Mobile POS: *It's REAL Now*

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Introduction

Mobile technology in retail, more particularly Mobile POS, has been the source of a tremendous amount of buzz since coming on the scene a handful of years ago. When it first came on the scene, there was a great deal of talk about how Mobile POS would replace traditional POS. Since then, however, reality has set in and retailers are moving forward, albeit more slowly than originally anticipated.

All that said, mobility has been transforming how retailers and hospitality providers interact with customers. The seminal moment was the release of the iPad. And it was not so much the device, but the price point of $499 that opened the door for retailers to begin looking at mobile devices for associates and potentially as a replacement for POS. This is true in spite of the fact that the device is neither retail-hardened nor enterprise-friendly.

For most retailers, deploying mobile at the store level involves four stages.

o **Stage 1** –Retailers simply get their store managers to use mobile devices instead of backoffice PCs, thus freeing them to spend more time on the sales floor. Studies show an undisputed link between the success of a store and the number of hours a manager is on the floor versus being in the back office. Devices used here are typically tablets, though consumer handhelds are sometimes used.

o **Stage 2** – The use of mobile devices is extended to sales associates for use in their interactions with consumers, essentially leveling the playing field on knowledge and information access where consumers have had an advantage due their smart phones. Tablets and consumer handhelds are used.

o **Stage 3** – This is where retailers face the most difficulty and challenge; it's where the mobile device is used to perform a checkout transaction. Tablets, consumer handhelds, and retail-hardened handhelds are the technologies used.

o **Stage 4** – At this stage, the customer is enabled to use their own device, typically a consumer handheld, to perform the checkout transaction while in the store.

4 Stages of Mobile

At **Stages 1 and 2** (mobile for managers and associates), the market is additive related to POS in that new mobile devices are coming into the store, but there is no impact on the number of traditional POS devices.

Stage 3 (Mobile POS) is the game changer for POS and in certain segments has become a major disrupter to overall POS shipments going forward. In general, however, mobile POS is best used where transaction speed is not as critical as mobility and customer engagement at the transaction.

Stage 4 (leveraging the customer device) may have an effect on total number of POS devices, but not for several years. This makes the most sense in transaction environments where customers bring their own bags.

The use of one or more of these stages is entirely dependent upon the retailer's individual desire for the technology and their willingness to transform the manner in which they interact with the customer. The aforementioned slower adoption of **Stage 3** is due in part to a variety of reasons, including:

o   EMV solutions for mobile are not ideal and are kludgy, so EMV installs are delaying mobile deployments.
o   Retailers are working towards a unified commerce back end system to feed the Mobile POS, ecommerce, and POS platforms. Most retailers have focused on this first as it is a core issue of growth and survival.
o   Apple's continued challenges to date in "enterprise-friendliness" have also caused delays, though IBM's relationship with Apple may help this in the future.
o   Mobile POS requires new layouts of security cameras, payment islands, etc.. Those remodels are costly.

In this report, we provide worldwide and North American shipments and installed base for each of the handheld categories outlined for Stage 3 for North America. We also forecast the shipments and installed base for these devices through 2020.

Retailers can utilize the data to measure their own plans against what we are anticipating, as well as what competing retailers are considering. Vendors, for their part, will be able to utilize the data in as a tool to gauge the most likely areas of investment by retailers and how to refine their strategies

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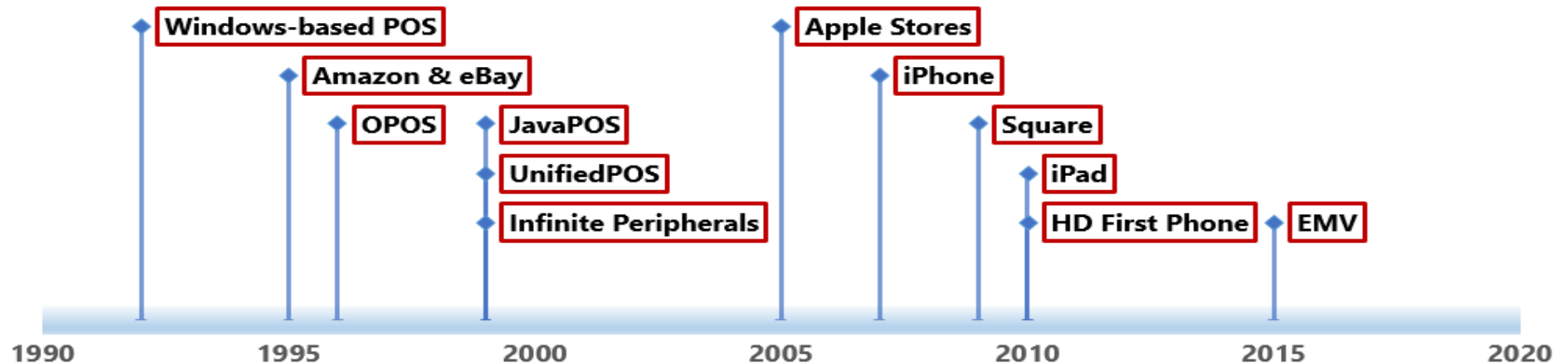HARD DATA, SMART DECISIONS

Background

Quick History Lesson

Mobile POS
Development Timeline

Other Related Developments
1879 - 1st Cash Register
1908 - Patent for Wireless Comms
1946 - 1st Car Phone
1950 - Diner's Club
1973 - 1st Mobile Phone
1973 - Client-Server POS
1974 - UPC Barcodes
1975 - "Don't leave home without it"
1985 - Windows OS, O/S 4680
1986 - 1st Touchscren POS

Year	Event
1992	Windows-based POS
1995	Amazon & eBay
1996	OPOS
1999	JavaPOS
1999	UnifiedPOS
1999	Infinite Peripherals
2005	Apple Stores
2007	iPhone
2009	Square
2010	iPad
2010	HD First Phone
2015	EMV

1990   1995   2000   2005   2010   2015   2020

Source: Various

Quick History Lesson, con't

Mobile POS, the technology that we address in this study, is actually a combination several technologies that include point-of-sale, wireless communications, IP networking, barcode scanning and handheld computing, among others. All of these are fairly recent developments, though retailers have been applying various technologies to retail transactions for thousands of years.

The 1970's and Prior – The most advanced piece of technology used in the early days was the abacus, which allowed shopkeepers to total up the sale to an individual customer. The cash register, along with the "*cha-ching*" sound, came along in 1879, and allowed retailers to keep a running total of all sales in their individual stores. These devices were mostly mechanical in nature and ubiquitous on retail counters throughout the first half of the 20th century. They were gradually replaced by smaller electronic cash registers that began appearing in the 1950's. Other technological and operational advancements were made during these times, including mobile communications, barcodes and credit cards.

1980's – 1990's – Personal computing made huge contributions to the advancement of retail technology during this time, as retailers began making the transition from stand-alone cash registers to networked POS systems. Retailers didn't know it yet, but the development of the Windows operating system during this time would lay the groundwork for it becoming the most widely-used OS in retail. The Internet also came along during this time, and along with it came a little company named Amazon, which changed the face of retail forever.

2000 and Since – Mobile devices (tablets, smart phones) have seen great development since the turn of the century, not just in their capabilities but also in their adoption. The first devices started showing up around 2002, and Apple released the iPhone in 2007 (11 subsequent models since then). Payment systems and the incorporation of WiFi in the stores both saw tremendous progress, though security remains a top concern. The Apple Store's incorporation of Mobile POS in 2005 is widely credited with being the source of all desire for Mobile POS. In an effort to help speed their customers through the checkout line, Apple adopted Windows-based Pocket PC devices made by Symbol (Apple continued to use the Windows-based devices until they were replaced by iPod Touch devices in time for the 2009 Christmas shopping season). The buzz for Mobile POS was huge, but the actual adoption was somewhat muted for a variety of reasons, not the least of which was the lack of a well-thought-out overall approach that incorporated not just the technical aspects of deployment, but also the operational aspects (how to deal with cash, receipt delivery, customer experience issues with front door security, etc).

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Methodology

Here's how we did it

How We Got Here

This Mobile POS study combines the results of several IHL primary research studies that are directed at different audiences.

The annual Store Systems Study that we do with RIS News (*The Brave New World of Unified Commerce*) serves as a source of some of the data we use for this study. Simply, we ask hundreds of retailers about their spend plans and preferences for a wide assortment of IT for the coming years. This data is aggregated by retail tier and by retail segment, and the overall report represents the very first retail IT study released each year, corresponding with NRF.

Our Mobile POS Hardware Vendor Market Share product also serves as a source for data for this study. This product is very data intensive and can go as deep as shipments by segment by region by operating system or processor-type. The data is also available simply in aggregate by vendor worldwide or by individual region. Included are historical data back 2 years and projections forward for the next 6 quarters by vendor.

Our Sophia Data Service also provides some of the foundation for this study. Sophia is by far the most comprehensive source of not just validated leads, but key wisdom for smart decisions in the retail industry. In addition, we use our WorldView product to get a handle on market sizing and forecasts.

Our hope is that vendors and retailers can utilize the data contained herein to track and regain lost revenues by fixing these issues. . For more information on this study, please see our website or contact us at +1.615.591.2955.

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