

## Whitepaper: Analysis of Successful Digital Signage Networks

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In a world full of Tivos, where viewers get a fiendish pleasure out of zapping commercials at every chance, it's not the same old game for Madison Avenue anymore. The fragmentation of mass media is forcing advertisers to chase an ever-diminishing slice of what once was a pretty simple mass market. The rules have now changed. A recent study showed that Tivo users skip 95.7% of all fast food commercials. How does the average brand manager then reach his audience? And amongst the myriad of choices for advertising, how can you know that you are getting a decent ROI? How can you guarantee your target audience is listening?

These realities are forcing everyone to "think outside the house". Fortunately, there is a way to reach your audience that is exploding today. It's called Dynamic Digital Signage.

The good news is that deploying a digital signage network is no longer rocket science! Just look at all of the resources available in this magazine!

In the early days of "Retail TV" (we didn't really call it Digital Signage back then...at least not before the advent of large format plasma displays), companies such as PRN (who produce Wal-Mart TV) and NGN (who ran the now defunct 7-Eleven TV network), wrote their own software and developed their own proprietary hardware to control their network of screens. Nowadays, sophisticated systems are available using off-the-shelf industry standard hardware and software to enable a wide variety of applications for dynamic digital signage in vertical markets, such as:

- Digital pre-show advertising in movie theatres that replace the old 35mm slide shows
- Targeted advertising in pharmacies and doctors offices to promote OTC and prescription drugs.
- Customized branded in-bank TV that prevents competitors ads from showing up
- In-store video messaging that is 100% in sync with what is on sale TODAY at that store
- Displays on gas pumps or in c-stores to get people to buy something more than just gas
- Menu boards highlight the extra value meal (or extra profit meal) of the day
- Gate information displays that show the FAQ for each flight at the airport.
- Networked gaming in sports bars and casinos linked with an affinity card
- Interactive exhibits in museums that display the most up-to-date content automatically.
- Corporate information networks where the good news from HQ makes it out to the field
- Training programs where no one asks, "Who's got the training tape?"
- Concession displays at arenas and stadiums that automatically adjust to the venue schedule.

The uses for dynamic digital signage are limitless. Perhaps movies like *Minority Report* are a little over the top, but not really. This sort of targeted marketing is very possible today and might actually be showing up in a Gap store near you sooner than you think! And of course, the closer you can get to the point of purchase, the better your chances of influencing sales in a world where immediate gratification never seems to be fast enough. But how do you sort this all out?

I have a favorite Top 10 List when it comes to implementing a digital signage network right the first time. There are many different aspects that you must consider. Here's my list:

1. Content is King: everyone's favorite number 1. No matter how good your technology is, if the content sucks, your network will fail. Plain and simple. Advertise Charmin Toilet Paper in McDonalds while waiting for your Big Mac, and you will fail (as the folks from NGN discovered).
2. Make it lively: Engage your viewer with relevant content, and he'll be unlikely to "tune it out"
3. Local Buy in is Critical: If the staff hate your channel, they will find a way to sabotage it. Repetitive audio is usually the biggest culprit here.
4. Location, location, location: It's true in real estate. It's true in digital signage. If the screen aren't in a place where people will notice them (such as 12 feet in the air), people won't notice them. Period.
5. Is it easy to do small updates? The key to a successful narrowcast network lies in your ability to easily target information to the right people at the right time. If you can only do monthly DVD updates, you really are missing the boat. If you can't easily change the price of an item across your network in 15 minutes or less, you've got the wrong platform. How much is that costing you?
6. Closed loop systems are key. If you can't prove that your ads ran, you won't be able to get a lot of money for the advertising on your network.
7. Don't rely on SneakerNet. Humans are human. Take mistakes out of the equation. Use the network to remotely update all of your systems. Don't just send around DVDs because you can't get up enough courage to talk to the geeks in the IT department. Use the network!
8. Employee oriented content is a powerful sales tool. While most people focus first on the customer facing screens, having subliminal employee communications will make a HUGE difference to communicate your brand and image internally. Face it; the days of the bulletin board are numbered.
9. Sell signage like end caps: Remember the vendors whose commercials are being zapped? They're looking to reallocate that advertising money somewhere else. You have the brands in your store. Leverage that. Get them to find NEW coop dollars to sponsor an end cap or a special targeted promotion on your network. It works better and costs less than what they are doing today.
10. Don't fight the PC industry. Use industry standard hardware. Low volume proprietary MPEG players just won't keep up with the price/performance of your average low cost PC.
11. Does it scale? Anyone can do a pilot. Brute force and ignorance can easily do this. What happens when you need to roll out 5000? Pick an architecture THE FIRST TIME

that is flexible enough to grow with your needs without having to replace the system later. (My apologies for extending my Top10 list to 11 items!)

What's new? The explosion in digital signage is happening NOW!!!

Take TESCO for example. TESCO is the UK's single largest retailer. One of out every eight dollars in the UK retail sector are spent at a TESCO store. That's huge. TESCO are deploying a network of 12,000+ screens in 300 locations, with seven to eight zones per store driving forty Panasonic flat panel displays per store. There's really no comparison of a network in the US of this concentration and sophistication. PRN is the closest with their Wal-Mart TV network. Wal-Mart TV is in nearly nine times as many stores as TESCO (2621 for Wal-Mart), but the display technology is rather dated by comparison (27" TVs 10 feet off the floor) with the same content throughout most of the store. PRN does also provide content for the "wall of TVs" in the electronics department as well as an "interactive music sampling kiosk" to preview music and videos.

Compare this with TESCO's eight targeted areas per store (Power Aisle; Grocery; Health & Beauty; Beer, Wines & Spirits; Home Entertainment; Counters (Meat, Fish & Deli); Café; and Checkout). Each of these areas has targeted content and advertising that is updated weekly to match exactly what is on sale that day in the store. But the biggest difference is in the display technology. With nineteen Panasonic plasma screens and thirty 17" LCD screens strategically located throughout the store, you just can't miss TESCO TV. [Note: JCDecaux sells the advertising for TESCO TV, Instrumental Media Group produce and distribute the content over a Hughes satellite network with Scala software controlling the media end to end.]



Mass merchants are not the only ones jumping head first into digital signage these days. Take for example fast food giants McDonalds and Burger King. McDonalds recently installed digital menu boards in many restaurants on the east coast. Each of the pilot stores has four plasma screens that completely replace the static menu boards of old. The prices were dynamically driven and occasionally, a Big Mac would wiggle to draw your attention. Unfortunately, most of the graphics were quite static, and with plasma, burn-in was a significant problem. Worse yet, the average revenue per customer did not increase. Just because a Big Mac wiggled from time to time did not cause customers to pay more for a Big Mac or buy two Big Macs.

Contrast that with what Burger King did in Germany. In 300 stores, they replaced just ONE panel of the menu board (the middle) with a 42" plasma from NEC. This screen was solely used to AUGMENT the existing menu boards, and continuously looped featured menu items to drive the average revenue per customer up. Guess what? It worked. Average revenue shot up and the cost to deploy the system? A lot less than replacing all the menu boards with screens. Burn-in was not an issue here, since there was no static imagery on the screen. As an extra bonus, the CEO of Burger King GmbH was able to broadcast his personal video message to all employees using the same system before the store opened. That's an amazingly powerful tool for an amazingly small investment. ([www.ictag.net](http://www.ictag.net))



Another interesting venue for digital signage is doctor's waiting rooms. This market has a lot going for it. Number one, the pharmaceutical companies have a lot of money to spend in



direct to consumer marketing. This is one of the few markets that I know of that can survive on pure advertising revenues alone. Secondly, the pharmaceutical companies can track EXACTLY how many prescriptions a particular doctor writes of each drug from month to month, so it's very easy to measure the effectiveness of an ad campaign. And lastly, with as many vertical specialty markets as the medical profession has, you don't necessarily need a large number of deployments to hit critical mass for advertisers. Even a few hundred locations can be a critical mass in certain medical specialties.

Compare for a minute the cost and effectiveness of a SuperBowl ad for Nexium (with purple pills flying around the screen). AstraZenica have only recently decided to tell you what Nexium is for! In the early days, they just said "Ask your doctor if Nexium is right for you". Will you remember to ask your doctor the next time you see him? Unlikely, unless he's watching the SuperBowl with you. Now run the same campaign in the waiting room of your doctor. What's the chance that you'll actually ask your doctor about Nexium, and then write you a prescription that moment? Pretty good I'd say. And the probability only goes higher when you are talking about a specialist - plastic surgeon, endocrinologist, OB-GYN, oncologist, dentist, even ophthalmologist or veterinarian. Consider your last trip to your eye doctor. Did you walk out with "Two pairs for \$99" or was it more like \$399 for designer frames with progressive lenses and prescription sunglasses? Imagine if you could get a mere 5% lift in sales. It's not unusual to get a 20% lift in sales if the message is targeted to the right people at the right time. ([www.iportmedia.com](http://www.iportmedia.com))

There are many different niche markets for digital signage, where people have a need to "wait". Doctor's offices are just one. Pharmacies are another. It's too late for a prescription at this point, but there are plenty of over-the-counter medications and other healthcare products that the pharmacists would be happy to recommend while waiting for your prescription to be filled. Tire and auto centers are another. While you are in for an oil change, perhaps they can entice you to get new wiper blades, or better yet, up sell you on the 30,000 mile tune-up, or pitch you on a new set of tires. Even a small increase can have a dramatic impact on the bottom line. But what do these stores have today in their waiting areas? TV sets, right? And what's playing on the TVs? Hummm...

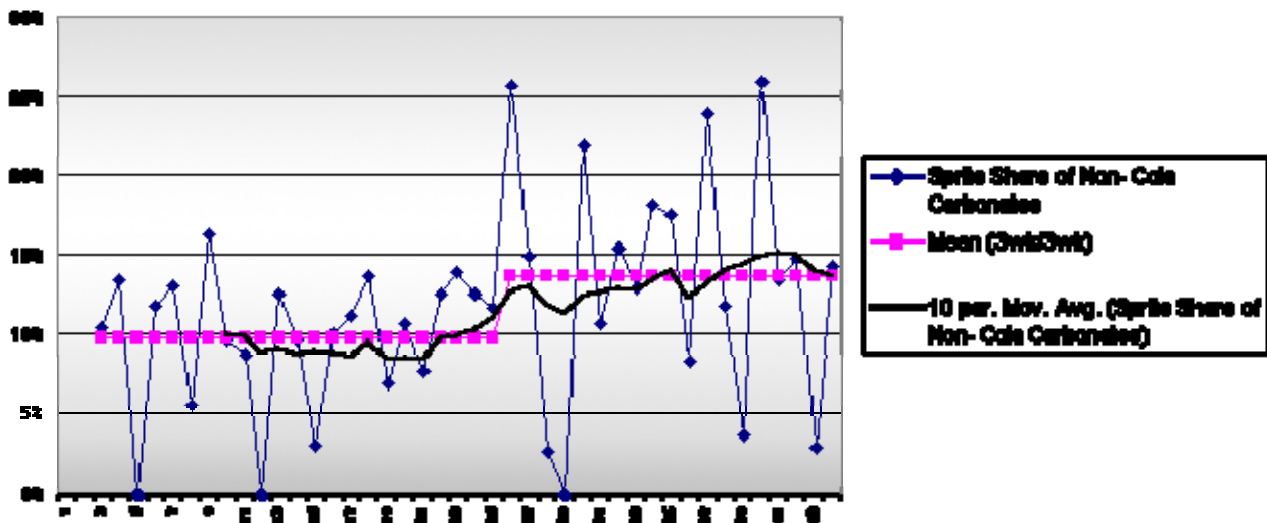
Let's imagine you are in a Dick's Sporting Goods store. Each store has a nice big video wall in the back tuned to ESPN or "the game". What are the chances that you'll have an ad on ESPN or during the game for The Sports Authority? Pretty high actually. That's a major problem for Dick's Sporting Goods unless one of the associates has his hands on the remote control to quickly switch out the those ads. If Dick's had a custom content loop playing in their store, not only would they not see competitive commercials, but they would be able to specifically promote what was on sale that week in their store, just as BestBuy does today. Prior to using a Scala based platform in their stores, BestBuy was only able to update the videos once per month. With only monthly DVD updates, BestBuy had no way of promoting weekly specials in the store. That is until they started using Scala. Now they have a completely coordinated marketing campaign between print, TV and in-store messaging each week, which has had a positive effect on their business. ([www.edr.com](http://www.edr.com))

The same "off the air TV" problem exists for many retail banks today. Many new banks feature TVs or plasma screens in the waiting areas tuned to CNNfn, MSNBC or BloombergTV while customers are waiting for the next available teller. What are the chances that you'll see

a commercial for eLoan.com or ditech.com with a better rate on a home equity loan than your bank may offer today? Major problem. Fortunately there is a service from Bloomberg that allows you to subscribe to a customized in-bank TV channel with content from Bloomberg, but with ONLY commercials from YOUR bank. It's your bank. It's your customers. Don't let your competitors in. ([www.affinitygroup.net](http://www.affinitygroup.net))

A lot of people have tried digital signage in convenience stores and gas stations without much luck. C-Stores are an impulse buyers' Mecca. So what went wrong? The first and foremost issue is "pay at the pump". People don't go into the store any more. Static signage and the little scrolling text display above the keypad in the pump just doesn't cut it. You need a nice screen. It needs to be big, full color, daylight viewable, and built for the outdoors. Add a little audio and you can start targeting your customers emotional buying patterns. Of course, providing interesting and compelling content is important too, not just pure advertising. From the advertisers perspective, it would be really nice to know that someone is WATCHING the ads, so you had better have an interface to the pump. Finally, make sure that the things that are advertised on your screens are ACTUALLY FOR SALE at the C-store or gas station. Just don't go for the NGN "billboard approach" of "how many impressions did I get?" Limit the ads to only those that can satisfy the immediate gratification of the consumer. It's a C-Store. That's what Convenience is all about. Keep your loop time short enough that all ads are played during a normal fill-up, and measure your sales lift. Done. ([www.vst-canada.ca](http://www.vst-canada.ca))

To see the effectiveness of digital signage in a C-Store, a study was done a few years ago where sales of Sprite (the product being advertised and measured) was compared against control store stores in the same city that did not have digital signage. The results were fascinating.



After gathering sales data for three weeks, screens were turned on in the stores with plasma screens and sales of Sprite shot up significantly (see chart on day 26). Then sales dropped off to zero a few days later. The store wasn't closed. They actually ran out of Sprite!! And the driver for Coke did not replenish until later. Over the remaining 3-week period, sales of



Sprite were consistently higher than in stores without digital signage (and the results could have been even better if they were able to keep the product in stock).

Cinema is another interesting market in transition. A few years back, most of the major theatre chains were in bankruptcy. The entire industry was over built. Phil Anschutz, of Quest Communications fame, purchased Regal, UA and Edwards Theatres along with NGN (remember the 7-Eleven network?) out of bankruptcy, and began to change the rules in Cinema. Theatres were outfitted with medium sized digital projectors and were placed next to each film projector. Each Cineplex was connected via satellite to each other, and voila', a new theatergoers experience was born. Gone are the cheesy 35mm slide shows before the movies begin. This was replaced by a nicely produced video pre-show program called "the 20wenty" featuring stars such as Jay Leno intermixed with advertising and promotions. Plasma screens could now be placed in the lobbies to drive concession sales and other promotions. And, best of all, the movie theatre was just not for movies any more. Alternative media events could be held in these theatres such as simulcast rock concerts in HiDef or pay per view sporting events. All of these alternative media events are "found money" for the theatre, which has turned the industry around. (OK...that and a nice summer box office will do wonders!) Christie Digital has developed an entire turnkey solution for the cinema market to control on-screen advertising, in-lobby advertising as well as digital menu boards. The system completely automates the process of running the projection booth. Simply thread the film in the projector and press the "Start Show" button. First the low budget ads play on the digital projector. Then with five minutes before the feature starts, the high budget ads start (everyone is now in their seats!) Then automatically, the digital projector is turned off, and the film projector is turned on. At the end of the film, the digital projector is turned back on with the low budget ads. Of course, the same infrastructure controls the media in all other places in the theatre from interactive kiosks and trailers in the lobby to digital menu boards. ([www.christiedigital.com](http://www.christiedigital.com))

Digital menu boards are popping up in stadiums and arenas as well. Consider a stadium or arena that has different sporting events or concerts each night of the week. Do they sell they sell beer at Disney on Ice? No way. Do they sell Gummi bears at the Hockey Game? Nope. So with all of these different events, you need a simple way to manage and promote the concessions: The digital menu board.



The image shows a digital menu board for concessions. The background is a blue film strip pattern. The menu is divided into three sections: beverages, popcorn, and snacks. The beverages section includes a large Pepsi cup with a Snickers candy bar (\$3.75), a medium Pepsi cup (\$3.50), a small Pepsi cup (\$2.50), a Dole orange juice carton (\$3.00), and an Aquafina water bottle (\$2.00). The popcorn section shows three sizes of popcorn bags: large (\$3.75), medium (\$3.50), and small (\$2.50). The snacks section features a hamburger (\$4.50), a tray of french fries (\$2.00), a slice of pizza (\$2.50), and two tacos (\$3.50). On the right side of the menu board, there is a large image of a Pepsi cup with ice and a film strip graphic with the text "EDGE OF YOUR SEAT REFRESHMENT!".

**CONCESSIONS**

**beverages**

- lg. \$3.75
- med. \$3.50
- sm. \$2.50
- Dole \$3.00
- AQUAFINA \$2.00

**popcorn**

- lg. \$3.75
- med. \$3.50
- sm. \$2.50

**snacks**

- \$4.50
- \$2.00
- \$2.50
- \$3.50

**"EDGE OF YOUR SEAT REFRESHMENT!"**

Digital menu boards, such as the one above, can be scheduled to dynamically promote the correct mix of food and beverages at different prices for each event at the arena. The content can be centrally managed and scheduled in advance. The prices can be preset via the web, or automatically linked to a point of sale system. Sponsorship can be sold to help pay for the infrastructure. The menus can easily be branded to coincide with the event, be it your favorite hockey team, basketball team or rock band. And with the newest state of the art LCD screens, you don't get burn in like plasma and the image quality is amazing.

I hope this paper has opened your eyes to the possibilities with digital signage and motivated you to get involved with this exciting new industry.

#### ABOUT THE AUTHOR

Jeff Porter is Executive Vice President of Scala, Inc., the leading supplier of software solutions for dynamic signage networks. Mr. Porter has been employed by Scala in various capacities since 1994. Scala today has over 100,000 units deployed worldwide. Scala's software suite is an off-the-shelf solution for dynamic signage networks and is in its third generation release. Prior to Scala, Commodore International Limited employed Mr. Porter, where he was responsible for worldwide product development of the Amiga computer from 1984 to 1994. He previously worked for AT&T Bell Labs and The Eastman Kodak Company. Mr. Porter holds a Masters degree in Engineering from the University of Illinois and a BSEE from Purdue University. He may be contacted at [jeff.porter@scala.com](mailto:jeff.porter@scala.com) or by phone 610-363-3345. <http://www.scala.com>