



WHITEPAPER

DIGITALLY CONNECTED SIGNAGE: SOLVING THE INFORMATION DISTRIBUTION DILEMMA WITH SATELLITE TECHNOLOGY

If you find your digitally connected signage is limited by your conventional telecommunications provider, who often distributes information via traditional means such as cable, satellite technology may be the solution you are looking for. The advantage of satellite to transmit large amounts of high quality content to a large number of locations, securely, reliably and cost-effectively, makes it the superior alternative to traditional telecommunications providers. When used in conjunction with terrestrial networks for traditional IT function and user collaboration, satellite based digital signage capability also provides the ideal disaster recovery solution, for protection against terrestrial connection failure caused by human error or natural disasters.

BY PAUL PROSSER AND MERV KUEK, 11 AUGUST 2011

BACKGROUND

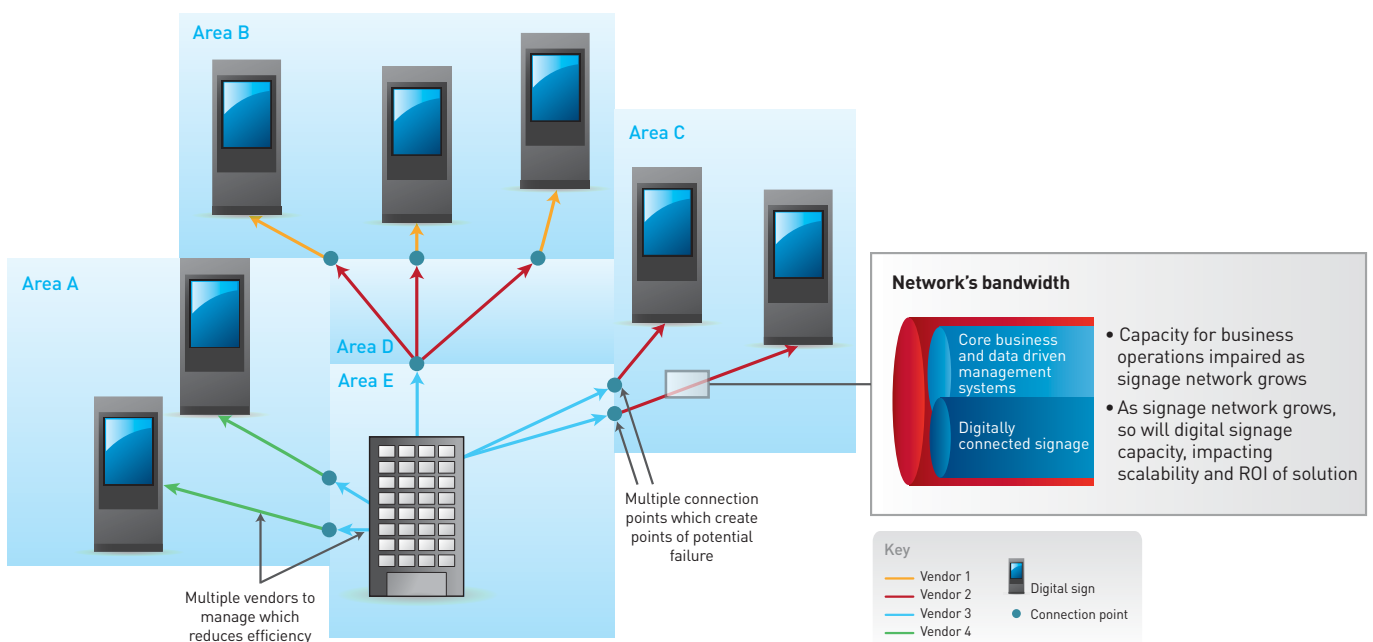
“The conventional cable or fibre optic technologies are suited to point-to-point communications and not to broadcasting large amounts of the same digital content.”

Digitally connected signage, also known as digital out-of-home (DOOH) advertising, is a method of communicating to potential customers whilst they are “out and about”. Digitally connected signage enables companies to communicate with customers through targeted up-to-date content and messages, tailored to specific audiences at specific locations and times. This then influences the customers’ short term decision making, yielding a return on investment for the company.

When launching and operating a digitally connected signage network, a vast majority of the project time is allocated to content and context. Often little time is devoted to the way this content is distributed to digital signs. The ongoing operating costs can represent a significant component when measuring the return on investment for the solution.

Many companies utilise conventional telecommunications providers to run all the content through traditional means, such as cable or fibre optic technologies, without reviewing alternative viable communications methods. Conventional cable or fibre optic technologies are suited to point-to-point communications and not to broadcasting large amounts of the same digital content to a range of geographically dispersed display locations.

Traditional signage network



Proof of concept

For proof of concept trials of digitally connected signage, existing cable or fibre optic communications are suitable. However, having to share network and bandwidth capabilities with other management systems such as POS, data, Internet and voice can prove to be problematic.

Staged rollout

The next step to take into consideration is staged rollout. The choice of infrastructure to support rollout, be it cable, fibre optics or satellite, is seen as less critical than the other components of digitally connected signage, such as content, context, feedback, SW choice, HW choice and screen size. Therefore, in this case, conventional cable or fibre optics access via the IT department is usually chosen.

Additional signage locations

Each new location requiring connection to the digital signage network requires a communication link to the central digital content development store. When the new location is physically in place and has current communications using terrestrial capabilities, then the volume of information within the digital signage solution needs to be applied to the LAN/WAN capabilities. In most cases additional capacity needs to be acquired or alternatively existing user level SLA's may need to be enforced.

New wisdom suggests that a significant review of the infrastructure to support rollout, is equally important as the other components. This will greatly dictate the scalability, cost and ROI of the overall solution.

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“Increased demand for ‘fresh’ content in real-time...with satellite suggested as the obvious solution.”

THE NEW WORLD OF THINKING

Digital Signage World 2011

Today’s digitally connected signage solutions involve ever increasing volumes of quality video content that require large amounts of bandwidth. The keynote speakers at the recent Digital Signage World 2011 conference in Sydney highlighted the increased demand in more personalised signage activity, due to an increase in the use of smart phones with smaller more compact screens. At each digitally connected sign location, additional blocks of content need to be delivered and stored. These, in addition to a high volume of video content, are ideally suited to satellite transmission, which allow for improved time management and cost-effectiveness.

“A dedicated satellite network...also provides the ideal backup service should conventional telecommunications be interrupted.”



The need for a strategy on the lifespan of the information provided to consumers and the increase in demand for up-to-date, “fresh” content in real-time, led discussions at Digital Signage World 2011, to which satellite was suggested as the obvious solution.

The presenters varied in their view on the interaction between marketing independence versus working with IT in planning and the potential conflict with bandwidth and prioritisation of service.

As digitally connected signage networks grow, it is important that they have their own dedicated connectivity supported by the IT department and are not competing with other data driven management systems. Otherwise, there is a likelihood of congestion and conflict across the organisation’s bandwidth and connectivity. On the other hand, if a dedicated satellite network is deployed, it can provide vital backup services should conventional telecommunication services be interrupted.

Digitally connected signage via satellite

Efficient and cost-effective

Digitally connected signage and multicasting are synonymous with the need to transmit content to a number of locations simultaneously with one transmission.

Satellite technology provides the most efficient and cost-effective means of transmitting and receiving data. Clients have the ability to multicast information from a single point, providing a faster and more efficient method of delivering content across large geographic areas. All sites within a secure and private network are configured to receive content simultaneously, therefore providing a more cost-effective method to deliver information to multiple locations.

“Satellite technology provides the most efficient means of transmitting and receiving data...the ability to multicast information from a single point...delivering content across large geographic areas.”

According to the most recent Digital Signage Expo (DSE) quarterly Business Barometer, which analyses research data collected from 447 digital signage providers (84% in North America), over a quarter of future company budgets will be absorbed by “deployment and delivery” activities. In fact, the investment required in “hardware, deployment and delivery”, averages over 45% of budgets.¹

Therefore, selecting the most cost affordable communications service is paramount for any digital signage business and all alternatives including satellite, should be considered. Satellite technology is ideal for not only digitally connected signage, but also for applications such as digital cinema, tele-medicine, e-learning and other broadcasting applications.

“One of Australia’s largest retail chains established satellite transmission as a cornerstone of delivery of content and corporate communications to over 800 stores.”

Reliability and scalability

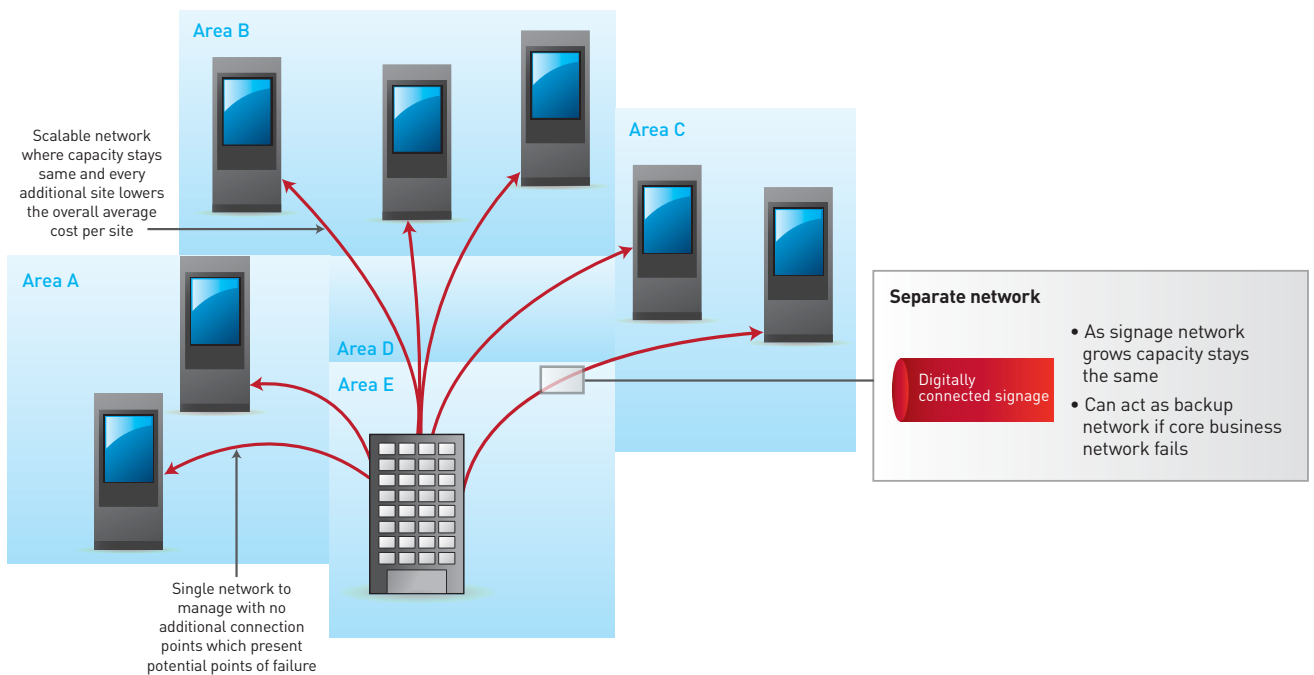
Satellite communications ensure there is only one network to manage. Other delivery options with comparable footprints usually require multiple terrestrial connectivity vendors, therefore reducing efficiency. Satellite communications also have the advantage of scalability and rapid deployment, quickly establishing a broadband network virtually anywhere and unlike terrestrial options, are unaffected by damage to physical lines or cables.

With satellite based networks, each new location needs simply to have a satellite dish installed, connected in the location to the digital content system and pointed to the chosen satellite in the sky, with no impact on inter-location communications.

Disaster recovery

A satellite network can also serve as a standby back-up for terrestrial networks and pays for itself in a digital media solution. Clients use the satellite network during “normal mode” for broadcasting applications. However, in the event of a disaster when terrestrial networks fail, mission critical voice and data traffic can be re-routed over the secure satellite network until terrestrial communications are restored, enabling the core business to function without disruption.

Satellite signage network



Benefits of satellite technology

- Most efficient means of transmitting content
- Multiple locations configured to receive content simultaneously
- Cost-effective and scalable with incremental ROI
- As signage network grows satellite capacity stays the same
- Multicast content from a single point across large geographical areas
- Secure and private network
- Manage one network, compared to multiple terrestrial vendors
- Less connection points (potential failure points) than traditional network
- Rapid deployment and greater geographical reach
- Not affected if terrestrial/traditional networks are disrupted
- Can serve as a back-up network for terrestrial networks





What to look for in a satellite solutions provider

- **Quality of satellite service**
Next generation satellite technology enables optimal transmission of data services. Ensure your satellite provider can provide 99.99% Teleport up-time to guarantee reliability and performance.
- **Customer service**
Service at all levels is important, whether it be sales, engineering or operations. Make sure your satellite provider has dedicated pre-sales engineers, who will ensure your network is tailored and optimised for your environment.
- **Ongoing support**
Support through the life of your service is very important, to ensure your satellite link is always on. Check your satellite provider has 24/7, 365 day support through an on-site Network Operations Centre (NOC) and provides rapid service restoration response.
- **Satellite experience**
Specialisation in satellite communications is very important. Ensure your satellite provider owns and operates its own Teleports with onsite NOC, has highly skilled and experienced engineers, employs the latest technology and hardware and has continuous routine and preventative maintenance.
- **Digitally connected signage experience**
Experience with industry intricacies and challenges provide superior solutions. Ensure your satellite provider has experience designing, deploying and supporting digitally connected signage networks.

PRACTICAL APPLICATION

Seven years ago, one of Australia's largest retail chains established satellite transmission as a cornerstone of delivery of content and corporate communications to its 800+ stores. Customers and staff are now kept informed about new products, special offers and the latest information, via digital signage displays throughout each store. This pioneer in digitally connected signage is hesitant to broadcast their deployment details to the market as they have used the solution to gain a competitive edge in the retail industry.

They have summarised the key outcomes of this project as:

- The ability to deliver content by satellite "one-to-many" so that all stores concurrently receive exactly the same content, boosting efficiency, effectiveness and consistency.
- The ability to deliver content via their own private satellite network, providing security, safety, and reliability.
- Satellite bandwidth remains the same over time no matter how many sites are rolled out, resulting in rapid ROI and minimal administration.

Greek shipping magnate, Aristotle Onassis once said: "The secret of business is to know something nobody else knows" and this describes this retailer.

CONCLUSION

If you are seeking seamless, secure, reliable and cost-effective transmission of content to many locations, no other solution delivers as well as satellite technology. Conventional cable and fibre optic technology is suited to point-to-point communications, not broadcasting large amounts of the same digital content. A private and secure satellite solution provides the most efficient method to multicast content, is scalable without incrementally increasing costs and can be rapidly deployed anywhere in world. Additionally, your digitally connected signage network can also serve as a back-up network in the event of a disaster when your terrestrial networks fail, enabling the core business to function without disruption.

The new world of technology and thinking suggests a significant review of the communications strategy you employ. A major Australian retailer with over 800 stores did, along with many around the world, establishing a competitive advantage and a solution that is cost-effective and future proof.

1. Digital Signage Expo (DSE) Business Barometer Report www.digitalsignageexpo.net

“Organisations seeking seamless, secure, reliable and cost-effective transmission of content to many locations, no other solution delivers as well as satellite technology.”

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