

Aiming high

Cloud technology is being embraced by the AV industry and is providing new opportunities for integrators. However, misunderstandings about its meaning and its potential remain, says **Steve Montgomery**

WE HEAR a lot about Cloud computing in the IT world where it has been extremely effective in increasing efficiencies and introducing cost savings within the data centres and computer services of large enterprises, such as financial services and government.

Andy Boyd, vice president of research at Gartner, points out: "Over the past few years we have seen greater modernisation of data centres and abstraction of the software from the hardware that supports it, along with convergence of the infrastructure. This is making the boundaries between the hardware more porous and enabling multiple hardware classes to converge upon each other, with simpler central management."

For these large industries, 'virtualisation' of the applications, data and the servers that deliver them are what has come to be known as the Cloud: remote computers whose physical location is irrelevant operating, in many cases, just as a local computer would.

The benefits are widespread, encompassing security, scalability, centralised management of hardware and support

services, software version control and efficiency in data collection and distribution. It also provides opportunities for collaboration, communication and sharing of information between end users. In these big systems, Cloud computing covers both the software applications as well as content, and is distinct from a simple web-enabled service.

"Cloud computing refers to the IT consumption model where IT is delivered as a service with the idea of managing and delivering applications and services for business value and impact. Companies can focus more on their business rather than running IT," says Rob Fraser, CTO of Cloud Services at Microsoft UK. "What it means is that it gives companies the capability to be more flexible, more agile, in meeting the needs of the business through the use of a consistent platform for infrastructure, apps and data that can span an organisation's datacentre, service provider datacentres, and the public Cloud.

"The beauty of this approach is that organisations can still keep specialised or existing business applications on premise, running their

business effectively with a mixture of both types of solution."

BROAD MEANING

Cloud technology is now being embraced in the same manner by the audiovisual industry with the objective of reaching the same goals. However there is a wide discrepancy in the understanding of the term and the technology itself within the AV community as it is applied to this industry. To some it refers to the simple delivery of content over the internet; to others it encompasses the full spectrum of offerings, including management of remote client devices, firmware and operating system updates and server-hosted application packages.

"We define the Cloud as an abstract service - that is a service that is provided at a location entirely in the virtual domain," says Nick Fearnley, CEO, Digital Media Projects. "If we are referring to a web service, it can be reached at a specific URL but the physical provisioning location is not known, or important. The concept works both ways, in that the service provider and consumer both consider the location and

technical provision to be unknown, potentially infinitely scalable and fully managed. Generally the provision will be made by a third party, within an organisation (as a department) or, more likely in the SME domain, externally. Abstraction of the service itself and the provisioning platform are important concepts. The idea that the 'Cloud' is non-local is unimportant."

LifeSize sales engineer Terry French concurs: "The Cloud can be interpreted in a number of ways. In essence, it is the ability of a company or person to access a service, application or infrastructure product remotely, off premise, on a subscription or pay-as-you-go basis. These services would typically be on a dedicated or shared server resource in a data centre that is managed, provisioned and maintained by a third party."

It is this on-demand, pay-as-you go simplicity without the capital cost and installation problems that appeals to many users as well as audiovisual applications providers. For the user, the IT overhead of application software installation, system configuration and managing

[KEY POINTS]

➤ Remote applications can combine AV, personal, IT and building management data to produce an integrated system to benefit the user

➤ Providers of AV services only need to focus on their application, without needing to address delivery and platform issues

➤ The Cloud facilitates rapid deployment of applications to multiple platforms and allows platform-agnostic solutions

➤ Security issues can be overcome through deployment of parallel networks for less-secure applications

➤ The Cloud enables businesses to integrate users' own devices into corporate networks for direct audio, visual and data communication

an ever-expanding range of fixed and mobile devices is removed, freeing up valuable resources and simplifying deployment.

Cloud technology, as distinct from web-delivered or website-based



'Cloud services are used extensively now and will expand in the future'

Terry French, LifeSize

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FEATURE: CLOUD TECHNOLOGY

alternatives, opens up new opportunities in many fields of application. "Digital signage based on the Cloud can connect with other Cloud-based applications using remote computers to manage the combined content, rather than simply playing out pre-prepared content from a media player behind the screen, even if that is rapidly updatable and combined with live web feeds or TV," explains Tony Davies, CEO of Visiosign UK.

"Our 360 Visual Communication Platform is a modular total information system that combines digital signage, meeting room management, wayfinding and other audiovisual services within a building in an intelligent way. It draws on other IT-related Cloud applications such as Outlook and SQL to extract meaningful data. So the system will analyse a diary, create a meeting room schedule, display visitor welcome messages and wayfinding routes on screens in the building.

"Beyond that, multi-location organisations, for

example, can show real-time operational performance data and sales figures as well as utility consumption rates for individual buildings/sites against global targets and levels, issue articles of interest across the whole organisation and selectively analyse and present them using up-to-date Cloud-stored information.

"We have successfully deployed a system like this for a global management company which showed information on screens to staff in common areas: restaurants, lift waiting areas and coffee lounges. They did not need to trawl through reams of emails to gather information, some of which would not even be pertinent to them. The return on investment was shown to be less than six months."

FUTURE DEVELOPMENT

This concept will be taken further in the future as new technologies become more mainstream, such as QR codes, NFC and direct Twitter interaction with smartphones and other personal devices becoming more popular and

integrated in the business world.

Crestron's Fusion RV Energy Management software provides a similar type of service, tying room management of lighting, environmental control, shades and AV equipment into an IT-centric system that aligns itself with demand and room management on a worldwide basis.

"As Cloud-based services grow in popularity, integrators can provide more globally accessible solutions to their clients," points out Mark Ridgwell, business development manager at Crestron. "AV vendors and integrators will have to choose between furthering their own IT expertise or partnering IT companies, as the two sectors begin to overlap more often. The demands of a complete system require the expertise of both areas, combining remote access to stored data via virtual machines and servers with the distribution and display of content.

Service providers can divest many of the tasks involved in distributing and

VISIOSIGN INFOBOARD HELPS DANISH HOSPITAL IMPROVE PATIENT RECOVERY EXPERIENCE

Silence, security and helpful orientation are key when recovering from a serious traffic accident. The Neurosurgery Department at Aarhus University Hospital in Denmark installed a shielded recovery area for patients with acute brain trauma to allow them total rest in a secure environment in order to optimise recovery periods.

Above each bed an information screen is installed providing information to patients about who and where they are, when they wake up. Pictures, for example, of family members are remotely uploaded to the screen to help brain and memory training.

VisioSign's technology is

hosted on Microsoft servers and developed in ASP.NET, while the player boxes are designed in Windows Embedded Standard. The innovative recovery room includes features such as circadian light, with staff able to survey the patients via infrared cameras at night.

Speakers are installed to reduce noise and play music; each patient also has a digital screen by their bed with information based on highly specialised nursing requirements for intensive care patients and utilising unified communications alongside the digital signage and audio system, to achieve a faster and better healing process for patients.

CASE STUDY

supporting software and delivering real-time and stored content. French explains: "They can engage with a third-party provider to deliver that solution for them in an OpEx model, either as a dedicated or shared service. An organisation doesn't have to invest in housing for a server room or in IT expertise. Cloud services are used extensively and will expand the future, allowing fast access to new types of devices as the underlying operation and connectivity is handled by a third party.

"If you take smartphones as an example, the device is only a small part of the experience; their power and ability to deliver rich collaboration is through the applications and services available via the App Store, which are generally Cloud-based. This applies to VC applications such as LifeSize Connections. This solution offers users the ability to access video from anywhere securely traversing firewalls and with the ability to meet with up to nine parties, including non-registered visitors on a buy-as-you-use basis."

The Cloud encompasses the idea that the underlying platform is infinite, scalable and managed, and service providers of apps need not concern themselves with such things but instead should focus on functionality,



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'Gaining a degree of accessibility beyond anything previously possible makes Cloud technology incredibly advantageous'

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Networking



- PURE SOUND
- PLUG & PLAY
- FUNCTIONAL USE
- DIRECTIONAL
- ROBUST

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FEATURE: CLOUD TECHNOLOGY

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As well as providing simplified access to a wider range of user devices, Cloud systems can be managed remotely. "One of the key benefits of Cloud-based administration or management of solutions is that they can be controlled from multiple locations," says Mike Cuckow, sales director, EMEA & Asia Pacific at Cabletime. "No longer does the control have to be centred in a headquarters, it can be done on the road, from home, from another country. This is very liberating for organisations."

SECURE SERVICE?

However there are security issues with all Cloud-based systems that are of concern to these organisations, particularly in the age of BYOD (Bring Your Own Device) where employees expect to use their own smartphones and tablets for their business and personal services.

Cuckow continues: "Customers are administering their content scheduling through the corporate Cloud, but lack of security is holding this back. Corporate customers need security guarantees and if they can't get them, they will set up their own corporate Cloud. This has meant that for all the advantages this concept offers, there are disadvantages which at the very least are time-consuming to counter."

Davies also cites this as a hindrance to the deployment of Cloud services: "Users are becoming far more relaxed about using the web for data storage and services through applications they have on personal devices; however some IT departments are still reluctant to deploy this type of software within their highly secure networks. The simple solution to this is to deploy an entirely separate, parallel network and this is being done by a number of large organisations. An added advantage is that video distribution can be bandwidth-hungry, depending on the format, and in this way does not adversely affect the in-house core data network."

Residential AV applications also utilise the Cloud for audiovisual delivery. "Savant's Ambient Intelligence application runs Apple OSX and can be registered as a user device in Apple's iTunes in the Cloud. Any audio or video content acquired on

any device automatically appears on any other and can be distributed around the home through Savant automation systems," explains RGB Communications chief technology officer David Webster. "This is an extremely powerful and simple way of acquiring content, either through iTunes or directly from disc and distributing it via the Cloud to all devices owned by a user within and outside the home. It is ideal for second homes and yachts, providing a common library of content throughout. It is also being installed as a music service in hotels and leisure facilities.

"Savant is already working on extending the range of Cloud-enabled services that gather information from a variety of online sources about a homeowner's lifestyle and location to determine and set the operation for a home automation system. It will analyse their diary and GPS position to set the heating, monitor previous arrival patterns to switch on lighting and make decisions without the user having to program or adjust the controller – all based on intelligence passively garnered from Cloud data. Ultimately we might expect this to be linked to power utility companies so that they can control power-hungry devices remotely without adversely affecting the homeowner."

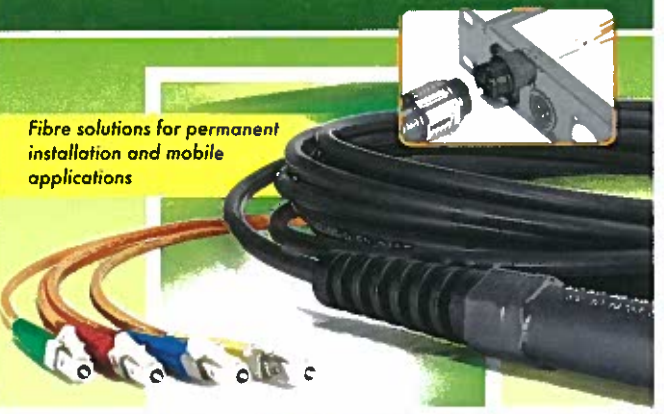
"Of course, the technology isn't perfect at the moment," concludes Rick Kukulies, VP of engineering at NuVo Technologies, whose residential audio players feature Cloud services and synchronisation. "The way Clouds work, bandwidth issues and even the popularity of the technology can be a strain. But it's hard to see these issues as a con. Ultimately, gaining a degree of accessibility beyond anything previously possible makes Cloud technology incredibly advantageous, and I think it's here to stay. It will undoubtedly continue to evolve into a higher-performing technology."

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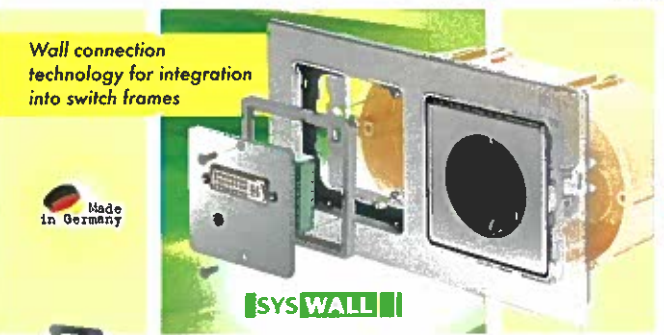


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