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Kiosk Industry Sector Report – Retail

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I. Report Organization

This Fourth Edition of our retail kiosk report, covering the largest sector of the kiosk industry—and the one with the most long-term potential—consists of three sections. The **Introduction, Projections and Trends** covers an overview and discussion of current and emerging trends in this fast-growing segment. This is followed by **Survey Results**, which includes the data summarization and charts derived from an extensive international survey Summit conducted during 2003 and early 2004. The survey responses were limited to those companies—and only those companies—who have deployed retail kiosks in their stores. Statistics included in this section are the average price of a retail kiosk, the average length of time a customer stays at the kiosk and 10 other charts of importance both to existing and potential players in the retail kiosk industry segment as well as to those companies exploring the feasibility of deploying the units.

The third section consists of in-depth **Case Studies** of leading and innovative projects both in the US and internationally. Summit staff personally evaluated these kiosks between November 2003 and August 2004. We focused on the leading types of retail kiosks: digital photography, music listening, movie ticketing, Quick-Serve Restaurant ordering, product information and ringtone downloading. In many cases, the kiosk was tested on more than one occasion; usually at the same location. In several instances, the same retail kiosk was tested in a different city or state. We observed and later interviewed kiosk customers.

Furthermore, we questioned store employees about their own experiences with the kiosks, customer interactions they observed, problems that were encountered and other relevant topics. The input received from these employees cannot be overstated. Even when they demurred, saying they knew nothing about *that thing*, they were surprisingly perceptive concerning customer behavior—usage, acceptance, tolerance and frustrations. Several photographs of each retail kiosk are included: one of the unit itself along with a few representative screen shots of the software application.

II. Introduction, Projections and Trends

Even during the economic downturn, retail kiosks were the one bright spot in an otherwise dismal economy. Now that the world economy is on its way toward recovery, retail kiosks continue to lead the way. Of the eight distinct market sectors in the kiosk industry, retail is both the largest and fastest-growing. Nearly one-third, 31 percent, of all kiosks fall into the retail sector, with many exciting projects underway or well along in the planning process. There is nothing on the near or long-term horizon to indicate any other industry sector will overtake retail as the most popular and widespread type of kiosk.

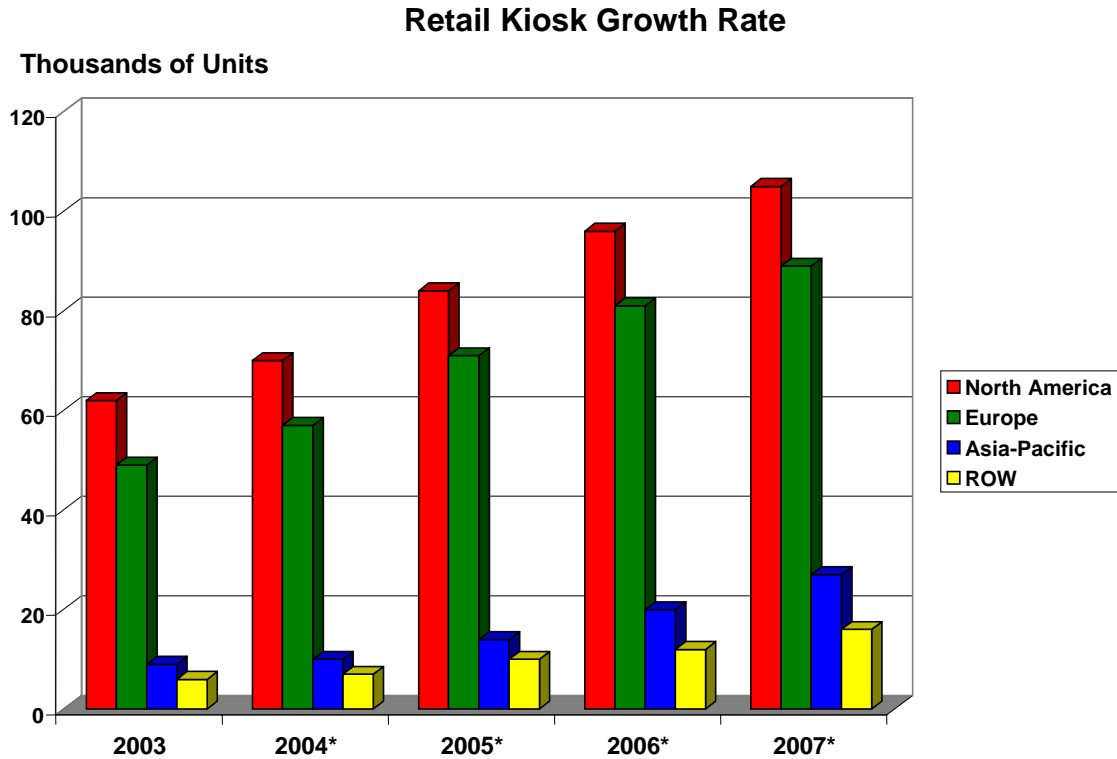
The *dot com* meltdown reduced the number of companies operating exclusively on the Web but those that remained have become major players in the retail space. Amazon and eBay are two prime examples. Kiosks continue to be an effective way to leverage company Websites, but the caveat issued several years ago remains: *If you think the secret to retail kiosk success is to take the company website and port it unchanged to a kiosk, think again.* This report includes some examples of interfaces that were first developed for the Web, and then were effectively *modified* for use on self-service devices. (Other Summit publications, notably *Internet Kiosks: Best Practices*, delve deeply into the different methods for achieving success in kiosk deployments.)

Current ROI and Growth Projections

Although retailers do not like to divulge their ROI, some impressive figures are found in the kiosk space. An international retail consultancy stated that office supplies giant Staples realized a six to eight percent increase to incremental sales when they added kiosks to their stores. Their net benefit is \$40M a year on a \$10M initial investment.

As Summit reported in the 2004 version of their flagship report, *Kiosks and Internet Technology*, the North American marketplace represents the most growth and innovative projects for all types of kiosks. As consumers grow more comfortable with making purchase decisions on kiosks, the number of kiosks in North American retail locations will grow 69 percent to 105,000 by 2007; up from 62,000 in 2003. Retail is the biggest category within that expansion, and the rising consumer acceptance of kiosks is driving that growth. Although the North American market encompasses both Mexico and Canada, we expect the majority of the expansion to occur within the United States.

The future for retail kiosks is bright. We project that the number of kiosks in North American retail locations will rise 13 percent this year to 70,000, then jump 20 percent in 2005, when there will be 84,000. The growth rate will slow somewhat in the following two years, we expect a rate of 14 percent in 2006 and nine percent in 2007. Worldwide, the growth for retail kiosks can be seen in **Figure 1**.



Source: Summit Research Associates, Inc., 2004

Figure 1. Retail Kiosk Growth Rate

By comparison, Europe's number of retail kiosks will grow slightly faster, rising 16 percent this year to 57,000 from 49,000 last year, then rising 25 percent next year to 71,000, before slowing down to a growth rate of 14 percent in 2006 and 10 percent in 2007. Europe will have 89,000 retail kiosks by 2007. The reason? Certain high-flying sectors (notably digital photography, CD/DVD preview and QSR ordering) have yet to make much of an impact in Europe. That day will come and kiosk installations will take off accordingly.

Leading Trends

Since we published the Third Edition of *Kiosk Industry Sector Report – Retail* in 2003, there have been several major advances—and successes. In addition to the increasingly popular digital photography kiosks, self-checkout, ringtone preview and download units, DVD trailer and music preview kiosks are also being installed in a variety of retail locations. Many of these settings are not where conventional wisdom would place them— at major retailers—instead, small stores are playing host to a growing number of these units. Another positive change is that many of the deployments at leading retailers are not consisting of just one or two per store. Units such as music listening devices (frequently 20-30 per location) are mounted on shelves, walls and poles in stores ranging from Wal-Mart to Barnes & Noble bookstores. A few retailers offer even more; a Barnes & Noble flagship store at Union Square in San Francisco has installed more than 60 units.

The deployment of digital photography kiosks is growing, especially in locations that already have set up one unit. The leading manufacturers report that the biggest share of their new business involves installing multiple units in locations that had previously put it just a single device. More and more people are buying digital cameras (for the first time in 2003, sales of digital cameras exceeded sales of film cameras in the US) and they quickly discover that printing pictures at home is cost-prohibitive and risky. Many people print color prints on ordinary laser printer paper to save money, or because they think paper quality doesn't matter. They find out to their regret that these prints start to fade away in as little as four months.

Other notable changes involve Digital Signage. We do not mean the very popular but passive units (that do not **actively** involve the customer) such as those manufactured by Cool Signs; units that are large TV-like screens showing advertisements or movie trailers. Nor do we mean large screens, commonplace in subway stations in Europe and Asia, showing advertisements. These units reach a captive audience who can spend many minutes waiting for their public transportation to pull into the station but are a one-way form of user experience. We are referring to *interactive* signs that are marketing kiosks. These are large units—such as those that will be discussed in the *Touch'N-Go* case study—that show brief movie trailers, character summaries of the movies being promoted, interactive games that patrons can play to win prizes and other activities that actively engage the prospective movie-goer.

C-Stores and QSRs

C-store leaders including Sheetz and Royal Farms acknowledge that food-ordering kiosks in their Quick Serve Restaurants (QSRs) have contributed impressively to the restaurants' bottom line in several ways. The average number of customers per day varies from 300 to 600, depending upon the size of the store and the number of kiosks. The average sale per customer has increased, while at the same time their personnel expenditures and even their food costs have decreased. The stores are able to provide better and faster service with less employees, essentially eliminating the order-taker position.

Food costs have decreased because each order is accompanied by a precise recipe for building that food item. For example, if a customer orders a tuna submarine sandwich, the kiosk not only processes the order and offers the customer several *upselling* opportunities, but it also produces an exact "recipe" for the sandwich maker. A person ordering a tuna sub with lettuce, tomato, olives and mayonnaise is issued a receipt and order number which he takes to the checkout counter to pay, obtain his beverage and then wait for his order. The sandwich maker not only receives that order but also gets an exact "recipe" for building that sandwich. The recipe lists the precise number of pieces of lettuce and slices of tomato to be placed on the sandwich, the exact quantity of tuna salad and mayonnaise to be spread on the bread, and even the **exact** number of olive slices to be added.

In some cases, the average purchase per customer has increased by 30 percent. How has the kiosk helped to produce this impressive figure? Through the use of upselling. Although the famous McDonald's question—*Do you want fries with that?*—has taken on

a life of its own, it remains a good example of trying to upsell the customer. The customer orders his tuna sub but the kiosk asks him if he would like to order two at a greatly reduced price. If he declines, the kiosk then asks if he would like to obtain a large soft drink and a choice of salad, chips or fresh-baked cookies for only an additional \$1.59. The items are appealingly pictured on the touchscreen and many customers (including Summit kiosk evaluators) have opted for the additional food. Upselling, as described in the **Case Studies** section of this report, is successfully enticing customers to buy more than what they had originally intended. It is a win-win situation for both customer and retailer.

The kiosks can make long lines seemingly disappear. A popular sandwich store in downtown Philadelphia previously employed one order taker. It was not uncommon to enter the store and see as many as 20 customers waiting to place an order. Many customers simply gave up at this point because they did not want to wait that long just to place their food order. The sandwich store replaced the single order taker (he was moved to the back of the store and retrained as a sandwich maker) with four kiosks. Now, when people entered the store, they found five people in each line. While there were still 20 people waiting to place their order, the customer did not see it that way at all; *he saw a short line of only five people* and happily came inside to join one of the queues. Not surprisingly, the ROI on the deployment of the kiosks was quickly reached.

The single most important reason that the QSR usage statistics are so impressive is that the customer is given no choice. **If he wants food, he will have to use the kiosk. There is no alternative.**

McDonald's is also actively pursuing the food-ordering kiosk initiative, with pilot projects underway in Illinois, Denver, and North Carolina. Additionally, there are international tests in progress in France, Australia and Japan.

Self-Checkout Units

More self-checkout units are being installed worldwide, especially in North America. One of the Case Studies in Summit's 2003 retail report shows that these expensive and complex devices continue to pay for themselves in a matter of months. Growing numbers of people enjoy using them and believe (erroneously) that the units allow them to get through the check-out process faster than if a paid employee performed that function. These days, many people head straight for them, avoiding the human checkers. Nevertheless, they are not foolproof and several people interviewed for this report, including some who are highly-educated and quite computer-literate, find them frustrating. They complain that there are insufficient instructions provided and that error messages are confusing. Self-checkout units work successfully when the store assigns an employee to oversee up to four units and can come and immediately resolve a customer problem. Once people are shown how to use them, the fear, uncertainty and doubt is quickly erased.

Line Busters

The Philadelphia sandwich store example mentioned above is a classic line-buster illustration. The US Postal Service's Automated Postal Center (APC) is another excellent case in point. The USPS is installing the kiosks only in locations that are very busy and where people can sometimes wait up to one-half hour before they can mail a package or purchase stamps. Furthermore, the postal employees are doing a good job in getting customers to try to units, especially if they are short on time. (The APC is discussed extensively in the Case Studies section of this report.) Many find success by having an employee pull people out of line to use the kiosks. This has been effective for years at banks, where the phrase "If you are only making a deposit, come with me" has been effective in reducing the queue. This technique has also been successfully used to introduce people to airline check-in units.

Cost and Headcount Reduction

The airline check-in kiosks pay for themselves in a short time. Not only is the average number of users high and growing higher every day, but the cost to process a boarding pass on the kiosk instead of with a gate agent is dramatic. The average cost to process a boarding pass is **\$3.68** when an airline employee conducts the transaction. The cost drops to **\$0.16** when it is done at a kiosk.

The Amtrak ticketing kiosks are amazingly successful. After the kiosks were installed in 1997, significant numbers of ticket sellers were either laid off or left through attrition. The company reports that 70 percent of New York City customers now use the kiosks to obtain their tickets. Although most of their units experience a lower average number of users per hour, a single kiosk in New York City's Penn Station registered 80 customers in **one hour**.

As mentioned above, the QSR kiosks have achieved considerable cost savings by tightly controlling the quantity of ingredients used to assemble their sandwiches. Not only does the use of *build recipes* guarantee product consistency, but savings are derived through the use of exact portion and ingredient control.

The ugly little secret surrounding many retail kiosks is that they often are deployed in order to reduce employee headcount. Rarely will anyone publicly admit this reason. Instead, management uses other excuses for kiosk deployment or spout *politically correct* phrases such as *we are re-purposing our employee base* to hide the real motivation. After all, this was the primary reason that the airlines embraced the self-check-in units.

Some movie theaters are able to eliminate most of their often-unreliable teenage ticket sellers by converting to ticketing kiosks. The Famous Players chain of movie theaters in Canada has retained one human ticket seller and typically installs five self-serve ticketing kiosks at each new mega-theater complex it opens.

Sales Increases

CeroView built kiosks for a teeth-whitening process called BriteSmile. The unit shows the before and after look the customer will have after undergoing the process. An incredible 98 percent of the customers sign up for the procedure after viewing themselves on this kiosk.

Amtrak reports revenues of \$330M per month generated through the self-service devices. The number of users is constantly increasing, along with the daily dollar volume. The success story is made even more remarkable by the fact that the company has done very little to promote the use of the kiosks or the benefits to be derived from them. And there is no real signage on the kiosks to call attention to them. By observing the many people who use them, prospective passengers see for themselves how quick and easy they are to use and those reluctant to try the new technology are often helped by the kiosk *veterans*.

Borders Books has 3,000 units, averaging three kiosks per store. (As many of half of the units are not housed in kiosk enclosures but look like a PC.) Fifty percent of their customers are there to buy a gift; 80 percent of their SKUs are Quantity One. More than 1.3M searches PER WEEK are conducted on the *Title Sleuth*TM units; this figure usually doubles during the Holiday season. They are adding *Out of Print* applications.

- Customers spend 1.5 times more than non-kiosk users.
- They make more unplanned purchases.
- They are much more likely to use borders.com.
- It is recognized by customers as well as non-customers as a unique service in retailing.
- The company is looking to improve software and enclosure; more than 50 percent of use is from the non-enclosures—the PCs with the Title Sleuth app.
- Future plans include going into Airports.

Secret to Success

Retail kiosks, perhaps more than any other industry sector, require the *buy-in* of the store employee. This is not news; we have been stating this fact for years. But it bears repeating since so many kiosks do not enjoy the success they could because the employees either perceive them as a threat, or —almost as detrimental— ignore them and let customers fend for themselves. Several case studies will illustrate this point.

If employees take the time to show customers how to use the kiosk, they make an investment in the future. People frequently need a bit of encouragement to overcome their fear of using unfamiliar technology. Retailers who understand this concept and build (and insist upon) employee-customer interaction into their deployment plans will reap the long-term benefits.

III. Survey Results

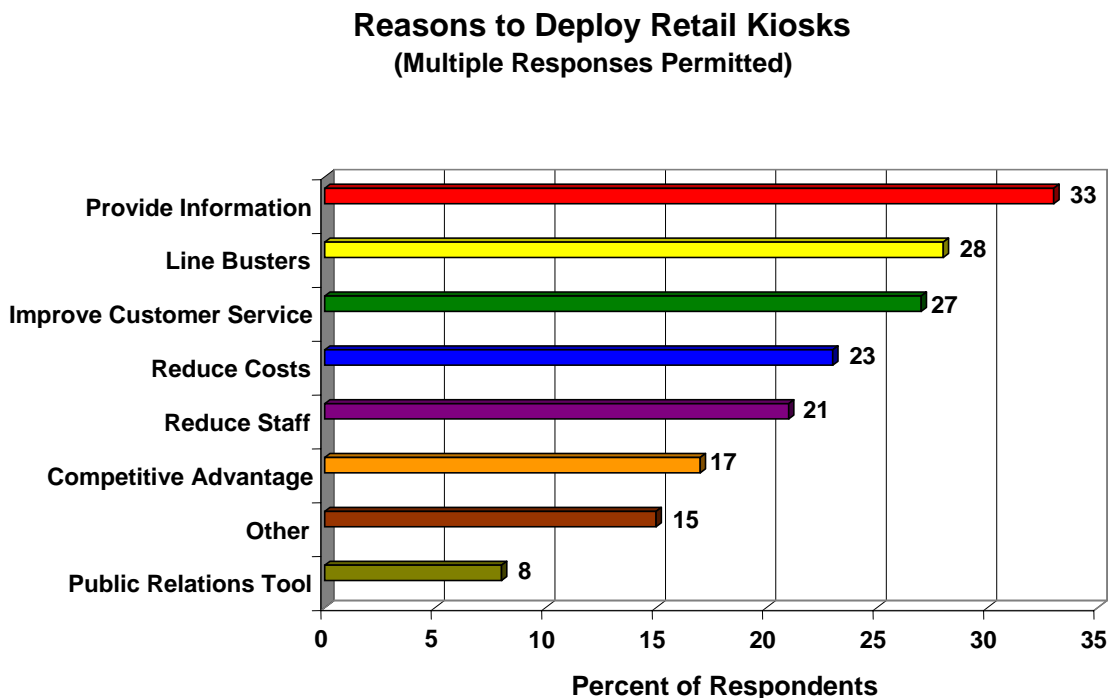
Summit researchers contacted several hundred companies who are actively engaged in the retail kiosk sector. Companies still in the “thinking” stage about putting retail kiosks into their stores were not included in the final statistics. Unquestionably, retail kiosks continue to be the fastest-growing segment of the kiosk industry, and many projects have finally started to move from the pilot phase into impressive deployments.

Each chart will include summary information to further clarify the data. The statistics are aggregate results and where the average might seem higher than expected, an explanation will be provided.

Reasons to Deploy Retail Kiosks

Why are so many retail kiosks being installed worldwide? There are many reasons. **Figure 2** illustrates the survey results. (Note that respondents were allowed to list more than one reason.) Using the kiosks to provide product information remains the leading reason; 33 percent said this was their chief motive for installing kiosks at their retail locations. Year after year, the kiosk as an information tool has been the leading rationale. Enlightened retailers will steer customers to the kiosk to gather information, answer questions, and “shop” while they are working with other shoppers. (See the Mazda Interactive Showroom and the Home Depot Faucet Case Studies as positive and negative examples.)

Deploying the kiosks as *line busters* is a growing reason—27 percent said it was why they have installed kiosks—they are being installed in many locations. People hate to wait and if they can be steered to the kiosk for a successful business transaction, everybody wins. It is important for the retailer to be proactive and encourage people to try the kiosk if they are to be successful. Airlines frequently use their gate agents to ask for volunteers to use the kiosk to check in and obtain their boarding pass and get out of a long line. Similarly, US Postal Service employees are using the same tactic to introduce customers to the new Automated Postal Centers. (See the Case Study on this type of kiosk.)



Source: Summit Research Associates, Inc., 2004

Figure 2. Reasons to Deploy Retail Kiosks

Improving customer service, a goal of all retailers, was mentioned by 27 percent of respondents as another reason kiosks were being deployed. This rationale is closely allied with line busting and other goals for making the retail experience more enjoyable. The easier and more streamlined the shopping process becomes, the more likely the customer is to return.

Reducing costs, and thereby increasing revenue, not surprisingly, is a popular reason for kiosk deployment. Nearly one quarter of all respondents listed this goal. The dramatic cost savings realized when airline check-in units are deployed, as discussed in the previous section of this report, are a prime reason there is a growing trends towards utilizing these types of self-service devices.

Going in tandem with cost reduction is the use of kiosks to reduce the number of employees required. Twenty-one percent of survey respondents listed this as a reason they deployed kiosks. While this is a *touchy* subject, the truth is incontrovertible; kiosks, when used successfully, can reduce the headcount needed to do a particular task. Often this does not mean that employees are fired or laid off. Frequently, as was the case with the very popular Amtrak kiosks, the employee headcount is reduced through attrition.

Launching a kiosk project for competitive advantage also remains a popular reason; it was mentioned by 17 percent of the respondents. Sometimes the presence of the kiosks are not promoted *per se*; but word of mouth and successful user experiences help to draw more people to the stores that successfully employ them.

The **Other** category made up 15 percent of the responses. The reasons included: it offers an additional sales channel (along with the bricks and mortar store, the company website and the catalog); it enhances the retailer's loyalty program, and—in some cases—provides a unique shopping experience. The latter reason will be seen more and more in leading edge supermarkets that are starting to offer small self-checkout units on shopping carts along with sophisticated produce scanners that use cameras to identify—and produce a barcode—for up to 30 different types of apples, for example. Educating the staff is yet another reason given for the installation of retail kiosks.

Number of Retail Kiosk Users per Day

One of the charts that Summit clients are most interested in reflects the average number of users per kiosk per day. **Figure 3** shows the results. Borrowing from a popular recent movie, the mantra of kiosks is: *If you build it, will they come?* To this must be added: *And if they come, will they use it?* How many customers, on average use a retail kiosk? Our survey results show an impressive average of 89 daily users per kiosk.

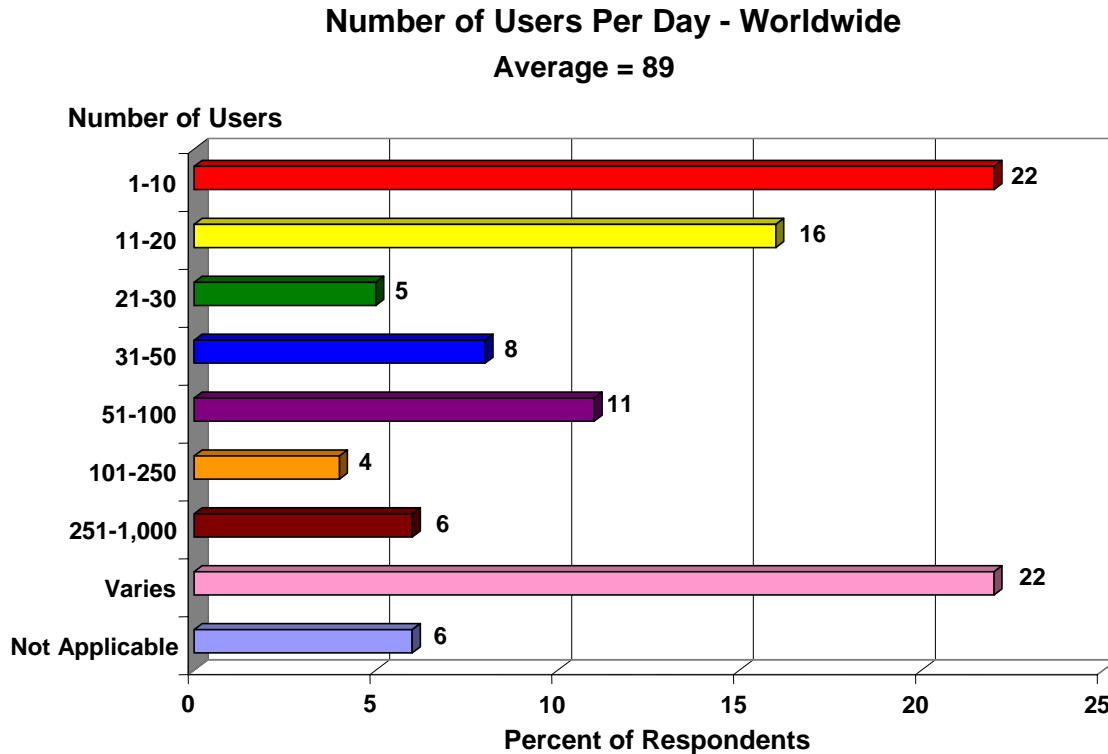


Figure 3. Number of Users per Day - Worldwide

While 11 percent of survey respondents said they averaged between 51-100 users per day, 38 percent said they had less than 20 kiosk customers per day. The 89 users per day average figure is derived from some of the very fast transactional units, including Quick-Serve Restaurant ordering units. In this category, several companies in the QSR industry report an average of more than 200 customers per kiosk per day. Airline check-in units and some train ticketing units also report high numbers of daily users.

This is not meant to imply that an average of 20 or less is cause for alarm. It depends upon the type of kiosk. There are a number of retail kiosks that are quite successful with only a handful of users per day. Digital photography kiosks are a case in point. One of these kiosks may attract less than 10 customers per day, but if the average customer prints 10 pictures, at an average price of \$0.42 per print, that store has generated \$42.00 in average daily revenue. This would equate to more than \$1,000 in revenue per month.

Even allowing for the cost of consumables replenishment, that kind of monthly revenue will mean that the ROI will be reached in well under a year. (The figures used in this example are actually quite conservative; several photo kiosk companies report much higher average number of prints per customer.)

Number of Retail Kiosks

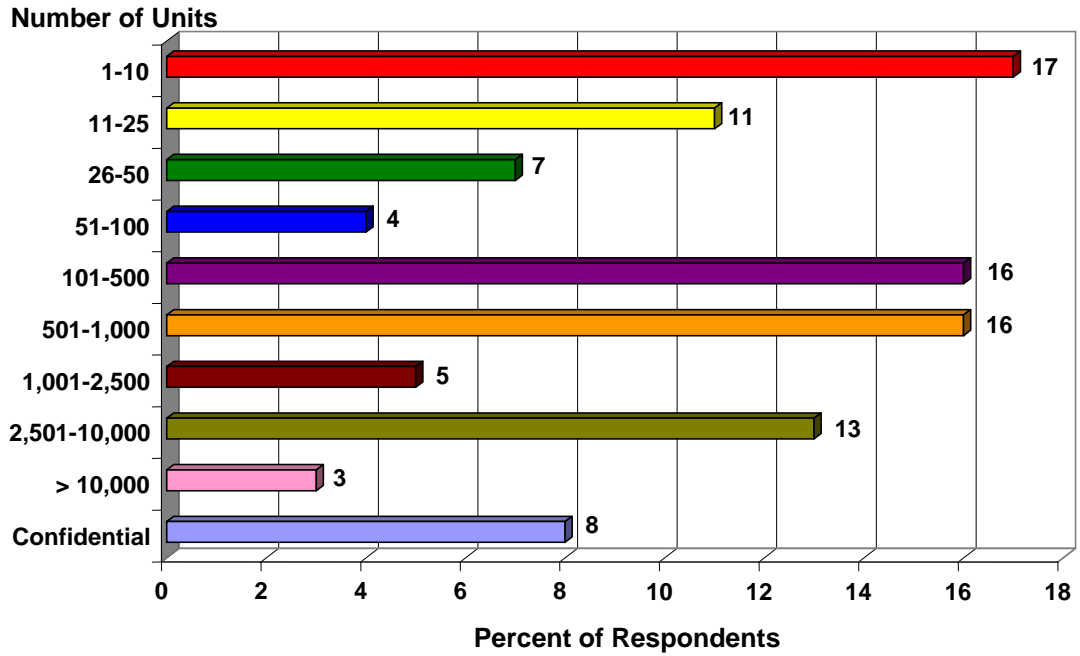
The number of retail kiosks deployed worldwide varies considerably. **Figure 4** shows the survey results. Here, the average number of kiosks installed—1,457—needs further explanation. While it represents the average installation per survey respondent, the fact that several companies have installed significant numbers (in excess of 10,000 units) have skewed the average upwards. It is perhaps more useful to look at the individual breakdowns. Nearly 35 percent of survey respondents have deployed 50 units or less.

An impressive 16 percent have installed between 101 and 500 kiosks and an equal percentage report installations between 501 and 1,000 devices. It is not difficult to see how the deployment average was computed; 13 percent report having installed between 2,501 and 10,000 units. Three percent were pleased to state that they had deployed in excess of 10,000 units.

Eight percent would not reveal a number, indicating that such information is proprietary. This is almost always a dead giveaway that their numbers are small and unimpressive. It is very rare that a truly successful company hides behind the *Confidential* category.

The future is bright for large-scale deployments in the next three-five years. QSR food-ordering units are still in their infancy; they will start to expand dramatically around the world. The same is true for ticketing units, especially for movie theaters. In addition to North America, expect to see significant rollouts of digital photography units in Europe and Asia in the near future. Ringtone downloading units, already common in Asia and some European countries, will begin to make similar headway in North America. As a result, the percentage of respondents indicating impressive rollouts will continue to grow.

Number of Retail Kiosks
Average = 1,457



Source: Summit Research Associates, Inc., 2004

Figure 4. Number of Kiosks – Worldwide

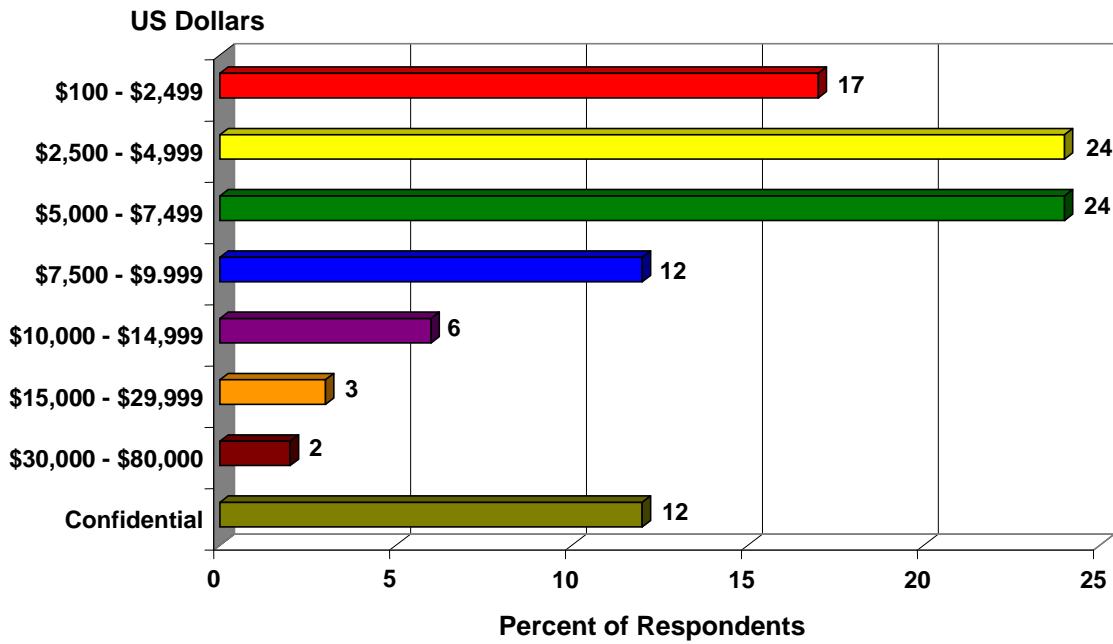
Average Cost per Retail Kiosk

The cost per retail kiosk reflects the price of a *complete* kiosk solution: the hardware, enclosure, software and integration. Communications charges and electrical power costs are not factored in because they vary from project to project and are often borne by the customer. For example, large retailers usually have their own broadband communications in place and can simply tie the kiosks into that system. Similarly, maintenance costs are usually a separate line item; some manufacturers bundle them in as part of the total solution while others offer them independently.

Figure 5 illustrates the average cost of a retail kiosk. At \$7,406, it is \$500 less than the average price of **all** types of kiosks. Generally, kiosk prices have been falling, while overall quality has been rising. Seventeen percent of survey respondents indicated that their kiosks cost between \$100 and \$2,499. Expect to see more units in this low price range. Price checking kiosks and music listening devices are two that can be deployed for a small average unit price. But nearly 25 percent said their units cost between \$2,500 and \$4,999. An equal percentage stated that their kiosk costs between \$5,000 and \$7,499.

Twelve percent report kiosk prices averaging between \$7,500 and \$9,999. These higher costs are usually the result of expensive enclosures and/or signage. Nine percent of the respondents said their kiosks were in the \$10,000-\$29,999 price range. Two percent said their units cost between \$30,000-\$80,000. These high-priced units tend to be self-checkout devices and, in some cases, custom low-quantity projects. Finally, 12 percent refused to divulge their prices, saying they were confidential. This almost always means that their kiosks are expensive and they do not want to reveal that fact to potential customers or competitors.

Cost Per Retail Kiosk - Worldwide Average = \$7,406



Source: Summit Research Associates, Inc, 2004

Figure 5. Cost per Kiosk Worldwide

Average Cost per Retail Kiosk by World Region

When the costs are broken down into the four world regions, the results—North America (\$7,282), Europe (\$6,165), Asia-Pacific (\$9,010) and Rest of the World (ROW) (\$3,750)—are quite interesting. The prices for retail kiosks are somewhat lower than the worldwide breakdowns for all types of kiosks as reported in the 2004 edition of Summit’s flagship report, *Kiosks and Internet Technology*. The retail kiosk survey results show that the Asia-Pacific region is the most expensive, averaging \$9,010. The explanation is that the survey respondents have deployed kiosks that are more expensive than their counterparts in other world regions. European kiosk prices (\$6,165) are, on average, priced more than \$1,000 below their North American counterparts (\$7,282). This is rather startling; generally European pricing for kiosks and kiosk-related peripherals are higher than anywhere else. Furthermore, the Euro is at historic highs, normally making the costs even more expensive. Not surprisingly, the ROW is by far the least expensive, averaging \$3,750 per kiosk. - illustrates the findings.

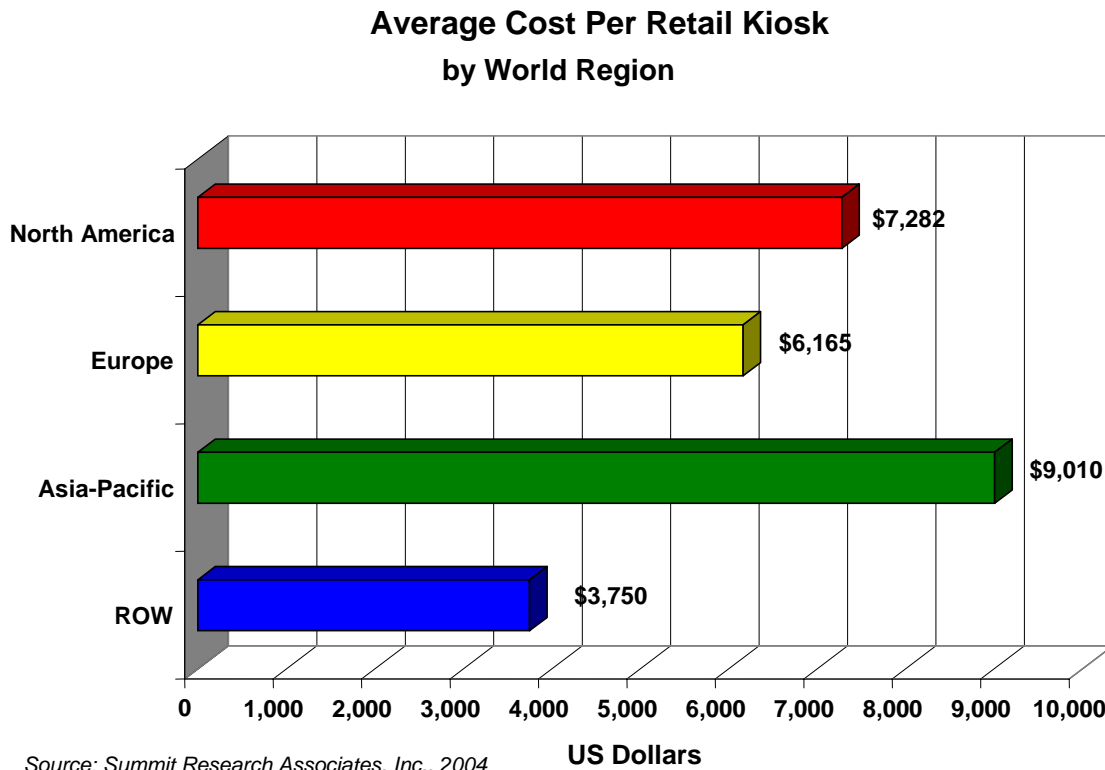
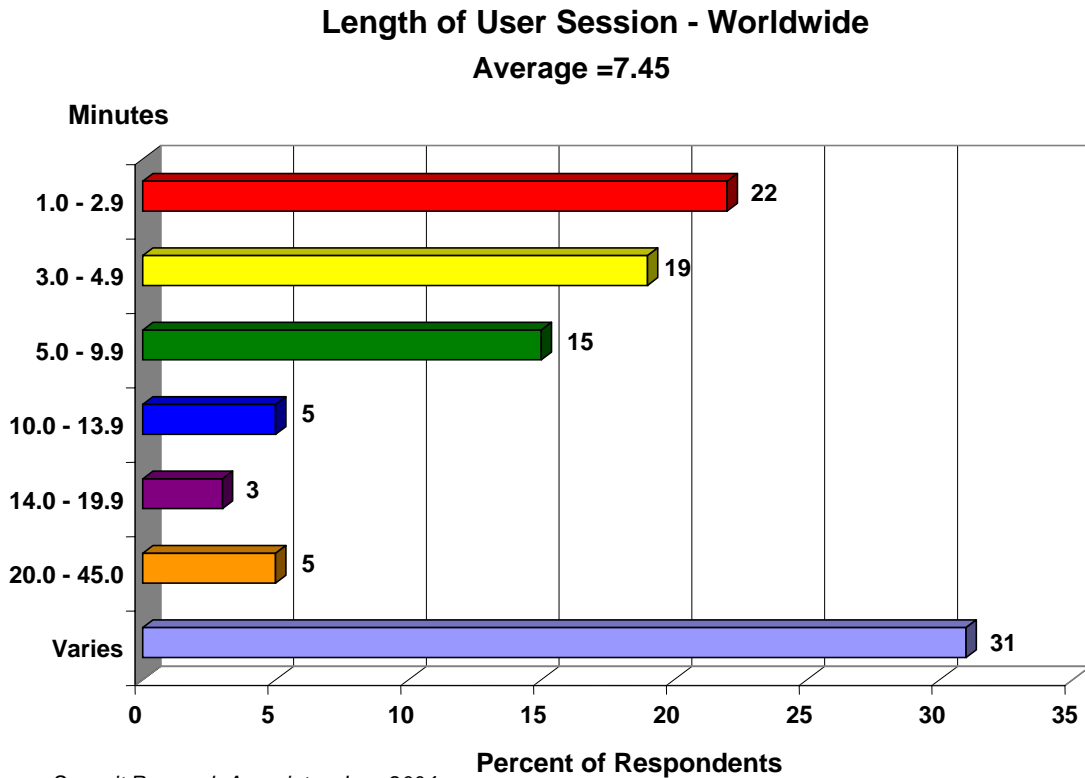


Figure 6. Cost per Kiosk by Region

Average Length of Time Spent at the Kiosk

How long does the average customer spend at the kiosk? The worldwide average is 7.45 minutes. **Figure 7** illustrates the findings.

Nearly one-quarter of all respondents, 22 percent, report that the average user spends under three minutes at the kiosk. This is indicative of the surge in popularity of airline check-in kiosks, movie ticketing units and fast-food ordering devices. Frequently these applications take under a minute to complete.



Source: Summit Research Associates, Inc., 2004

Figure 7. Average Length of User Session

Nineteen percent report that the user session averages between three and five minutes. An additional 15 percent of the respondents said that the average length of time is between five and ten minutes. Two to three years ago, when Web Payphones were a more popular type of kiosk than they are today, ten minutes was a very common usage figure. These devices typically have a ten-minute minimum charge so customers tended to use most or all of that time to surf the Internet since they were already paying for it.

Usage in excess of ten minutes is reported by 13 percent, while five percent say their customers use the kiosk from 10 to just under 14 minutes. Three percent say their units are used between 14 and 20 minutes, and five percent indicate that their kiosks average from 20-45 minutes of use per customer. Almost one-third of the respondents, 31 percent,

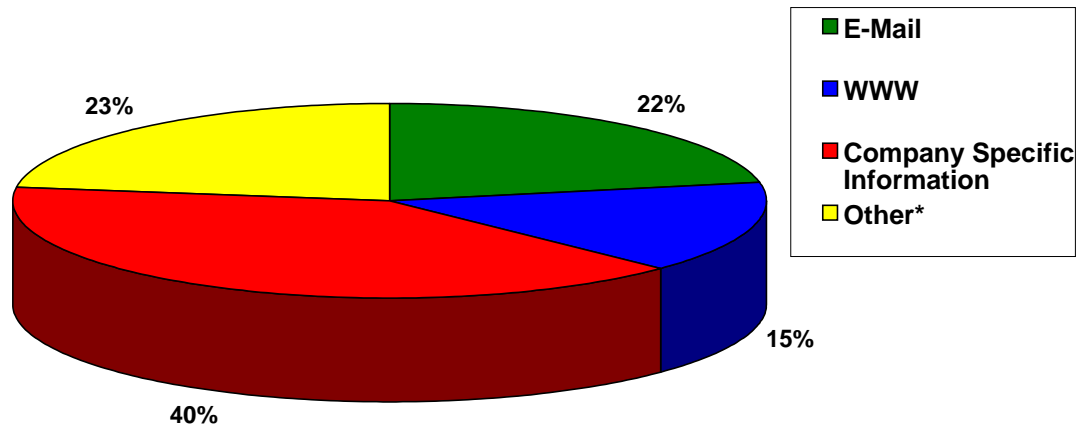
say that the usage varies. This is typical of digital photography kiosk users. Those kiosks that allow customers to edit or otherwise *fine-tune* their prints will see a higher average user session (but not necessarily a higher revenue per customer) and the length of time the customer spends at the kiosk is dependent upon the number of prints he is going to make. Photo kiosks that allow little or no editing, offer automatic picture enhancement, and allow the customers to **Select All Prints**, will experience a lower average time per user but will enjoy higher revenues.

As the popularity of mobile phone ringtone preview and download kiosks grows, the average time the user spends at the kiosk will also increase. The same will be seen at DVD previewing and DVD burning kiosks—when the costs of DVD-producing devices become affordable.

Usage Patterns

What types of activities are customers engaged in at the retail kiosk? **Figure 8** shows the survey results.

Retail Kiosk Usage Patterns



*OTHER includes Ticketing, e-Commerce, Music Downloads, Advertising and Gift Registry

Source: Summit Research Associates, Inc., 2004

Figure 8. Usage Patterns

Not surprisingly, survey respondents indicated that company-specific information accounts for 40 percent of the use at the kiosk. As the case studies will show, almost every kiosk provides a link to the retailer's (or specific product) website.

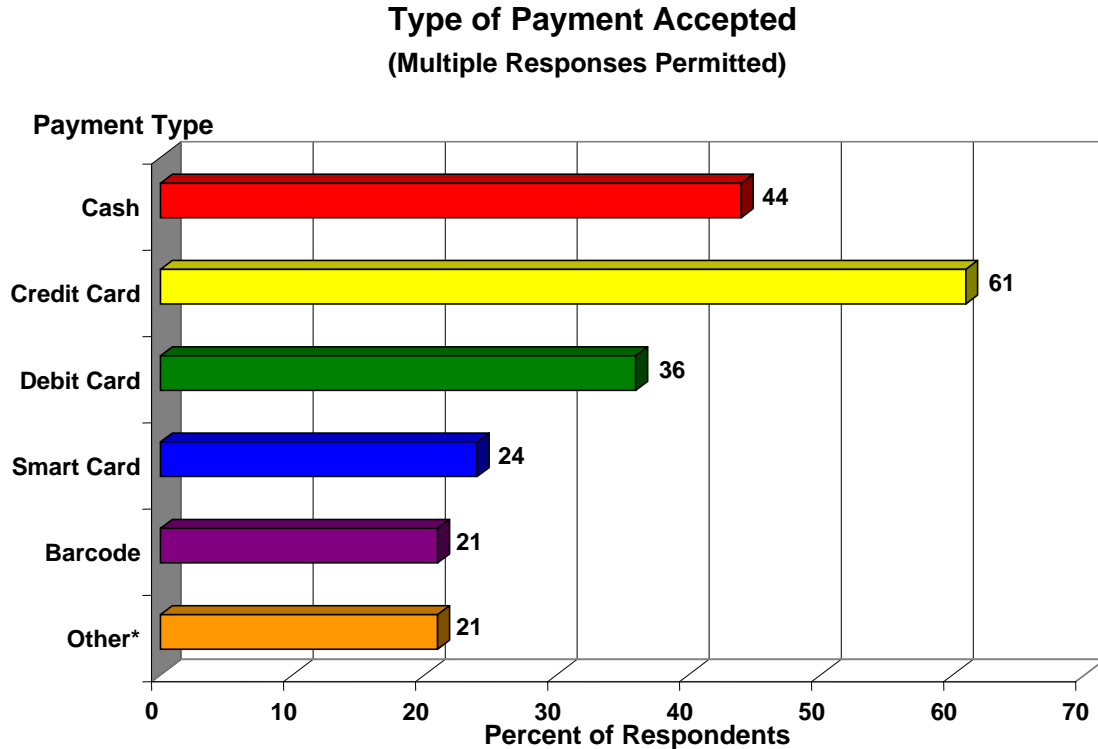
E-mail accounts for 22 percent of the usage. Customers cannot use this link to send and receive e-mails to their friends and colleagues. In most instances, the link allows them to provide their e-mail address so that the company can send them product information or other marketing materials.

Access to other websites accounts for 15 percent of the usage on retail kiosks. These are sites closely related to the products being sold or promoted on the kiosk. Again, the links are tightly controlled; customers cannot simply surf to their heart's content. (In the past, some kiosks did not carefully control these links, allowing customers with minimal computer skills to quickly turn the kiosk into their own personal PC.)

The **Other** category, accounting for 23 percent of the respondents, includes several different activities including gift registries, ticketing and e-commerce.

Payment Types

The different types of payment allowed at retail kiosks are shown in **Figure 9**. Cash is accepted at 44 percent of the kiosks in our survey. Cash is still more widely accepted on kiosks in other parts of the world than in the United States. Credit cards are even more widely-accepted; 61 percent of respondents said they included a credit card reader as one their kiosk's peripherals. Even though debit cards are normally processed through the same reader as credit cards, they are listed separately because survey respondents listed them in that manner.



*OTHER includes coins, checks, loyalty cards, via mobile phone, prepaid card

Source: Summit Research Associates, Inc., 2004

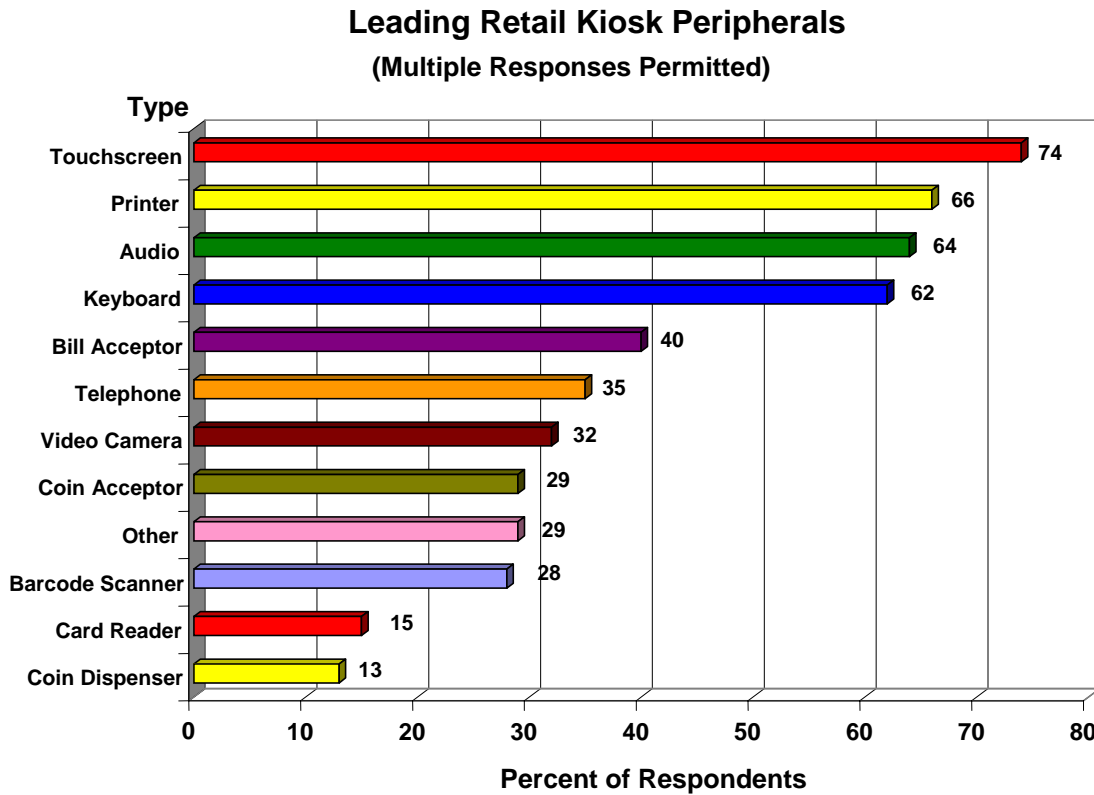
Figure 9. Type of Payment Accepted

Smart cards are found in 24 percent. Although their usage has increased in the past year, it is not nearly the success once predicted. The cards are quite popular and in widespread use in Asia, however. Multi-use cards (transport, ticketing and small consumer purchases) such as Hong Kong's Octopus™, have become an accepted—and necessary—part of everyday life.

Special cards that include a barcode are used in 21 percent of retail kiosks. According to survey respondents, the same percentage indicated that they use **Other** forms of payment. These consist of coins, checks, loyalty cards, prepaid cards and the newest—mobile phones with the ability to transmit payment.

Peripherals Used

The type of peripherals used in retail kiosks is not much different from kiosks in general, but printers are used more often, being found in 66 percent of retail kiosks. Only 13 percent of these types of kiosks use card readers. **Figure 10** reflects these findings. Touchscreens are more widely used in retail kiosks than in kiosks in general; 74 percent, nearly three-fourths of all respondents, indicated that they include these popular peripherals as part of their kiosk configuration. Touchscreens remain the single most popular peripheral on these kiosks, and with good reason. They make the process of interaction less intimidating and—with visual feedback—quickly tell users that their selection is being processed. They will continue to represent the most widely-used retail kiosk peripheral well into the future.



Source: Summit Research Associates, Inc., 2004

Figure 10. Leading Kiosk Peripherals

More than 60 percent of these kiosks include dedicated keyboards, a higher number than Summit expected to find. An impressive 64 percent incorporate audio to get their message across to the customer. Video cameras are found on 32 percent of the kiosks according to survey respondents. Another surprise is that 35 percent still include a telephone handset. Newer retail kiosks are less likely to incorporate this device; Infrared (IR) and/or Bluetooth receptors for mobile phones are expected to be used far more in the

future. The mobile phone will play a significant role in the retail experience going forward. Using them for uploading photographs is only the beginning; expect to see them used for boarding passes and couponing.

Coin acceptors are used in 29 percent of the respondents' retail kiosks. They are found more often in countries other than the US where the use of coins, including £1, €1 and €2 coins, along with Canadian one and two dollar coins, are extremely popular. They are an important peripheral that is part of self-checkout units wherever they are located. Coin dispensers, on the other hand, are found in only 13 percent of the kiosks surveyed.

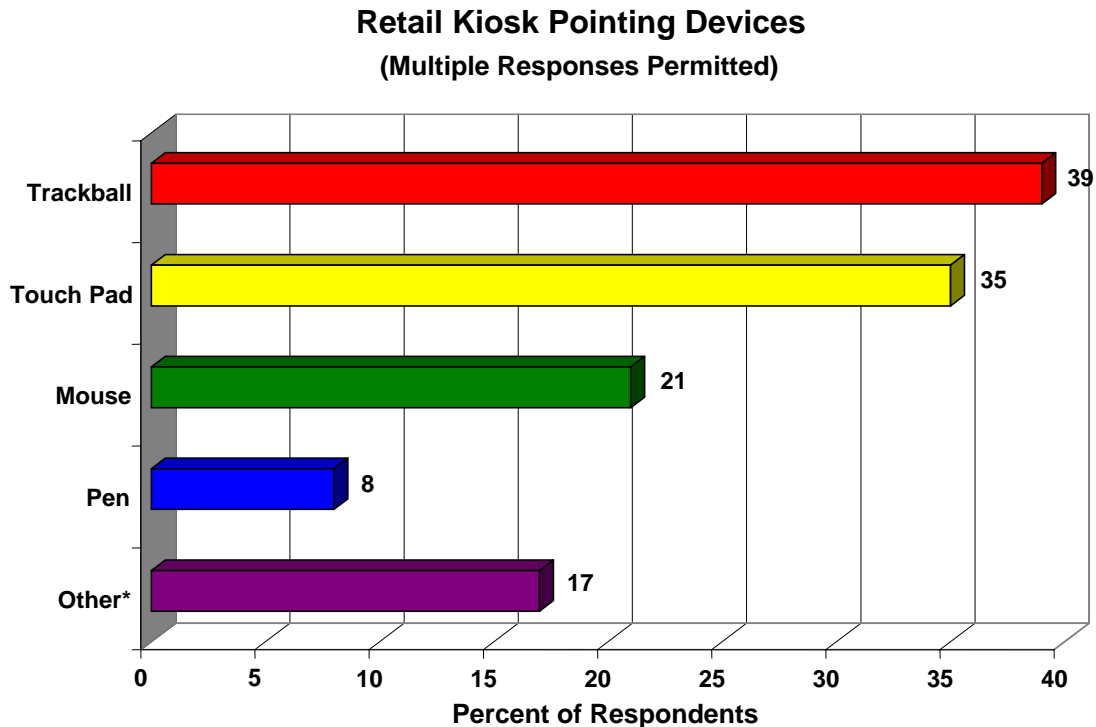
Bill acceptors are used even more frequently, with 40 percent of respondents indicating the inclusion of this device as part of their retail kiosk configuration. Because of the US's continuing *love affair* with paper currency, they are mandatory in all American kiosks that accept cash. Despite the growing use of credit cards for all types of payment (McDonalds is installing card readers at all of their restaurants), many kiosk solution providers are including bill acceptors as part of their kiosk configuration.

Another increasingly popular peripheral found on retail kiosks is the barcode scanner. Survey respondents indicated that they are currently found in 29 percent of the units they have deployed. This number is expected to increase sharply over the next few years, as more price-checking—along with DVD and CD-previewing—kiosks are placed in service. Grocery stores in particular will be the site of innovative new products incorporating barcode technology. Devices are currently being tested in both Europe and the US that attach to the shopping cart, allowing customers to scan items as they put them into their baskets. The system will not only keep a running tally of the amount being spent at the store, but will offer recipes and companion products for those items. Long popular in parts of Europe, expect to see specialized scanners that will create the precise bar-coded label for produce so that the checkout process will be even faster than it is today.

The **Other** category, mentioned by 29 percent of the respondents, encompasses several peripherals that are either niche products (and likely to remain so) or devices that could become standard equipment on retail kiosks in the future. They include check cashing equipment, biometric devices (fingerprint, hand geometry and iris scan readers), DVD reader/writers, motion sensors and web cameras. Headphones deserve special mention because they are already found on the majority of music and DVD preview kiosks. Despite the fact that most people do not like to touch surfaces (enclosures and particularly touchscreens) that appear dirty, they do not have the same hesitancy when donning a pair of quality headphones. They put them on to preview a CD or DVD with little or no concern about who had previously used them.

Leading Pointing Devices

The trackball continues to be the most popular pointing device used in retail kiosks, with 39 percent of the survey respondents indicating their inclusion in their kiosk configuration. **Figure 11** illustrates these results. The touchpad, commonly used on laptop computers, is used in 35 percent of the kiosks in our survey. This is somewhat surprising because the touchpad is not all that intuitive, especially among the population that does not use a laptop computer. Both pointing devices are often incorporated into the keyboard.



OTHER includes Thumbwheel, Videogesture and Touchscreen

Source: Summit Research Associates, Inc., 2004

Figure 11. Pointing Devices Used

The mouse is used in 21 percent of the kiosks. This is somewhat surprising because mice can (and do) get easily vandalized. Nevertheless, there are a number of kiosks that continue to use the *veteran* of pointing devices.

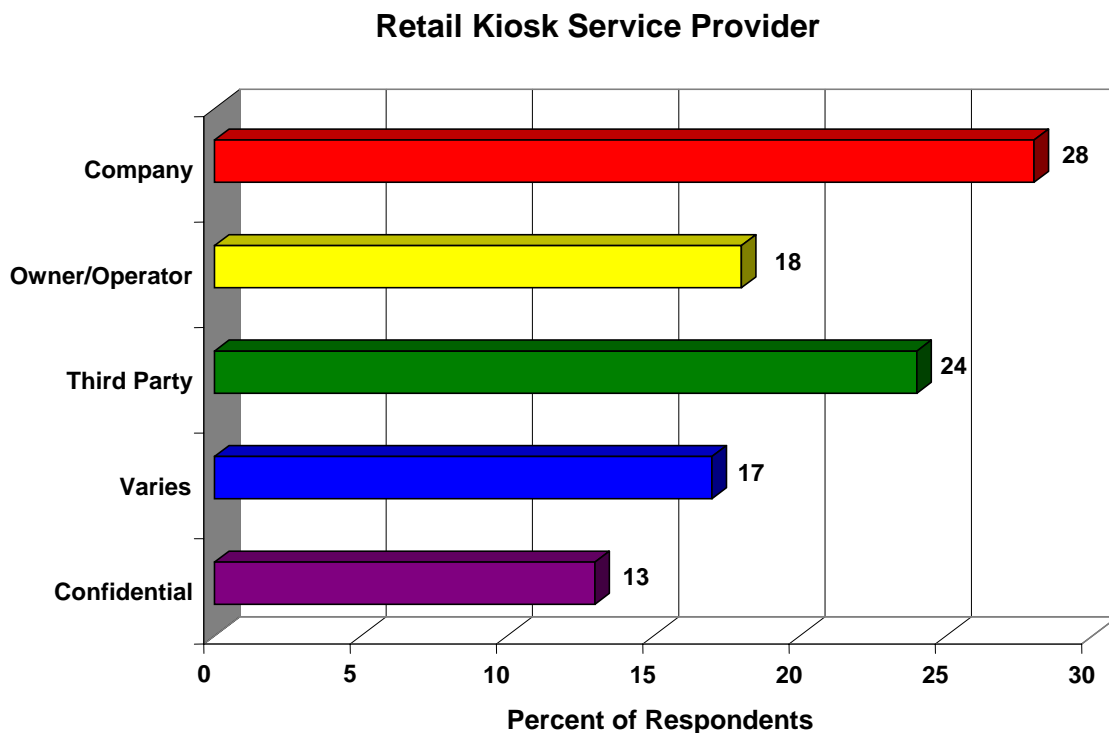
Another pointing device that continues to be used on some kiosks is the pen; eight percent indicate that they employ it. This is not normally recommended because the pens regularly get misplaced unless they are sturdily tethered to the kiosk. And if the pen is missing, the kiosk will not function as intended, causing considerable customer frustration. Furthermore, the user experience is somewhat disrupted when the customer has to move his hands to pick up the pen every time he wants to make a selection.

Other devices include the Thumbwheel, the clever device used by RedDotNet in their music listening and DVD-previewing units that allows customers to quickly adjust the volume and to scroll through the many titles and descriptions. (See the Case Studies section of this report.)

Service Providers

Summit has long espoused the importance of using a service provider to keep kiosks up and running as close to 100 percent as possible. The company from whom the retail kiosk was purchased is the leading supplier of service and maintenance; 28 percent reported these findings. **Figure 12** shows the survey results.

Many respondents rely upon third-party maintenance providers; 24 percent indicated that they use this source. A number of organizations have been established to perform this service, on a local, national and even global scale.



Source: Summit Research Associates, Inc., 2004

Figure 12. Kiosk Service Provider

Another 18 percent reported that the kiosk owner/operator was responsible for the servicing of the retail kiosks. The risk here is that the owner/operator will not be diligent in having his employees keep the kiosk fully functional. Summit has actually seen kiosks where the store employees warned us not to use it because it was not working, yet made no effort to correct the problem.

Finally, 17 percent said that their choice of service provider varies, depending upon the location of the kiosk and what types of services are available in that area. Respondents also mentioned that their choice of providers varies by cost; in some locations, the kiosk must be kept up and running on a 24/7 basis; more expensive rapid-response servicing is

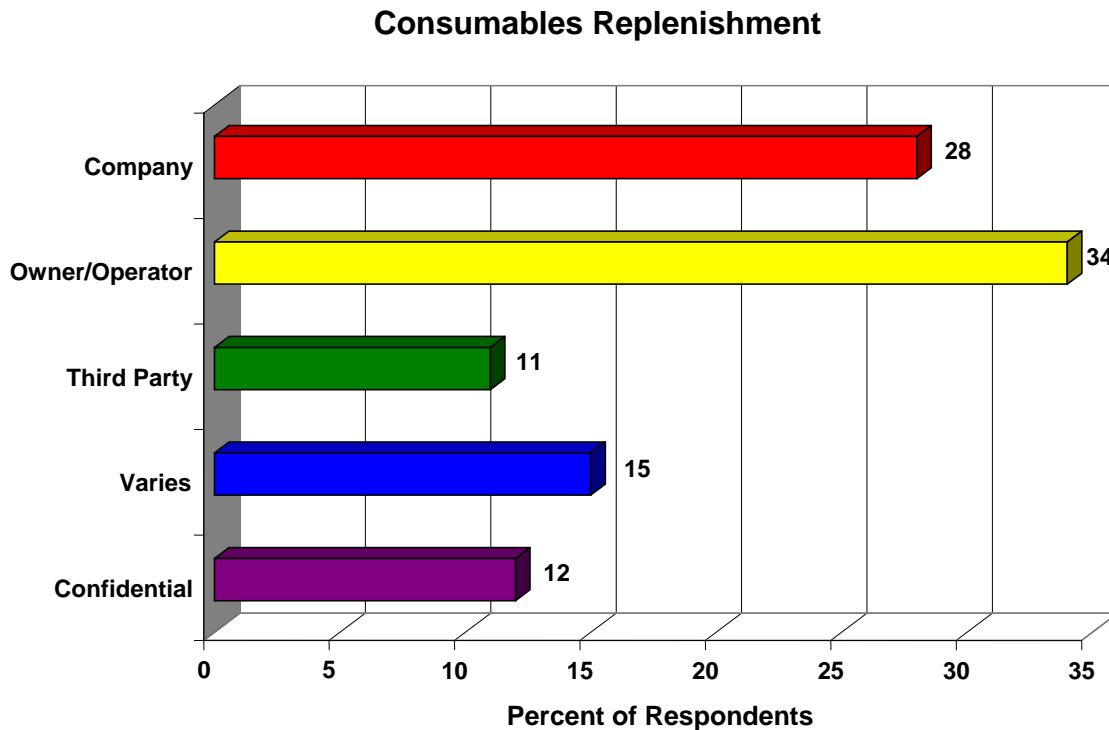
required in those instances. In other cases, especially when there are multiple kiosks installed at the same location, a more economical eight-hour or next-day service agreement is acceptable.

The essential point is that kiosk servicing **must** be built into the operational cost of the kiosk. Whether it is the turnkey solution provider, a third-party or the owner/operator is the entity performing the service; it must be a *responsible* organization. Servicing cannot be left to chance; there is too much at stake in the overall success of a kiosk rollout.

Consumables Replenishment

All types of kiosks can be *brought to its knees* if the stock of consumables – tickets, receipts, photographs, CDs, etc. is allowed to run out. While it is annoying when this occurs on other types of kiosks, it is perilous on a retail kiosk. People have paid for tickets, food, photo prints or other items. If they do not get their product(s) or their proof of purchase, the retailer could have a small revolt on his hands.

Our survey indicated that the company providing the kiosk performs this function 24 percent of the time. **Figure 13** reflects the findings. It is surprising to Summit that the figure is that high. Having the solution provider make *house calls* to replace receipt paper, ticket stock, ink and other consumables seems to be an expensive solution to an important issue.



Source: Summit Research Associates, Inc., 2004

Figure 13. Consumables Replenishment

The owner/operator of the kiosk assumes responsibility for replenishing the consumables 34 percent of the time. We feel this should be higher but many retailers have to deal with a substantial employee turnover and do not want to be constantly training people in the installation of kiosk supplies.

Third-parties are used to replace supplies only 11 percent of the time. This makes sense (and this percentage should be even lower) because it adds to the operational costs when instead it could be done effectively in-house.

In all cases, kiosk management software should be utilized to alert those responsible when the consumables are low. Do not wait until the consumables are completely gone. If this is allowed to occur, lost revenue and diminished customer goodwill will follow as surely as night follows day.