

EMERGING TRENDS IN DIGITAL SIGNAGE

KEEPING UP WITH ALL OF THE RECENT INNOVATIONS IN DISPLAYS

By David Keene



The Planar EP-Series LCD display installation at the Oregon Museum of Science and Industry (OMSI). The museum, through Fashionbuddha Studio, a design firm in Portland, tapped Planar Systems for a display platform to showcase the work of 12 innovative Oregonians in an exhibit called Brainstorm. The displays feature fully integrated optical touch technology and was built into side-by-side kiosks that can easily be used by multiple people at the same time. The touch technology allows a museum guest to easily select and explore — in familiar, smart-phone fashion — depictions of any of the 12 featured innovations.

There has never been a period of innovation in the display world — indeed in the digital signage equipment world in general — to match what we've seen in the past two years. We are witnessing a resurgence of the display market, much of it centered around digital signage. The list of innovations and trends include larger size LCD displays, 4K displays, interactive touch screens, outdoor digital signage, LED walls for digital signage, alternative displays for digital signage (LPD, Flexible LED, and more), and Cloud digital signage software. We can't delve into all the latest and greatest here — space precludes it — but for the latest trends in large-size LCD displays, 4K, and video walls, see the article in this issue from Todd Fender of DisplaySearch (and our downloadable report). Here is a sampling of what's also garnering the most attention in digital signage as we head into 2015.

INTERACTIVE DIGITAL SIGNAGE

The demand for interactive digital signage is growing rapidly. Wayfinding continues to be a top market segment for interactive digital signage — and wayfinding can now integrate apps such as Google Maps and other mapping tools. For the retail store, the introduction of interactivity turns the digital sign into a retail kiosk so retailers can provide a variety of services to shoppers. In sports stadiums and other venues, large video walls are now interactive — and often feature integration with social media feeds from fans or customers. There is so much innovation happening in the market, with new platforms such as interactive touch tables, integration of mobile technology with digital signage, and interactive connected ecosystems, that it can be hard to keep up.

“In the past, touch-enabled displays have been a small (single digit) portion of the overall market, but that is changing rapidly,”

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DIGITAL SIGNAGE MARKET REPORT

says Jennifer Davis, VP, marketing, Planar Systems. “In small format displays, the change has been enabled by touch-friendly operating systems that make application development and repurposing of existing content easier. In large format displays, we have seen an emergence in the capabilities of creative agencies, marketing groups, and third-party developers to take advantage of the multi-touch capabilities to create compelling experiences, never before possible.”

“We are seeing considerable growth in the integration of mobile with digital signage applications,” says Jason Cremins, chief executive officer of SignageLive. “From simple QR codes to obtain detailed info on products, to GPS and other local position technology to deliver targeted messaging. We are also working on projects where viewers can take control of a screen by using their mobile phone or tablet as a remote control interface.”

UHD/4K

4K resolution doubles the number of horizontal and vertical pixels versus 1080p, giving approximately 4K vertical lines or 3840x2160 (8.3 million) pixels. The ITU and the Consumer Electronics Association have officially classified both 4K and, believe it or not, 8K resolution as Ultra High-Definition or UHD. The name technically applies to both 4K and 8K, but most manufacturers are clarifying the UHD nomenclature by specifying 4K UHD and 8K UHD. As a side note, to address potential confusion, digital cinema 4K projection has a resolution of 4096x2160 due to a slightly wider aspect ratio of 1.90:1.

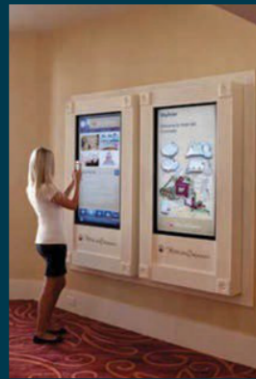
2K? 4K? 8K? What does your project need? How many pixels do you need to do 2K or 4K? Again, “4K” is not a very scientific term, but



One of the most promising of the new QSR markets is digital signage for outdoor. And at the top of that: drive-thrus. Shown here, the Peerless-AV Xtreme Outdoor Digital Menu Board, comprised of a kiosk, Peerless-AV Xtreme display, and a rain cap, which doubles as a solar shield to reduce solar load within the kiosk. The kiosk is made of aluminum and steel construction, and is powder coated with a formula that will resist fading.

INTERACTIVE DIGITAL SIGNAGE

By Maria Porco



In today's digital, touch-screen-powered world, people expect — and enjoy — the ability to interact with digital signage. In addition to new technologies such as Microsoft Kinect, multiple-touch-point displays, small screen interactivity on mobile devices, and big-screen installations like video walls, new possibilities are rapidly unleashing innovative opportunities within today's interactive applications. A

timely example of this is near field communication (NFC), which allows the transfer of content between different devices in a seamless and powerful way.

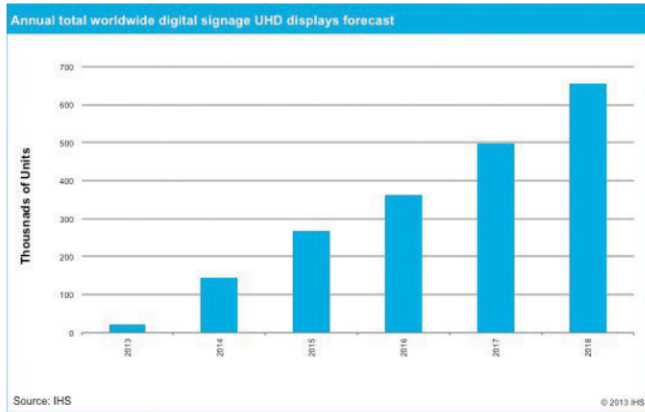
New possibilities in the digital signage space are especially exciting for NFC. Though there are many ways for content to be transferred between a screen and a mobile device (QR codes, text, and email opt-in), NFC ushers in a new era of extraordinary convenience where simply placing the device within a few inches of the screen will trigger content transfer. Retailers can expand their promotions; hotels can increase their guest-oriented information; enterprises can empower employees with access to training; and universities can transfer information such as student schedules.

Another emerging interactive technology gaining popularity provides users with access to live video calls directly from a digital signage display. For example, last year Amazon introduced its “Mayday” service, which allows organizations to turn to signage-based video calls as a way to more effectively support customers. This new technology enables users to talk live, face-to-face with customer service personnel via any screen, in any location — opening opportunities for better collaboration in sectors such as retail, banking, manufacturing, and many more.

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let's say 3840 pixels x 2160 pixels. 8K (also called UHDV Ultra High Definition Video)? 7680x4320. OK, so then what kind of display device do you need to do that? Well, that depends on how many square inches, feet, or acres you have to work with. Give me enough screen size, and you can do 4K anywhere, with practically any combination of projectors or flat panels. (You could/can do 8K in a football stadium with 40-year old Sony Jumbotrons if you have enough of them — they were hard to kill — and enough room in the endzone.) Of course, the most important “breakthrough” resolution milestone in recent years happened this past year when we jumped from 2K to 4K with one display device.

In 2014, Samsung showed their 65- and 85-inch displays with a 110-inch in the wings. LG showed their 84-, 98-, and 105-inch 4K/UHD



According to market research firm IHS, further growth in 4K technology and displays will support the continued expansion of the digital signage industry. Shipments in 2014 of UHD panels aimed specifically for digital signage purposes will reach an estimated 145,000 units. In coming years, digital signage installations should contain the ability to support 4K content, to ensure that many companies currently employing digital signage will be able to upgrade to 4K content and connectivity as it becomes more readily available. [Source: Sanju Khatri, Digital Signage & Public Information Displays, IHS.]

displays, and NEC showed a 4K video wall that looked outstanding. Planar and Viewsonic both showed great looking 84-inch interactive 4K/UHD displays. Both Samsung and Philips, to name just two manufacturers, had desktop 4K/UHD displays that are perfect for viewing really high-resolution graphics and images requiring extreme detail. As consumers buy more 4K/UHD displays, the prices will come down to earth and when they do these companies

are ready, willing, and able to take care of your high-resolution display needs.

DIGITAL SIGNAGE CONTENT MANAGEMENT SOFTWARE

We are well beyond the days when digital signage content management software was marketed primarily as a SaaS or a Premise-based system. The new buzzwords are HTML5, Beacons, the Cloud, and mobile/smartphone interaction.

Omnivex announced the release of Commercial and Enterprise versions of its Omnivex Moxie software. Moxie Commercial has been designed to support small-to-medium-sized organizations with local installations of up to 50 players that don't require Enterprise features.

Four Winds Interactive (FWI) recently announced a new software release that improves how clients build, deploy, and manage their enterprise visual communications networks. The release is accompanied by a user-friendly "app store" that contains hundreds of images, videos, apps, templates, and much more that can be

used to quickly design and populate visual displays — whether one screen at a time, or enterprise-wide. The software release, 5.0, has been in development for more than a year and has been designed to make creating an enterprise visual communications network as easy as programming a smartphone with user preferences.

Some digital signage content management software is moving to the Cloud (as opposed to being installed on the customer's serv-

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Texas A&M University installed in spring 2014 — at a renovated Kyle Field — the largest LED video wall to date for a college stadium. Daktronics, who has designed and manufactured electronic scoreboards, programmable display systems, and large screen LED video displays for more than 45 years, provided Kyle Field's newest technology. Daktronics is of course no stranger to providing large displays for some of the top stadiums in the U.S. They are currently working with the Jacksonville Jaguars by providing them with what's being dubbed "the largest HD LED video display in the world," scheduled to be completed in fall 2014.

ers. And even for premised-based software, there is an increasing Cloud component. What are the top trends there?

Tom Nix, the CEO of Scala, one of the most prominent digital signage content management software providers, comments that, "Working with a Cloud-based system offers a range of benefits with the most universal being flexibility, scalability, and instant access. You'll be able to access your content manager from any computer in the world, which increases efficiency, especially for those constantly on the move. For companies growing at a rapid pace, utilizing Cloud

computing allows for an easy and cost-efficient transition to your new work sites. Cloud applications are highly accessible, always having the latest and greatest tools and technology at the ready."

Nix also comments on what the future hold in terms of having more robust content for digital signage that changes with a change in "context," e.g., POS data in a store, etc.

"Companies have leveraged historical and third-party data to create dynamic content," adds Nix. "Whether it is what number you are in line, the current local temperature and weather, or even the score of the ball game, these are all valuable methods to gain consumers' attention. But the combination of data and digital signage holds even more powerful capabilities that have the potential to optimize the effectiveness of communications and drive your marketing campaigns. Within the next two years, the physical store will be as data-centric as online marketers, allowing for a strong combination of captivating visuals and personalized messaging."

OUTDOOR DIGITAL SIGNAGE

There is probably no vertical market within digital signage that is as fast-growing as the QSR market — Quick Service Restaurants need digital signage for their dynamic menu boards. The need for QSR's to quickly and easily change menu selections, prices, and daily or day-part special promotions means one thing: digital signage, in all its permutations. And the newest and one of the most important sub-markets in QSR: outdoor digital signage for drive-thrus that needs to be tough, weather-resistant, and bright enough to be visible in direct sunlight. ■



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