



# State of the Satellite Industry Report

September 2012

*Sponsored by the*



*Prepared by  
Futron Corporation*





# SIA Member Companies (September 2012)





## Study Overview

- Based on year-end 2011 annual statistics from major players, representing consistent satellite industry segments
- All data reflect global revenues, unless otherwise noted
- Revenue is expressed as in-year U.S. dollars (not adjusted for inflation)
- The SIA's 15<sup>th</sup> annual comprehensive study of satellite industry statistics ([www.sia.org/IndustryReport.htm](http://www.sia.org/IndustryReport.htm))
- Performed by Futron Corporation, the report includes surveys of 80 key companies, including nearly 40 SIA members, augmented with publicly available data and research to derive industry revenues and statistics
  - Response rate among SIA members was 70%
  - Response rate among all companies surveyed was 50%



# Satellite Industry Segments Surveyed

## Satellite Services

- Consumer Services
  - Satellite Television
  - Satellite Radio
  - Satellite Broadband
- Fixed Satellite Services
  - Transponder Agreements
  - Managed Network Services
- Mobile Satellite Services
  - Mobile Data
  - Mobile Voice
- Remote Sensing/Imaging Services
- Space Flight Management Services



## Launch Industry

- Launch Services
- Launch Vehicles

## Ground Equipment

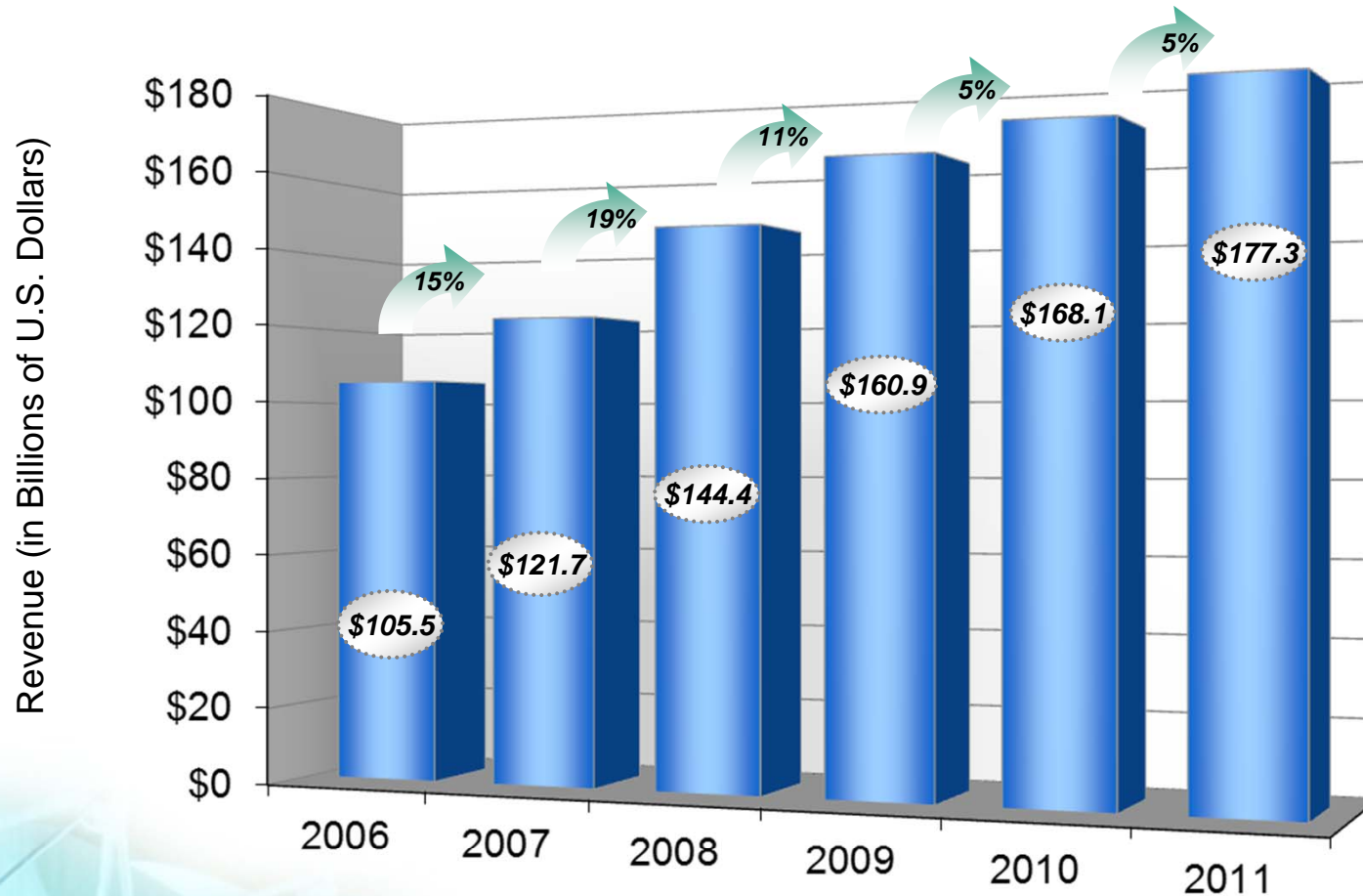
- Network Equipment
  - Gateways
  - Control Stations
  - Very Small Aperture Terminals (VSATs)
- Consumer Equipment
  - Direct Broadcast Satellite (DBS) Dishes
  - Mobile satellite terminals (including satellite phones)
  - Digital Audio Radio Service (DARS) Equipment
  - Global Positioning System (GPS) Stand-alone Hardware

## Satellite Manufacturing

- Satellite Manufacturing
- Parts, Components, and Subsystems



# Global Satellite Industry Revenues



*World satellite industry revenues posted average annual growth of 9% for the period from 2006 through 2011*



# The Satellite Industry in Context

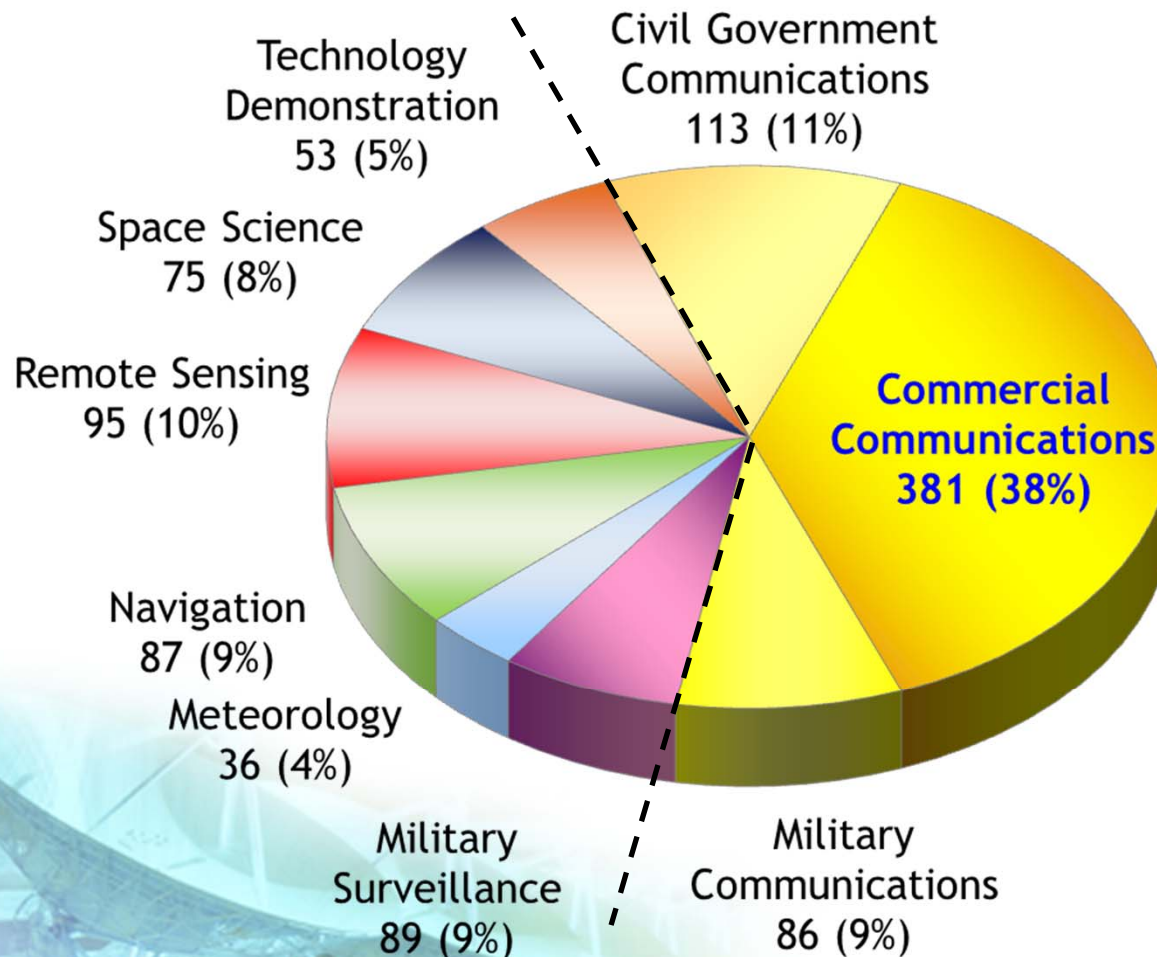
- The global satellite industry posted 5% growth in 2011, matching its 2010 growth and outpacing both the worldwide economic growth rate of 2.8% and U.S. growth of 1.7%



- The satellite industry is a subset of both the telecommunications and space industries
  - Satellite industry revenues represent 61% of space industry revenues, and 4% of overall global telecommunications industry revenues
- Satellite industry growth surpassed both telecommunications and space industry growth
  - Overall global telecommunications spending rose by 4.9% in 2011, compared with 5.5% in 2010
  - Overall global space spending rose by 4.8% in 2011, following 7.7% growth in 2010
  - U.S. telecommunications spending experienced somewhat faster growth of 5.8% in 2011, following slower 2.4% growth in 2010 and a steep 8.2% decline in 2009

*Sources: SIA "State of the Satellite Industry Report 2012"; Telecommunications Industry Association "2012 Playbook"; Space Foundation "The Space Report 2012." All industry revenue figures are for 2011; Diagram is a notional representation and is not to scale*

## Operational Satellites by Function (May 2012)



- Communications satellites now comprise nearly 60% of the satellites on orbit
  - Of 994 operational satellites, 38% are commercial communications satellites
  - An additional 20% are civil government or military communications satellites
- More than 50 countries currently operate at least one satellite (some with assistance from other nations or entities)



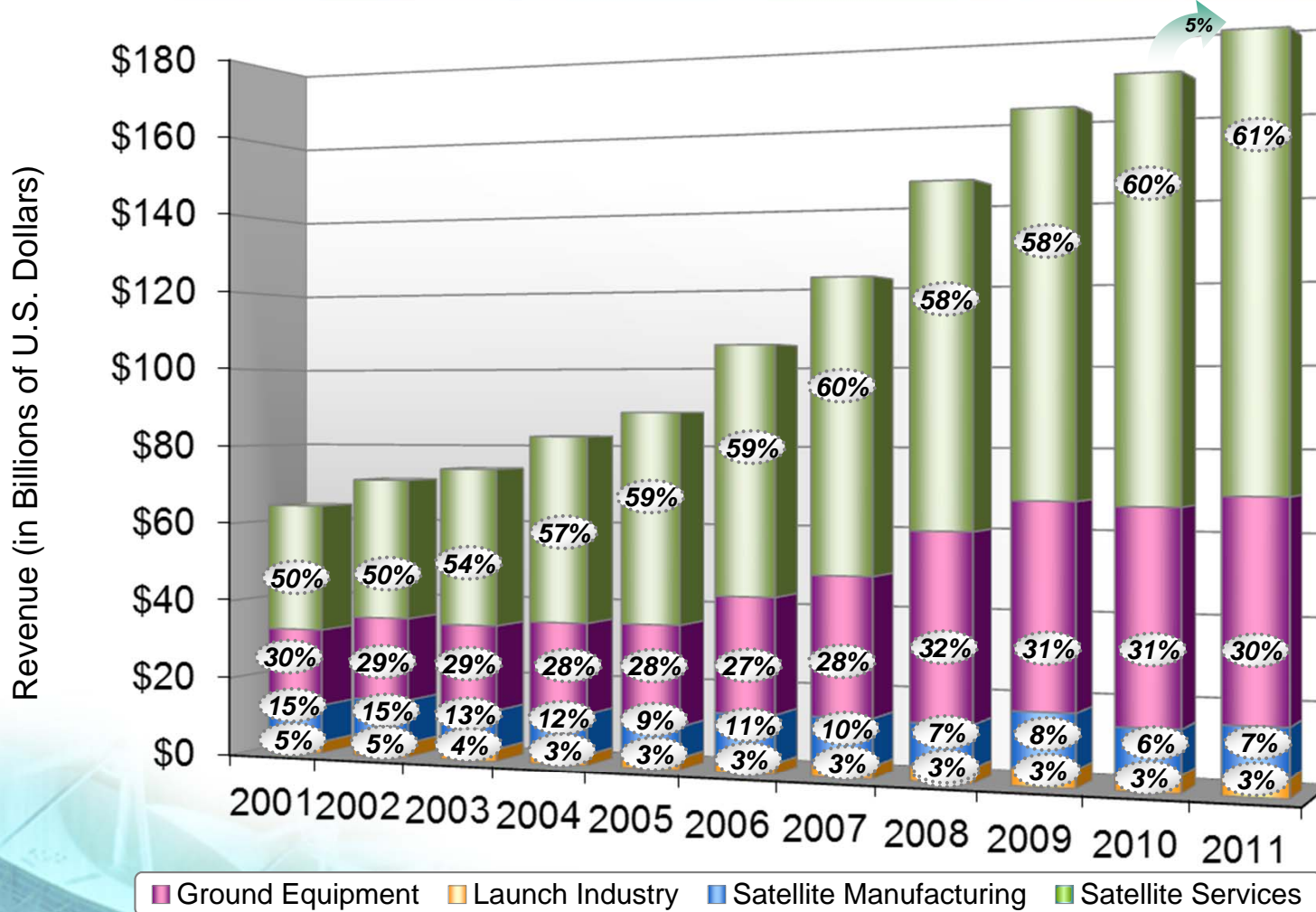
## Top-Level Global Satellite Industry Findings

- Overall worldwide satellite industry revenue growth was 5% in 2011, equaling the 5% growth rate in 2010
- All four satellite industry segments posted growth in 2011
  - Satellite Services revenues, the largest segment, grew by 6%, led by a steady increase in DTH subscribers, particularly in emerging markets
  - Satellite Manufacturing revenues have fluctuated from 2006 through 2011, but aggregate revenues have remained steady
  - Launch Industry revenues rose by 78% overall from 2006 through 2011, with an average annual growth rate of 10.8%
  - Ground Equipment revenues increased by 2% in 2011, with slower growth in consumer equipment but growth in network equipment remaining constant
- U.S. satellite industry employment continued to decline, but the rate of net job losses slowed from 2.7% in 2010 to 1.8% in 2011





# World Satellite Industry Revenues By Segment: Long-Term Review

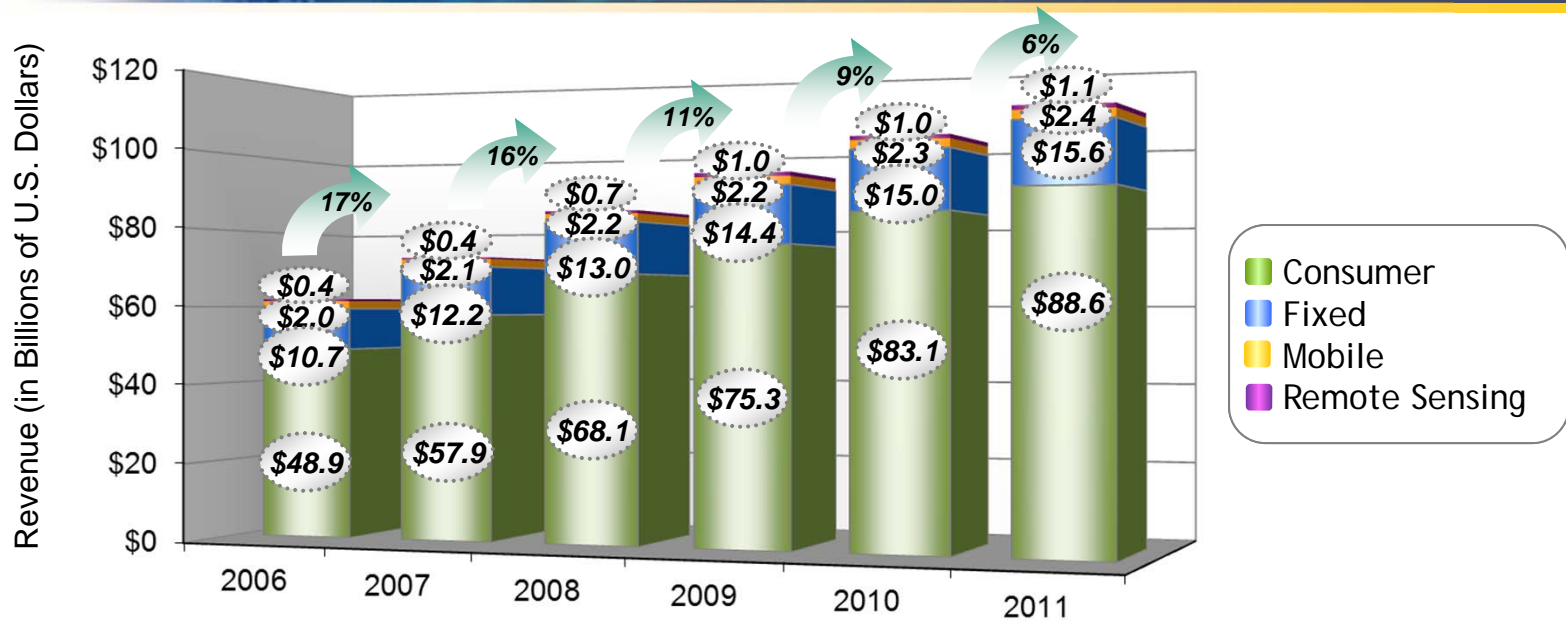


Notes:  
 Numbers may not sum exactly due to rounding.  
 Figures not adjusted for inflation.

*Global satellite industry revenues grew by 175% for the period from 2001 through 2011, an average of 10.7% growth per year*



# World Satellite Services Revenue



**Notes:**

Numbers may not sum exactly due to rounding.

1. Includes capacity for DTH satellite TV platforms

2. Includes VSAT networks; Space Flight Management services included in Managed Services beginning in 2010

	2006	2007	2008	2009	2010	2011
<b>Consumer</b>	\$48.9	\$57.9	\$68.1	\$75.3	\$83.1	\$88.6
- Satellite TV (DBS/DTH)	\$46.9	\$55.4	\$64.9	\$71.8	\$79.1	\$84.4
- Satellite Radio (DARS)	\$1.6	\$2.1	\$2.5	\$2.5	\$2.8	\$3.0
- Satellite Broadband	\$0.3	\$0.4	\$0.8	\$1.0	\$1.1	\$1.2
<b>Fixed</b>	\$10.7	\$12.2	\$13.0	\$14.4	\$15.0	\$15.6
- Transponder Agreements <sup>1</sup>	\$8.5	\$9.6	\$10.2	\$11.0	\$11.1	\$11.3
- Managed Services <sup>2</sup>	\$2.2	\$2.6	\$2.8	\$3.4	\$3.9	\$4.3
<b>Mobile</b>	\$2.0	\$2.1	\$2.2	\$2.2	\$2.3	\$2.4
- Voice	\$0.9	\$0.9	\$0.9	\$0.7	\$0.7	\$0.7
- Data	\$1.1	\$1.2	\$1.3	\$1.5	\$1.6	\$1.7
<b>Remote Sensing</b>	\$0.4	\$0.4	\$0.7	\$1.0	\$1.0	\$1.1
<b>Total</b>	\$52.8	\$72.6	\$84.0	\$93.0	\$101.3	\$107.7



## Satellite Services Findings

- Worldwide Satellite Services revenues expanded by 6% in 2011, slightly slower than the 9% growth experienced in 2010
- Consumer Services, by far the largest contributor to worldwide satellite services revenues, grew by 7%
  - Satellite Television Services (DBS/DTH) account for more than 80% of all Satellite Services revenues
    - Globally, 7.3 million satellite pay TV subscribers were added in 2011, mainly in emerging Asian markets, bringing the world total to 154 million
    - U.S. satellite pay TV subscribers increased to 37 million, a 5% growth rate, maintaining their one-quarter share of the global subscriber base
  - Satellite Radio (DARS) revenues also grew by 7% in 2011, exceeding \$3 billion for the first time
    - Nearly 1.7 million subscribers were added, an 8% increase
    - Satellite Radio remains primarily a North American service
  - Satellite Broadband service revenues increased from \$1.1 billion in 2010 to \$1.2 billion in 2011
    - The U.S. continues to account for about 70% of global satellite broadband revenues, and the number of U.S. subscribers now exceeds 1 million



## Satellite Services Findings (2)

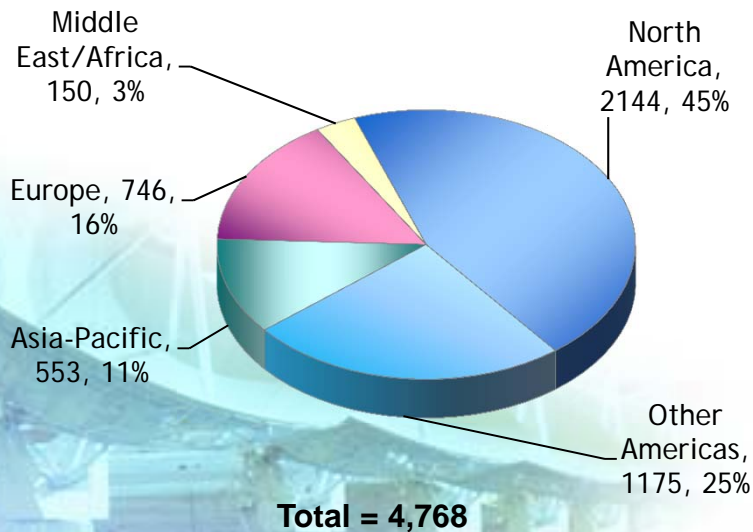
- Fixed Satellite Services Revenues grew by 4%, from \$15 billion in 2010 to \$15.6 billion in 2011
  - Transponder Agreement revenues increased by 2%, from \$11.1 billion in 2010 to \$11.3 billion in 2011, with growth evident across multiple regions
  - Managed Services revenues grew 9%, from \$3.9 billion to \$4.3 billion, and nearly doubled between 2006 and 2011
- Mobile Satellite Services revenues grew by 4%, from \$2.3 billion in 2010 to \$2.4 billion in 2011
  - Mobile telephony services revenues grew faster, at 11%, than mobile data services revenues, at 3%—a reverse of last year's trend
  - Mobile data services revenues still comprise about three-quarters of overall mobile satellite services revenues
- Remote sensing imagery revenues grew about 10%, from \$1 billion in 2010 to \$1.1 billion in 2011



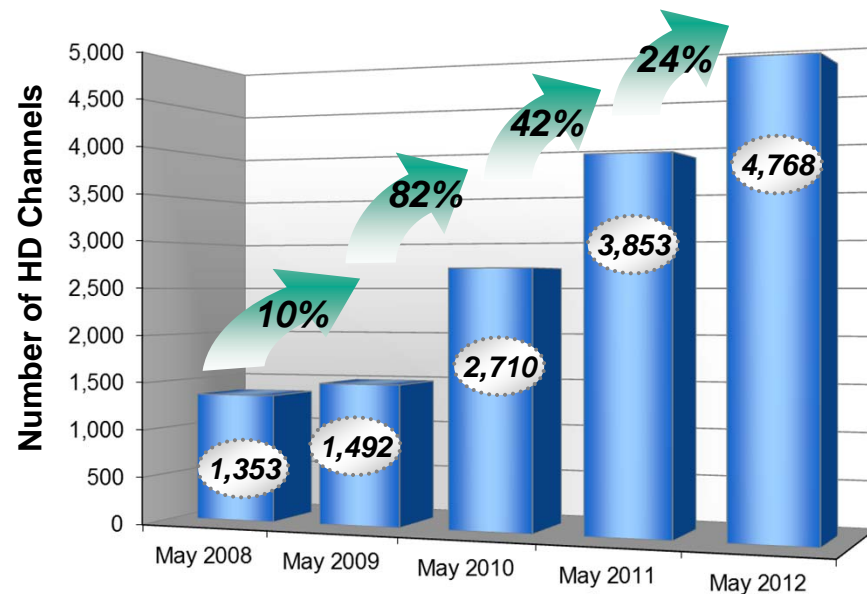
# Impact of HDTV on Satellite Industry

- Increasing numbers of High Definition Television (HDTV) and cable distribution channels continued to drive revenues for satellite pay TV
- HDTV contributes to retail and wholesale services revenue by increasing transponder agreement revenues and consumer satellite TV revenues, and also drives ground equipment
- The number of HDTV channels worldwide grew substantially year-on-year from May 2008 through May 2012, with approximately 70% serving the Americas
  - The remaining 30% of HDTV channels primarily serve Europe and Asia-Pacific; yet the gap between these markets and the Americas indicates significant growth potential

**HD Channels by Region**

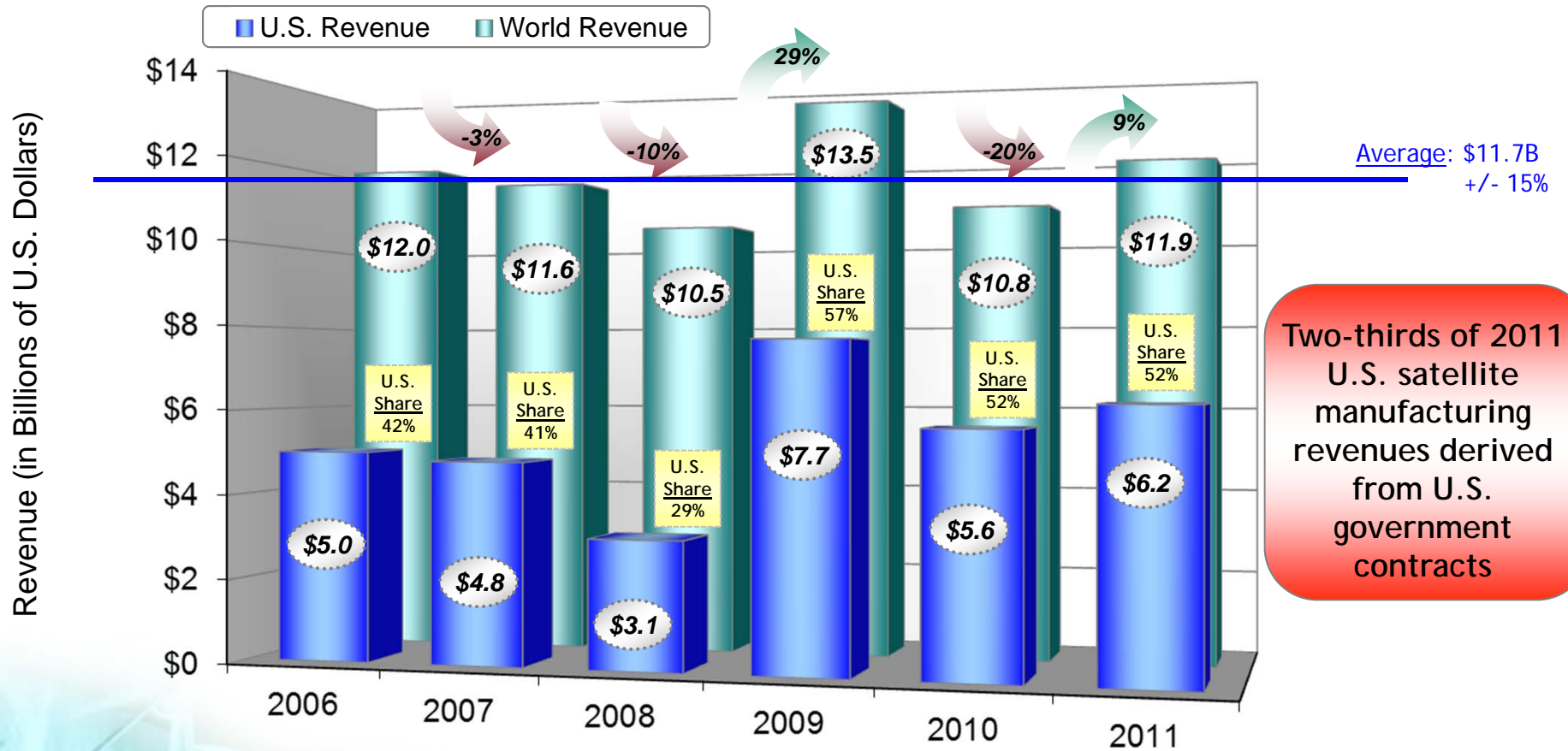


**Worldwide HD Channel Growth**





# Satellite Manufacturing Revenues



Note: Satellite Manufacturing revenues are recorded by this study in the year the satellite is launched, using information based upon unclassified sources. World revenue includes U.S. revenue.

The U.S. share of global satellite manufacturing remained constant at 52%



# Satellite Manufacturing Findings

- Global Satellite Manufacturing revenues grew 9%, from \$10.8 billion to \$11.9 billion
  - In 2011, larger numbers of spacecraft were completed and deployed in orbit compared with 2010
- U.S. Satellite Manufacturing revenues increased by 10%, from \$5.6 billion in 2010 to \$6.2 billion in 2011
  - U.S. firms built 22% of the spacecraft launched in 2011, but earned more than half of satellite manufacturing revenues, reflecting production weighted toward more technologically sophisticated satellites
  - U.S. government spending has typically accounted for between one-half and two-thirds of U.S. satellite manufacturing revenues
- Europe accounted for 32% of 2011 Satellite Manufacturing revenues
- Asia accounted for 15% of 2011 Satellite Manufacturing revenues

Spacecraft Launched by Mission Type (2006) \*

Mission Type	Number of Spacecraft
Commercial Communications	21
Civil/Military Communications	5
Meteorological	11
Navigation	9
Space Science	22
Remote Sensing	16
Military Surveillance	17
<b>TOTAL</b>	<b>101</b>

Spacecraft Launched by Mission Type (2011) \*

Mission Type	Number of Spacecraft
Commercial Communications	31
Civil/Military Communications	9
Meteorological	4
Navigation	12
Space Science	10
Remote Sensing	10
Military Surveillance	14
<b>TOTAL</b>	<b>90</b>

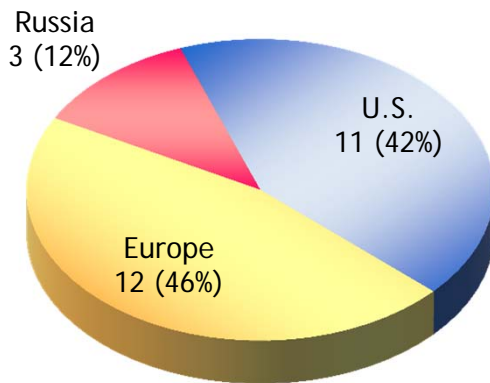
\* Does not include government-built, university-built, and/or research satellites



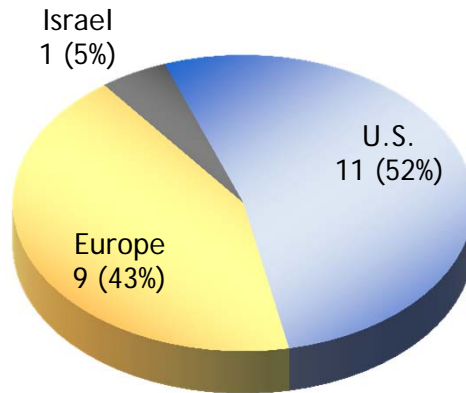
# Satellite Manufacturing Orders: Longer-Term Trends

- Announced commercial geosynchronous (GEO) satellite orders, 2006 - 2011

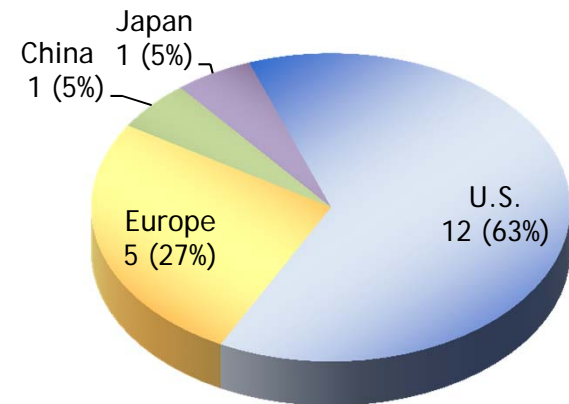
2006 Orders: 26



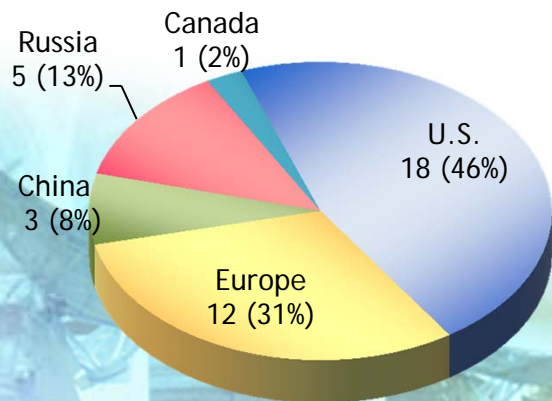
2007 Orders: 21



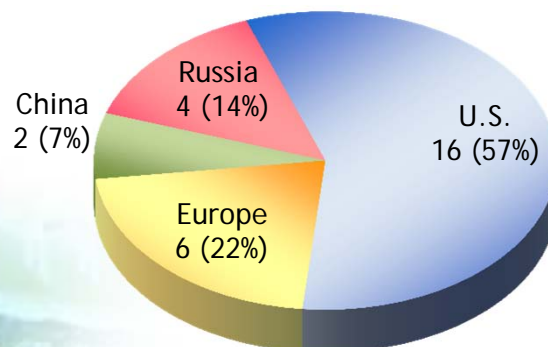
2008 Orders: 19



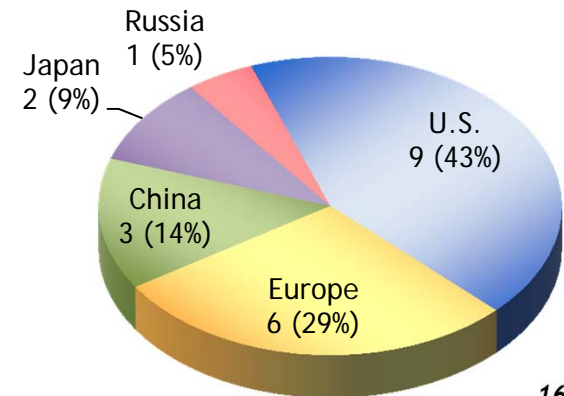
2009 Orders: 39



2010 Orders: 28



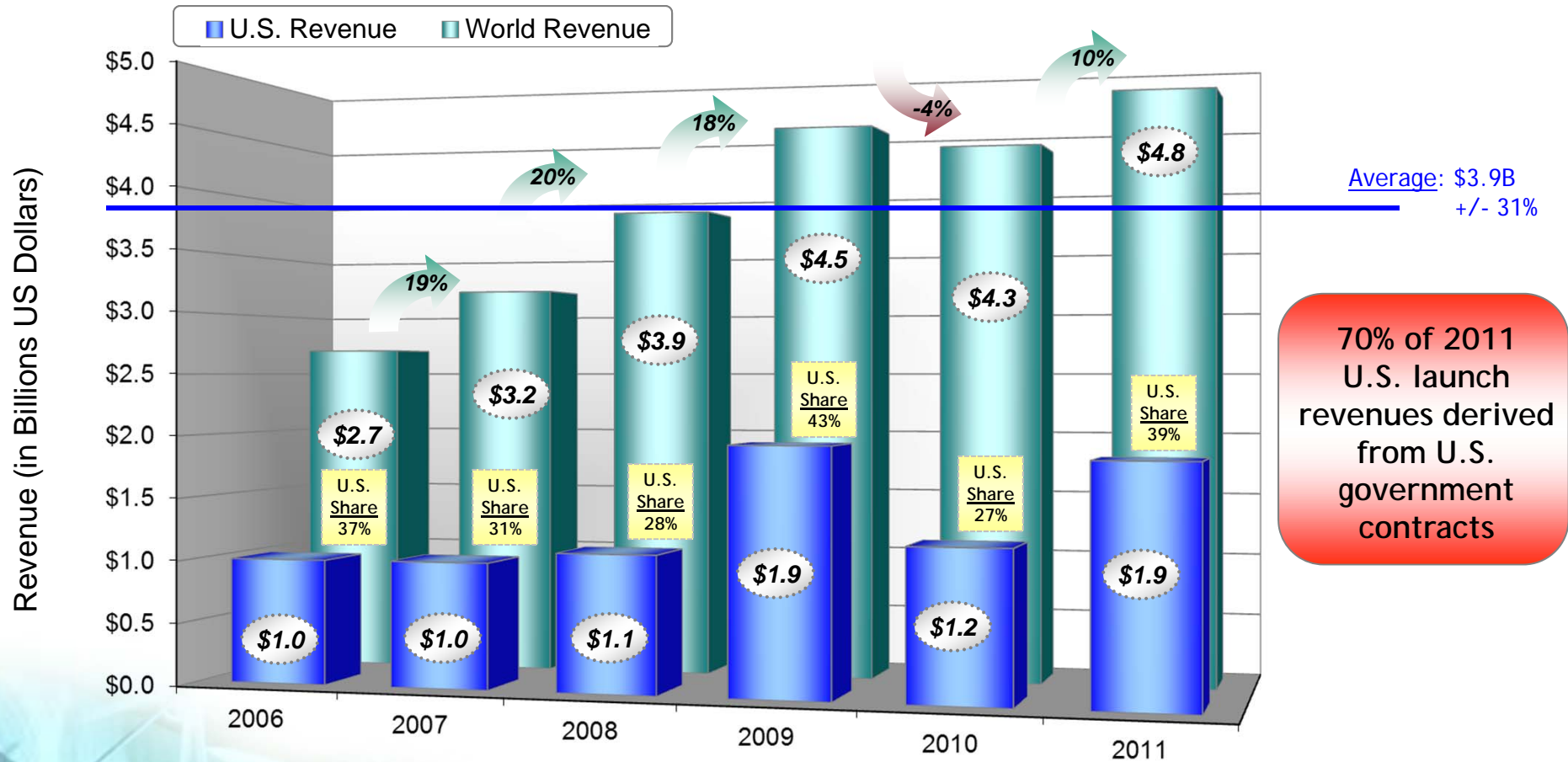
2011 Orders: 21







# Satellite Launch Industry Revenues



70% of 2011 U.S. launch revenues derived from U.S. government contracts

Note: Launch Industry revenues are recorded by this study in the year the launch is conducted, using information based upon unclassified sources. World revenue includes U.S. revenue.

*U.S. launch revenues rose from \$1.2 billion to \$1.9 billion, increasing the U.S. share of global revenue from 27% in 2010 to 39% in 2011*



# Satellite Launch Industry Findings

- Worldwide Launch Industry revenues increased by 10% in 2011, compared with a 4% decline in 2010
  - Government customers remained the major launch revenue driver in 2011, accounting for 59% of commercially-procured launch revenues
    - This marked a slight increase from the 54% government share in 2010
  - The average revenue per launch grew in 2011 due to a greater number of heavier-class launches
- The U.S. had the largest share of launches, but 70% of these launches were enabled by U.S. government contracts
- Europe (with 25% of 2011 launch revenues), Russia (19%), and Asia (17%) are the other main players in the global launch market
- The number of commercially-procured launches remained relatively stable, increasing from 54 in 2010 to 56 in 2011

Commercially-Procured Launches by Orbit Type (2006) \*

Orbit Type	Number of Launches
Geosynchronous (GEO)	24
Low Earth Orbit (LEO)	21
Medium Earth Orbit (MEO)	6
<b>TOTAL</b>	<b>51</b>

Commercially-Procured Launches by Orbit Type (2011) \*

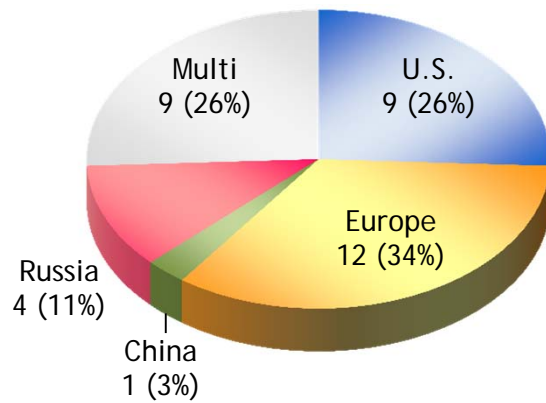
Orbit Type	Number of Launches
Geosynchronous (GEO)	24
Low Earth Orbit (LEO)	23
Medium Earth Orbit (MEO)	9
<b>TOTAL</b>	<b>56</b>

\* Does not include launches conducted by government entities for government customers outside of commercial procurement processes

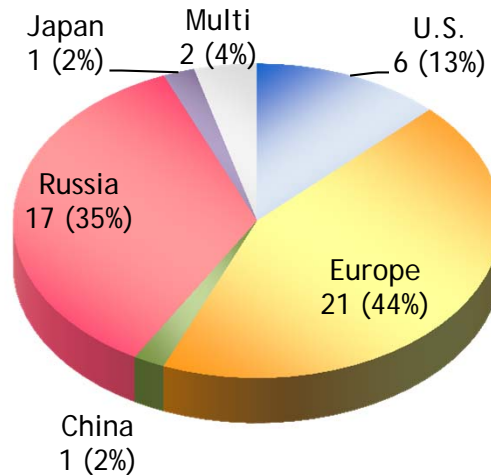
# Launch Orders: Longer-Term Trends

- Announced commercial launch orders, 2006 - 2011

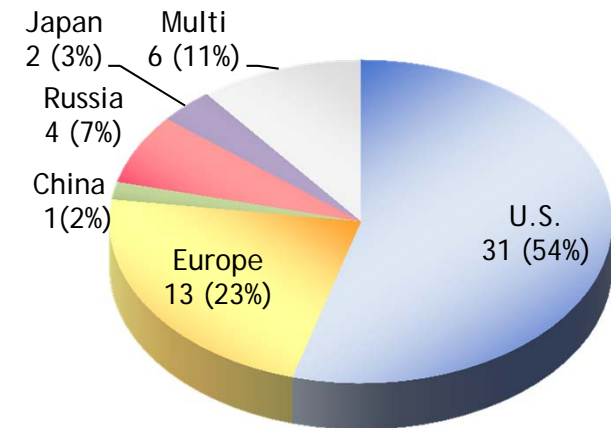
2006 Orders: 35



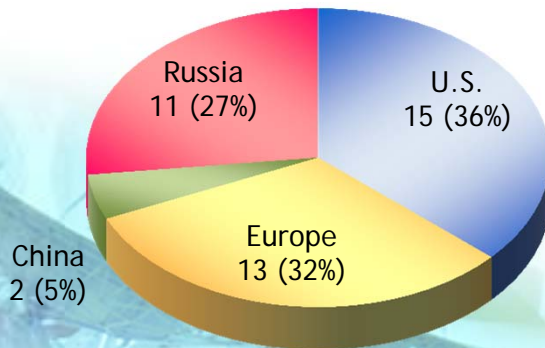
2007 Orders: 48



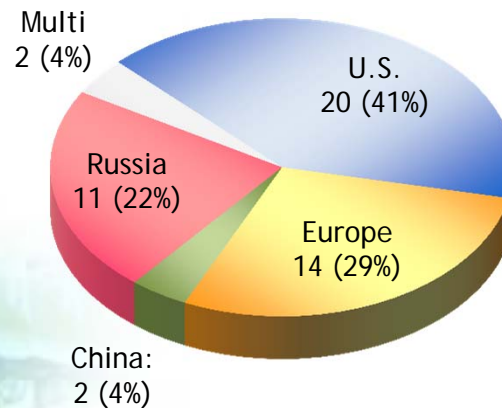
2008 Orders: 57



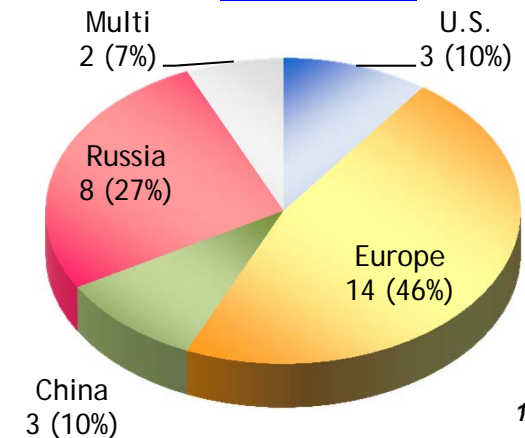
2009 Orders: 41



2010 Orders: 49



2011 Orders: 30

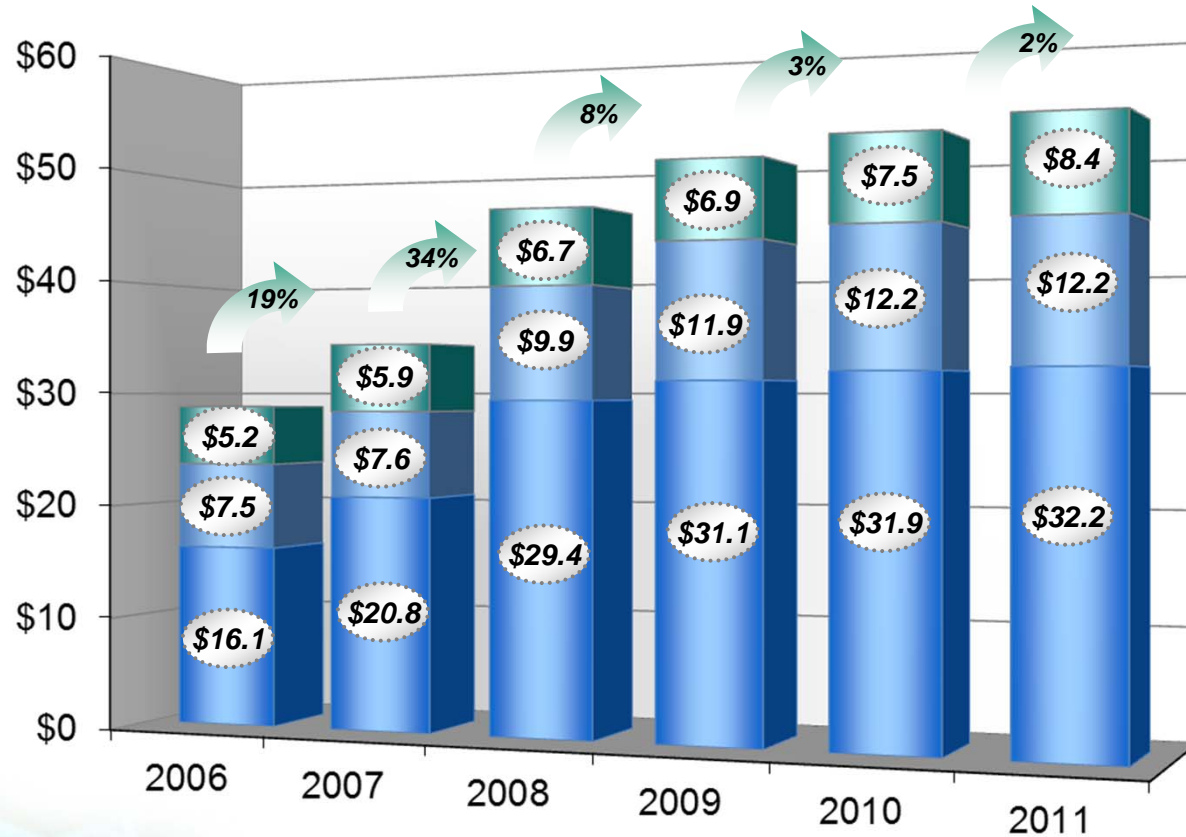




# World Ground Equipment Revenues

■ Consumer (GPS Segment) 
 ■ Consumer (Other Equipment) 
 ■ Network

Revenue (in Billions of U.S. Dollars)



Includes:

*Network Equipment* – Gateways, Network Operations Centers (NOCs), Satellite News Gathering (SNG) equipment, flyaway antennas, and Very Small Aperture Terminals (VSATs)

*Consumer Equipment* – Satellite TV and broadband dishes, mobile satellite terminals, and stand-alone GPS devices, not including chipsets used in devices (such as smartphones) whose primary use is not satellite navigation



## Ground Equipment Findings

- Ground Equipment revenues increased by 2% overall in 2011, slightly slower than 3% growth in prior year
- Consumer Equipment revenues accounted for 84% of overall ground equipment revenues, and grew 2% in 2011—compared with 3% in 2010
  - A significant factor in this slower growth was continued migration of sales from stand-alone GPS devices toward embedded chipsets
    - Stand-alone GPS equipment sales (including in-vehicle automotive, aviation, and watercraft navigation systems, personal navigation devices, shipment tracking devices, and precision measurement instruments) represent about 70% of the consumer ground equipment market
    - Although stand-alone GPS devices reached 110 million units sold in 2011, this growth is being outpaced by sales of GPS chipsets embedded in smartphones and similar devices—which are not factored into this study
  - Network Equipment revenues accounted for 16% of overall ground equipment revenues, and grew at 9% in 2011—compared with 8% in 2010



## Ground Equipment Findings: Consumer Terminals

- The number of Consumer Ground Equipment terminals in service grew across all segments

Terminals in Service (Millions)	2006	2007	2008	2009	2010	2011
Satellite TV	88.7	100.5	133.6	141.3	146.8	154.1
Satellite Radio	14.2	18.0	20.4	20.4	20.2	21.9
Satellite Broadband	0.8	1.0	1.3	1.1	1.2	1.3
Mobile Satellite Voice and Data Services	1.8	1.8	1.9	1.9	2.1	2.3
Mobile Satellite TV	0.6	0.7	1.0	1.5	1.8	1.9

- Satellite TV subscribers grew by 7.3 million, with more than 60% of subscriber additions coming from emerging markets
- Satellite radio subscribers grew by 1.7 million in 2011, following a slight decline in 2010
- Consumer satellite broadband subscriber growth in 2011 continued to occur primarily in the U.S.
- Mobile Satellite TV (S-DMB) revenues derive from new hand-held video services available primarily in Asian markets



# U.S. Private Sector Satellite Industry Employment (2011)

- U.S. satellite companies shed 16,456 jobs, or 6.4%, between 2006 and 2011
- The industry has lost 24,034 jobs since reaching an employment peak in 2008, a 9.1% decline—attributed to the overall global economic downturn and industry restructuring
- All four industry segments experienced job losses in 2011
  - Satellite Services lost 1,820 jobs, or 2.4%
  - Satellite Manufacturing shed a net 788 jobs, or 3.0%
  - Launch Industry employment declined by 1,073 jobs, a decline of 2.2%
  - Ground Equipment employment decreased by 635 jobs, or 0.7%

Satellite Industry Segment	2006 Employment	2007 Employment	2008 Employment	2009 Employment	2010 Employment	2011 Employment
Satellite Services	69,377	83,993	84,267	81,047	75,623	73,803
Satellite Manufacturing	32,368	26,724	28,014	26,854	26,611	25,823
Launch Industry *	51,262	50,670	52,007	51,984	49,195	48,122
Ground Equipment	102,367	96,190	98,663	90,651	91,805	91,170
<b>Total</b>	<b>255,374</b>	<b>257,577</b>	<b>262,952</b>	<b>250,536</b>	<b>243,234</b>	<b>238,918</b>

\* Includes launch tracking and telemetry services

Source: U.S. Bureau of Labor Statistics (BLS). All figures are preliminary for annual 2011 – the most recent complete data as of August 2012

Figures derived from three inputs: BLS Current Employment Statistics Survey (CES); BLS Quarterly Census of Employment and Wages (QCEW); and U.S. Census Bureau North American Industry Classification System (NAICS)

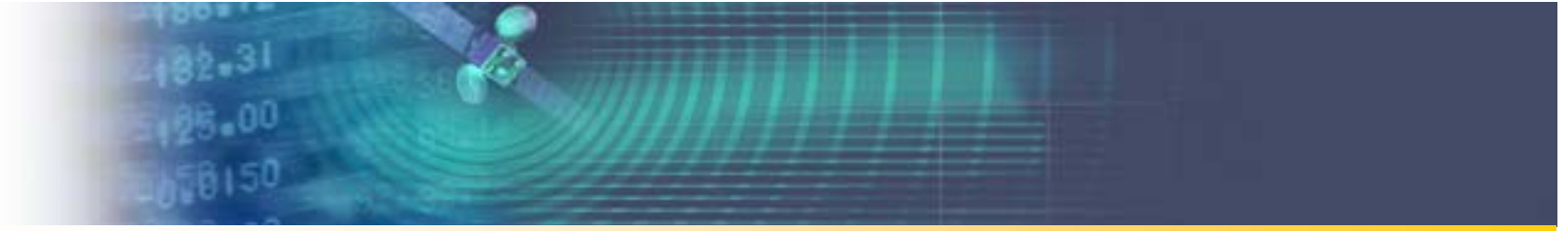
Estimates are rounded to the nearest job.



## 2011 Satellite Industry Trend Summary

- The global satellite industry continues to grow at a steady rate of 5%, nearly double the worldwide economic growth rate
- All four satellite industry segments grew in 2011
- Global Satellite Services, by far the largest segment, grew by 6%
  - Satellite Services now comprise 61% of world satellite industry revenues, and remain the primary growth driver for the other industry segments
- Global Satellite Manufacturing revenues grew by 9%, while U.S. satellite manufacturing revenues increased by 10%
- Global Launch Industry revenues grew by 10%, with the U.S. share rising from 27% to 39%
- Ground Equipment revenue growth rose 2%, reflecting ongoing demand for consumer and network equipment
- U.S. satellite industry job losses continued through year-end 2011, but the pace of employment reductions slowed





All previous reports are available on the SIA website,  
[www.sia.org](http://www.sia.org)

For more information on the satellite industry,  
please contact [info@sia.org](mailto:info@sia.org)

## Satellite Industry Association

1200 18th Street, NW

Suite 1001

Washington, DC 20036

202-503-1560

