

MARKET STUDY:

2011 North American Self-Service Kiosks

Analysts
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IHL Group is a global research and advisory firm specializing in technologies for the retail and hospitality industries. The company, based in Franklin, Tenn., generates timely data reports, offers advisory services and serves as the leading retail technology spokesperson for industry and vendor events.

What We Do

IHL provides customized business intelligence for retailers and retail technology vendors, with particular expertise in supply chain and store level systems. Our customers are retailers and retail technology providers who want to better understand what is going on in the overall technology market, or wish to identify specific equipment needs for the retail market.

When We Started

Greg Buzek served as Product Development Manager for two Fortune 500 retail technology suppliers for 6 years. Faced with making recommendations to senior management with spotty reports stuffed with technical jargon and unsubstantiated data, in 1996 he left to form IHL Group as an arms length consulting firm that delivers exacting research to corporate managers.

How We Work

Reliable market analysis is essential for corporations to accelerate revenue and expand their market share. Most research providers do not disclose data sources or statistically defend the validity of their assumptions. We do. We disclose in precise detail exactly how and why we reached our conclusions so that our customers can be comfortable with the data they are using.

What We Know

Our associates and advisors have over 100 years combined years of retail technology experience. Our associates have worked as product managers, sales representatives and executives in the retail market. We have the relationships, tools, and experience to meet your research and consulting needs.

Table of Contents

Introduction6
 Introduction6
 Self-Service Kiosks Defined7
 Self-Service Basics9

1. Current Trends/Challenges in Kiosk Systems11
 1.1 Can Kiosks be Leapfrogged?.....11
 1.2 Labor Challenges12
 1.3 Improved Customer Service12
 1.4 Are DVD Kiosks at Risk of Plateauing?13
 1.5 “Someday You’ll Thank Me for This” and Other “Lies” Our Parents Told Us14
 1.6 Big Boys Have Entered the Fray14
 1.7 Return on Investment?.....15
 1.8 Where is Travel Going?15
 1.9 Security Concerns16
 1.10 Pay at the Table.....16
 1.11 The Technology is Great, But.....16
 1.12 What About Digital Signage ?17

2. 2010 Self Service Market Share18
 2.1 Shipments by Device Type.....18
 2.2 Installed Base by Device Type21
 2.3 Estimated Kiosk Revenue Turn22
 2.4 Forecast Shipments.....22
 2.5 Forecast Installed Base23
 2.6 Forecast Revenue Turn23

3. Best Practices in Self-Service Kiosk Types24
 3.1 Self-Checkout Systems.....24
 3.2 Ticketing Kiosks.....28
 3.3 Check-In Kiosks32
 3.4 Food Ordering Kiosks.....34
 3.5 Postal Kiosks37
 3.6 Other Retail Kiosks.....39
 3.7 Future Kiosks41

4. References.....42

List of Figures

Figure 1 – Overall Shipments by Device Type 18
Figure 2 – Overall Shipment Growth by Device Type..... 20
Figure 3 – Estimated Software Lifecycle 20
Figure 4 – Installed Base Growth by Device Type 21
Figure 5 – Estimated Kiosk Revenue Turn by Device Type 22
Figure 6 – Shipment Forecasts by Device Type 22
Figure 7 – Installed Base Forecasts by Device Type 23
Figure 8 – Revenue Turn Forecasts by Device Type..... 23

INTRODUCTION

Introduction

Retail customers today want value, choice and speed. In today's fast paced lifestyle, time is the most important commodity. In a market where self-sufficiency often reigns supreme and time is at a premium, new self service technologies are emerging that will revolutionize the way we shop for goods and services. The Internet taught consumers how to select and pay for products on their own. This same technology is now moving into traditional retail outlets, and there are some interesting findings already in the field.

- NCR claims that customers spend 2 or more days per year waiting in line.
- According to SNL Kagan, kiosk-based DVD rental revenues peaked in 2005 and by 2010 had declined by nearly one-third.
- Interestingly, only 27% of respondents to a recent Summit Research Associates survey indicated that their rationale for deploying kiosks was *Revenue Generation*. Less than 5% indicated *Create a New Channel*, and 12% said *Reduce Costs*. Over 50% said *Provide Information*.
- KioskCom claims that retailers see a 6-8% increase in incremental sales when they add kiosks to their stores.

In the preparation of this study, we found that one of the overwhelming issues industry-wide is the decided lack of consistency in nomenclature for the various types of kiosks. In some circles, there is no distinction between a kiosk that performs full transaction processing features (such as a self-checkout system in Kroger) and one that simply serves as an information provider. Further, some retail publications make no distinction between a self-standing technology-based kiosk and a small portable "manned" kiosk such as is found in shopping malls (Dippin' Dots, Sunglass Hut, etc).

To help resolve some of the confusion, for this report we will adopt the convention wherein a kiosk refers to the former, namely, a self-standing technology-based unmanned device. We will address five specific types of Self-Service Kiosks (plus an "Other" category) that are deployed in various retail, travel and hospitality settings.

The rationale for kiosk installation varies from retailer to retailer, but there are some common findings across deployments. From previous IHL reports, we know that Self-Checkout installations at Kroger, Albertson's and others suggest that anywhere from 15-40% of the daily transaction volume and 12-30% of the daily dollar volume of these stores are now being handled by Self-Checkout machines. This is an upward trend. In the case of Check-in Kiosks, airlines such as Southwest, Northwest and Delta claim that

domestic check-in takes as little as 30 seconds, and that as much as 70% of all passengers use these kiosks for check-in. Continental Airlines notes that times with no bags to be around 30 seconds, but only increasing to 66 seconds with bags as well as a 66% customer usage rate. Given the severe focus on customer service, both by those serving and those being served, these numbers indicate that appropriate use of kiosks offers significant return, whether in financial or customer appreciation/loyalty terms.

The beginning of the report addresses the trends and challenges of such devices in the retail/hospitality/travel industries. The report then moves to the quantitative functions of the Self-Service market (Shipments, Installed Base, and Market Value) and presents four-year forecasts for each. In the body of the report, we begin to focus on the particular kiosk types, why they have been implemented, who they target, and the best in class as of this writing. We place a special focus on how payment is accepted and methods for improving card acceptance.

We conclude the report with a Look to the Future. In other words, we take what we currently see happening in the Self-Service Kiosk arena, and extrapolate it years into the future. Granted, some of this may seem a little H.G.Wells-ish or Orwellian. Then again, who, in 1984, would have thought that in 2011 you could walk into a grocery store and not only pay for your groceries with a credit card, but do so without a cashier ever touching your groceries?

Self-Service Kiosks Defined

It should be noted that at the time of this writing, there appears to be very little readily available public data that segregates kiosks by function. Most documents and articles simply refer to “kiosks” without differentiating between a kiosk system that has complete payment acceptance functionality and a listening kiosk with no payment acceptance whatsoever.

For the purpose of this report, we will look at six types of self-service kiosks that are found in the retail and hospitality environments. Granted, there are many other types of kiosks found in retail and hospitality settings, but these are the ones that lend themselves most readily (either currently or in the near future) to payment acceptance.

1. **Self-Checkout** – We define Self-Checkout Machines as computerized systems that allow shoppers to purchase tangible products unassisted (including full payment) in a retail setting. This includes a measure of security built into the unit that may be based on cameras, scales, beams, or other electronic means. We have limited this definition to include only those systems that handle tangible consumer products.

2. **Ticketing Kiosks** – We define Ticketing Kiosks as those kiosks found at airports, amusement parks, bus terminals, parking, movie theatres and subway/train stations that enable the customer to purchase a ticket for a ride or movie. These are distinct from Check-In Kiosks (described below) in that Ticketing Kiosks are a “first-contact” type of device, meaning that these kiosks may serve as the first payment point for a customer. This having been said, these devices may also serve as Check-In Kiosks from the standpoint that the customer may have already paid for their ticket elsewhere (phone order, web, etc). In this case, the device is simply used to provide a boarding pass, print the movie ticket, etc. The Ticketing Kiosk may therefore typically be a technically more complex system than a Check-In Kiosk.
3. **Check-in Kiosks** – We define Check-in Kiosks as those kiosks located in lodging or travel settings that confirm previous payment. They may essentially serve as a stand-in for a receptionist at a hotel, motel, lodge or resort and may have built-in functionality that provides a room key after a credit/debit/smart card has been authorized (the same card that was used to reserve the room). As mentioned above, these devices tend to be of a “second-contact” form, meaning that the customer has already “made contact” and tendered payment elsewhere (phone order, web, etc) before encountering this device.
4. **Food Ordering Kiosks** – We define these as devices that allow customers to place orders for food, either in a fast food, casual dining (for take-out), or in deli environments. These are distinct from ordering kiosks found in some casual dining settings, where the server enters information that is relayed to the kitchen; rather, these devices are used by customers to order their own food.
5. **Postal Kiosks** – We define these as devices currently located in US Post Offices that allow customers to mail letters and packages without the assistance of postal workers. These are distinct from vending machines in those same locations that simply dispense stamps.
6. **Other Retail Kiosks** – This group consists of a wide variety of transaction kiosks that may be found in retail or hospitality settings. The most notable in this group are DVD rental kiosks such as those offered by Redbox and NCR (who acquired TNR). We have chosen to not include in-store web-based kiosks (such as those found in Staples and Office Depot) since they typically consist of a standard PC with a persistent internet connection locked to the store’s eCommerce site, rather than a separately configured kiosk.

Self-Service Basics

Though features and design differ, Self-Service kiosks will have some common components. Units use a display (typically a touchscreen) to guide the customer through the process of purchasing goods or services. Typically there is a processing unit built into the kiosk, though sometimes the system may take the form of a thin client. Self-Service kiosks may appear to the customer to be stand-alone devices, but they are indeed networked to the in-store systems.

In the case of Self-Checkout Systems, customers simply scan (bar-coded) or weigh (non-bar coded) each item as the screen keeps a running tab of their purchases. The customer then bags the items. Bags are most often placed on scales or sent through a tunnel to verify the accuracy of the purchase and insure no items are stolen. An attendant keeps track of several units at a time, watching the process via cameras attached to the checkouts, verifying non-bar coded items and checking ID for age-related purchases (alcohol, tobacco, etc.). They most often use a nearby command center to care for all these activities. Attendants are also available to assist and instruct customers in the process.

Ticketing, Check-in, Food Ordering and Postal Kiosks are functionally similar to Self-checkout systems; all but the Postal Kiosks are typically smaller, mainly due to the need for scales, scanners, etc required for security. In the Self-checkout and Postal systems, security for the entire transaction is built into the unit. In each of the other kiosks, security for the transaction is shared by other devices or personnel (the fast-food worker has to hand over the food, the gate personnel has to check the boarding pass, etc).

Payment is accomplished using cash (using a coin or cash acceptor), credit/debit/smart card (using an EFT device) or check (using a check reader). Self-checkout systems can also double as convenient ATM machines.

Receipts, itineraries, tickets or boarding passes are printed at the unit, completing the transaction.

Self-checkout systems, due to their typically more complex transactions, require a remote attendant (usually one for every four systems) for monitoring proper use of the device. Other kiosks require no such support.

Kiosks can usually integrate well with current POS and back office software through pre-designed conduits or available configuration toolkits. Purchase information is interpreted as a regular transaction by the retailer's POS software.

Self-Service Basics

<i>Description</i>	<i>Price</i>
<i>2011 North American Self Service Kiosk Market Study</i>	<i>USD \$995</i>

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