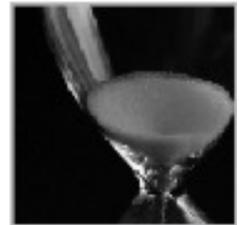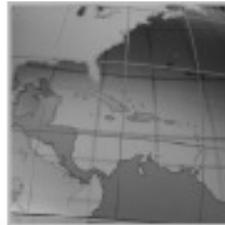Analysis

Wide Format Print vs. Digital Display – Part 2

An Exploration into Print Signage vs. Digital Signage Display

InfoTrends
A Questex Company

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Executive Summary

This the second of a two-part analysis that presents key findings from recent research and InfoTrends' opinions on how these technologies will interplay in the future. Whereas Part I concentrated on comparison between printed and digital signage and trajectory of the market, this analysis will focus on the economic considerations that advertisers, retailers, and distributors have to consider when examining digital display signage and digitally printed signage options. InfoTrends relies on a combination of primary and secondary research findings to develop this analysis and the opinion expressed herein are entirely our own.

Key Findings

- Shops that want to be successful in digital signage must be willing to develop a highly consultative sales approach.

    o Shops must be willing to invest time to understand what really works and what doesn't in the systems they install.

- There are multiple pricing and revenue models in the digital signage market. Signage and graphics shops are more likely to be successful in the models that rely on a content strategy as opposed to hardware-based.

- Interactivity is becoming increasingly important to advertisers, and digital signage systems provide a higher-level of interactivity. However, at some level, digital signage is threatened by the mobile technology, which can serve as a "miniature signage" system.

- Advances in technology that help advertisers target and measure the effectiveness of their messaging will further fuel growth in the digital signage market.

Recommendations

- Signage and graphics providers, and even equipment and supplies dealer, should look for ways to become involved in the digital signage business. Part of that investigation should include looking for help from their existing dealers and hardware partners, many of which have engaged digital signage at some level already.

    o Many of the key suppliers in the wide format business, 3M, Caldera, EFI, HP, Roland, Synnex, and others have at least some technology, if not entire packages, that can facilitate entry to this market.

- Measurement is an important part of implementation, companies that enter the digital signage business should evaluate and incorporate tools that provide and prove effective audience measurement.

- Those that are interested in moving into digital signage should incorporate mobile communications as part of their strategy; elements of interactivity that heighten the engagement with products and brands, allows for mobile centric signage applications.

Introduction

It has been speculated that with its ability to allow for more rapid information change, digital signage will impact the printed signage market. Print service providers that have been interviewed by InfoTrends have generally reported that they are not yet feeling the effects of digital signage on their business, and instead of a threat, many see digital signage as a new revenue opportunity.

JC Decaux Interactive Digital Signage Implementation in London

Economics

Economics come down to two core elements, what does something cost and what can it be sold for. For wide format signage and graphics producers the economics of wide format digital printing are often compelling, which is why InfoTrends sees many shops from outside of wide format interested in entering the signage and graphics market.

InfoTrends has developed a tool to calculate break-even points for the investment in wide format digital printing hardware. The assumptions are based on real-world examples and they show that shops are able to break-even on their investment in wide format printers by printing as few as a few hundred square feet per month for low-end devices up to about 8,500 square feet per month for high-speed UV-curable inkjet printers.

Table 1: Break-even Print Volume Point for Wide Format Digital Printers

Equipment type	Monthly break-even volume
60-inch aqueous inkjet printer	325 ft2
64-inch eco-solvent inkjet printer	980 ft2
5M wide solvent inkjet printer	5,550 ft2
Mid-range UV-curable inkjet printer	3,025 ft2
High-speed UV-curable inkjet printer	8,900 ft2

The break-even calculations in the Table above were based on varying equipment amortization schedules, pricing structures, and operating cost assumptions. The point of displaying them is that for companies in the signage and graphics market, the proposition is clear, the more they print, the more profit they can count on.

From the print buyers' standpoint, printed signage has an easily quantifiable cost. These applications, produced for a retailer or other B2B accounts, would sell for a few dollars per sq. foot or an established discount price depending on volume ordered. Shops that would charge $60 for a single poster would produce 50 posters for less than $25 per poster. The cost of signage and graphics on this type of transactional basis is fairly easily recognized and the impact of a signage and graphics campaign can be measured by comparing the sales of certain products and services before and after the signage was installed.

In other signage applications, such as vehicle wraps, which are designed not to drive direct transactional activity but to raise awareness and recognition of a particular product or service, measurement can be established through comparing web sites hits, number of telephone calls fielded, or even through a brand recognition survey. Advertisers can then develop metrics such as cost per impression, cost per new contact or cost per new web site hit that helps quantify the return on investment in a signage campaign. If we call these sales activities, inquiries, or brand recognition improvements "interactions" then calculating ROI is fairly straightforward; Net change in interactions/cost = ROI. Digital signage when used for a point of sale has found to be effective.

This is the same kind of metric that can be applied to digital signage systems. There are multiple studies, most of which were commissioned by digital signage system manufacturers, that show the strong ROI of digital signage systems as well as identify the tools that help quantify that ROI. A Nielsen study, where digital signage advertising was tracked in 120 grocery stores over a period of time, it was found that 4 out 5 brands experienced increases of up to 33% in additional sales compared to when using printed signage alone.

Costs

The costs associated with digital and printed signage will of course vary from job to job but InfoTrends has found that here are some average costs to be associated with print and digital signage.

The costs for wide format printed signage are available for review by customers at any time. Typical costs for posters, signs, and banners are readily available from any number of sources to the print buyer. The hard costs of print are simple and easy to understand. The Table below illustrates some typical and average prices on a per square foot basis for

key wide format applications. There is a very wide variation in some of these "average" prices which depends on order quantity as well as process and materials used.

Table 2: Average Pricing for Printed Signage

Application	Cost
Backlit	$2.50 - $11.50/sq. foot
Banners	$2.50 - $6.00/sq. foot
Billboards	$0.40 - $3.00/sq. foot
Posters	$2.00 - $7.50/sq. foot
Vehicle wrap	$5.00 - $9.00/sq. foot plus design & installation
Wallcovering/Wall mural	$4.00 - $9.00/sq. foot

There are also soft costs related to the management of print that are harder to quantify, these costs include shipping, installation, storage, and disposal. Digital signage systems reduce some of those soft costs, such as shipping, changeover/installation and storage, but introduce other soft costs such as network management, content development, and maintenance.

The University of Michigan, has done extensive research on the estimated costs and pricing of digital signage services and has found that the cost of display depending on size can range from anywhere from $1,500 to $12,000 USD to install. Price increases with the amount of interactivity, size and complexity of the screens being installed. Yearly servicing fees of the displays is around $200 in addition to the costs for power sources, mounts, and any IT services needed. The Table below illustrates the average pricing for various sizes and complexities for digital signage.

Table 3: Estimated Pricing for Digital Signage

Display Size	Non-Interactive	Interactive	Interactive with case (kiosk)
32" Wall Mounted	$1,500	$2,500	$3,300
42" Wall Mounted	$2,100	$3,300	$4,100
46" Wall Mounted	$2,600	$4,000	$4,800

| 55" Wall Mounted	$3,900	$5,700	N/A
70" Wall Mounted	$9,400	$12,800	N/A

Source: University of Michigan, Pricing and Costs for the Digital Signage Service, 2013

Since many signage and graphics shops are becoming increasingly IT-oriented, develop content as a matter of serving their customers, and are configured to provide maintenance, it is natural that many are considering how they can play a role the in the growing digital signage business. For signage and graphics providers that are interested in entering the digital signage business, it is important to develop a clear picture of the economics of implementing and operating a digital signage system.

Different Models

A digital signage system includes a screen and a content delivery mechanism. The small iterations of digital signage systems include a DVD player or hard drive that sends messages to a screen. Typically these systems are rented out on a monthly basis, and using a quick search InfoTrends found the cost to average less than $50 per month per screen. Larger implementations use network/IP addresses to send messages to individual locations, systems like that are typically offered for around $100 per month. Still larger iterations use broadcast messaging delivered via satellite. The pricing of that type of system is more complex and often very similar to the printed billboard market because pricing frequently depends on location and display frequency. The cost of displaying a billboard in Times Square is and should be more than a billboard off the highway in rural Tennessee because many more people will see it. Companies such as CBS Outdoor that operate billboard-sized digital display systems have a pricing model that is very similar to how billboards are priced, based on location, but also factoring in duration and frequency.

Clearly, the smaller a digital signage system is in terms of scope, the less complex the configuration would be. As such, the sheer number of implementations of small signage systems is vastly larger than the high-end broadcast version, of which there are tens of thousands of sites.

Figure 1: Framework for Digital Signage Market Analysis
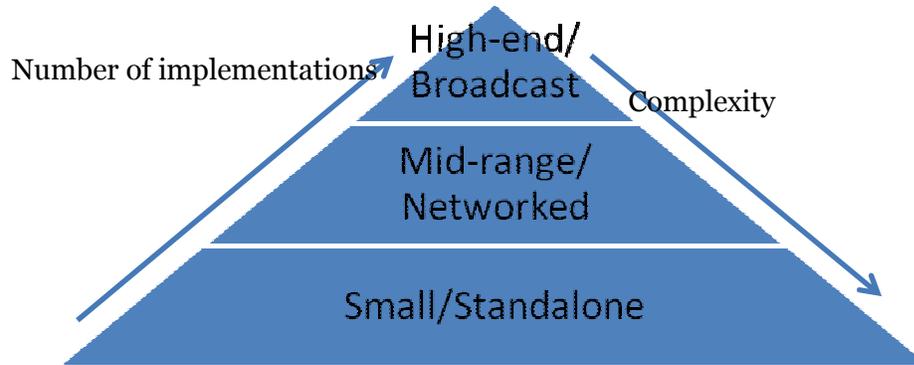
InfoTrends believes that many signage and graphics establishments have, or can fairly easily obtain the networking skills required to compete in the low-end and mid-range of the digital signage market.

One company that has fully embraced digital signage is FastSigns, which is providing all of the tools that their franchisees need to enter the market on these levels. However, "the money is in content" says FastSigns' Digital Signage Specialist Wayne Rasor "the hardware is widely available, and selling digital signage hardware is a one-time deal. Content is the service." What Rasor, who has been involved in digital signage for over a decade, suggests is that the FastSigns sign shops that have been successful moving into digital signage are the ones that have developed a great content strategy, which means the consultative selling approach is critical – just as it often is in the printed signage business. FastSigns has even developed demonstration sets of content for vertical markets such as food service, education, healthcare, and automotive so that its franchisees can readily illustrate market-specific content.

For shops that want to offer digital signage systems there are at least two different revenue models that have developed, homogenous and mixed use.

The mixed use revenue model of digital signage systems presents one of the challenges to straightforward economic analysis, partly because some of the benefits of digital signage include "soft", but very real benefits such as more dynamic messaging, higher levels of interactivity and perceived reduction in wait time. These systems are, in effect, just like billboards, which are controlled by "outdoor advertising" companies but are rented out by the day, week, month, or year. Digital signage systems are "rented out" to advertisers based on very short time blocks, usually 30 seconds at a time. A complexity arose in this model because the store owners, mall owners, and airport operators would share in the advertising revenue derived from these systems. They don't "own" the system; they simply hosted or allowed the screen to be displayed in their environment. This was the revenue model that many digital signage implementations were originally based on, and many still are, but wider-scale adoption required additional business models.

In the homogenous model, the messages displayed on a digital signage system are tightly controlled by a single company that wants to present information and promote products within a specific environment. An example of this is model is a digital signage system found in fast food stores that serve as digital menu boards that advertise and promote only the products the company is selling at a particular time. The signage system may present other information, such as news scrolls and weather forecasts, but the primary messages are advertising products being sold within that store or environment. In this case, the costs of installing and deploying a digital signage system would fall entirely on the institution that would host the system. In some cases, such as in a department store, the store may charge a company whose products they promote on their system, or they could work digital signage advertising into negotiated pricing.

Interactivity and Signage

The University of Michigan research highlights an important dynamic that needs to be mentioned in the discussion of print vs. digital signage; interactivity. Many advertisers are looking for ways to heighten the engagement with their target audience, and interactivity is seen as a great way to accomplish that goal.

In some of InfoTrends' recent research, wide format print buyers were asked if they use or have ever used QR codes or some other interactive media element in their wide format graphics. The percentage of shops that have used these interactive media elements has more than doubled from 2011 to 2013. Furthermore, the research found that in both cases over 90% of those that have included some interactive elements reported that they would do it again.

Figure 2: Do you use or have you ever used QR codes or some other interactive media element in your wide format graphics?
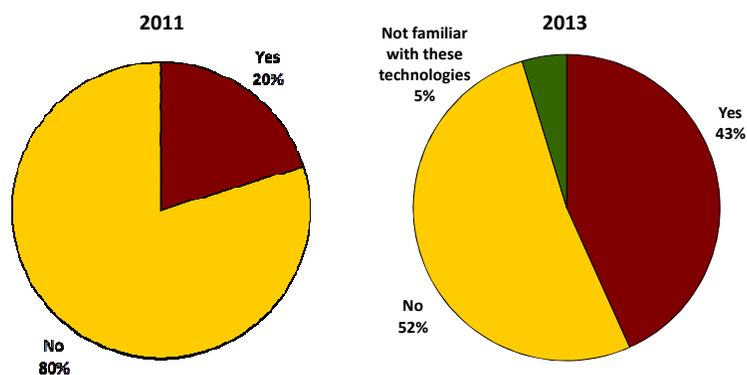
N = Wide Format Buyers
Source: *Who Buys Wide Format?,* InfoTrends 2011 & 2103

The point - interactivity is an important trend in the signage and graphics market, and digital signage amplifies the opportunity to include interactivity. FastSigns Rasor reports "we say that printed signage typically has one of three goals, to inform, direct, and sell. Digital signage does all of those, and can entertain at the same time. Advertisers

increasingly want to connect the message on the sign with the message on the mobile device."

Of course one of the ultimate advantages of digital signage systems is that it is dynamic, so messages can be changed much more easily than with static signage. The ultimate goal is to connect a digital signage system with audience measurement tools, such as EFI's SmartSign Analytics tool, to create a dynamic set of content that would draw the attention of the viewers based on real-time measurement of the viewers.

Just as some believe that digital signage represents the next phase in the signage market, there are those that believe that mobile advertising will usurp digital signage systems. Not only does mobile advertising offer the dynamic element that digital signage systems offer, a great content strategy in the mobile market can be personalized based on location, preferences, travel patterns and more.

Figure 3: Additional Advertising Channels Should Mean Adding Services for Signage & Graphics Shops
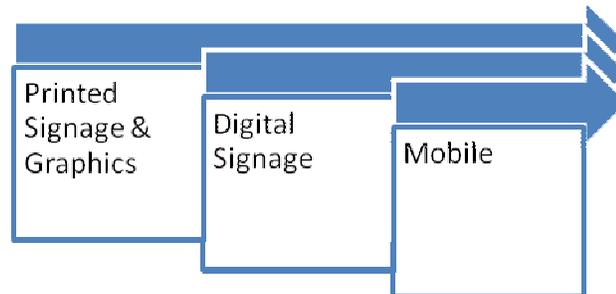
InfoTrends Opinion

Digital signage is a growth market already and many technologies and tools that will contribute to future growth are still emerging. There is an important similarity between the printed signage and graphics market for sign shops, and that is the strategic importance of a consultative selling approach on the one side, and a rigorous attention to operational detail on the other. In the digital signage business, the result of that highly consultative sales approach should manifest in a great content strategy which is the key to ongoing revenue streams.

A bigger picture look at how these products, technologies, and markets are developing provides a good example of how additional technologies don't replace, but complement and supplement, resident technologies. Digital signage is another channel that some advertisers will want to consider, and smart signage and graphics service providers will work to leverage their signage expertise, service capabilities, and content development experience to grow their business.

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