

**May 2006**

**OPINION PIECE**

**Set your sites on a neutral host**

[OPEN PRECEDE]

Broadcasters seeking to 'go digital' can take heart from the many options now available—one that is growing in popularity is the outsourcing of delivery infrastructure, which allows the broadcaster to retain resources to focus on the business of content.

[CLOSE PRECEDE]

Chris Jaeger, Managing Director - International Business, Broadcast Australia

While some countries in the Asia Pacific region are well advanced in the migration to digital broadcasting, many others are either poised on the verge of starting, or running trials and making preparations. This latter group, which is driving the second phase of the region's digital migration, may well benefit from the experience of those who went first. For 'going digital' involves a whole lot more than multi-channelling or high-definition television; the challenges associated with a digital network are vast, and require significant capital investment and technical expertise.

Broadcasters will acknowledge that the migration to digital involves two quite disparate undertakings: the development or sourcing of digital content, and the deployment of transmission infrastructure. The first holds all the glamour and excitement of high definition, data-streaming and interactivity. Its challenges include the upgrading of studios and studio-equipment and conversion of existing content into digital format. In contrast, the deployment of a digital broadcast network potentially involves the systematic, site-by-site upgrade of every transmission site across the licensed region.

The shift in broadcasting technology brings with it the opportunity for a shift in broadcasting philosophy. Traditionally, broadcasters have played the dual role of content provider and deliverer; but in nations such as the UK, Australia and, to some extent, Malaysia, this has changed. Recent years have seen the emergence of infrastructure companies that take responsibility for the ownership, operation and ongoing maintenance of transmission sites, with broadcasters entering into a contract for the delivery of their content.

## **Ease the burden**

Undoubtedly, the migration to digital broadcasting has accelerated this trend. Faced with the enormous capital expenditure required to realise a digital network, broadcasters are seeking means of easing the burden. In an industry where most commercial broadcasters compete on the basis of content, it is becoming a viable option to outsource the vehicle for delivery of that content.

This means that the specialist infrastructure company applies its capital and technical expertise to deploying, operating, maintaining—even owning—the network, thereby freeing the broadcaster to focus on the content part of the digital equation. The significant issue is that the infrastructure company is independent of the broadcaster, and acts as a ‘neutral host’ of its services.

The process of deploying a digital broadcast network involves three main stages: planning, design and building. The first of these—planning—is perhaps the most critical, as its expert execution can greatly mitigate deployment time. It includes spectrum and interference management, coverage analysis and prediction, and the assessment of existing infrastructure on a site-by-site basis to see the extent to which any of it can be accommodated within the new system. The design phase involves the detail of system and equipment specifications, and leads into the project management and engineering of the building phase.

All three deployment phases are skills intensive, in particular the design and build phases which importantly demand digital systems integration experience. The building phase is also capital intensive. Moreover, a digital network requires ongoing operation, monitoring and maintenance to ensure optimum performance. Digital networks are by nature substantially more complex than analogue networks, so monitoring and remote control systems need to be more sophisticated—another skills and capital challenge. The option of an infrastructure company to independently host broadcast services, thereby relieving the burden from the broadcaster, could be the ideal solution for many Asian broadcasters planning to migrate to digital in the near future.

## **Infrastructure sharing**

Irrespective of whether the host is independent or ‘neutral’, another option that should be considered by all broadcasters migrating to digital is infrastructure sharing. This is where multiple transmitter channels are broadcast through a single antenna system using RF combining technology. Infrastructure sharing allows the cost of deployment to be shared between broadcasters, but also addresses the escalating issue of environmental impact and greatly facilitates the control of interference—particularly where adjacent channels and single frequency networks (SFN) are in use.

In the Asia Pacific region, broadcasters have undertaken the joint roll-out of digital networks in both Taiwan and Australia. Yet this is also a scenario that strongly lends itself to the model where a neutral host provides a single, sharable infrastructure. As an infrastructure specialist, the neutral host is in the ideal position to ensure that its network operates with optimum performance, ensuring all its clients' services are delivered seamlessly from the perspective of the broadcaster. The national industry also benefits from this model, since capital is utilised efficiently on behalf of all industry participants, which ultimately translates benefits to consumers.

It might be speculated that the presence of the neutral host begins to blur the definition of 'broadcaster' as the duties of content creator and deliverer are divided. However, the potential paradigm shift becomes all the more striking when all the possibilities of digital broadcasting are considered.

A key point here is that the conversion from analogue to digital broadcasting is not necessarily a 'one to one' relationship. The efficiency of digital coding permits multiple services to be provided within the same amount of spectrum that a single analogue channel occupies. This means, for example, that a broadcaster can now offer six television services that are multiplexed together prior to being delivered into the transmitter.

### **Who owns the multiplex?**

It also means that the door is potentially opened for the neutral host to expand its role and identity beyond infrastructure host—for the question arises as to who owns and operates the multiplex and spectrum license. It is not inconceivable that the neutral host could step into this role, thereby permitting a single multiplex to offer varied content from different content providers.

This is the model currently being trialled in Australia for two significant digital broadcasting trials: Broadcast Australia's DIGITAL **FORTY FOUR** datacasting and movemedia digital video broadcasting to handheld (DVB-H) trials. In both cases, Broadcast Australia has been given temporary access to the spectrum licence and operates the multiplex on behalf of multiple content providers.

At the end of the day, the migration to digital broadcasting is a very involved process, requiring extensive capital investment, technical expertise, and meticulous planning and design. While the neutral infrastructure host model can represent a paradigm shift in how we define a 'broadcaster', embracing this change actually opens the door to significant business advantages that can accompany the move to digital. It is for this very reason that broadcasters across the Asian region

are viewing the neutral infrastructure host as a very real option. It will not only help streamline the region's launch into the digital age, but has clear operational advantages well into our digital future.



Chris Jaeger – Managing Director International Business

### **Company background**

As the owner and operator of one of the most extensive terrestrial broadcast transmission networks in the world, Broadcast Australia provides transmission services for radio and television (analogue and digital) broadcasters and offers site sharing and infrastructure services.

With over 70 years broadcast transmission experience, Broadcast Australia plays a strategic role in developing new and emerging technologies—including Infocasting, Digital Radio and Mobile TV. The company's aim is to provide world-class broadcasting solutions throughout the Asia Pacific region by working with strategic partners, including wholly owned subsidiary, The Bridge Networks.

Broadcast Australia is a 100% owned subsidiary of Macquarie Communications Infrastructure Group, an entity listed on the Australian Stock Exchange (ASX code: MCG). Its sister company, the UK-based Arqiva, specialises in providing broadcast transmission solutions for fixed and mobile media applications.

**Web site** <http://www.broadcastaustralia.com.au/>

### **Technical enquiries**

Chris Jaeger, Managing Director - International Business, Broadcast Australia  
Telephone: +61 418 384 622  
E-mail: [Chris.Jaeger@BroadcastAustralia.com.au](mailto:Chris.Jaeger@BroadcastAustralia.com.au)

### **Media enquiries**

Relate Technical Communications Pty Ltd  
Telephone: +61 3 9593 9973  
E-mail: [info@relatetech.com.au](mailto:info@relatetech.com.au)