marked with the date and time the request was reported to or otherwise discovered by the ISD and with the date and time that the applicable problem was resolved; or (b) a report of Service Interruption or other issue by Customer via telephone (telephone notice is required for ***** ***** * – ***** or ***** ***** * – **** *****), email, CSG’s web accessible ticket tracking system or other mutually acceptable means.

“**System Availability**” means the Total Available Minutes in a given calendar month less any minutes attributable to an Excluded Problem (which, for the avoidance of doubt, includes Scheduled Maintenance).

“**Total Available Minutes**” means the total minutes available in a given calendar month (i.e., number of days in calendar month times sixty (60) times twenty-four (24)).

2. **Hosting and Support Services.**

CSG shall provide technical support and operational maintenance for the Production Environment of the Ascendon System as part of the Ascendon SaaS Services. These hosting and support services are provided in a manner to maximize Service Availability and minimize any Service Interruption of the Production Environment. CSG shall provide the hosting services from facilities located in the United States. Under no circumstance shall hosting services be provided from an off-shore location without the prior written consent of an Authorized Customer Representative.

Technical Support/Operations

Customer may submit support incidents or queries to CSG’s ISD via telephone (*****), or CSG’s web accessible ticket tracking system (accessed at ***** *****) and

other mutually agreed means; provided, that Customer must notify CSG of ***** issues via telephone to the ISD.

CSG shall provide support on a ***** for issues with a ***** of “*****” and “*****” and during ***** for issues with a ***** of “*****” and “*****”.

Should CSG discover a performance or operations issue impacting the Production Environment, CSG shall notify the Customer Project Manager identified in an affected Ascendon Service Order (or such other representative Customer has identified to CSG in writing (email acceptable) to receive such notice) of such issue, as well as CSG’s initial assessment of issue severity, no later than (i) ***** from the time of discovery of a ***** issue and (ii) ***** for a ***** issue.

Support Levels

CSG shall escalate support issues as follows:

- **Level 1 Support (SSC):** CSG provides initial support through CSG’s ISD, which shall provide for the initial triage of an issue. The ID may be contacted via telephone (*****), email or web (through CSG’s extranet at *****) and will work with the Customer to collect pertinent information, understand the issue and attempt to replicate and resolve. If, after the ISD’s investigatory resources are exhausted, the ISD still unable to resolve the issue, it will escalate to Level 2 Support.
- **Level 2 Support (Operations):** Once the ISD escalates the issue to Operations, Operations begins troubleshooting and analyzing the issue. Operations has additional security rights permitting it to dig deeper into the issue through database queries, server reviews and monitoring. If, after the Operations’ investigatory resources are exhausted the issue remains unresolved, the issue will be escalated to Level 3 Support.
- **Level 3 Support (Development, QA, etc.):** If necessary, the Level 3 Support Team will be engaged to attempt to determine root cause for the reported and unresolved issue. The Level 3 Support team may include developers, Quality Assurance analysts, and/or implementation analysts with additional access permissions to review code or provide additional technical insight into expected versus actual behavior of the Ascendon System.

CSG Contact and Escalation List

The table below identifies the contact information for all levels of Ascendon Support Services. All critical issues requiring escalation are managed through the ISD who will contact the appropriate on-call personnel:

Support Level	Contact Name/Title	Contact Information	Operating Hours/Staffing Levels
Level 1	International Services Desk (ISD)	Phone: ***** (*****) Web: *****	*****
Level 1 Escalation	Manager of the ISD	Escalation from ISD analyst	*****

Support Level	Contact Name/Title	Contact Information	Operating Hours/Staffing Levels
Level 2	Operations	Escalation from ISD	***** ***** ***** (***)
Level 2 Escalation	On-Call Analyst	Escalation from ISD	***** ***** ***** (***)
Level 3	SME (e.g., Development, QA, PS, etc.)	Escalation from Level 2 (Operations)	***** ***** ***** (***)
Level 3 Escalation	On-Call SME	Escalation from Level 2 (Operations)	***** ***** ***** (***)
Management Escalation	Operations Manager	Escalation from Level 2 (Operations) on-call	***** ***** ***** (***)
Senior Management Escalation	Operations Director	Escalation from MS Manager	***** ***** ***** (***)

3. Priority Definitions and Service Level Metrics for Ascendon Support Services

CSG uses the following priority definitions and target response times for issues reported by the Customer to CSG. From the time that an issue is reported to or discovered by CSG until the issue is resolved as prescribed below, CSG shall also use commercially reasonable efforts to provide Customer acknowledgements and subsequent updates in accordance with the applicable times set forth in the table below. In addition, at any time during the pendency of an Exception that affects Customer’s operations in the Production Environment or the Sandbox Environment, Customer may contact its Account Manager to discuss such Exception. In addition, to the extent a ***** and ***** issue lasts greater than ***** (**), Customer may contact *** to discuss such issue.

Severity Level Priority	Description	Acknowledgement/ Updates	Targeted Workaround
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- If Customer makes a valid claim for a Sandbox Service Interruption Credit, CSG shall, subject to Customer’s review and audit rights, calculate the Sandbox Service Interruption Credit *********
- As used in this Section 5, “**Sandbox Service Interruption Credit**” means with respect to a given calendar month the product of the (i) fees paid by Customer to access the Sandbox Environment(s) during such calendar month and (ii) Interruption Time Percentage.

CSG shall provide Customer access to reports and/or tools that enable Customer to determine the availability of the Sandbox Environment.

6. *****

 ***** (***** “*****”) ***** (\$*****)

 ***** (*) ***** (*) ***** (*)

*****End of Ascendon Schedule C*****

Ascendon Exhibit A

Data Elements – Consumer Information and Usage Data

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*****End of Ascendon Exhibit A and end of Ascendon Addendum*****

**CSG Systems International, Inc.
Subsidiaries of the Registrant
As of December 31, 2019**

<u>Subsidiary</u>	<u>State or Country of Organization</u>
Ascade AB	Sweden
Ascade Holding AB	Sweden
Ascade Middle East FZ-LLC	United Arab Emirates
Billing Intec Uruguay S.A.	Uruguay
CSG Forte Payments, Inc.	Delaware
CSG Forte Payments Canada, Inc.	Delaware
CSG Interactive Messaging, Inc.	Delaware
CSG International Australia Pty Limited	Australia
CSG International Colombia SAS	Colombia
CSG International (NZ) Limited	New Zealand
CSG International Pty Limited	Australia
CSG International PTE Ltd	Singapore
CSG International Sdn Bhd	Malaysia
CSG Media, LLC	Delaware
CSG Mobile Card Investment, LLC	Delaware
CSG SA Holdings (Pty) Limited	South Africa
CSG SA Services (Pty) Limited	South Africa
CSG Systems International, Inc.	Delaware
CSG Systems U.K. Limited	United Kingdom
CSG Systems, Inc.	Delaware
Digiquant, Inc.	Delaware
Independent Technology Billing Solutions S de RL de CV	Mexico
CSG Systems International (India) Pvt. Ltd.	India
Independent Technology Systems Limited	United Kingdom
Independent Technology Systems Scandinavia AB	Sweden
Independent Technology Systems SL Unipersonal	Spain
Intec Billing (Holding) Canada Ltd	Canada
Intec Billing Canada Ltd.	Canada
Intec Billing Ireland	Ireland
Intec Billing Nigeria Limited	Nigeria
Intec Billing, Inc.	Delaware
Intec Telecom Systems (France) SARL	France
Intec Telecom Systems Denmark A/S	Denmark
Intec Telecom Systems Deutschland GmbH	Germany
Intec Telecom Systems do Brasil Limitada	Brazil
Intec Telecom Systems Italia S.P.A.	Italy
Intec Telecom Systems Limited	United Kingdom
Intec Telecom Systems South Africa (Pty) Limited	South Africa
Volubill Danmark ApS	Denmark
Volubill, Inc.	Delaware

Consent of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
CSG Systems International, Inc.:

We consent to the incorporation by reference in the registration statement (No. 333 10315, 333-117928, 333-125584, 333-176579, 333-176580, 333-196530, 333-227000) on Form S-8 of CSG Systems International, Inc. of our reports dated February 21, 2020, with respect to the consolidated balance sheets of CSG Systems International, Inc. and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the "consolidated financial statements"), and the effectiveness of internal control over financial reporting as of December 31, 2019, which reports appear in the December 31, 2019 annual report on Form 10-K of CSG Systems International, Inc.

Our report on the consolidated financial statements contains explanatory paragraphs that refer to the Company's adoption of ASC Topic 842, *Leases*, and ASC Topic 606, *Revenue from Contracts with Customers*.

/s/ KPMG LLP

Omaha, Nebraska
February 21, 2020

**CERTIFICATIONS PURSUANT TO
SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Bret C. Griess, certify that:

1. I have reviewed this annual report on Form 10-K of CSG Systems International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2020

/s/ Bret C. Griess
Bret C. Griess
President and Chief Executive Officer

**CERTIFICATIONS PURSUANT TO
SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, Rolland B. Johns, certify that:

1. I have reviewed this annual report on Form 10-K of CSG Systems International, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2020

/s/ Rolland B. Johns
Rolland B. Johns
Executive Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The certification set forth below is being submitted in connection with the Annual Report on Form 10-K (the "Report") for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Bret C. Griess, the Chief Executive Officer and Rolland B. Johns, the Chief Financial Officer of CSG Systems International, Inc., each certifies that, to the best of his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of CSG Systems International, Inc.

February 21, 2020

/s/ Bret C. Griess
Bret C. Griess
President and Chief Executive Officer

February 21, 2020

/s/ Rolland B. Johns
Rolland B. Johns
Executive Vice President and Chief Financial Officer