VDC Research Group
Automatic Identification and
Data Collection Practice

An Executive Brief

KIOSKS FOR SELF-SERVICE AND INTERACTIVE APPLICATIONS:

Technical and Vertical Market Analysis, 2nd Edition

Prepared by:

Rory Gardner, Research Associate
Andrew Nathanson, Director

Automatic Identification and Data Collection Practice
VDC Research Group, Inc.
January 2008

This executive brief presents top-level findings from VDC Research Group's (VDC) study, *Kiosks for Self-Service and Interactive Applications: Technical and Vertical Market Analysis, 2nd Edition*. The report defines and analyzes the global market for self-service and interactive kiosk solutions and components

VDC defines a self-service and interactive kiosk solution as a freestanding, interactive multimedia system used to provide information or enable transactions between the consumer and enterprise end user. A kiosk is typically comprised of a computer, display screen and application specific components (input and output). Kiosks are typically designed to service a specific application, or set of applications, within a public forum.

VDC segments the self-service and interactive kiosks market as follows:

Complete Solutions

- Self-Service and Interactive Kiosks
  - Transactional
  - Informational
  - Single Station
  - Multi Station
  - Micro/Mini Kiosks
- Self-Checkout Stations

Input Components

- Displays
- Keyboards/Keypads
- Bar Code Scanners/Engines
- Card Readers
- Electronic Signature Capture
- Coin/Bill Acceptors/Dispensers

Output Components

- Printers
- Coin/Bill Acceptors/Dispensers

Emerging Technologies

- RFID Technology
- Biometrics Technology

Software

- Operating Systems
- Application Software
- Middleware
- Remote Management System

VDC also provides an overview, definition, and key considerations for the following regions, vertical market and distribution channel segments:

Regions

- <u>Americas</u>: Argentina, Brazil, Canada, Chile, Mexico, United States, Venezuela;
- <u>EMEA:</u> Benelux, Eastern Europe, Egypt, France, Germany, Israel, Italy, Scandinavia, South Africa, Spain/Portugal, Switzerland/Austria, Turkey, United Kingdom/Ireland; and
- <u>Asia-Pacific</u>: Australia/New Zealand, China, Hong Kong, India, Japan, Korea, Singapore, and Taiwan.

Vertical Markets

- Retail
- Hospitality and Commercial Services
- Health Care
- Government

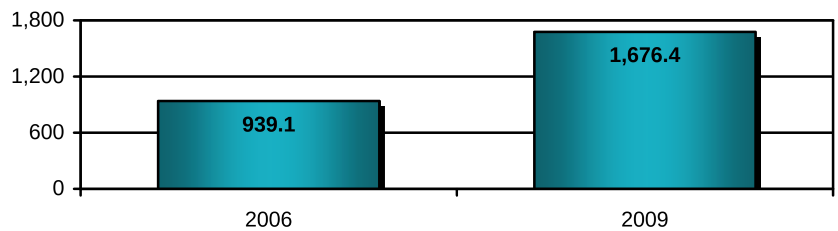
Distribution Channels

- Direct
  - Direct-to-end user
  - Direct-to-OEM/Private Label
- Indirect
  - Value-added reseller (VARs)
  - Value-added distributors (VADs)
  - System integrators (SIs)
  - Dealer/Distributors (D/Ds)

MARKET ANALYSIS

In 2006, the market for complete kiosk systems approached $940 million. VDC is anticipating the market to continue to grow at a compound annual growth rate (CAGR) of 21% through 2009, when it will approach $1.6 billion. Total units for complete kiosk systems are anticipated to almost double by 2009.

Exhibit 1
Forecasted Global Shipments of Self-Service and Interactive Kiosk Solutions
(Millions of Dollars)



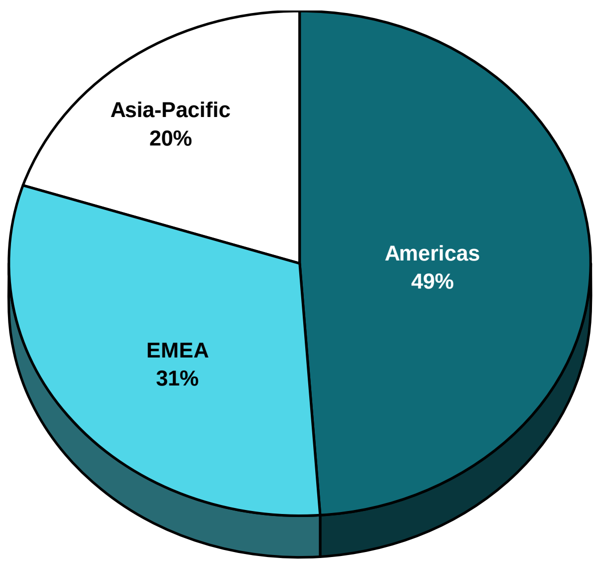
Regionally, the kiosk market in the Americas represents nearly 50% of total global revenues. The Americas position within the kiosk market is a result of several factors, including the overall size of the region and its core kiosk markets, society's increasing reliance on – and acceptance of – self-service technology, and rising end-user comfort levels (for using the technology). The EMEA region is expected to undergo the strongest growth over the next five years, with investments being driven by government involvement, increasing populations of 'tech savvy' consumers, and an expanding kiosk footprint.

Suppliers are very optimistic about the Asia-Pacific region due to economically developing country markets such as China and India; however, the region has higher barriers to entry, including:

- The requirement of domestic channels – the preferred way of doing business is with local suppliers;
- Strong and dense competitive landscape, including high concentrations of entrenched domestic suppliers; and
- Low labor costs that correlate to a highly price sensitive and competitive marketplace.

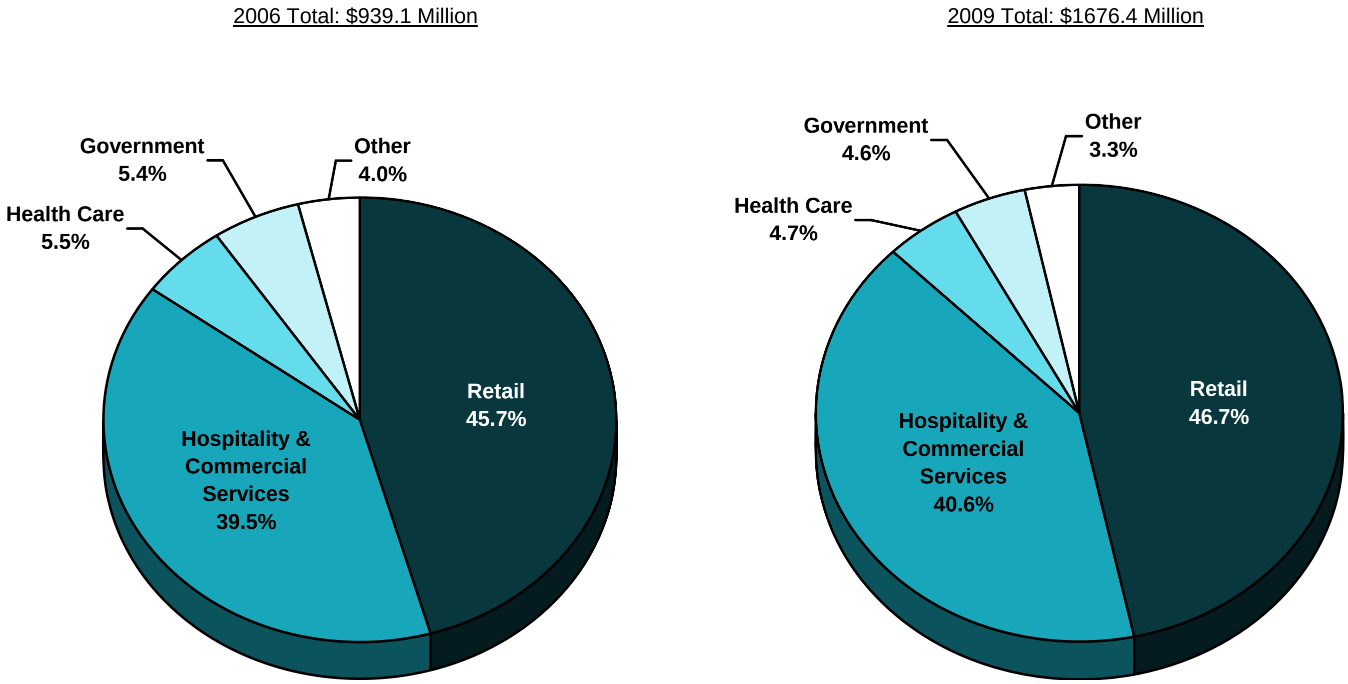
Exhibit 2
Forecasted Global Shipments of Self-Service and Interactive Kiosk Solutions Segmented by Region
(Percent of Dollars)

2006 Total: $939.1 Million



Approximately 85% of the global kiosk market is represented by the retail and commercial services (i.e., airlines, hotel/motel, and entertainment/gaming) vertical market segments. Due to its wide range of applications, adoption rates, and a continuing need to reduce labor costs, retail is expected to remain the leading vertical for kiosk investment and deployments. The retail kiosk market is driven primarily by transaction-based applications such as loyalty programs, DVD rental, bill pay, gift cards, and photo development. Unlike retail, growth in the commercial service vertical will be driven by both transactional- and informational-based kiosk solutions, with leading applications including transportation, ticketing, queue busting, and access to public information.

Exhibit 3
Forecasted Global Shipments of Self-Service and Interactive Kiosk Solutions Segmented by Vertical Market
(Percent of Dollars)

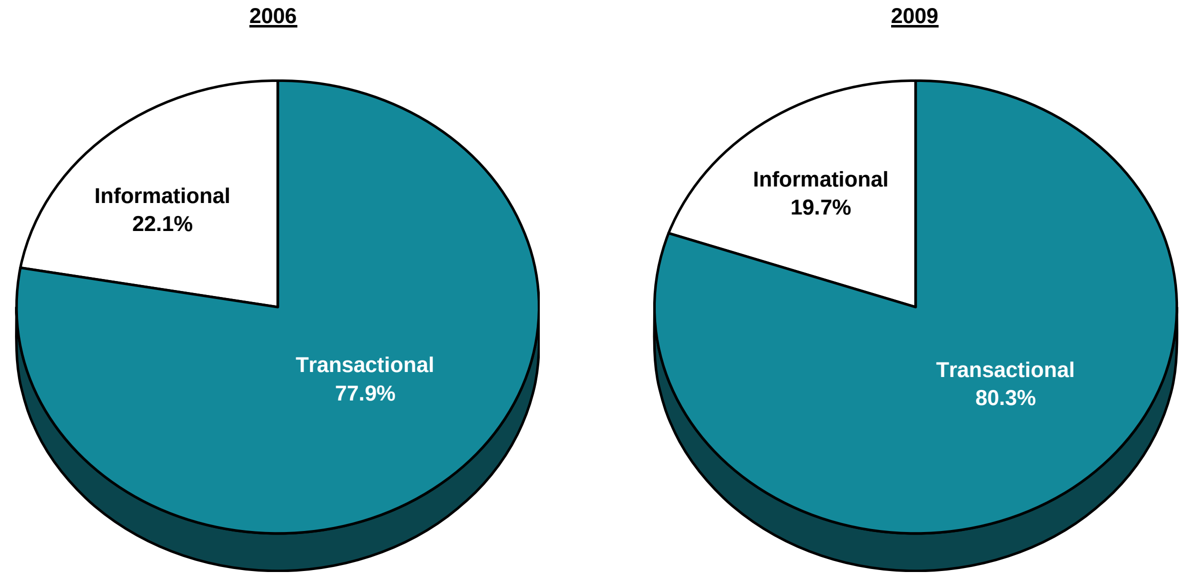


Transaction-based kiosks systems currently account for 78% of all kiosk deployments worldwide and will continue to represent the majority of deployments as enterprise end users increasingly rely on self-service solutions to:

- Enhance customer service;
- Improve operational efficiency;
- Generate revenue;
- Differentiate from competition; and
- Keep pace with technological innovation.

Once the consumer becomes comfortable with (and trusts using) the technology, enterprise end users will be able to place more information on and conduct more transactions with interactive kiosk solutions. This trend is expected to give rise to more deployments of 'hybrid kiosks' that are capable of servicing multiple applications on one device.

Exhibit 4
Forecasted Global Shipments of Self-Service and Interactive Kiosk Solutions Segmented by Type of Solution
(Percent of Dollars)



The more prevalent issues, forces, and trends impacting the current and future global kiosk market include the following:

- The search for another killer application such as airline self-check-in and retail self-checkout is the focus of many kiosk suppliers. Signs of strong future growth are being observed in applications such as:
  - Queue busting and pre-ordering;
  - Loyalty card-based specific marketing;
  - Hotel check-in/out;
  - Human resource management; and
  - DVD rental/burning/downloading.
- The average kiosk deployment is a rather arduous task due to the extremely high learning curves, level of customization (hardware, software, and services), and the typical demand for significant piloting or beta tests prior to rollout. Common deployment schedules are as follows:
  - Pilot test (6-12 months);
  - Second generation deployment (12-24 months); and
  - Full deployment >24 months;
- In most cases, enterprise end users will contact a complete solution provider. Hardware and software suppliers are rarely the first point of contact for the enterprise end user, with the exception of large tier 1 accounts. The total solution/value-add providers have a tendency to serve as 'gate-keepers' to their accounts, frequently influencing the decision-making process for which hardware and software suppliers will be used;

- Suppliers are witnessing a trend toward increased customer demand for larger displays. Continued technological advancements, decreasing price points, and customer comfort levels are influencing deployments of 19", 21", and even 23" displays on interactive kiosks. Mini/Micro kiosk suppliers are also observing a similar trend regarding demand for larger screen sizes, but will eventually reach a limit due to form factor restrictions;
- Micro/Mini kiosks have taken the use of bar code scanners and engines to new levels. Micro/Mini kiosks have added the functionality to allow consumers to not only check prices of items but compare products, learn about products, receive retail promotions, and interact through loyalty programs;
- There is a growing trend within the kiosk industry to implement card readers instead of cash acceptors/dispensers for the majority of transaction-based solutions. This trend, which is an extension of the growth of card-based payments in general within industrialized nations, is the result of the lower cost, smaller form factor, and ease of integration/support associated with card-based components. Recently, a number of component manufacturers have begun supplying displays, signature capture devices, and bar code scanners equipped with integrated card readers. This trend exhibits the ubiquity of card-reading solutions; and
- Thermal printers are undeniably dominating the kiosk printer market due to the high usage of receipt printers in kiosks and self-service checkout stations. In particular, direct thermal continues to overshadow all other technologies, largely due to its competitive pricing, ease of integration, limited components and low consumable cost.

ABOUT THE STUDY

VDC Research Group's 2007 *Kiosks for Self-Service and Interactive Applications: Technical and Vertical Market Analysis, 2nd Edition* is a continuation and expansion of research initiated in 1995 with the publication of VDC's first kiosk market analysis: *The US Market for Interactive Kiosks: New Horizons for Advanced Computing Technology*. In the 2nd Edition, VDC provides separate chapters analyzing the three regional markets (Americas, EMEA, Asia-Pacific). Moving forward, *Kiosks for Self-Service and Interactive Applications* will be grouped in the *Retail Automation Equipment Planning Service*.

ABOUT VDC

VDC Research Group (VDC) is an independent technology market research and strategy consulting firm that specializes in a number of retail automation, RFID, AIDC, embedded, component, industrial, and defense markets. VDC has been operating since 1971, when the firm was founded by graduates of the Harvard Business School and Massachusetts Institute of Technology. Today, we employ a talented collection of analysts and consultants who offer a rare combination of expertise in the market research process; experience in technology product and program management; and formal training in engineering and marketing. VDC's clients include thousands of the largest and fastest-growing tech suppliers in the world and the most successful investors participating in the markets we cover.

For more information about VDC's *2007 Kiosks for Self-Service and Interactive Applications: Technical and Vertical Market Analysis, 2nd Edition*, contact:

Rory Gardner, *Research Associate*, AIDC/RFID Practice, 508.653.9000 ext. 149, rgardner@vdcresearch.com

Andrew Nathanson, *Director*, AIDC/RFID Practice, 508.653.9000 ext. 125, andrewn@vdcresearch.com

For purchasing/pricing information, contact:

researchinfo@vdcresearch.com | 508.653.9000