



Beacons: Privacy, Promise, Potential

Retail's Revenue Opportunity

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Introduction

Among the various technologies that the retail press deals with currently, few garner as much mindshare as those often referred to as “indoor positioning”, but to which we will refer as Location-Based. In a nutshell, the advent of civilian GPS made it possible for the consumer to not only know where she was at any given time, but also how to get to where she was going. The incorporation of such technology into the ubiquitous smartphone made the process easier, and it worked great for getting from Point A to Point B in the great outdoors. Once inside a store or mall, however, the technology simply could not function as well, and consumers then had to resort to using store/mall directories or, perish the thought, they would have to ask a human being for directions. The development of Wi-Fi and then Bluetooth wireless, specifically Bluetooth Low Energy (BLE), became the most sought-after solution to the problem, and sensors called Beacons (which can interact with a smartphone’s Bluetooth) could be deployed throughout the interior of a store or mall to triangulate a given customer’s location.

The purpose of this study is to provide the retail community with a broad overview of the key Location-Based technologies currently found in Retail and Hospitality. We will present a description of each technology, along with what we see are the strengths and weaknesses of each. We will provide some of the most pertinent data pertaining to each technology (including market size), as well as a listing of those retailers who have deployed the individual technologies. Finally, we will present a best practices case for each technology.

The primary benefit that location-based technologies have for the consumer is an enhanced shopping experience. The primary benefits for retailers include gaining additional customer insight and the ability to target offers that drive both revenue and improved service.

Retailers are encouraged to use these charts in discussions with their vendor partners. It is our intent that they provide unique insights into vendor strategy and provide thought-provoking questions as we all move through and prosper in the Era of Intentional Innovation.

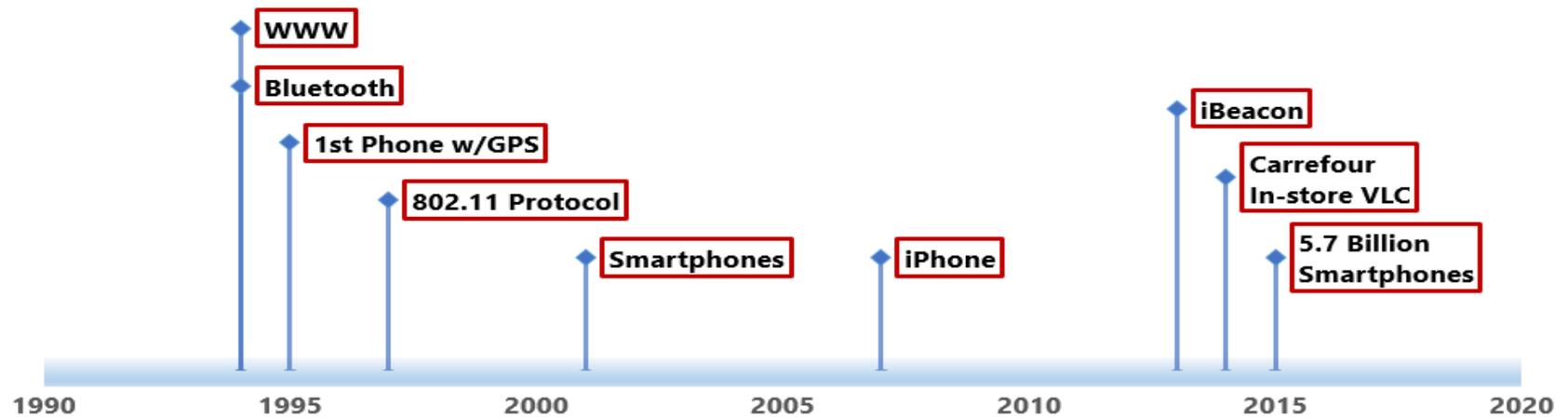
Quick History Lesson

Location-Based Technology Development Timeline



Other Related Developments

- 1880 - Alexander Graham Bell invents Photophone
- 1980 - Civilian GPS
- 1983 - IBM PC
- 1991 - CompuAdd wins Sears POS



Source: Various

Quick History Lesson, con't

Strange as it seems, the leading edge technology that we address in this study actually has its roots before the turn of the century...the last century, that is. In 1880, Alexander Graham Bell and his assistant Charles Tainter invented the photophone, a device that allowed for the transmission of speech on a beam of light. Simply, this was the earliest precursor to fiber-optic communications, which serves as the main backbone for the Internet. Before the PC, Retailers were interested in location-based technologies, even though they didn't know to call it that. They were interested in knowing where their customers lived, where their delivery fleet was, and where their customers spent time in their stores, among other things. These data points were very valuable, but the technology of the time made obtaining the data very difficult.

Prior to the 1980's – Prior to the invention of reel-to-reel film media, determining the location of a customer in the store was done through direct human observation. The early days of reel-to-reel showed some promise, but the development process was cumbersome and time consuming. This changed with the advent of filmless cameras and VCR's during the 1970's and 1980's. As the cost of these small, high-resolution cameras came down, retailers adopted them in droves. The development of the Internet eventually gave rise to IP cameras in the mid-to-late 1990's, and these have been successfully deployed throughout the Retail enterprise.

1990's – At the time when parachute pants were still popular, GPS devices, heretofore the sole domain of the military, were developed and widely deployed in delivery and executive fleets. The rise of the Internet during this decade opened a whole new world to retailers and consumers alike.

2000's – Consumer technologies, most notably smartphones, have advanced and been widely adopted since the turn of the century, when Japan's NTTDoCoMo released their first smartphones. Adoption in North America didn't begin until 2002, with the release of Danger, Inc.'s Hiptop (aka T-Mobile Sidekick). Around the same time, Windows and Blackberry devices started appearing, and then in 2007 Apple released the first iPhone.

2010's – Since 2007 Apple has released 12 different models of the iPhone, and every model came with Bluetooth, and all but the very first came with a GPS chip. Every other smartphone manufacturer can make similar claims. Smartphones have become so ubiquitous that they began to disrupt markets once dominated by other devices, like PDA's, wristwatches, portable radios, and GPS devices, etc.. Seriously, when was the last time you bought a road atlas?

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Methodology

Here's how we did it



How We Got Here

This study leverages a variety of resources available to IHL. Market data for some of the technologies in this study remain somewhat sketchy, but reliance upon data received in surveys and interviews of retailers and vendors we have a high confidence that we can “get our arms around” the markets in question. Typically, our process resembles the following.

Step 1 – We leverage our [WorldView IT Sizing Forecast Model](#), a sizing and forecast tool for over 300 retail Hardware, Software, SaaS and Services categories. IHL has been sizing and forecasting the retail / hospitality market worldwide by solution for over 10 years. This provides the upper bounds of the market data and total market size.

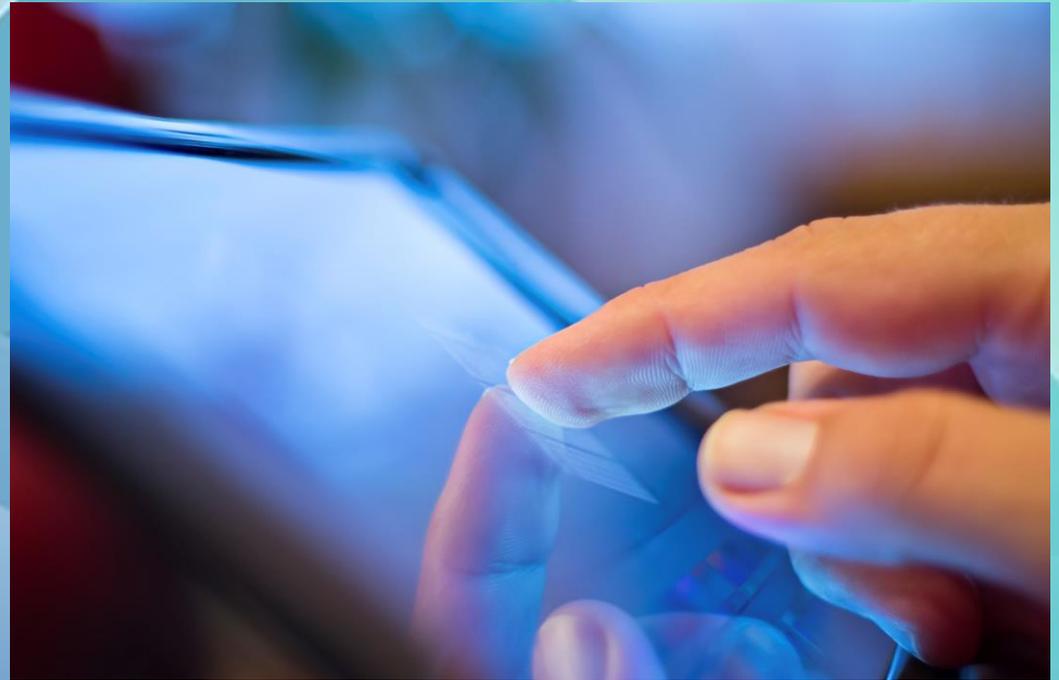
Step 2 – We combine this with our [Sophia Data Service](#) that tracks over 4,500 enterprise retailers and hospitality providers (with a minimum of 50 locations) in terms of which vendor’s technology a given retailer / hospitality provider has installed, the total lanes / licenses, the timing of those installations and when they are due to be replaced.

Step 3 – We validate the installs and business sizing for each vendor through public records and vendor / channel interviews. Customer service / traction is validated through existing customer interviews and surveys.

Step 4 – We merge all of this together into a singular view that provides total market size.

This study represents the overall worldwide retail and hospitality beacon systems market as defined in this study. For more information on this study, please see our website or contact us at +1.615.591.2955.

Appendix



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