

## “Digital Signage 101

### *A Quick Introduction For Those Who Are New to Digital Signage*

#### **What is Digital Signage?**

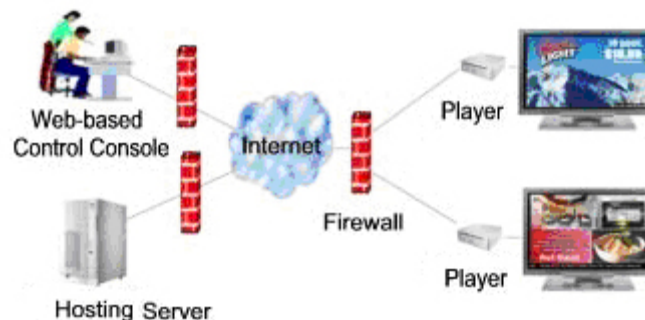
Digital signage refers to the use of modern display panels, digital content and Internet technology to deploy a network of rich-media signs to replace traditional print signs. Digital signage is a new generation screen-based media network created to deliver dynamic advertising and communications at various out-of-home locations. Today's widely available broadband infrastructure and increasing affordability of display panels are spurring a fast adoption of this new generation of digital media network. Digital signage can be deployed at almost any locations where people gather, shop, entertain, walk-by, or wait.

Unlike traditional print posters and static billboards, digital signage delivers dynamic and rich-media content using new generation media and network technology. Research shows that people are 5 to 10 times more likely to pay attention to dynamic rich-media content in contrast to the traditional static signs.

Unlike standalone video or PowerPoint-based display panels, digital signage can deliver up-to-date content and real-time messages remotely through the Internet. With digital signage, content update consistency and efficiency are greatly improved while the content distribution cost and time are significantly reduced.

#### **How Digital Signage Works?**

A typical digital signage network is comprised of a centrally located management server and many networked display panels installed at various locations. A local media player, which is usually installed at or near the display panels, receives contents from the central management server and plays the contents locally for one or several display panels. For example, a large retail store chain can deploy a digital signage network for in-store advertising and customer communications. One or many displays and media players can be installed at each store. The management server can be hosted centrally. The marketing department can centrally deliver weekly or even daily sales and other messages to some or all of its stores in real-time or based on predefined schedules.



## **Digital Signage Advantages**

Whether you are looking for new ways to reach your customers or a better and more efficient media to communicate with your employees, a digital signage network is the ultimate solution to reach your audiences with dynamic up-to-date content and messages. Digital signage can maximize your message and maintain relationships with your customers. With digital signage, you can extend your messages to follow your audiences where they go.

Traditional media tools including billboards, print posters, stand-alone video displays have all been created to deliver messages at high traffic locations. However, those traditional displays take a long and costly cycle to produce, distribute, and update. More importantly, in today's global economy the static nature of those traditional displays greatly handicaps a business that has the need to reach audiences spreading around a large geographical region or even across continents with timely, up-to-date, and localized content. As our society and technology continue to evolve, digital signage is becoming a new generation of digital media delivering dynamic and relevant content to target audiences in a way beyond the reach of traditional media tools.

## **Digital Signage Applications**

Digital signage can be deployed at almost any businesses or locations to provide an appealing visual environment, to promote products and services and to improve communications with customers or employees. Those businesses or locations may include retail store chains, shopping malls, banks, pharmacies, hair salons, hotels, restaurants, office buildings, doctor offices, libraries, fitness centers, hospitals, health spas, and more.

Digital signage has also been used to establish a new generation of out-of-home advertising networks by installing displays at high traffic locations with unique demographics. This new generation of advertising networks not only offers advertisers new channels to reach audiences with unique demographics at specific locations, but also picks up where TV, newspaper, and online advertising leave off, as it is able to reach targeted audiences while they are away from home and office.

## **Deploying and Managing a Digital Signage Network**

A typical digital signage network project will most likely grow from a few displays to many displays and from a few locations to many locations. Digital signage is not an end-product, but rather an on-going "Plan, Design, Deploy, Manage, and Grow" process. The concept of "think big, start small" is the key to any successful digital signage network. Before jumping into a digital signage network project, you should understand the process and the various components involved with digital signage including hardware, software, locations, content and more.

## **Location**

Location is just as important to digital signage as in Real Estate. Determining the right locations is one of the first issues to consider in deploying a digital signage network. The location should usually have high traffic, unique demographics and enough attention span from your targeted audience. Ease of installation and maintenance should also be considerations.

## **Display Panels**

Almost any display technology including plasma, LCD, projection, and LED can be used for digital signage. Plasma and LCD are the most popular displays used for digital signage. Depending on the locations, panels of different sizes and types should be selected. LCD is still the best option for displays under 40 inches, while plasma has a better price for displays over 40 inches. Large LED video walls are usually used for outdoor digital signage applications.

## **Media Players**

Media players are either PC based systems or embedded media player systems. Most media player software clients are Windows-based systems, while some are Linux-based. Most media player software or systems only work with their own digital signage server software. Options for PC-based player systems include regular desktop PCs and mini PCs. Regular PCs are usually cheaper, but bigger in size compared to the mini PCs. Fanless mini PCs are becoming one of the better options for media players.

## **Display Mounting and Enclosures**

Depending on the installation locations and requirements, mounting and enclosures can be an expensive initial investment. Ceiling mount, wall mount, pole mount and floor stands with various enclosures are the common options for installing display panels.

## **Wiring**

Wiring includes the electric power, the network connection, and the audio/video cables between local media players and the display panels. Mini PCs can usually be mounted in the back of display panels and require less wiring. Sometimes a regular PC has to be installed in a backroom and wiring has to be run between the PCs and the display panels. Audio/video cable wiring options include regular VGA cables for distances within 100 ft range or CAT5 cables with transmitter and receivers for longer-ranges. Some CAT5 solutions can support up to 1,000 ft. The price and performance of wireless audio/video solutions are still less than ideal today.

## ***Internet Connection***

Broadband Internet connection is required for most digital signage networks to distribute content. Wire or wireless router can be installed locally to connect the media players to the Internet. Mobile wireless Internet is another option as the service becomes more available.

## ***Content and Player Management***

At the heart of a digital signage network is the content and player management technology. Managing a large digital signage network can potentially be a daunting task. While there are many digital signage solutions in the market, only a few can qualify as a lifecycle content management service platform for digital signage networks. The right system should allow you to "think big, start small" and effectively manage the process of deploying, managing, and growing a digital signage network. It should support a content publishing process where content can be in a different state during its lifecycle including drafting, pending, approval, live, and expired. Player monitoring and reporting features should also be included. If your plan is to build a large network with national, regional, and local sub networks, you want to organize the displays based on zip codes, cities, and states. You also want to be able to assign access control at different levels of this organizational structure. You want to schedule and publish some content globally to every display, some only at the state level, and some only at the city or a zip code level. No matter where the displays are located physically, within the same zip code or half way around the world, content should be updated dynamically and centrally in real-time; the displays and the players should be monitored and controlled centrally; and various detail and summary play reports should be generated as needed. How easily can those tasks be executed?

## ***Content***

Just like with any other media network, ***content is still the king when it comes to digital signage***. You build your digital signage network to deliver content. You should plan ahead for a content strategy that can fulfill the objectives of your network. You want to keep your content up-to-date and appealing. In addition to your own content, you should determine what kind of external content feeds might be appropriate for your network. You may also integrate your digital signage network with your existing information systems or your application service providers to automatically deliver dynamic content and information about your business.

## ***Conclusion***

Digital signage is among the fastest growing businesses around the world in delivering advertisements, corporate communications, and other messages. The increasing use of modern display panels in the out-of-home locations as well as the widely available broadband Internet infrastructure have provided unprecedented opportunities for businesses to deliver dynamic content to their audiences. A digital signage network is not an end product, but rather an ongoing process. Understanding what it takes to build and manage a digital signage network before jumping into it is critical to your success. As price for display panels continues to drop and the digital signage technology continues to improve and standardize, the explosion of this new generation media network is yet to come. "