Dynamic Digital Signage
Influencing POS Behavior

Perhaps the two fastest developments in foodservice technology are self-service applications (kiosk-based) and dynamic digital signage (instore broadcasting). In general, kiosks have been confined to order entry functions while digital signage is focused on influencing instore customer purchase behavior at the point of sale. Restaurant customers are already in a buying mood and influencing purchase decisions is an exciting application area for high-tech marketing. Dynamic digital signage (DDS) in foodservice, which emerged only a few years ago, is based on advances in video processing and display technology.

While menu boards continue to be a focal point in most QSR establishments, dynamic digital signage can be a complement to this age-old medium for instore promotion and interactivity. There has never been a time when audio and video broadcasting has received as much attention in the foodservice industry. For restaurateurs instore promotions are not aimed at convincing consumers to dine - its about influencing what to purchase. Effective in-store content should impact consumers to purchase at a higher incremental level in average check. The effort is focused on upselling, branding and bundling. Content can include menu item descriptions, preparation instructions and related informational items as well as new item introduction, add-ons and modifiers, recipes and in-store discounts and promotions. The results of a DDS campaign can be easily tracked and measured. Consumers appreciate being entertained and informed, not just marketed. Research indicates that since consumers in restaurants are at the point of purchase by choice, they are more likely prone to influence than customers in other retail settings. Dynamic digital signage can be persuasive as it delivers special promotions, updates menu items and intelligently advertises selections based on time of day.

Quick service restaurant patrons want short and relevant information that can be comprehended in a short period of time. A smart approach is not to plan long broadcast pieces but to break up short promotional materials with non-advertising content, thereby creatively engaging the viewer. It has evolved from management discovering the large amount of instore commercial real estate available and the appropriateness of powerful, networked media. The conversion from static to dynamic content has led to more target marketing of instore customers seeking to make a purchase decision.

In many QSR operations, the drive through may be responsible for more than half of its transactions, and the menu board can play a significant role in consumer purchase decisions. The display simply plays a major part in the quickness and convenience of the experience. Despite this apparent need for speed, dynamic digital signage has also been shown to positively impact point of purchase decisions and lead to increases in sales. Just as contactless payment readers are designed to move the customers through the line quicker, so too is DDS intended to accelerate service but with a higher contribution margin.

Quick service operators are finding that dynamic digital signage can enhance the customer’s point of sale experience while extending the company’s brand and strengthening customer loyalty. Video clips can be viewed on several devices, including a television screen, PC monitor, cell phone, video iPod, smart billboards and assorted non-traditional platforms. There are more

Menu Board Trends
According to a recent study by Mainstreet Menu Systems, an industry leader in restaurant signage, there are five trends currently affecting the design and deployment of QSR menu boards.

1. Day-parting. Converting the menu board to different displays depending on the meal that is to be featured, for example, different boards for breakfast, lunch or dinner. It simply doesn’t make sense to promote all menu items all the time, especially when many are not available for purchase at all times.

2. Dynamic signage. Digital systems consist of flat panel screens and connectivity to a content network. Digital menu boards virtually have an infinite amount of space since the presentation can change multiple times before a customer makes a purchase decision. In addition, digital menu boards offer unparalleled controls as connectivity to a content network can be managed remotely.

3. Green electrical packages. As more restaurants become more environmentally friendly, menu boards are relying on low energy screens and energy conservation techniques. Environmentally friendly display screens and backlit boards tend to last longer and help with power containment.

4. Space expansion. There is nothing more expansive than a digital screen which has infinite content capacity. Simply stated, digital screens can be used to provide a wide variety of content without the need to add additional screens.

5. Non-traditional boards. In addition to digital screens, many restaurants are adopting magnetic and raised icon boards featuring more pictures and fewer words. Magnetic menu boards rely on magnetic strips to be applied alongside or atop a display screen.
touchpoints appearing in more places than ever before. Given the trend toward social computing (YouTube) dynamic digital signage appears to be a natural evolution for promotional upselling to an interested consumer marketplace.

Dynamic Digital Signage

Dynamic digital signage (DDS) represents a move from a static method of communication to a vibrant platform wherein screens replace boards. Static media is often overlooked and can easily be ignored; also, once viewed the customer has no reason to look again. On the other hand, DDS is designed to grab the customer’s attention and maintain it. While Generation P is known for its preference of cashless (plastic) payment systems, it also has grown up with a cellular phone in one hand and an iPod in the other. Coupled with the explosion in HDTV, teenagers and young adults are more attuned to quality audio/video content as well as stimulating presentation platforms. The application of animation to previously stagnant content can make a huge impact on consumers of all ages.

In the realm of digital signage, special consideration needs to be given to content. Dynamic digital messaging is a medium which requires content that is current, relevant and most importantly, engaging. Particular attention must be given to each message to ensure that it is suited to the presentation format and audience, while at the same time remains consistent with company marketing strategies and product branding. Messaging content, style, special effects and target audience are important to an effective dynamic digital signage campaign. Also known as place-based media, DDS can be measured through a correlation between a playlist audit (content) and POS data (transactions). A positive correlation indicates an impact profile while a negative correlation means the content likely did not influence consumer behavior. Dissimilar to the objectives of other forms of media campaigns, instore digital programming seeks to accomplish three general goals: influence the POS purchase decision (promotional) and extend the company’s brand (informational) while enhancing the customer experience (entertaining). From a restaurant perspective, DDS is highly appealing since it enables instant updating of menu item availability, pricing, descriptions, add-ons and modifiers, as well as upselling opportunities (bundling and coupling). Given the nature of visual movement, DDS has an infinite spatial capacity and can be controlled through a standalone PC or instore network. In addition, for multiunit operators portions of a dynamic digital signage network (or even the entire enterprise) can be administered remotely.

DDS Metrics

Traffic volume and sales data by time of day are basic elements used to evaluate QSR operations. When DDS is involved, there are three popular techniques used to determine its impact on point of purchase behavior: POS correlation, event-based couponing, and net impression tracking. Matching POS transaction data to dynamic digital content playlists will generate a correlation index between sales and DDS content. Different messages will have varying impact on purchase decisions and understanding how unique broadcast content influences consumers from various demographics can be important to future operations. Similarly, different
messages displayed in separate parts of the restaurant may also have varying impact on sales. Smart campaign software involves analysis of POS data to media playlists to determine effectiveness enabling the correlation of content to traffic.

With event-based couponing a QSR displays attractive combo meals on screens above its service counter with the following message, “Mention Discount Code 337 with your order and receive a $1 discount now on all combo meals.” Industry experts claim that this form of promotion teaches the customer to pay attention to broadcast content, now and during repeat visits, as there may be a promotion or other benefit for them.

Net impression tracking involves evaluating the customer’s ability to recall the content of a dynamic digital display. When a message is broadcast, an impression is created. Measuring the strength of recall can be used to evaluate this relationship.

Restaurateurs can use dynamic digital signage to increase revenues and enhance the customer experience by delivering targeted messages where they seem to matter most – at the point of purchase. An additional advantage of DDS is its potential for revenue generation through the sale of advertising space in its playlist. Niche marketing can provide an opportunity for non-food revenues as a result of payments made on a per-performance broadcast.

Signage Options

The initial cost of digital signage often discourages many operators from investigating potential benefits. From a financial consideration perspective, there are basically three digital signage format options available to QSRs: static signage, hybrid signage, and dynamic signage. While most digital signage developers advocate a minimum of five or six screens are needed to be effective, the hybrid model has evolved as the more affordable and practical approach. It is important to note that each of these formats can be configured to be highly effective.

Static signage usually involves backlit menu boards; content is displayed in a fixed format deemed best for delivering basic information. The problem with static signage is that there are few reliable metrics for measuring impact and there is no way to track item changes made on the fly. Additionally, space is limited and once appropriated space cannot be easily modified. Over time static signage becomes part of the room décor.

Hybrid is a combination of static (fixed) and dynamic (changing) content. Composed of both menu boards and digital screens wherein the screens are controlled by a PC playing downloaded content from a local, central or remote server. In a typical hybrid scheme, one or two of the panels are digital screens while the remaining surface involves menu boards. Many industry experts support the hybrid model as the most effective digital signage option as it incorporates the best of the other two options.

While static signage tends to fade to the background and be-
Restaurant Technology

Candidate content for QSR digital campaigns:
- Menu and menu graphics
- House or chef specialties
- Upselling menu promotions
- Restaurant reviews/testimonials
- Staff news
- New item promotion
- Functions and events information
- Banquets and catering
- Frequent diner program features
- Advertising/Promotions for revenues
- Real time contents (photos, games, contests, messages)
- Public relations messages
- Themed events
- Special occasion (kids parties, special occasion dining)

encourage a sale by creating a relationship between the two. To a large extent content is driven by both hardware and software that is part of the DDS toolbox. The content can be professional commercials (media spots), internal promotions (time dependent discounts), attention grabbing features (celebrity voice or image), entertainment (music, art, sports, etc.), and/or third-party advertisements (revenue modeling).

Content Management
DDS can engage customers and enhance the customer experience but to apply this technology correctly, a business needs to understand its customers. DDS requires the business not focus on its goals but the objectives of its customers first. Installing plasma screens and running 30-second commercials is unlikely to deliver added value to customer interaction. The key is to match customer interests to a solution that meets business objectives. When business and customer objectives are considered the next step is to identify environmental and location issues related to technology and implementation. Things to consider are traffic flow, lighting, ambient noise and physical point of purchase.

With DDS the place, time, promotion and audience is known and the content is dynamic and customized. There is probably no aspect of dynamic digital signage more critical to success than content management. Restaurateurs need to devote nearly as much attention to DDS content as they do to menu. Operators have experimented with a variety of content cycling, including looping and playlist formats, and cite three strategies for success:
- Block scheduling – playlist is established and runs continuously until interrupted
- Interval scheduling – ability to change menu and prices and control other content based on time of day
- Unscheduled/spontaneous – content is randomly selected; may be based on instore traffic demographics

DDS software enables segmentation of screens into various regions and banners for broadcasting multiple media simultaneously. Systems are capable of instantly transitioning from full-screen orchestrated animation to split-screen frames.

DDS vs TV
A difference between dynamic digital signage and television is the nature of the audience. With television the reason to view is to watch a show, not the commercials. Most viewers desire fewer or no advertisements. With DDS the viewer is at the location to make a purchase and has interest in relevant content; commercial or informational. Second, on television the commercials are placed between segments of a show; with digital signage the advertising cycle needs to be short and repetitive but entertaining. Third, if a viewer does not like the content

Signage Practices
While full screen digital presentations are popular, it may be appropriate to divide display screens into different regions or zones, each with its own content.

According to www.digitalsignagetoday.com, there are a series of best practice guidelines to be followed when segmenting screen real estate:

Use flow motion. The screen as a whole should suggest a logical flow. In other words, the viewer should intuitively be able to tell where to look first, then where to look next. This can be accomplished by making the content that is of greatest value the largest.

Keep branding consistent. On-screen content should be consistent with all other messaging in the establishment. Things like color schemes, size of design elements, relative positioning of type and images and visual styles.

Apply artistic principles. As a rule, eyes always land on the largest and brightest item displayed. Use this design tip to direct the viewer around the screen, for example, when scrolling text, don’t make it larger or brighter than the primary message.

Understand animation. When something is moving or changing, eyes will be drawn to it. Animation should be most prominent in the area of the screen that are the primary focus. Too much movement elsewhere on the screen will distract from the message.

Keep it simple. Avoid using lots of sidebars, graphs and scrolling text or numbers. Define the desired level of depth of the content, and plan a visual strategy accordingly.

Minimize irrelevant information. Just because something will fit on a screen does not mean it should be included in a presentation. Things like weather reports, business tickers, sports scores and news flashes may be important but can cloud message delivery.
QSR Digital Displays In Use

Krystal Restaurants (Lexington)
Operational since February 2007, this digital signage application has the ability to narrowcast video, graphics, audio, live TV signals and text crawl content, to multiple displays located instore and at 14 exterior car stalls (drive-up) locations. Each stall is equipped with traditional backlight menu board plus a 32-inch LCD display.

Functionality: An arriving automobile triggers broadcast of an introductory presentation of animated promotions, marketing messages and company branding on an LCD screen. After the customer places an order with the waiter, the customer can interact with the display via buttons on a console located beside the driver’s side window. Available media includes television channels (CNN, Nickelodeon, Weather Channel, Cartoon Network, ESPN or Fox News) and alternative video options. Audio is transmitted via an FM channel.

Supplier: Hammond Communications Group (HCG) is a supplier of turnkey digital signage solutions, and provides consultation, network procurement and installation, programming, network operations and training for digital signage systems.

External unattended triggers can be instrumental in influencing decision making at the point of purchase and providing information and entertainment services.

McDonald’s Franchise Restaurants (Chicago)
In an effort to personalize each location McDonald’s restaurants has incorporated content-managed digital signs in franchised restaurants. This system went live in mid-August 2007. Content included news, music videos and action sports features which can be selected by patrons via cell phone text messaging. The test was to evaluate if DDS was more engaging, appealing, interactive and memorable to the consumer and its impact on instore sales. Instead of being restricted to commercial television programming, instore broadcast technology was used to influence the customer experience through customized entertainment. Designed to build patron loyalty, the video content was targeted to conform to McDonald’s daypart needs.

Supplier: Tap.tv is a leading interactive digital signage firm offering video jukebox activities for instore customers featuring text messaging digital master from cell phone. Cell phones receive a Thank You message and cell phone number is captured for future marketing and promo activities.

Video Juke Box: Each restaurant was seen as akin to a video jukebox in which customers could dial a special instore phone number, from their cell phone, and request which video segments should be broadcast over the system. The system in turn provided a text message “Thank You!” response to the cell phone screen and stored the phone number of future marketing and promotional campaigns.

Video Bar: Eight 15-inch LCD flat screens were mounted side-by-side over the front service counter. These screens continuously played synchronized marketing content with progressive movement across the screens (cross-screen effects). This configuration delivered multi-media messaging in support of store marketing events, menu suggestions and promotional offers. In addition, several 42-inch screens were mounted in the store’s dining areas and carried split screen content that presented a variety of daypart-appropriate promotional material. The videos played in the largest portion of the screen. Positioned along the left screen margin was scrolling full-motion video previews that invited customers to text short codes from a cell phone to change the video presentation. Like a video jukebox, patrons were able to use their cell phone to text a particular television request. Video screens showed unusual action sports – like kayaking, base jumping or white-water rafting interspersed with McDonald’s ads.

KidVid display located in the Playplace with a 50-inch monitor featuring kid-oriented content activated by a themed 3-foot-tall, Grimace-purple touch-panel kiosk. Children had access to a touch-panel kiosk and were able to select cartoon content for display.

PartyCam located in the Playplace that was activated via a kiosk and allowed kids to see themselves on the screen. For birthday parties and special occasions, a manager code was used to interrupt broadcast video and turn on the camera, allowing the children to see themselves on the big screen monitor. This feature will also be used to digitally record the activities. The test was conducted in cooperation with an 11-unit franchise company only and McDonald’s corporate has not been involved. For the test locations, logos and commercials in bright, friendly McDonald’s colors continually bounce around the stores.

<table>
<thead>
<tr>
<th>Dynamic Digital Signage</th>
<th>Traditional Media (TV and Radio)</th>
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<tbody>
<tr>
<td>Impacts purchase behavior at POS</td>
<td>Time gap between ad and purchase</td>
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<tr>
<td>Consumer is in-store and targeted</td>
<td>Untargeted mass marketing</td>
</tr>
<tr>
<td>Campaign based on demographics</td>
<td>Broad based market parameters</td>
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<tr>
<td>Flexible content based on in-store traffic</td>
<td>Fixed, static message for all</td>
</tr>
<tr>
<td>Interactive and high effectiveness</td>
<td>Non-interactive and low effectiveness</td>
</tr>
<tr>
<td>Highly compelling; appeals to senses</td>
<td>Uninspiring; easily ignored</td>
</tr>
<tr>
<td>Impact can be reasonably measured</td>
<td>Highly difficult to measure</td>
</tr>
<tr>
<td>Content is perishable and timely</td>
<td>Content has shelf life (print coupon)</td>
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Table One. Contents Comparison
on television he or she can simply change the channel; with DDS the viewer ignores the content if dissatisfied. Fourth, viewers adjust to the broadcast schedule; with DDS the audience arrives randomly throughout the day and so specific times of presentation may be irrelevant. (see Table One. Contents Comparison, pg. 128)

What's Next?

This past winter, the television show “American Idol” received 64 million text-message votes during its fifth season proving that the public has become very comfortable with using a cell phone to conduct transactions. As restaurants continue to explore means of expanding customer interaction, some system suppliers are moving toward call-to-action applications. Not long ago, the most efficient way to contact a restaurant was via phone, e-mail or contact information found at a Web address. This may no longer be the case as text messaging begins to evolve as a preferred method of information exchange. The Mobile Marketing Association claims that nearly 69 percent of all cell phone users employ text messaging on a regular basis.

This past spring, the media company SeeSaw announced that it had added built-in functionality to its restaurant digital signage network to allow instore customers to send and receive interactive data targeted at cell phones. Customers are able to send a text message to a number shown on a screen and receive some sort of reward in return. The perk, labeled an “m-coupon” can provide the recipient with access to exclusive content or pricing. For example, a restaurant could run a contest by showing a series of trivia questions that the customer responds to via the keypad on a cell phone. The winner would then receive an m-coupon delivered to their phone. The coupon would be displayed on the phone’s screen and scanned at the POS for a discount.

In July 2007, Morton Steakhouse conducted an invitation-only broadcast event carried over the Velocity HD Suites video platform. One of Morton’s private dining areas was used to originate a business to business virtual meeting service. Although a similar idea was attempted a few years ago, advances in digital media technology have changed the landscape as this experimentation was deemed highly successful. A total of 71 of Morton’s 74 restaurants have been equipped with high-definition TV broadcast capabilities enabling projection to all participating Morton locations simultaneously. The restaurant chain demonstrated precision marketing through a powerful alternative channel for specialized audiences. The equipment package for each of Morton’s suites consists of a 9-foot drop-down screen; a digital high-definition projection system; an HD satellite receiver, and surround-sound audio technology powering several high-fidelity speakers.

Morton’s, long-time known for fine dining, and Velocity, considered the premier private broadcasting network, conducted this experiment that involved no travel costs as each participant visited the nearest Morton’s location. Customers were impressed by the broadcast quality and the restaurant’s service and ambience. Many industry observers believe this experimentation may permanently alter foodservice advertising paradigms.

The Strength of Dynamic digital signage over print media or basic broadcast media may not just be technical; it may also be psychological. Dynamic digital signage can influence purchase behavior, deliver product information, entertain, and broadcast emotional messages to enhance the customer experience at the point of purchase. DDS allows for instant menu updating, pricing, item availability, descriptions, discounts, promotions, etc. Screens can be part of a centralized network for multi unit operations and separate for independent operations. In addition, a restaurant can opt to have variable content controlled in-house as the profile of customer traffic changes.

Quick service restaurants struggle to market goods and services to on-the-go, on-demand customers. DDS is an innovative and unique media platform that can engage and influence instore purchase decisions. Delivering a targeted, entertaining message at the right time, especially with a special twist or benefit, can add significant dollars to the bottom line.

The best hardware, software and netware will fail spectacularly if it relies on weak, boring or poorly designed content. As dynamic digital signage becomes more popular, the cost of installation and training are expected to continue to decline. DDS can have an unparalleled impact on customer purchase decisions and therefore deserves consideration in all restaurants; not just quick service restaurants.

Proper content can deliver brand information, educate customers and issue a call to action, but only if the right content is delivered at the right time. Digital signage has the ability to reach the right customer, in the right place, at the right moment.

Michael Kasavana, Ph.D., NCE, CHTP, is a NAMA Professor in Hospitality Business for the School of Hospitality Business at Michigan State University. He can be reached at kasavana@msu.edu.