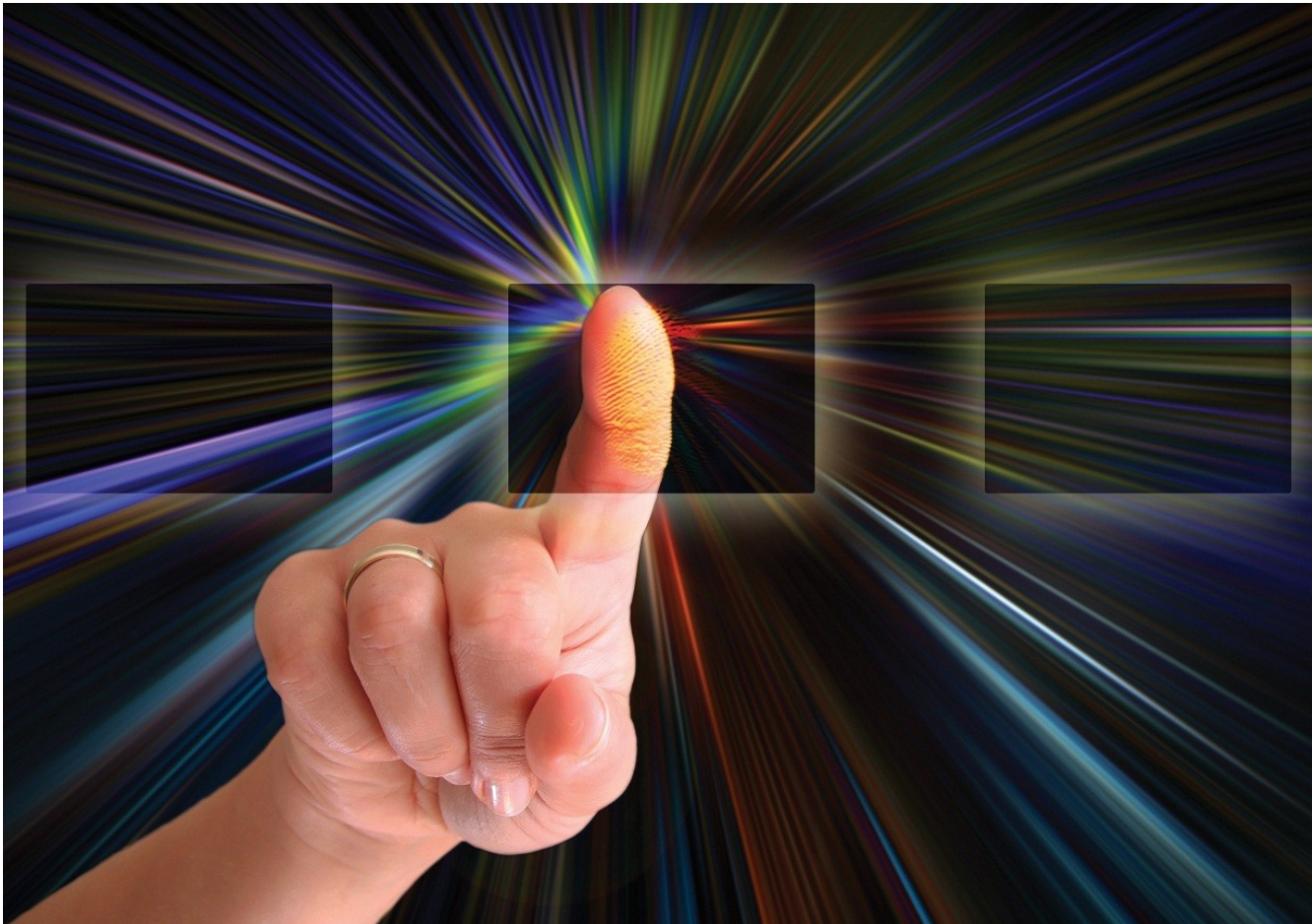


## Commercial Edition—August 2011

### What's new in the world of AV



Retail and leisure encompasses a broad range of businesses from major retail chains, to independent stores, single-site shops, leisure parks and the heritage sector – museums, galleries, historic sites and libraries. What unites all these diverse businesses is the need to find a competitive edge, ways to increase footfall, raise the average spend and create and sustain customer loyalty in a challenging economic climate.

In this first edition of Computerworld Wales AV Update, we have gathered market trends, forecasts, emerging technologies and the applications shaping these sectors with products and solutions available from our partners.

We hope you will find the information of value.

*Kevin Collins*

## Touch signage poised for growth

**Shipments of touch screens for signage are set to surge by a factor of seven over the next three years, according to forecasts by research firm iSuppli.**

By 2013, iSuppli predicts, the worldwide market will have grown from below 405,000 units in 2010 to 2.97 million units.

Retail is forecast to represent 20.7% of the touch screen market while 41.8% is expected to comprise public spaces, the hospitality and healthcare space where touch can be used for navigation, accessing information and exploring the facilities on offer locally.

Retail's push for touch is reinforced by a recent POPAI study of UK retail digital signage, which revealed that while just one in five screens today is touch enabled, 42% of retailers are considering using interactivity to enhance sales.

The study claims 30.5% of retailers will invest in single touch while 17.1% planned multi-touch investment. A further 42.7% claimed they would 'probably invest' in single touch and 37.8% multi-touch touch.

The study also indicates that retailers are receptive to other technologies offering enhanced customer engagement such as gesture control, holographic, augmented reality and 3D.

Returning after a four-year gap, the POPAI study, sponsored by LG Electronics, found use of digital signage in UK retail to have grown; digital signage is present in 47,000 UK stores, using 131,500 displays many of which are hooked into the 111 networks currently in place.

While the study predicts positive market growth with 58,000 stores equipped with digital signage by the end of 2011, the market is far from saturation point. Most retailers have less than five screens per store and although the larger retailers use digital signage, it is largely restricted in flagship stores and busier branches - 63% of all UK stores are yet to install a single screen.



## Innovation drives interaction

A plethora of interactive display innovations from new and existing technology players is driving the capabilities of digital signage forward into enhanced customer interaction.

Innovations from one of the leading digital signage display makers, Samsung, include a transparent multi-touch LCD and multi-touch Surface display, developed jointly with Microsoft.

Samsung is one of the brands pioneering development of transparent LCD and has previewed a prototype at 2011 shows including CeBIT in Germany and SID in the US.

The prototype is a 46-inch LCD with full HD resolution and with 10-finger touchscreen capability. Transparency is achieved by removing the standard back light, instead using solar cells to draw power from surrounding light sources.

Samsung's SUR40 meanwhile, uses Microsoft's Surface touch interface along with technology from PixelSense which gives the LCD panel the power to 'see' without cameras. The resulting touch wall senses fingers, hands and objects placed on the screen and has more than 50 simultaneous touch points. While the display is to be targeted initially at corporate collaboration, it clearly holds promise for interactive digital signage.

Further developments emerging from Europe include a smart content display wall with multiple-touch and person-tracking technology that reacts to people approaching the display and enables them to interact with the content.



## Bigger is better

Commercial-grade large-format displays will grow by 50% in 2012 according to forecasts from DisplaySearch, which reported an impressive growth of 44% for the sector in 2010.

A key driver for growth is the increased popularity of the videowall, the report claims. The advent of thin bezels is credited with fuelling the deployment of LCD videowalls and enabling LCD to compete against direct-view LED and rear-projection DLP cubes, the technologies that have traditionally dominated very large digital signs.

The comparatively lower cost of LCD is also serving to open up new markets and applications for LCD-based videowalls.

A further challenge comes from projectors, which although often overlooked for digital signage applications, are increasingly being stacked and edge blended to build huge image displays and high impact panoramas.

The emergence of ultra short throw projection from brands including Hitachi, NEC and Sanyo, has allowed projection onto walls, floors and ceilings from extremely short distances, in turn creating new applications within retail, leisure and the heritage and culture sectors, particularly when teamed with motion-activated sensors and gesture control.



## Digital signage to integrate with mobiles

Digital signage is moving from a passive visual experience to an interactive one, engaging viewers directly through a range of technologies from touch and gesture control to motion sensors and face recognition. The explosion of the smart phone and tablet market has put devices into the hands of their customers and the two are beginning to integrate. Digital signage owners can now engage directly with their customers, personalise their customers' experience of signage and target content.



Digital signage software platforms are beginning to support social media feeds from the likes of Twitter and Facebook, enabling retailers to integrate social media with their digital signage.

Around 25% of social media conversations about shopping are posted online from within the store, and there is clear opportunity for retailers to develop ways to interact with these customers by responding to posts and even initiating contact.

It is still early days however. While 80% of major UK retailers are on Twitter and 72% on Facebook, they are failing to fully exploit social media. When tested by an online marketing consultancy, only 25% of retailers responded to a direct call out on Twitter while a meagre 20% responded to a negative comment.

The rise of the smart phone and tablet is also enabling a range of location-based services with tantalising potential for retailers and other users of digital signage. Using the GPS within the smart phone or tablet, a range of location-based services such as FourSquare, LocaModa and Gowalla offer their users a whole new type of loyalty reward style schemes.

FourSquare for instance lets its users 'check-in' to locations which can be any business or venue such as a store, restaurant or tourist attraction while Gowalla asks its users to scan products – both with the general aim of earning rewards.

For retailers or brands to be able to identify when potential or existing customers are physically near or in their store or interacting with their brand has immense potential, particularly when teamed with digital signage and the ability to communicate with those customers.

Developments in financial transaction-enabled mobile phone technology using NFC (Near Field Communications) also holds the tantalising promise of direct transactions for digital signage networks.

## Digital menu boards – payback in one year



Quick service restaurants (QSR) are increasingly swapping their printed or static backlit menu boards for digital menu boards, a form of digital signage which allows QSR chains to reduce costs and increase sales and achieve a swift return on investment.

A 2008 study by the Digital Signage Association in the US calculated that a QSR making \$1 million a year could increase sales by 5% by adopting digital menu boards and pay off in less than two years. Analysis of recent rollouts however, indicates that payback could be achieved sooner - within 12 months.

A major rollout of digital menu boards for a US QSR chain with more than 300 locations, achieved double-digit sales growth during its test phase, prompting a forecast of break-even in 12 months.

Quick payback times are also being achieved in the UK. A recent digital menu board deployment in a leading burger chain's UK outlets is expected to pay for itself within 12 months. It also saw a 63% uplift on sales of some products.

The key benefits of digital menu boards include reducing printing and shipping costs, the ability to change content dynamically and from a remote central location, the ability to promote high margin items and de-emphasise less profitable items, increase the average value of a sale through cross- and up-selling, and the opportunity to run timely promotions, for instance an ice-cream promotion in hot sunny weather.

Soft benefits also include reduced perceived waiting times, the creation of a channel for corporate communications and training, improved customer perception of the restaurant environment as well as staff satisfaction.

While the quick service restaurant is their main market, digital menu boards are also proving popular in bars and clubs.

## Digital menu boards – at a stretch

While 40-50 inch professional displays designed for heavy usage are ideal for digital menu boards, stretched displays may be the answer where space is tight. These landscape LCD displays vary from 16:4 to 17:6 aspect ratios and are available from NEC and LG. The NEC includes an option slot to integrate a PC, media player or CAT 5 receiver while the LG's include auto-scaling to resize content to the unusual format.

Brand	NEC	LG	LG
Model	MultiSync X431BT	M3801S	M2901S
Size (diagonal)	43-inch	38-inch	29-inch
Aspect ratio	16:9	16:9	17:6
Resolution	1920 x 480	1920 x 520	1366 x 480
Brightness	500 cd/m <sup>2</sup>	420 cd/m <sup>2</sup>	400 cd/m <sup>2</sup>
Option slot	Yes	No	No

Stretched or bar-type LCD screens like this NEC MultiSync X431BT are ideal for menu boards where cover-counter space is limited.



## **World's first industrial – grade LED-backlit LCDs**

The world's first professional grade LED backlit models join NEC's MultiSync X-series public display range combining all the advantages of LED backlighting with industrial quality panels suitable for heavy use.

Using LED backlights in the 46-inch X461S and 55-inch X551S has enabled the pair to be lighter (20/25kg), slimmer (43.3mm) and use less energy (135/155W) than LCDs with conventional CCFL backlights.

The displays are also designed for 24/7 use, include comprehensive connectivity and are the first to adopt OPS, the Open Pluggable Specification, for the expansion slot.

Developed by Intel, Microsoft, NEC and other leading manufacturers to simplify the design, installation and maintenance of digital signage systems, OPS defines the size and connectors for slot-in players to make them as swappable as car stereos.

Other key features include native 1980 x 1080 Full HD resolution, a high brightness of 600 cd/m<sup>2</sup> and typical contrast ratio of 4000:1.

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## **Interactive education boost for heritage and culture sectors**

The Hitachi iPJ-AW250NM interactive projector not only projects an 80-inch (diagonal) image from a distance of just 56cm, but has built-in interactivity to turn any flat surface into an interactive surface, making it ideal for heritage and cultural sector sites looking to develop their education services.

The infra-red sensors in the projector work with Hitachi interactive pens and StarBoard software to bring the interactive learning experienced by students in their classrooms into museums and galleries.

Because of its ultra short throw lens, the projector may be used in small rooms or tight spaces, on a table top or wall mounted and using front or rear-projection modes - anywhere where its built-in interactivity is required to add the ability to interact with displays and enable visitors to explore

Enhancing education facilities helps museums, galleries and libraries to boost visitor numbers and create new income sources, from educational programmes and events for all ages and from venue hire

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## **Large vibrant images from close-up**

Ultra-short throw projection is not just for education, it is also ideal for creating high impact displays on walls, ceilings or floors in leisure facilities including museums and galleries and retail environments such as showrooms.

The latest generation of Ultimate short throw projectors generate an 80-inch diagonal image from just 50cm<sup>1</sup> so can be positioned up close to the display, eliminating the problem of shadows created by visitors passing through the projection beam.

Using rear projection mode, they are an ideal solution for small spaces and for simulations. They can also be vertically mounted to create high impact displays on the ceiling or floor.



The Hitachi Ultimate Short Throw projector range includes models with WXGA or XGA resolution, brightness levels in eco and full brightness modes of 1700-3000 ANSI lumens,

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## **Create high impact visual panoramas**

Videowalls aren't the only way to deliver high impact visual displays in large open spaces like shopping centres and museum atria. The Sanyo PDG-DHT8000L projector is a DLP powerhouse packing twin lamps and colour wheels delivering full HD resolution, 8000 ANSI lumens and 7500:1 contrast – a specification that makes it more than capable of delivering vibrant images in large venues with high levels of ambient light.

The dual lamp system provides peace of mind for installer and client alike, ensuring that even in the unlikely event of a lamp failure, the unit will continue to function.

An integrated edge blending features enables multiple projectors to be deployed to create panoramas of up to 360°.

Launched earlier this year at ISE 2011 in Amsterdam, the Sanyo PDG-DHT8000L is a true workhorse designed for heavy use, so ideal for digital signage and all-day displays in retail or leisure environments. It also packs a colour matching function and a range of optional lenses is available.

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## **Opening the door to powerful location based services**

The growing use of location-based services by smart phone owners will enable retailers and other users of digital signage to know when customers are near or even in their venue, and potentially interact with those customers through their digital signage network.

The summer 2011 release of software-as-a-service-based digital signage platform signagelive will enable its users to be amongst the first wave able to tap into this powerful new capability.

Using signagelive 'app'-style widget add-ons for location-based services such as Foursquare or Twitter, signagelive users will have a mechanism to develop a range of innovative customer interactions through their signage network, such as increased footfall by attracting passing customers into their store.

The summer release will also support the integration of Facebook, Twitter and other social media tools via signagelive widgets.

Signagelive widgets can be customised and added to signagelive either in a multi-zone digital sign layout or as full-screen assets, on any displays on a signagelive network.

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## **Reduced energy consumption with new LED Samsung LFDs**

Samsung's four new lines of commercial grade, 1080p LED displays have feature-sets designed to meet the demands of moderate- to high-use digital signage and videowall applications with reduced energy consumption.

Contd...

Swapping traditional backlights for LED enables 30% to 50% cuts in energy use, Samsung claims, and a slimmed-down chassis – 35% to 40% thinner than conventional LCDs for quicker, easier and potentially cheaper mounting.

The three-strong ME digital signage series has high refresh rates to ensure smooth scrolling text and reduced motion blur, RS232 and RJ45 for control and DisplayPort for easy connection along with integrated stereo speakers and USB playback.

The HE line with TV tuner is designed for moderate use in small businesses such as GP surgeries or smaller stores, while the UE and UD narrow-bezel models are 'affordable' and 'mission-critical' 24/7 videowalls, respectively.

Available Q3, 2011

## TV-based digital signage for single site stores

EzSign TV from LG Electronics is an easy to use, TV-based digital signage solution designed for small businesses which have previously not used digital signage because they have neither the time nor expertise to use complex systems.



LG EzSign TV provides small, typically single-site businesses such as independent shops, pubs, cafes and restaurants, with a 32 and 42-inch LCD TVs with their promotional messaging and information overlaid onto TV content.



Digital signage helps to reduce perception of wait times so the system would also suit – 'while you wait' or appointment-based businesses like garage services, chemists, opticians and dentists.

Digital signage content is created quickly and easily from a range of EzSign templates using a wizard-

style interface that guides the user through the process.

Using the step-by-step wizard, users can customise the templates, changing colours and fonts for instance, and add their own text.

## The ultimate 3D TV leisure package



We have teamed with Medium and LG Electronics to offer the Ultimate 3D TV leisure package, comprising of an LG 3D Projector (CF3D), Cinema 3D TV, a 6 or 10 foot screen plus at least 5 pairs of Cinema 3D glasses.

Customers can purchase the CF3D, the world's first single lens, passive, full HD 3D projector with a dual light engine from Computerworld, and choose from a variety of sizes from 42 to 55 -inch LG Cinema 3D TV – both based on passive 3D technology which benefits from lightweight, low-cost glasses.

A number of pubs across the UK have already installed the LG Electronics CINEMA 3D pub package with fabulous results both for the pub and drinkers.

"The benefit of the CINEMA 3D Pub Package is already visible for us all to see. Feedback from recent focus groups shows that participants would always choose to watch sport in 3D rather than in a competitor pub because of the quality of the 3D experience and in particular the 3D big screen. "

The lightweight glasses and 'flicker-free' technology of Cinema 3D makes it a more comfortable viewing experience, as evidence suggested from a survey conducted for LG revealed that 88% of viewers preferred the Cinema 3D experience over active. For more information on LG's Cinema 3D package call Computerworld.



## Samsung videowall-in-a-box

The videowall is proving an effective solution to the problem of how to grab the attention of shoppers amid the hustle and bustle of the retail environment, and Medium's videowall-in-a-box bundle provides resellers with a time- and cost-effective solution.

Everything you need to create an eye-catching 2x2 videowall has been wrapped up into one competitively-priced turn-key Samsung solution that costs less than a single 82-inch LCD display.

A videowall enables content versatility with the ability to show multiple images from multiple sources in addition to a single high impact display.

The solution<sup>2</sup> includes four 46-inch Samsung UX LCD screens, Full HD ARK compact PC, a pre-spaced wall bracket and trim, HDMI local connecting cable and supply and installation<sup>3</sup>. Also on offer is optional onsite support and maintenance for just £345 per year.

<sup>2</sup> Subject to availability.

<sup>3</sup> Conditions apply, subject to site survey.



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