Digital Signage

Market Segment Overview

It's estimated that there are more than two million digital signs in the U.S. alone and the numbers are growing by about 20 percent per year.[3]

From the big box retailer at the mall to the coffee shop down the street, getting a routine tune-up for your car at a gas station or a comprehensive check-up for yourself at a doctor's office, chances are wherever you go today you will encounter digital signage.

What Is Digital Signage

A digital sign is a display that shows information:

- What's on sale (retail)
- What's on the menu (restaurants)
- What's happening that day (hotels, colleges/universities)

The possibilities for how and why digital signs are used are infinite: from increasing sales in a retail store, to conveying information and entertainment in an airport, to providing emergency alerts on a college campus.

What Goes Into a Digital Signage Solution

A digital sign can be standalone or part of a network of hundreds or thousands of signs. It can be managed one-by-one or centrally managed from a remote location. Whatever the size or scope of a digital signage solution, the basic components include:

- **Display:** HD flat-panel screens (LCD or plasma), handling a wide range of media inputs, increasingly with touch capabilities and the ability to interact with mobile devices

- **Content management:** Today's powerful digital media players capable of managing video graphics, web feeds and other sources of content

- **Content:** Sources of content include video, graphics, web feeds and more; developed in-house and/or by a media agency; may include third-party advertising

- **Network:** LAN and/or WAN, wired or wireless

How Big Is the Digital Signage Market

The digital signage market is big and growing. IMS Research estimates that hardware supporting digital signage (displays, media players, etc.) generated nearly $5.5 billion in revenue during 2011 and anticipates an 8.5 percent CAGR through 2016.[1] The United States is the largest regional market worldwide; Asia-Pacific is the fastest-growing.[2]

It's estimated that there are more than two million digital signs in the U.S. alone and the numbers are growing by about 20 percent per year.[3] There are an estimated 1,000 large networks (with ten or more displays) owned by organizations and used exclusively to support their internal communications needs, with a further 10,000 smaller networks.

Advertising

With more digital signs in place, they now offer an opportunity for advertisers to reach intended audiences. More people now watch video on digital signs than on Internet sites or Facebook, and these numbers will only grow.[4] As a result, advertising on digital signs is taking its place alongside TV, radio and the Internet. It's estimated that there are more than 350 ad-based, digital signage networks operating on a for-profit basis in North America. Total advertising revenues on all outdoor digital media increased 11.4 percent to $7.88 billion in 2012—better than any other media channel (including the Internet), according to PQ Media.[5] The ten largest networks deliver nearly two-thirds of all advertising.

Top Vertical Markets

With millions of digital signs now in operation worldwide, it is difficult to think of a venue type where digital signs cannot be found. The major vertical markets are:[6]

- Retail: Big department stores, specialty stores, small retailers, malls

- Entertainment: Movie theaters and entertainment complexes

- Transportation: Airports, bus and train stations, subways

- Hospitality: Restaurants, hotels and motels

- Corporate: Office buildings, lobbies, elevators

- Health care: Doctors' offices, clinics and hospitals

- Banking: Branch banks, brokerage offices

- Education and government: Colleges and universities, K-12 schools, government offices

Why Use Digital Signs

Business can achieve a wide range of goals using digital signage. Here are some of the most common objectives:

Lowering costs: Replacing slower, costly and less efficient printed methods of distributing information

Increasing sales: Increasing awareness of products, services, new offerings, promotions, etc., linking digital signage with inventory to make it possible to automatically update pricing for products that are reaching their expiration date

Information or wayfinding: Providing visitors/consumers with information/directions for specific locations, events, arrivals/departures etc., in transit centers, hospitality, schools, large retail complexes and many other locations

Merchandising: Making a virtual product presentation to enable the consumer to view a product from all angles, see videos, get information, etc.

Enhancing the customer experience: Showing "how to" videos to give people new ideas about using your products; using multi-touch-screen signs/kiosks that enable people to get quick access to information they need

Enhance/extend the brand: Offering HD video, animated and/or glassless 3D graphics and new levels of interactivity to create high-impact brand messaging

Costs

The cost of deploying digital signage has steadily declined over the years. In 2012 it was estimated at $3,511 (for a 40" screen, media player hardware/software, mounting brackets, installation, management and maintenance for three years), a 58 percent drop from nearly ten years ago.[7]

Technology Trends

As the market for digital signage has evolved, so has the technology.

Displays: LCD and plasma displays account for about half of revenues. The majority of installations have screens around 42 inches, but sizes over 50 inches are growing in popularity. Smaller screens (less than 30 inches) are also seeing growth thanks to increased uptake in restaurants, schools and health care locations. LED backlit screens (replacing cold cathode fluorescents, or CCF, screens), thin bezel displays (less than 9mm) and touch screens are also all growing in popularity.

Intel® Digital Signage
Market Segment Overview: Digital Signage

Media players: In media players and PCs, the big trend here is toward smaller form factors, with many manufacturers designing units intended to be embedded within a display. Displays with an expansion slot to hold a media player/PD now account for 15 to 20 percent of products on the market.

Software: As digital signage becomes more pervasive, you are seeing more operating software specifically designed for signage applications. For example, Intel and Microsoft have worked together to optimize Windows® Embedded Standard 7 operating system on the Intel® Core™ microarchitecture. Content management software is becoming more versatile—Intel's introduction in 2013 of the Intel® Retail Client Manager is an example of a scalable solution designed for the needs of both large and small digital signage solutions.

Standardization: A major goal of the digital signage industry is to develop standard hardware formats that make it easy to connect components—similar to the standards that are common in audio and video. For example, Intel has introduced an open pluggable specification (OPS) to define the size of the connector and electrical interfaces for the connector in DS components. Many manufacturers have already adopted this standard, making it possible (for example) to create media players that plug into the back of display monitors. This lowers costs for both developers and users. For example, it makes it easier for operators of digital signage networks to swap media players if a failure occurs in the field, and also allows easier upgrades, future-proofing investments. Intel is seeking the same goal with the introduction of the Intel® Retail Client Manager platform: making it easy to play any content on any media player will simplify ongoing content development and management (a major challenge) helping drive the overall growth of the digital signage market.

Remote management: Because digital signage networks can involve having hardware in a wide range of locations, being able to assure that the screens can be turned on and off (for energy efficiency), are running properly (critical when they are carrying ads) and remote repair is possible are critical requirements. A solution such as Intel® Active Management Technology (Intel® AMT) makes it possible to remotely discover and repair many network problems without costly onsite service visits.

Anonymous viewer analytics (AVA) technology: The ability to gather accurate, detailed measurement of audience engagement with digital signage will only add to their value and enhance their role as a provider of paid advertising. Anonymous viewer analytics (AVA) technology is now widely available and makes it possible to provide actual audience measurement data: how many people looked at the content, how long they watched, and their demographics (e.g., gender and age bracket).

Security: Because of its highly public-facing nature, security is a critical issue in any digital signage installation. Security breaches can occur as a result of physical access to a display or media player, or unauthorized access via network communication. The operator of a digital signage installation with inadequate security risks loss of reputation, lost revenue as well as potential for litigation. Solutions such as McAfee Embedded Control and McAfee Deep Defender form key components of a secure signage network.

As mobility, interactivity, social networks and all of their ancillary capabilities transform consumer patterns, the opportunities for creating deep, effective customer engagements anytime, anywhere is expanding.

Digital signage is at the heart of the revolution, creating new opportunities for the kind of smart, personalized consumer experiences that businesses need to deliver today.

Intel® Technology Provider

For more information on digital signage solutions, visit **intel.com/retailsolutions.**

[1] http://www.imsresearch.com/press-release/Media_Players_PCs_and_Displays_Drive_Nearly_5_Billion_in_Revenue_for_Digital_Signage

[2] http://www.infocomm.org/cps/rde/xchg/infocomm/hs.xsl/36280.htm

[3] http://www.slideshare.net/msftweb/connecting-your-business-to-devices-and-customers-with-windows-embedded

[4] 2010 Arbitron Digital Place-Based Video Study

[5] http://www.pqmedia.com/about-press-20130516.html

[6] NSR Analysis 5/09 & 2012-2015 Intel estimates

[7] http://www.wirespring.com/dynamic_digital_signage_and_interactive_kiosks_journal/articles/The_2011_Digital_Signage_Pricing_Study__Costs_Fall_Another_5_6_-821.html

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