



Watch this Space –

**How Mobile and Beacons Are Enhancing
the Value of Out-of-Home Media for
Advertisers and Mobile App Partners**

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A whitepaper sponsored by Gimbal

GIMBALTM

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While input and feedback from the industry leaders above substantially shaped and greatly contributed to the whitepaper, the opinions and views expressed are those of the author.

Proper Citation and Availability

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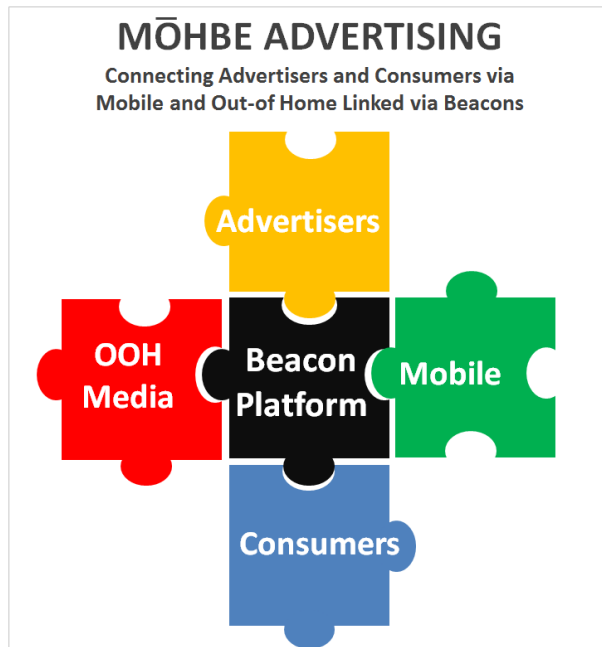
<http://go.gimbal.com/whitepapers/mobile-beacon-technologies-transforming-out-of-home>

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www.immr.org/mobile-beacon-technologies-transforming-out-of-home.html

INTRODUCTION

In venues, on street corners, transit, roadside and many other locations, out-of-home (OOH) media is ubiquitous, enabling advertisers to engage consumers as they go about their daily lives.



Source: Dr. Phil Hendrix, immr

Offering a wide range of locations, formats and creative, OOH delivers one of the highest reaches of any advertising channel. As a medium and an industry, OOH is being transformed by technology, extending its reach and making it even more valuable for advertisers and consumers.

Mobile and beacon technologies are transforming OOH media, enabling advertisers to engage consumers on the go with timely, relevant and even personalized ads, messages and offers. OOH and mobile powered by beacons, or MOHBE, offers significant advantages, including greater precision in targeting, richer data and measurable results.

With the integration of beacons, MOHBE extends OOH beyond the immediate, physical environment, connecting with and reinforcing consumers' mobile and digital experiences. As Kevin Hunter, COO of Gimbal [observes](#), integrating beacons, OOH and mobile bridges the physical and digital worlds, enhancing consumers' experiences and creating new opportunities for advertisers.

Airports globally, from [Orlando](#) to [London](#), [Hong Kong](#) and other major hubs, are deploying beacons to improve travelers' experience. Beacon-guided mobile apps are guiding travelers, showing where luggage can be picked up and dropped off and presenting offers for food, shopping, and other products and services in the airport. Integrating beacons with OOH and mobile in airports brings tremendous utility for travelers and value to advertisers targeting this high-value segment.

Recent Beacon and OOH Cases

Levi's – [ShopAdvisor](#) ran a [campaign](#) with beacons last fall for Levi Strauss & Company. Gimbal beacons were placed in advertising kiosks near Levi's stores and at the entrance to Levi's stores, and special offers were sent to ShopAdvisor users. Of the consumers who received the offer, 16% visited a Levi's store.

Adshel – In Australia Adshel is [rolling out](#) more than 3,000 beacons across its national OOH network to enhance its targeting and data capabilities in the outdoor advertising space. Adshel indicates that the beacons will be used initially to 'listen and learn' and build insights on consumers and for advertisers.

London Airports – [Proxama](#) and [Eye Airports](#) are [deploying](#) 200 beacons across 8 London airports, including London Gatwick, delivering targeted content, offers and rewards to 100 million passengers.

Touchtunes – [Touchtunes](#) is [introducing](#) Gimbal beacons into its Digital Jukebox network, in-venue digital signage, and proximity-based mobile app, reaching up to 60,000 venues in N. America and Europe.

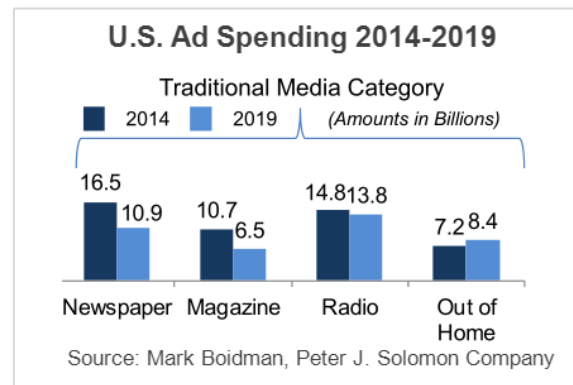
From the [National Geographic Museum](#) to [SXSW](#) (the huge tech and music event held in Austin each year), venues, attractions and events are deploying beacons to enhance guests' experience. When integrated with mobile apps, beacons enrich consumer profiles by providing data on areas visited, dwell time with particular exhibits and other granular aspects. After gaining these audience insights, these enriched profiles allow advertisers to better reach visitors with relevant posters, displays, and other OOH media that closely match attendees' demographics and interests as well as on-site behavior.



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Restaurants and bars are also leveraging beacons to engage and better serve customers. Tillster is [integrating](#) Gimbal beacons into its mobile ordering and payment solution, allowing customers at quick-serve restaurants to order and pay for their food without standing in line or waiting on a server. Earlier this year Touchtunes [announced](#) that it is introducing beacons into its interactive music and entertainment network in over 60,000 social venues. When combined with OOH advertising, beacon-enabled solutions can drive traffic and supply the data needed to measure ROAS (return on ad spend) for OOH campaigns and offers.

In the U.S. alone, OOH advertising represents a \$7+ billion industry, projected to grow to more than \$8 billion over the next 5 years. When mobile and beacons are integrated more fully with OOH, the projected growth rate of 3.7% is likely to prove quite conservative. As award-winning science fiction author William Gibson observed, "The future is already here — it's just not very evenly distributed."



This whitepaper outlines the enormous potential of MOHBE (Mobile + OOH, powered by beacons) for advertisers, mobile app publishers, and OOH media properties, covering the following key topics:

- Industry leaders' perspectives on OOH, mobile and beacons
- Primer on what beacons are and how they work
- 5 stages of mobile, beacon and OOH integration
- Why OOH stands out in a crowded media landscape
- How advertisers, mobile app partners and OOH media can capitalize on the opportunity
- Challenges advertisers and the OOH ecosystem must address

INDUSTRY LEADERS' PERSPECTIVES ON OOH, MOBILE AND BEACONS



“OOH can capture consumers’ attention during those ‘moments of pause’ when they’re away from home. Beacons allow us to understand who’s passing by and who’s pausing, and potentially the next opportunity to engage... they are also cost effective and unobtrusive.” **David Krupp, CEO – Kinetic U.S.**



“Mobile allows consumers to experience the world in connected ways. It’s also changing what we know about audiences... ‘Did consumers actually see my message? What actions did they take?’ Mobile reveals this and more, in real time.” **Josh Kruter – SVP – Digital, Clear Channel Outdoor**



“Beacons engage mobile users and provide a method of attribution to show that OOH works. With other traditional media channels continuing to fall out of favor, OOH should benefit from those trends and grow its share of the market.” **Mark Boidman, Managing Director, Peter J. Solomon Company[†]**



“The movements of people in the real world are incredibly valuable... beacons allow us to present ads and information that are contextual and immediately relevant. But the user experience has to be easy and can't be interruptive.” **Mike Gamaroff, Managing Director, Kinetic U.S.**



“OOH has always been great to target where, but now mobile data allows us to target the when as well. Beacon-enabled campaigns have been off the charts in terms of engagement... With beacons you also get an almost real-time ROI attribution model.” **Ryan Laul, Director [d] theory (OMG)**



“[With beacons] OOH can engage consumers on their life's journey during the day in a very contextual, relevant way ... delivering the right message at the right time and place to the right person, and then measuring it.” **Ray Rotolo, SVP – OOH Assets, Gimbal**



“Beacons allow brands to understand a user’s journey from beginning to end and serve personalized messages – based on location and proximity – that feel less like ads and more like helpful content to consumers.” **Regis Maher, President & Co-founder, do it outdoors media**



“With beacons shopping centers and retailers can reach and connect with consumers on an individualized basis... improving their shopping experience and also boosting foot traffic.” **Mort Aaronson, Chairman and CEO of PlaceWise Media**

[†]Mark Boidman also serves as advisor to Gimbal

A 60-SEC. PRIMER ON BEACONS (Read this First)

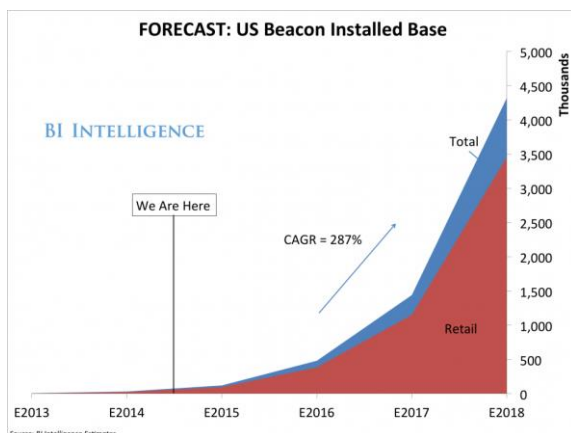
Note – if you are already familiar with beacons, skip ahead to the next section.

Beacons are a relatively new phenomenon. Popularized by Apple with its iBeacons and now compatible with iOS and Android devices, beacons are small, wireless transmitters that can be affixed to surfaces (walls, shelves, etc.) or embedded in objects (e.g., ATMs, vending machines, fixtures, access points, even products and packaging). In fact, Gimbal recently [announced](#) that it is licensing its beacon firmware to enable almost any device with Bluetooth Low Energy (BLE) to act as a beacon.



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The primary purpose of a beacon is to send a signal via Bluetooth that can be detected by mobile devices in the vicinity of the beacon. When a mobile app programmed to recognize the beacon's signal comes within a specified distance (e.g., from within inches to up to 50-75 meters), the app "wakes up," detects the beacon's presence, and based on intelligence in the app and/or cloud displays a message, ad, offer or other communication on the user's device.



Beacons are being installed in malls, retail stores (grocery, department, specialty and big box), restaurants, museums, sports and entertainment venues, and many other places. Beacons are also being deployed in popular OOH locations, including transit (subway stations, bus shelters, and trains and buses themselves), kiosks and other "street furniture," airports and many others. The number of beacons deployed in retail and related applications is growing at CAGR of nearly 300% a

year, and is [expected](#) to reach 4.5 million in the U.S. by 2018. Industry analyst ABI [projects](#) the market for beacons in commercial applications (e.g., commercial/enterprise, connected home, healthcare, personal asset tracking, and others) will be much larger. As deployments grow, the environments in which consumers live, shop, work and [play](#) are rapidly becoming "[beaconized](#)."

"Over the last twelve months iBeacons /BLE beacons have caught the zeitgeist and emerged as a key anchor technology in the retail space. However, there are many other markets that will generate even bigger volumes of BLE beacon shipments over the next 5 years, creating a 60 million unit market in 2019." [ABI Research](#), July 2014

Illustrative Use Cases for Beacons

The following scenarios illustrate four of the most popular use cases for beacons-enabled apps – the next section discusses how mobile and beacons can be more fully integrated with OOH.

- **Shopping Malls** – When entering a [mall with beacons](#), consumers with a shopping app such as [RetailMeNot](#) can receive push notifications highlighting special offers at participating merchants, specials in the food court, a schedule of events in the mall for the day, enroll in the mall’s loyalty program, etc. [Mobiquity Networks](#) is a mall-based ad network currently in 236 malls reaching 37,000 storefronts; Gimbal partner PlaceWise Media is [integrating](#) beacons into its solutions for some 700 shopping destinations.
- **Grocery Stores** – In the wine section of a [grocery store](#), users with a beacon-enabled app – either the store’s, a brand’s app, or a [specialty app](#) – could view wine ratings, get advice on wines that best match the consumer’s price range, preferences, food to be served, or other criteria and receive special offers from the store or brands on selected products.
- **Attractions** – From museums in [Los Angeles](#) to [zoos in Italy](#), public attractions are using beacons to enhance guests’ experience. By combining beacons with apps powered by software providers such as [Cuseum](#), attractions can replace dedicated radios and allow visitors to use their mobile devices to take self-guided tours and hear or view additional information as they view particular exhibits. The app can also show products available in the attraction’s store, allow visitors to sign up for the attraction’s newsletter, purchase a season pass and other applications.
- **Subway Stations** – As individuals enter a [subway station](#), beacons integrated with the transit authority’s app or a third-party app can trigger directions to the correct platform, show when the next train is scheduled to arrive, and present offers from businesses as well as brands.

Beacon Platforms

A beacon platform consists of hardware (beacons themselves), software and one or more mobile apps capable of recognizing beacons in particular locations

- **Beacons** – hardware consists of one or (typically) more beacons placed at various locations in and around a location, both indoors and outside. Beacons may also be embedded in fixtures, displays, kiosks, etc.
- **Integrated app(s)** – one or more mobile apps capable of recognizing the beacon(s) in a particular location. The apps may include a brand or retailer app; a third-party app, such as [RetailMeNot](#) or [Shazam](#); a social media app; or some other app.

- **Beacon management software** – this software allows the beacon owner or its partner to configure and monitor the status of beacons (e.g., specifying unique identifiers for each beacon; range; battery life remaining; etc.)
- **Proximity engagement software** – this software allows the beacon owner or its agency partner to set up and manage campaigns. Upon detecting the beacon's signals, a campaign simply tells the app what it should do, e.g., for first-time visitors, "show a welcome with 25% offer;" for returning guests, present a link to enroll in the loyalty program; as fans exit a venue, present a link to purchase a season pass; etc.

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User Requirements

To participate in campaigns in locations enabled by beacons, the user must (i) have a Bluetooth enabled mobile device; (ii) have Bluetooth turned on; (iii) have one or more apps on their mobile devices capable of interacting with beacons; and (iv) opt in to receive alerts, messages and offers from the paired app(s). Google's recently introduced [Eddystone](#) platform relaxes the "paired apps" requirement, but introduces [trade-offs](#) related to data access and ownership.

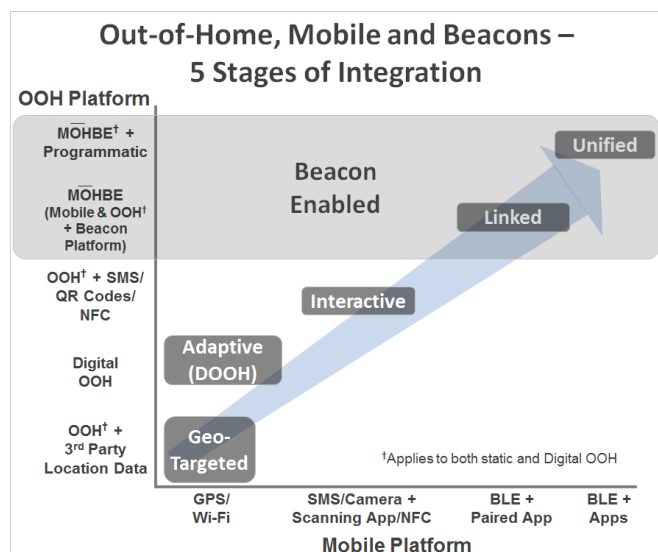
HOW BEACONS MULTIPLY THE EFFECTIVENESS OF MOBILE AND OOH

Both OOH and mobile are effective channels in their own right. Across the globe mobile advertising is growing at unprecedented rates – in the U.S., eMarketer [projects](#) mobile advertising spend will double between 2015 and 2018 (from \$28B to \$58B). While OOH advertising is much smaller – approximately \$7B per year in the U.S. – it is the only legacy channel continuing to expand and, as discussed next, stands out in a crowded media landscape.

When mobile is integrated with OOH and vice versa, the combination is much more effective than either of the channels by themselves.

When beacons and BLE (Bluetooth) enabled devices are introduced into the mix, the effectiveness of mobile as well as OOH is [multiplied](#).

As shown in the figure, OOH, mobile and beacons can be integrated in a number of different ways. The 5 stages of integration range from OOH and mobile to MOHBE (mobile plus OOH enabled by beacons), as explained on the following pages.



Note: BLE = Device with Bluetooth Low Energy

Source: Dr. Phil Hendrix, immr

The 5 Stages of Integration between Mobile, Beacons and OOH

Stage 1 - Geo-targeted OOH – OOH media planners devote a great deal of effort profiling audiences by location and even places to determine the best matching locations and placements for various advertisers and campaigns. Historically, OOH media has relied on surveys and other conventional sources of data to profile audiences in locations based on age, gender, income and other demographic data. Now, third-party mobile data sources such as [Placed](#) and [PlaceIQ](#) provide much richer and more granular data, including demographics, user interests, travel history (including stores visited before and after), and even spending patterns. PlaceIQ [profiles](#) mobile audiences in a billion 100 x 100 square meter tiles, over 27 unique time periods. These profiles of mobile consumers by time and location serve two purposes:

- Geo-targeted profiles allow media planners to match campaigns to audiences with much greater precision.
- They allow advertisers to [estimate](#) the impact of OOH advertising on mobile consumers' behavior – for instance, by determining the percentage of customers in the vicinity of a brand's OOH ad that subsequently visits a retail store where the brand is sold.

Geo-targeting enhances the precision of OOH audience targeting and the estimated impact of OOH media. With beacons (Stages 4 and 5), advertisers gain even greater precision in targeting – for example, consumers who are actually on a particular subway train; in a bus shelter; in a specific department, aisle or even near a particular display in a store – as well as attribution.

Stage 2 - Adaptive DOOH – Data from mobile users allow digital OOH (DOOH) advertising to adapt to audiences not just by location but by time as well.

Like digital media on the Internet, [Digital OOH](#) (DOOH) can display ads dynamically, rotating and displaying ads in 15-60 second intervals. With DOOH the profiles of mobile users by location and time (e.g., day of week, daypart and even time of day) become even more valuable. For example, the profiles and interests of commuters traveling into the city via subway on a weekday morning are very different from those travelling into the city on the weekend. With DOOH ads and information shown in, around and on transit, malls, venues, and other locations can be tailored to audiences based on location and time of day. Similarly, when a concert, game or other major event is held at a venue, DOOH in and around the venue can tailor content to fans' profiles and interests. By detecting and adapting dynamically to mobile consumers, DOOH offers an even more flexible and [powerful channel](#) for brands, retailers and locations.



Source: Titan 360

"In the U.S. more than 110 digital out-of-home networks... utilize strategically placed, networked digital signage displays to reach consumers with highly targeted messages in transportation hubs such as airports, railway and bus terminals; executive networks in office-building lobbies and elevators; and shopping malls." [ScreenMedia Daily](#)

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Stage 3 - Interactive (Mobile + OOH) – In addition to profiling audiences, mobile devices allow consumers to interact with OOH ads, both static and digital. For instance, consumers can share an ad with others, receive additional information and offers, or respond to a "call to action" (e.g., enroll in a loyalty program; enter a contest; answer a trivia question; etc.). Mobile consumers can interact with OOH ads in four ways – for consumers the simplest and most common way is to snap and share a photo of an OOH ad or offer on Facebook, Instagram, Twitter or other social media. More and more OOH ads show hashtags to promote social sharing. Consumers can also respond via SMS to a "text message enabled" OOH ad. With an app on their mobile device consumers can also scan a QR code shown on OOH ads. Finally, with an [NFC](#) equipped smartphone consumers can "tap" an OOH ad with an embedded NFC sensor. Increasingly, advertisers are including 2, 3 and even all 4 ways for consumers to interact with OOH.



Source: Clear Channel Airports

By enabling consumers to interact with OOH ads, mobile increases the reach, engagement and conversion rates of OOH media. These methods do require consumers to take some action, though – e.g., scanning a QR code, texting, etc. In contrast, beacons enable proactive and passive engagement – once permission(s) have been granted, when their device detects a beacon consumers are engaged automatically, without requiring any further action.

Stage 4 - Linked (MOHBE = Mobile + OOH enabled by beacons) – With the addition of beacons, mobile and OOH become a much more powerful combination for consumers and advertisers. When mobile consumers are exposed to a beacon-enabled OOH ad, advertisers benefit in several important ways.

- First, the app registers the "event," revealing (i) which consumers were exposed; and (ii) the dwell time (length of exposure) as well as other metrics. Compared to other methods of profiling OOH audiences, beacons yield precise measures based on actual exposure and engagement with an OOH ad, providing a critical piece to OOH attribution.
- Secondly, the event triggers the mobile app(s) to engage consumers automatically in intelligent and compelling ways – for example, an app might present a push notification with a call-to-action; display an ad, reminder or coupon when the consumer nears a

retailer where the advertised product is sold; etc. Again, all of this happens without the consumer having to scan or tap an ad, text or take some other action.

- Thirdly, when a consumer exposed to an OOH ad subsequently enters a store in which beacons are present, the beacon-paired app can detect that event, enabling the advertiser to attribute behaviors (e.g., store visits) to OOH ad campaigns.
- Finally, these events and others can be recorded as part of an individual consumer's history and used to distinguish "first-time," returning, interested, engaged and other types of consumers based on previous beacon-triggered events.

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In a beacon-enabled world, OOH and mobile are deeply linked, providing richer data and consumer profiles, triggering new forms of engagement (automatically, with consumers' permission), and establishing the impact of OOH on mobile consumers' real world behaviors.

Stage 5 - Unified (MOHBE with Programmatic) – With [programmatic](#) platforms advertisers use real-time bidding to automatically purchase digital inventory (web, in-app, video and others) that matches and reaches specific, narrowly defined audience profiles. Growing rapidly across channels, programmatic is [projected](#) to account for more than half of all digital advertising within the next 18-24 months. OOH is also beginning to integrate inventories with programmatic platforms. With programmatic, unified MOHBE (beacons, mobile and out-of-home) makes the combination even more powerful in four important ways:

- First and foremost, programmatic simplifies the purchasing of ad inventory, which as PJSC's Mark Boidman [pointed out](#) is badly needed in OOH.
- As programmatic advertisers bid on ads that closely match target audiences, richer profiles from MOHBE raise the value of OOH inventory, both static and digital.
- The data captured by beacon-enabled apps on users' locations, history, interests and other criteria make the inventory of in-app ads more valuable. The vast majority of these ads will be sold programmatically, in either open or closed marketplaces. When the combination of OOH and mobile ads on partners' apps boost yields, OOH media and their app partners stand to benefit. How the "surplus" will be divided remains to be determined.
- As beacons are deployed more widely, OOH will also be able to establish [attribution](#) (e.g., exposure to OOH ads boosts store traffic, conversions, etc.) and return on ad spend (ROAS). These metrics in turn provide the kinds of metrics that advertisers and media planners need to boost their investment in OOH.

All in all, the combination of MOHBE (mobile + OOH + beacons) and programmatic bodes well for advertisers, OOH media and mobile app partners.

WHY OOH STANDS OUT IN A CROWDED MEDIA LANDSCAPE

As shown below, national advertisers across a wide range of product and service categories reach consumers via OOH. In addition, local SMBs (small and medium-size businesses) leverage OOH in their advertising efforts. The popularity of OOH among advertisers large and small is explained by its reach, visibility, dwell time and other distinct characteristics shown below.

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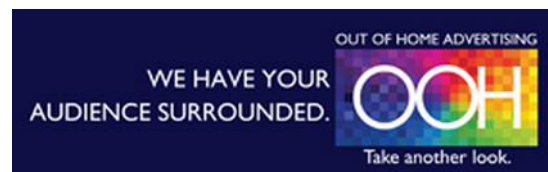
Top 10 OOH Advertisers - 2014
▪ McDonald's
▪ Apple
▪ Metro PCS
▪ Verizon
▪ GEICO
▪ Warner Bros Pictures
▪ Citi
▪ Chase
▪ Coca-Cola
▪ NBC

Top 10 OOH Categories x Ad Spend
▪ Misc. Services & Amusements
▪ Retail
▪ Media & Advertising
▪ Restaurants
▪ Public Transportation, Hotels & Resorts
▪ Insurance & Real Estate
▪ Financial
▪ Government, Politics & Organizations
▪ Communications
▪ Schools, Camps, Seminars

Source: [OAAA](#)

7 Characteristics Distinguish OOH Advertising

Reach – OOH reaches consumers wherever they go, with 30,000 displays in malls, 68,000 in airports, and 49,000 in bus shelters. Billboards (158k), posters (165k), buses (205k), subways (184k) and mobile billboards (1,200) reach pedestrians, commuters and drivers alike (Source: [OAAA](#)).



Visibility – In consumers' line of sight, with frequent exposure, colorful graphics, and clever creative, OOH ads like this bus wrap for Delta Dental are more likely to get noticed, remembered and acted upon.



Source: Laughlin Constable Agency for Delta Dental

Digital, mobile and other formats as well as creative elements enhance visibility.



Source: dio

Targeting – OOH ads can reach audiences that are targeted based on location, interests, demographics, and (with DOOH) time-of-day. By targeting festivals, business openings and other areas with concentrated, hyper-local audiences, [mobile billboards](#) also bring speed, flexibility and a high degree of accuracy to OOH.



Dwell Time – On transit media (e.g., subways, buses, taxis, airplanes), in doctor’s offices and even at intersections, dwell time can range from a minute to a half hour or more, with much of it “wasted.” With messages and creative that match the audience and context, OOH recall is high.

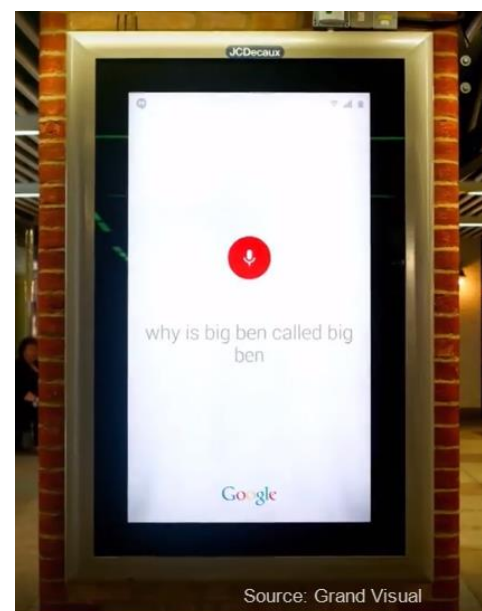


Path-to-Purchase – Many OOH ads are on or near consumers’ path to purchase, e.g., for CPG, near grocery stores; for OTC medications, near pharmacies; for autos, near dealers, etc. Since consumers often decide on purchases at or near the point-of-purchase, OOH ads significantly influence products and brands purchased.



Engaging – Given outdoor constraints, creatives do some of their best work in OOH, using novelty, surprise, humor and other elements to get attention and to get the message across quickly. In this McDonald’s ad by Grand Visual, the “thought bullets” follow individuals as they pass by, making it appear as though they are thinking about McDonald’s food.

Utility – Consumers value OOH ads that contain information they can use, e.g., new products, services or nearby points-of-interest and activities. Even leading tech companies recognize that OOH ads are valued by consumers on the go. This Google Outside campaign, for example, took over some 150 DOOH displays in London to showcase its Google Search app for iOS and speech recognition capabilities.



RECOMMENDATIONS FOR ADVERTISERS, MOBILE APPS AND OOH MEDIA

Advertisers – Seize the Opportunity to Integrate Beacons into Mobile and OOH

Many large advertisers are well positioned to capitalize on the MOHBE opportunity. Combining beacons with mobile and OOH (i) offer more granular data for targeting; (ii) allows advertisers to leverage the consumer's history, location and context; and (iii) allows the brand to engage consumers in personalized and frictionless ways, including retargeting consumers on mobile who have been exposed to an OOH ad. For the following types of brands and products, especially, these features and benefits of MOHBE yield immediate and significant dividends:

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- **Brands with brick and mortar locations** – for example, quick-serve and fast casual restaurants (Taco Bell, McDonald's, Dunkin' Donuts); banks and financial services; movie theatres; department and specialty stores, big box and other retailers; and others, particularly in densely populated urban areas. Target just announced that it is deploying beacons in 50 of its stores, following Macy's and other large retailers.
- **Brands in "high involvement" product categories** – consumers with "time on their hands" (e.g., in transit or while waiting in line or in a doctor's office) will pay attention to and engage with content that interests them – for example, fashion; movies and entertainment; mobile devices and games; and other "high involvement" product categories
- **Available for a limited time** – consumers on the go are often planning and coordinating activities with friends, so limited time offers with a call-to-action (e.g., for concerts, entertainment, sports, performing arts, museums, seasonally flavored coffee or drinks, etc.) are apt to get their attention and prompt a response
- **Products for which need varies by location or season** – the need for products and services such as flu shots, allergy medications, auto maintenance, and the like vary widely by time and location. To appreciate the impact see the BENADRYL® case in the next section.
- **Brands with popular mobile apps** – brands with their own popular apps offering functional, social, and other benefits include pharmacies such as Walgreens and CVS (prescription refills); Coca-Cola, Pepsi and other CPG brands; specialty stores such as Sephora; lifestyle apps such as The Weather Channel; QSRs such as Taco Bell and Krispy Kreme; transit authorities; and others. These brands are in a unique position to use MOHBE and quantify attribution.
- **Brands introducing new products** – categories that regularly introduce new products that interest consumers include CPG; automobiles; cable and television networks; etc.

- **Products requiring explanation** – ideal for consumers in transit, who may have 15 minutes or more “dwell time,” products that require or benefit from explanation include new athletic equipment, apparel and shoes, financial products, etc.
- **Brands Promoting their Own Apps** – applies to many of the above, but especially for brands who have (or aspire to have) a regular following, such as Starbucks; Nike; etc.

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As these examples suggest, leading national brands – many of whom have their own mobile apps and are advertising OOH – are uniquely positioned to integrate and reap the benefits of beacons. Customers value the enhanced functionality beacons bring; are more likely to have or download the brand’s or a partner’s app; and they have locations, content or some other asset that reveal whether consumers visited or took some action. In sum, for these brands the cost and complexity to “test and learn” with MOHBE are relatively low while the payoff is likely to be quite high.

Mobile Apps – Partner with Brands and OOH Media on MOHBE

As explained in the Primer, when a mobile app comes within range of a beacon that it recognizes, the app can engage its owner with messages, offers and ads tailored to the location and individual. Of course, few brands have persuaded more than 10-15% of their customers to download their apps. As a result, brands and retailers are relying on third-party apps – many of them shopping related – to serve as “partner apps” and complete the platform, e.g., brand + beacons + mobile app. For instance, [Lord & Taylor](#) has worked with [SnipSnap](#); Levi’s has worked with RetailMeNot; in Norway Coca-Cola has partnered with [VG](#), a leading Norwegian newspaper with a popular mobile app.

Gimbal is facilitating the development of the ecosystem by partnering with mobile apps such as Shazam, Tillster and others. The playing field is wide open, however, for other mobile apps to forge partnerships with OOH media and brands. Since many apps are aimed at consumers within a vertical – for example, health and fitness, travel, entertainment, home and garden, etc. – there are many natural pairings of third-party apps and OOH media for brands and locations. For example, healthcare apps such as [WebMD](#) could be paired to work with beacons in physicians’ offices served by [Health Media Network](#), [AccentHealth](#) and other DOOH networks. These networks reach large audiences (150 – 200 million individuals) with an average dwell time of nearly half an hour.

For mobile apps, MOHBE offers a number of significant benefits, including more personalized user experiences, offers and content from brand partners tailored to the user’s precise location, history, and interests. It also offers additional revenue from in-app ads, push notifications, app downloads and other sources. Although the campaign did not employ beacons, the BENADRYL® case below illustrates the largely untapped synergies between OOH and mobile apps – with beacons integrated in OOH and participating pharmacies, the synergies are likely to be even greater, allowing the advertiser to verify, for instance, how much traffic the campaign produced.



BENADRYL® Social Pollen Count goes digital

Last summer, BENADRYL® launched a dynamic, location-specific digital OOH campaign in the UK. Digital OOH displays were employed to show the pollen count when it peaked, in close proximity to sufferers via heightened geo-targeting.

Consumers were prompted to download the Benadryl app. The campaign produced a double-digit lift in traffic to the BENADRYL® website homepage from desktop, mobile and tablet, mobile traffic growth of 20% on live dates, and more than 150,000 BENADRYL® Social Pollen Count app downloads.

Source: [Kinetic Worldwide UK](#) ; [JCDecaux](#)

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OOH Ecosystem – Work with Brands and Partners to Rapidly “Beaconize” OOH Media

Although the number is growing rapidly, only a small number of beacons have been deployed in OOH media. While the OOH ecosystem is large and complex, a handful of major players own or manage a large percentage of OOH assets. For industry leaders, the opportunity is clear – integrate beacons into OOH and work closely with brands and their agency partners (both creative and media buying) to help them recognize, test and prove the benefits of MOHBE to consumers and advertisers.

Mark Boidman, investment banker with Peter J. Solomon Company and a leading advisor on M&A to OOH companies, sums up the opportunity nicely in this [interview](#) and [presentation](#) at the recent Amplify 2015 OAAA/TAB National Convention + Expo.

“OOH is a sector that has been misunderstood and undervalued. It also has not had the full benefit of mobile and online video dollars... That should shift over time into DOOH, as people expect more mobile and contextually relevant content while they are on the go. As a result, we think there’s an opportunity for growth.”

Mark Boidman, Peter J. Solomon Company

We believe his assessment applies to both static as well as digital OOH.

Recent developments reinforce our conclusion and should raise the sense of urgency for the OOH industry. Facebook began [giving](#) away beacons to small- and medium-sized businesses (SMBs), part of its plan to become a dominant player in local advertising. The majority of Facebook’s 1.4 billion users now access Facebook on their mobile device. As part of the agreement, SMBs share data from beacon-enabled interactions with Facebook. Through a subsidiary, Google is also [investing](#) in OOH companies.

On the surface, neither of these would appear to be a threat to the OOH industry – however, with their substantial audiences, assets and capabilities, Facebook, Google and other digital leaders will continue to be dominant forces in mobile advertising. If OOH incumbents are slow to seize the opportunity and integrate beacons, mobile and OOH, we would not be surprised to see an outsider assume the mantle and disrupt the status quo.

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CHALLENGES FOR THE INDUSTRY AND ITS PARTNERS

As outlined above, the OOH industry and its partners – including OOH agencies, proximity marketing firms, beacon solution providers and app publishers – have a unique opportunity to integrate and leverage mobile and beacon solutions. To capitalize on the opportunity, each of the players, individually and collectively, will need to address challenges related to consumer experience, security, data, and privacy.

Consumer Experience

Consistently delivering a positive experience for consumers may well be the single most important challenge. As OOH and other industries integrate beacons, they must answer a number of questions. For example, which apps on a consumer's phone are given permission to detect and use a beacon signal? At any "beaconized" OOH property, over a period of time, e.g., while consumers are waiting for a bus or subway or on the trip itself – how many beacon-triggered messages can be presented to a consumer? How should campaigns address first-time vs. repeat visitors?

These and related questions require careful consideration and orchestration. Otherwise, an enhanced experience valued by consumers could become a cacophony and even an irritation, resulting in the equivalent of banner blindness or worse, ad blocking. While there are technical solutions to managing these issues, orchestrating consumers' experience also requires considerable experience and judgment. The OOH industry must work together with leading partners to collectively share best practices and proactively establish standards and certification for participants.

Securing Beacon Networks

With beacons integrated into OOH media, advertisers can recognize and engage consumers while they are in the presence of an OOH ad as well as afterwards, e.g., when subsequently visiting a store or even websites, much like retargeting. This digital medium represents a valuable new asset and revenue stream for OOH media owners, one they can dynamically lease to advertisers and app partners of their choosing.

Much like a website, mobile app or any other digital platform, access to the beacon network must be managed carefully. Otherwise, third parties and even competitors could intercept and "hijack" beacon signals in ways that are invisible and potentially harmful to the OOH property, advertisers and even consumers. For example, by "eavesdropping" on beacons that are not secure a third-party could present consumers with messages and offers from a competing advertiser or retailer. An unauthorized third party could also "bombard" users with messages, creating consumer ill will and backlash. While technically different, these intrusions have the same chilling effect as ad fraud, spam, Wi-fi sniffing and other malicious activities.

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Fortunately, enterprise-grade security in leading beacon management platform prevents unauthorized access by apps, advertisers or any other party that has not been given explicit permission. Gimbal beacons, for example, transmit an encrypted, rolling ID, allowing the owner to determine who has access and when each beacon can be accessed. While an in-depth discussion is beyond our scope, OOH media owners must take proactive measures to secure their beacon networks and mitigate these risks.

Managing and Protecting Data

Combined with OOH, beacon-enabled solutions generate an enormous amount of data on "events" as well as consumer responses (or their absence) to campaigns. For example, events include foot traffic past an OOH site; dwell time by users; and others, all by time of day. By studying traffic patterns advertisers can determine the best time to engage with visitors. Audience characteristics such as demographics of visitors and the apps they use can contribute to better design and content of engagements and even physical signage. Complementing these data, campaign measures include messages sent, opened, and acted upon as well as consumers' visits to target stores and websites. These events – uniquely observed with beacons-enabled apps and OOH – provide definitive measures of conversion from digital messaging to physical visits. Working with [Umbel](#), PlaceWise is also [integrating](#) first-party shopper data into the mix.

Since OOH operates 24 x 7, the amount of data can be staggering. Similar to the wealth of information observed, captured and reported for websites – only in this instance coming from physical and digital in the real-world – beaconized data represent a new and incredibly valuable asset for OOH and advertisers. In addition to security, additional complexities must be considered – for example, which data to capture; where the data are stored; who has access to the data; how exposure to OOH ads gets combined with store visits, spend and other data from first- and third-party sources; etc. These questions require careful consideration, coordination and compliance across the multiple parties involved in MOHBE.

Beacons and Privacy

It bears repeating that beacons do not capture nor do they store any data on consumers – beacons simply transmit signals that apps detect and respond to. In addition, consumers must (i) turn on Bluetooth on their mobile devices to receive beacon signals and (ii) opt-in to give an app permission to send messages, present offers, etc.

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Nonetheless, when paired with beacons mobile apps are in a position to observe new types of user behaviors. To protect consumers' privacy the OOH industry and its app partners must adopt and adhere to the best practices summarized on the next page. In addition to the best practices, the Federal Trade Commission has [issued a staff report](#) recommending ways that key players in mobile inform consumers about their data and privacy practices.

Using TACT to Preserve Consumers' Privacy	
Transparency	Give consumers information on the data being collected, the manner in which it is being collected and how it will be used
Added Value	Make consumers aware of the value they are receiving, e.g., how they benefit from providing their personal data
Control	Give consumers control by (i) informing them who their data are being shared with and (ii) allowing them to opt out of data collection at any time
Trust	Collect only the data needed and use the data collected to deliver consumer value

Source: [The New Data Values](#), AIMIA

CONCLUSION

Beacons represent an enormous opportunity for the OOH industry and its partners. By integrating beacons, OOH media owners gain a new digital network that complements their physical assets, increasing the value of OOH properties and enhancing the effectiveness of OOH advertising. Advertisers gain a deeper understanding of mobile consumers, the ability to target specific OOH audiences, and measure the impact of their OOH ads. For mobile app partners, beacons provide a bridge between the digital and physical, yielding insights that can be used to improve functionality and users' experience. These insights also translate into more precise targeting, higher eCPMs and, with more relevant, value-added content, more satisfied users. Finally, consumers stand to gain by receiving content (messages, ads, etc.), offers and services that more closely match their needs and interests, in places and at times when they can use them.

To capitalize on the mobile, beacons and OOH opportunity, key players – including OOH media, agency and tech partners, advertisers and mobile app publishers – must work closely together and share best practices. Provided the consortium integrates these capabilities in a systematic, consumer-centric fashion, the prospects are bright for the OOH industry, advertisers and consumers.

APPENDIX

About the Author

Dr. Phil Hendrix is the founder and Managing Director of [immr](http://immr.org), a leading consulting and advisory firm, where he helps companies and startups capitalize on digital and mobile technologies. Focusing on markets for disruptive new products and services, Dr. Hendrix helps clients develop compelling value propositions, validate product-market fit, and accelerate growth. Within the digital landscape, Phil focuses on [innovation](#) enabled by mobile, location, context, and data + analytics.

As an analyst, Phil focuses on disruptive technologies and their impact across industries. He is a regular contributor at leading industry conferences, including [iMedia Summits](#) (Commerce, Agency and Breakthrough), [Mobility Live](#), GigaOm's [Mobilize](#) and [Structure:Data](#) conferences, [Street Fight](#) (hyperlocal), [ad:tech](#), [Wireless Technology Forum](#), Social-LoCo, [World Summit on Innovation and Entrepreneurship](#) and others. Much of his work focuses on mobile, location, context and consumer behavior, including shopping, M-commerce and mobile advertising.

As a consultant and advisor, Phil has led significant engagements with startups and Fortune 100 clients in mobile, consumer electronics, financial services, transportation, insurance and others. He works closely with management and project teams on key issues, including market sizing, segmentation, positioning, and branding as well as innovation, user experience, and customer retention. Over the course of his career, Phil has helped clients conceive and successfully launch dozens of new products, services and businesses.

Before founding [immr](http://immr.org), Phil was a partner with [DiamondCluster](#) (strategy and technology consultancy, now the strategy group of [PwC](#)), founder and head of IMS (Integrated Measurement Systems), and a principal with Mercer Management Consulting (now [Oliver Wyman](#)). He has held faculty positions at Emory University and the University of Michigan, where he taught courses in marketing, research, and buyer behavior for MBAs and executives. While at Michigan Dr. Hendrix also held a joint appointment as a research scientist in the [Survey Research Center](#), Institute for Social Research.

Additional perspectives and reports prepared by Dr. Hendrix are available at [immr](http://immr.org) and [Slideshare](#). This [overview](#) contains key perspectives and links to recent reports.

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GIMBAL™

About Gimbal

Gimbal, Inc. is connecting brands, venues, events and retailers with their customers in exciting new ways by providing leading-edge mobile technologies and solutions. With advanced geofencing, the world's largest deployment of industry-leading Bluetooth Smart beacons, location-based engagement, analytics, unmatched security features and privacy controls, the Gimbal platform helps drive mobile app engagement and loyalty.

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Originally incubated as part of Qualcomm, [Gimbal](#) is now an independent company providing the leading mobile engagement platform for use by brands, retailers, advertisers, venues and out-of-home (OOH) networks. Our focus is on maintaining the highest standards of quality for every component of our platform and continuing the innovation to create the best digital-to-physical bridge. We envision our technology as an integral part of the Internet of Things to discover the next 10 billion relationships with the relevant things in the environment around you.

The Gimbal location and proximity-aware mobile engagement platform helps deliver the content, offers and information consumers want; when and where it matters to them. By understanding consumers' unique interests and their precise location, Gimbal enables partners to deliver the most relevant content. Gimbal beacons are best in class, but great hardware is only one piece of the puzzle. Gimbal provides geofencing, location-based messaging, secure proximity beacons and analytics.

Along with advanced geofencing and analytics, Gimbal also offers unmatched security features and privacy controls. Gimbal has earned TRUSTe's certification for consumer-controlled privacy, is a member of the Future of Privacy Forum and delivers industry-leading security via its secure software and transmissions. For more information, visit www.gimbal.com.