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WHITE PAPER

Retail IT Meets Video: Cisco Makes Digital Signage Play Over the Network

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INTRODUCTION: MARKETING CHALLENGES FOR RETAILERS TODAY

If you are a retailer, you are already well aware of the myriad challenges your company faces today: The retail industry is highly competitive, and most retailers operate on narrow margins. Significant changes in the business climate — in the economy, in supplier or energy prices, in the weather, or in consumer demand — can adversely affect those margins, turning profit into loss.

The past several years have seen tremendous market consolidation in the retail industry worldwide, as retailers have sought to improve their margins through economies of scale. The tectonic shift to big-box and megachain business models has created new operational challenges for the largest retailers and has further increased the pressure on margins for smaller retail chains. Many retailers have invested in new point-of-sale and inventory management systems to improve control over pricing and promotions and streamline execution chainwide. By now, most large retailers have also extended their supply chains to encompass cheaper labor areas such as Asia or Mexico — although lower manufacturing costs do not always translate into improved landed costs at the retailers' distribution centers.

But improvements in operational efficiency only go so far toward enhancing the top and bottom lines: To grow revenues and profits, retailers must increase inventory turns and boost same-store sales. Optimizing the marketing mix to achieve this goal is no easy task.

Marketing to Consumers in the Internet Age

Of course, retailers with catalog operations can market directly to their lists, but most retailers lack a comprehensive customer database. In the past, retailers have relied on advertising in traditional media such as television, radio, or newspaper to promote their brands, their stores, and their seasonal goods to consumers. But as viewership has migrated away from TV, radio, and print publishing to the Web, the value of advertising in traditional media has diminished. This is a long-term trend: Younger consumers are much more likely to turn to the Web or other services for news, sports, and entertainment.

Of course, advertising has followed consumers online: Witness the meteoric rise of Google, and the rising revenues of its Web advertising competitors Yahoo!, MSN, and AOL. Certainly, Web-based advertising is a great facilitator of B2C ecommerce, which is increasing at a very healthy 18.2% compound annual growth rate worldwide (according to IDC's *Internet Commerce Market Model* version 11.1). But retail ecommerce accounted for only about 5% of total U.S. retail sales in 2006; and while 211 million Americans accessed the Internet at least once a month from home last year, only 54% of them followed through to buy something online.

Therefore, although the Web is a key channel for retailers — and one that they have increasingly integrated with their bricks-and-mortar and catalog operations — the in-store experience represents the retailer's most important marketing opportunity to boost sales and increase inventory turns: Research from retail industry trade associations shows that consumers make approximately three-quarters of their buying decisions in the store.

As a result, retailers are beginning to invest in new in-store marketing solutions such as digital signage. Digital signage offers retailers a powerful new medium to deliver targeted, relevant, and engaging messages that promote brand awareness; improve the consumer's in-store experience; and influence buying behavior where the impact is greatest — at the point of purchase.

What Is Digital Signage?

In a nutshell, digital signage can be defined as digital displays and content that can be remotely managed over an IP network. Digital signage systems provide centralized scheduling, management, and publishing of digital media assets to on-premise digital displays and kiosks. Digital signage servers typically provide capabilities for content authoring and the creation of playlists, content management and delivery, and device (display) management. Displays are connected to the network via media players, and the media players communicate with the digital signage server software to play out content.

Digital signage is sometimes referred to as narrowcasting because digital signage systems are generally all capable of directing different playlists to different displays. Not surprisingly, many of the early digital signage vendors had a background in broadcast or other TV technologies. In fact, a critical advantage of a digital signage solution lies in its ability to support video, in addition to graphics and text — video is far more compelling for the viewer.

Digital signage networks running over IP are only now starting to see broader adoption as bandwidth and storage have become more affordable and available and as digital signage solutions have matured. Happily, we are well beyond the early experimental days when retailers attempting to replace static, printed signage with a more compelling display had to resort to a PC with a monitor and a DVD player. (PC-based solutions were also fragile and prone to failure, and updating the content was a completely manual process.) We are also beyond the days when digital signage represented such a large initial capital investment that only an advertising-supported network seemed feasible: Today, retailers can implement their own digital signage networks at incremental cost.

What Are the Benefits of Digital Signage?

To gauge the benefits that retailers expect from their digital signage investments, we spoke with several large retailers in different stages of implementation. The most important drivers for digital signage include the following:

Higher-Quality, More Compelling, and Informative Content

At the very top of the list comes the opportunity to truly engage customers in the store — when they are most likely to be influenced — and enrich their shopping experience. Digital signage successfully draws consumer attention to key in-store promotions. The immediacy of digital signage is a powerful motivator: Many retailers told us that they saw a marked increase in sell-through of merchandise that was promoted via digital signs. Digital signage can be a particularly effective way for retailers to promote private-label brands that carry higher margins. Digital signage is also an excellent vehicle for high-fashion merchandising, and other "lifestyle" marketing, because it can engage the viewer with compelling video. (High-fashion retailers are investing in high-definition video for this reason.)

Because digital signage can very easily be customized — for example, by geography, time of day, season, or demographics — it can be made much more relevant to the consumer. Grocers, for example, can set up different playlists for morning food shoppers, after-school snackers, and commuters on their way home from work who might also buy beer or wine. Merchants can insert promotions for umbrellas when it's raining, snow tires when it's snowing, and air conditioners when temperatures climb. Hardware chains can direct content about tractors and animal feed to their rural customers, lawn seed and hand tools to their suburban customers, and storage and space-saving products to their urban dwellers. Home improvement retailers can target content by merchandise area to help do-it-yourselfers choose the right products for their plumbing, painting, or electrical projects, and they can cross-sell houseplants in the winter and annuals and perennials in the summer.

Digital signage — with directional audio — can also be especially useful in do-it-yourself (DIY) retail environments in which consumers need more "how-to" advice to help them select a product. This can be particularly valuable in retail environments where staffing levels are a constraint or where sales associates can't be experts in the use of every product the retailer carries. (Digital signage can also be used to train store employees during off-business hours so that they can gain expertise.)

Digital signage can incorporate local news, weather, or other topical information, providing wayfinding or a public service to shoppers, and can allow the retailer to be more a part of the community. Digital signage with community-interest content can shorten the perceived wait time at checkout.

In addition, digital signage offers retailers the potential to integrate dynamic displays with other IT systems in the future. For example: digital signage programming could be tied to inventory levels. Playlists could be correlated with point-of-sale data and market basket analyses to evaluate the effectiveness of messages by time of day or location. Digital signage could be integrated with video surveillance to analyze buyer dwell times. It could be connected to sensors that make the viewer part of the equation;

for example, sensors could read the radio frequency identifier (RFID) tag on a garment that the shopper in front of the sign is holding and cue the signage system to insert an ad for suitable accessories, or sensors could infer the viewer's age and gender and cue the signage system to play content for the viewer's specific demographic.

Employee Communications and Training

Many retailers tell us they use their digital network off-hours for employee communication and training, particularly because traditional communications methods are inflexible and impersonal and because PC-based training is inconvenient or impossible. Employee turnover and seasonal increases in part-time staff can make training a significant issue for many retailers; creating DVDs or other training materials and mailing them to the stores is a cumbersome, expensive, and slow process.

The digital signage network is the perfect vehicle for updating sales associates chainwide about new promotions, seasonal merchandise, and so on. Some retailers we spoke with deliver a brief, daily program during the half hour before the store opens to provide corporate communications and new product training and to reinforce selling messages for the merchandise they want to move the most. This approach leads to increased sales employee productivity, higher job satisfaction rates, and a more cohesive corporate culture.

Marketing Speed and Agility

In addition to the flexibility to tune messages by store zone, location, season, customer demographic, and potentially — as noted above — the individual viewer, digital signage gives retailers tremendous agility. Digital signage enables retailers to respond quickly to changing market conditions — where the time to deployment for a new promotion often means significant competitive advantage.

With traditional, static signage, it can take days or weeks to roll out a new promotion across all of the stores in a large chain. In-store printing certainly helps to address this challenge, but most traditional signage is printed offsite, mailed, and then hung by store employees. In addition to the time this takes, retailers tell us that managing compliance in this regard is often a big challenge (often, the signs don't even make it onto the store floor or outdated signs are not taken down).

Digital signage also gives retailers a valuable tool for testing new promotions in a targeted group of stores — experimenting with sign placement and message and tweaking according to consumer response — before rolling them out chainwide. The ability to correlate what is played on digital signs to point-of-sale data gives retailers the immediate feedback they need to optimize their in-store marketing.

Finding just the right balance between the need for centralized control over promotions and flexibility at the local store level can be a challenge in many retail settings. Retailers may need to give their franchisees a measure of autonomy while also ensuring the consistency of their brands. Selected stores may have opportunistic inventories to sell that aren't part of chainwide promotions. Promotions also may need to be adapted locally according to variables such as season and weather. Digital signage helps address this "tug of war" by enabling retailers to flexibly define roles and responsibilities as well as variable schedules for content playout.

Advertising Revenue

Digital signage creates more in-store advertising "real estate" than traditional, printed signs. Digital signs can cycle several ads in the course of the average time a viewer looks at the sign. Because digital signs displaying video and graphics are so much more compelling than printed signage, the retailer can offer a much higher-impact advertising opportunity to its major brands.

Digital Signage Market Poised for Strong Growth

IDC believes the digital signage market is poised for rapid growth over the next several years as retailers move from successful pilots to broader deployments and as the market entry of major IT providers such as Cisco takes digital signage into the mainstream. The major systems vendors and display manufacturers have the scale, channel, and standards-based offerings to reduce implementation costs and time and accelerate digital signage adoption.

CISCO'S VISION: DIGITAL SIGNAGE ON YOUR NETWORK

Cisco has offered products to capture, manage, and play video over the network for a decade. Over the past year or so, the company has moved aggressively to expand its solution footprint with new products of its own and from a series of acquisitions, including Scientific Atlanta and Arroyo in the consumer arena and SyPixx and Tivella in the enterprise space.

Tivella's narrowcasting server and compact media players form the core of Cisco's new digital signage offering, which builds on top of the Cisco Digital Media System (announced September 2006). Cisco's modular approach makes it very easy for retailers to start small, with pilot signage projects, and then expand incrementally. Because Cisco Digital Signage leverages the Cisco Digital Media System and the network, retailers can also expand into new video application areas that share a common media management platform.

Of course, a digital signage implementation is still heavily reliant on local and regional installation services — the "hang and bang" crowd, as they are sometimes called — that do the wiring and mount the displays. Although the Cisco Digital Signage offering works with virtually any display, Cisco is partnering with NEC to provide a global network of installation service providers, in addition to the end-to-end solution that includes the LCD or plasma screen.

Cisco Digital Signage Product Components

The Cisco Digital Signage solution is pictured in Figure 1. Components of Cisco's solution include:

Cisco Digital Media Manager

The Cisco Digital Media Manager (DMM) is a Web-based media management application that enables content authors to easily manage, schedule, and publish digital media content for both live and on-demand playback. The Cisco DMM serves as the repository for all digital media content on the network — not just for signage, but for all of the Cisco Digital Media System solutions. This facilitates content reuse and provides the common foundation for Cisco's growing list of video and digital media applications.

Cisco Digital Signage Module

The Cisco Digital Signage Module is an add-on application that is installed on the Cisco DMM software and provides playlists, on-screen template customizations and zoning, and scheduling and publishing of digital signage content to digital displays, as well as remote device management of the digital displays themselves.

Cisco Digital Media Players

Cisco Digital Media Players (DMPs) — together with the Cisco DMM — control the individual LCD or plasma displays and provide the flexibility to zone and customize content via templates. Cisco DMPs are lightweight, small form factor, low power consumption, fanless (quiet) devices. They support content in both high-definition (HD) and standard-definition (SD) formats — including MPEG-1, MPEG-2, MPEG-4, Flash, and HTML — so that retailers can leverage content in a broad array of formats. Cisco DMPs provide hardware-based decoding and 1GB of memory for local content playback with high resiliency. They are solid-state devices and are designed for high reliability; with a mean time between failures (MTBF) of 25 years, they're guaranteed to outlast many generations of displays — a claim that PC-based media players certainly can't make.

Cisco Video Portal

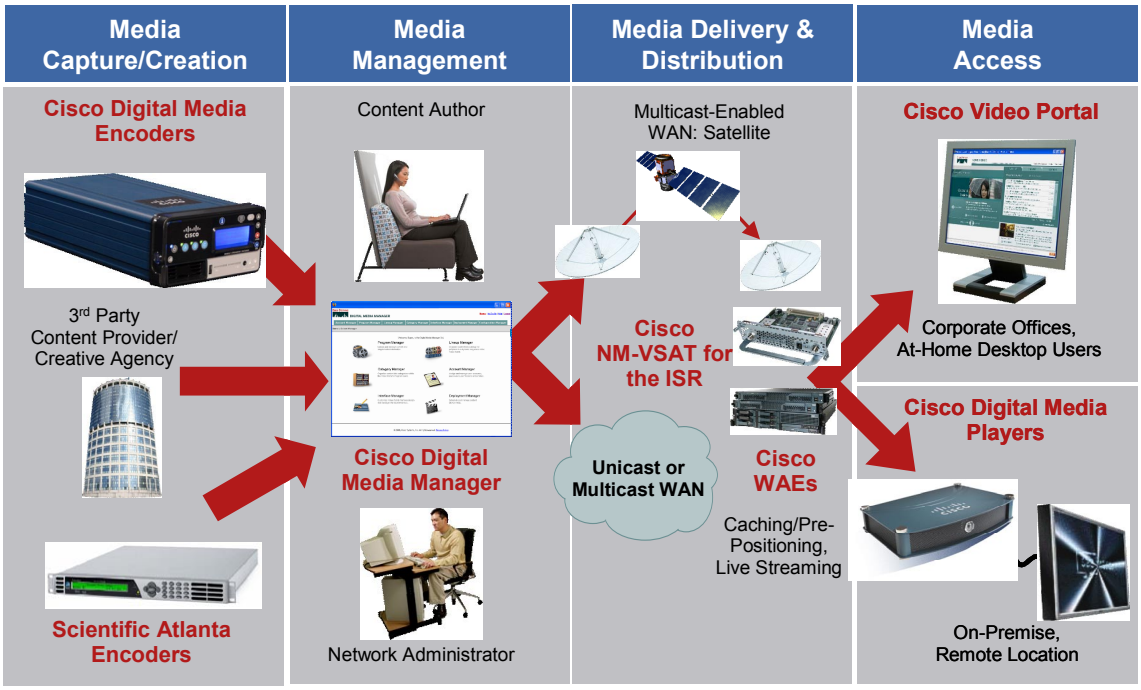
In additional to digital signage, the Digital Media System provides support for desktop video playback. The Cisco Video Portal is a sophisticated Web-based interface that desktop audiences can use to browse, search, and view digital media — both on-demand videos and live Webcasts — that is managed by the Cisco DMM. It also includes a Web-based reporting tool. In the retail setting, the Cisco Video Portal can be used for interactive kiosks to give customers a way to watch "how-to" videos, or learn more about products or product configurations, as part of their shopping and decision-making process. Retailers can also further enhance their brand by delivering consistent messages both in the store and to customers' desktops at their homes. For internal organizational communications, they can deliver corporate messaging and training through the Cisco Video Portal to employees' desktops.

Other Cisco Products for Media Delivery

Depending upon the particular implementation, customers may also want to deploy Cisco products for streaming, multicasting, local content caching, managing delivery over satellite systems, and so forth. Relevant products include Cisco Application and Content Networking System (ACNS) Software with Cisco Wide Area Application Engines (WAE) and Cisco Network Module-VSAT in a Cisco Integrated Services Router (ISR) for satellite content distribution.

FIGURE 1

Cisco Digital Signage Components

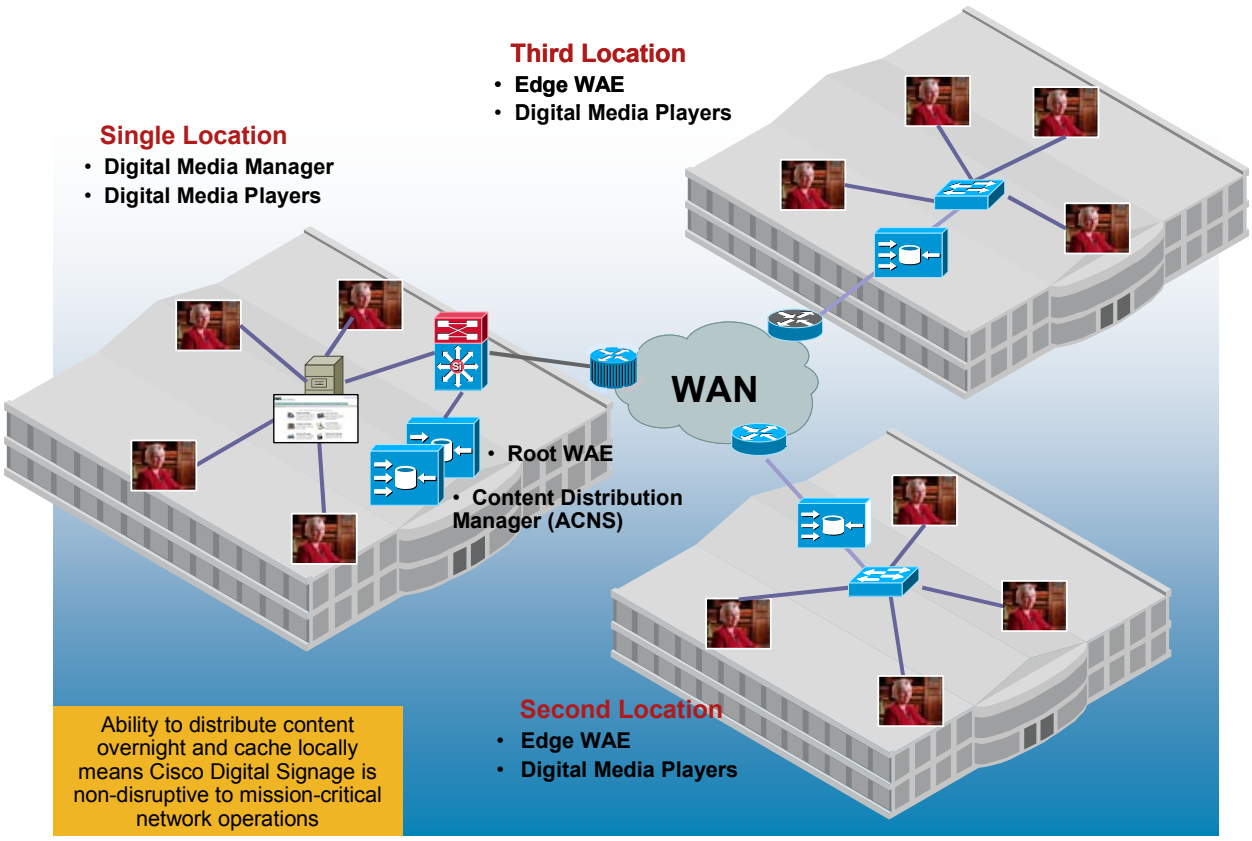


Source: Cisco, 2007

As noted earlier, because Cisco's solution is modular, customers can roll out digital signage progressively, with incremental investment (see Figure 2). Some retailers we've spoken with are retrofitting existing stores; others are deploying digital signage as part of the buildout plan for new locations.

FIGURE 2

Cisco Digital Signage — Modular and Scalable



Source: Cisco, 2007

Cisco Digital Signage and the Cisco Digital Media System also leverage the Cisco Intelligent Retail Network, which provides the foundation for delivery of a common set of services to a broad range of devices — with centrally managed security, performance, and availability.

Implementing Digital Signage: Best Practices

As we spoke with a broad array of retailers that are investing in digital signage, a set of best practices began to emerge from our discussions. Not surprisingly, there is a learning curve, so it's best to start small, with a pilot, and then scale up. The learning curve is perhaps less about the technology involved than it is about putting this "new medium" to work in the context of an in-store marketing strategy. However, to scale a digital signage deployment, the network must be leveraged and properly taken into account.

Establish Clear Goals for Your Signage Project

Decide up front what your goals are for your digital signage network. Your goals will guide display placement and size, the number of displays you need, the geographic distribution of the displays, and the type of content you need to create or repurpose. Signage location and placement are very important factors in the success of digital signs, and most retailers needed to experiment to get the equation just right. Factors such as real estate, lighting, and traffic patterns all play a big role. Your goals will also affect decisions about budget, how return on investment (ROI) is to be measured, and the skill sets and resources you'll need to bring to bear on the project.

Plan Your Budget

Your budget will need to factor in costs for displays, media players, servers, and installation (including wiring and hanging displays); any network upgrades required; any content distribution charges; and the costs of ongoing content creation. You may find that a substantial percentage of these costs are already being subsidized by other projects; for example, network upgrades to support VoIP or surveillance applications and content creation for multichannel marketing programs. (When you leverage your network for multiple applications, such as voice and video communications, budgets can be shared among different groups, such as marketing, corporate communications, human resources, and IT). Also, digital signage costs have dropped significantly over the past couple of years, as display prices have come down: Plasma and LCD screens are much more affordable today, and the quality of both has improved steadily. Implementation time is often a factor of how quickly the displays can be installed, which in turn will depend on how easy it is to access power and the network from the signs' locations.

Be sure to also factor in the cost savings that your digital signage network will afford, including the cost savings in labor, printing, and mailing that you will realize from replacing traditional signage. Also include cost savings for employee communications and training, if you will use your digital signage network to replace other methods. And don't overlook the opportunity costs: There is often substantial value in the ability to field new promotions more quickly, minimize the risk of promotions being delayed due to printing or mailing problems, and provide just-in-time communications and training to sales associates.

Ultimately, your ROI will depend on your particular deployment model and current expenditures. It may be as simple as offsetting the cost of purchasing, maintaining, and operating your digital signage system against the increased sales you'll generate via in-store promotions of selected products. Or you may be able to justify your digital signage network based on the cost of newspaper flyers over the course of a year. Or perhaps your ROI will come from the savings you'll realize by training high-turnover employees using your digital signage network versus an in-person approach.

Build Digital Signage Requirements into Your Content Creation Strategy

Although digital signage can and should leverage existing marketing and brand materials, including advertising that the retailer and/or its branded suppliers may produce, most TV advertising spots are too long for digital signage — except at checkout counters or in other store locations where shoppers stand in line and dwell times are longer. Retailers have found that shorter, 10-second spots are much more effective than 30-second advertisements in the areas of the store where dwell times are short.

Digital signage content typically needs to be much higher in quality and resolution than Web content. In addition to broadcast-quality video, retailers can also repurpose high-resolution graphics created for print advertising. Even better: Incorporate digital signage requirements up front as part of your content creation strategy. Digital signage content needs to be crisp and compelling — and this is driving interest in higher-resolution, higher bit-rate formats such as MPEG-2 or MPEG-4 and HD.

Have a Plan for Keeping Content Fresh and Relevant

It's critical to have a strategy in place for creating and continually refreshing digital signage content. When content is stale, digital signs quickly lose their impact — consumers learn to ignore them (just as they learn to ignore static, printed signs). Content must also be relevant to the viewer, so think about how you can leverage the tremendous flexibility of digital signage to narrowcast targeted messages by location, demographic, time of day, day of week, and so forth. Establish methods for measuring the effectiveness of your content so that you can tune it over time and increase the effectiveness of your digital displays.

Also, it's important to clearly define roles and responsibilities for managing your digital signage content. Your existing staff should be able to manage the process, and they will appreciate the time that the digital signage system saves them compared with the labor and expense that are typically involved in packing up and mailing out traditional signage to stores — they'll be able to spend more of their time on value-added merchandising activities and less time on administrative tasks.

Define Your Content Distribution Strategy

How much of your content will be on-demand versus live? How often does the content change? How quickly must the content reach your displays (that is, does it need to appear on your displays in minutes, hours, or days)? As you plan your content strategy, consider how dynamic it needs to be. Well-designed digital signage networks should eliminate the reliance on IT for day-to-day content management.

Digital media content — especially high-resolution graphics and full-motion video — requires careful network and bandwidth utilization planning. Over what network topologies — terrestrial or satellite, or both — will your content be distributed? Is the network equally constrained, or does it vary in certain areas? Digital signage can be configured to minimize the load on your network in a variety of ways. For example, content can be pushed to stores overnight when bandwidth isn't a constraint and cached on servers in the stores for delivery over each store's LAN (this also provides a level of redundancy). Cisco DMPs can also store content locally, eliminating constant reliance on the network and providing additional failover support.

Moreover, what's your level of tolerance in terms of mean time between failures, and how long do you expect your hardware investments to last? Digital signage solutions that leverage solid-state media players can substantially reduce maintenance costs and downtime in your stores.

CHALLENGES AND OPPORTUNITIES

Cost Implications

Early adopters of digital signage faced a variety of challenges in the past that IDC believes are less of a factor today. Perhaps the biggest barrier to broader digital signage adoption has been its relatively high cost, driven in large part by the cost of large, high-quality, commercial-grade displays. But those costs have dropped significantly.

Another contributor to cost has been the custom nature of most digital signage implementations. Generally, retailers have relied on audio/visual contractors or integrators to plan and implement their digital signage networks, sometimes entirely outsourcing the management of their digital signage network to digital signage service providers or — in some cases — digital signage network operators that resell some portion of the "airtime" to advertisers. Although an attractive model from a revenue standpoint, advertising-funded digital signage networks can be problematic for in-store applications: Retailers we've spoken with want control over the messages that play in their stores. Consequently, advertising-funded digital signage networks have been more successful in larger, outdoor, public venues. (Ad networks also require stringent metrics and accountability, which often cannot be disclosed and are not easily managed with disparate inventory and point-of-sale systems.)

Shift to IP-Based Solutions

Although retailers will continue to rely on service providers to help them plan and install their digital displays, IDC believes the larger retailers will increasingly operate their digital signage networks themselves over their own networks. As retailers gain experience and confidence in their ability to manage digital signage networks in-house, digital signage will become one more "intelligent service" that leverages the retailers' existing networks and enables them to derive greater value, overall, from their network investments.

Retailers that operate their own digital signage systems can realize the full power of digital signage, integrating it into their overall marketing and promotions as "another channel" and tying it into their other operational systems, such as inventory management, to help them manage down inventory risk based on real-time information.

The transition of digital signage from a separate, service provider–managed system to a system that is managed as an integral part of the retailer's IT infrastructure marks a fundamental shift in the digital signage market. IDC believes the "commoditization" of digital signage by major vendors will further drive down implementation costs and help accelerate adoption by making digital signage components more plug-and-play.

Market Evolution

Until recently, the digital signage market has been extremely fragmented — consisting of dozens of small vendors providing one or more of the components of a complete solution. Some have focused on providing best-of-breed digital signage software (typically, either Windows- or Linux-based), relying entirely on an OEM channel to package their software with appropriate hardware and provide planning, installation, and (often) management services. Others have focused on providing turnkey hardware/software appliances (typically, a Windows- or Linux-based server solution together with a proprietary media player). Not surprisingly, retailers have turned to service providers for technology selection in a market that could be said to have "too many choices" and to provide some comfort around vendor viability.

A few of the leading display manufacturers have brought servers and media players to market in order to provide an end-to-end solution, but up to now, the digital signage market has lacked participation from the major IT vendors. The entry into the digital signage market of large vendors such as Cisco will help to foster the standards and the organized "vendor ecosystem" that are necessary for broad-based adoption.

Content Is King

Compelling content will continue to be the most important ingredient in any successful digital signage network (although if content is king, then the network is queen.) As is true for all types of digital media, content creation requires good collaboration between left-brained and right-brained people within the enterprise: that is, staff from marketing, merchandising, advertising, and IT. In a way, this challenge is not new: Good collaboration between marketing and IT is essential for any successful Web site, and we have a decade of experience there now. To some degree, Web content itself can be leveraged in digital signage systems — if the creative work is planned with the higher-resolution needs of digital signage in mind. Retailers will need to decide what an acceptable level of quality is, but we believe customers will increasingly adopt high-definition formats (e.g., 1080i or 1080p). Because digital signage needs to be seen from a greater distance, the display layout (typically, two or three screen "zones") needs to be designed specifically for the signage application.

Retailers will also need to decide to what, if any, extent they wish to accept advertising on their in-store networks. If they do, they will need to implement policies and procedures, and potentially some automated workflows, to capture and incorporate partner content into their playlists, according to business rules, and track and measure CPM for accountability. Ideally, partner content can (if it is compelling) provide two benefits to the retailer: incremental advertising revenue (or alternatively, some cost offset) and some help with content creation.

Network Readiness

Network readiness is also a factor, and IT organizations must assess whether they need to add additional bandwidth to support their digital signage application. Fortunately, digital signage solutions are generally designed to manage content distribution transparently, in the background (they can be configured to push content at nonpeak times). Caching content on in-store servers also ensures that digital displays keep running in the event that the network that connects the stores becomes unavailable.

ROI and Metrics

Measuring ROI will continue to be a challenge for many retailers and can be key to the sustainability of digital signage initiatives. The ability to correlate digital signage content with point-of-sale data over time can give retailers a better picture of the effectiveness of their digital signage efforts. Because of the great flexibility that digital signage provides, and the ability to implement new promotions quickly, digital signage is an excellent vehicle for test marketing. Also, digital signage offers the potential for "return on objectives" (such as communications and training), so in many cases, hard metrics may not be necessary to justify the investment.

Cisco Digital Signage

From a vendor perspective, Cisco is a new face in the digital signage market, and historically, its greatest advocates within the enterprise have been found in IT. Cisco will need the help of the network management team and IT leadership to facilitate access to the marketing and sales promotions groups within its retail installed base. (Cisco's strong understanding of the network can help move digital signage deployments out of pilot mode or small-scale deployments into larger, scalable solutions.) We believe this gives IT the opportunity to take a proactive role in regard to digital signage. Given its scale and reach, Cisco is certainly well positioned to ensure the success of the largest digital signage investments.

CONCLUSION AND RECOMMENDATIONS

IDC believes that the digital signage market is poised for rapid growth over the next several years. Retailers have conducted large, successful pilots and have proven to themselves the benefits that digital signage can bring. ROI is measurable and achievable.

From a technology perspective, digital signage solutions have become quite affordable, in part because of the economics of the display marketplace. The technology is now mature, robust, and reliable. Moreover, with the market entry of large IT vendors such as Cisco, the largest retailers can be assured of the highest levels of service and support. We suggest that larger retailers evaluate potential digital signage solutions with an eye to bringing the solution in-house and managing it as a component of the enterprise IT infrastructure.

We recommend that retailers seriously investigate the use of digital signage in their organizations if the benefits outlined earlier resonate as important advantages to their operations. A phased implementation is the best way to ensure success. Retailers should begin with a pilot so that they can incorporate lessons learned into successive rollouts to additional stores. Network readiness needs to be factored in. In some cases, it may be more cost-effective to phase in digital signage as part of a store renovation or new store launch than as an ad hoc retrofit, depending on store configuration.

IT departments have an important role to play and need to become more educated about the narrowcasting of video and other rich media over the IP network. Now is the time for IT to proactively partner with its colleagues in marketing to explore how digital signage can help increase revenues and improve business agility.