Dealing with datacasting

A report by private consultants into digital terrestrial broadcasting and datacasting hints that a change in mindset will be necessary for Australians to reap the benefits of the digital age

In a speech about digital television, US vice-president Al Gore said: "[It is] the greatest transformation in television's history...one that is truly bigger than the shift from black-and-white to colour...it's like the difference between a one-man band and a symphony".

Consultancy Communications Strategies & Management (CSM; headed by ex-SBS managing director Malcolm Long) uses this quote at the beginning of its 140-plus page report submitted to the Department of Communications, Information Economy and the Arts last month, probably to underline how crucial the decisions will be that dictate the introduction and use of digital terrestrial television (DTT) and datacasting.

The report, *Development of Datacasting Technologies and Services*, examines what datacasting is, the services that can be provided under its umbrella, and the technology which its introduction involves. It is split into three sections:

• Background to the Report - an overview of DTT broadcasting and datacasting in Australia, the meaning of datacasting, multimedia, datacasting and convergence, television versus the computer, and transmission platforms;

• Datacasting Services - the development of these overseas, and relevant commercial alliances, profiles of several countries and companies in France, the UK and US, Sweden, Germany, New Zealand, Japan, Hong Kong and Singapore; the scope and nature of content of datacasting services in Australia; the capacity of datacasting services to offer video, audio, interactive and Internet connectivity; the likely demand for datacasting services within Australia; and directions and trends shaping their development;

• The Technology of Datacasting - this final section addresses the history of datacasting and examines issues such as digital compression, DVB-T datacasting, enhanced television, production, transmission, bandwidth, bit-rate, reception, set top boxes and conditional access.

But first, a definition. According to CSM, a terrestrial datacasting service is an over-the-air multimedia service other than traditional television that may deliver information in any form, with perhaps some kind of interactivity; often exhibiting elements of convergence; and harnessing the power of computer processing. It is this definition which the report sets out to identify: what datacasting is and what it involves in terms of content and technology.

The second section of the report, Datacasting Services, contains the bulk of the research. CSM's key premise here is that the datacasting proposition is simply so novel in Australia, as it was overseas, that it will need to be marketed in a "coherent and coordinated way by all the industry groups involved". Television has become such an entrenched part of popular culture that to make datacasting available to the broader community a major change in mindset will be required in order to overcome what for the majority of the populace is a central and passive part of their daily lives. The report defers to the UK where "there appeared to be an attractive, well crafted marketing package at digital launch time".

The central role of television in Australian society means that to be commercially viable, any datacast programs and services must recognise the importance of the link with the television viewing experience. CSM says that content providers must take into account the "lazy interactivity" of some viewers, design services that make use of multimedia and have a "televisual feel", and interlink services with TV events, personalities and programs.

Electronic program guides (EPGs) are already a prime application for datacasting technology. As a business proposition they are a "welcoming billboard" to viewers but also a multimedia entry point for viewers' use of the TV set, wherever their destination. "TV broadcasters and datacasters are learning from the Internet. There is great value in owning a portal site. Such an EPG can entice viewers to taste new services, go shopping, even answer questions about personal preferences," states the report. "Equally, a well-developed EPG can be a benefit to all service providers who can be accessed from it...Arrangements for EPGs will become an increasingly important issue as launch date for digital terrestrial TV approaches."

In terms of spectrum capacity, Australia has the opportunity to take a lead in aggressively developing the potential of datacasting, according to CSM. Unlike the US, where broadcasters have to contend with a cable industry which is also digitising and Europe, where there is a shortage of spectrum enabling broad-

casters to embrace datacasting, Australian broadcasters will have considerable capacity for datacasting. "...there will be growing but still limited competition from cable and satellite. In addition, there will be one or more mandated datacasters who will have a very strong incentive to develop successful services", states CSM.

For digital terrestrial datacasting technology to be a success, reception equipment must be reasonably priced and configured to receive and process datacasting applications, as well as being marketed as an attractive proposition to the general public. Comparing Australia to the UK and US, CSM forecasts that receiving equipment providers may need to decide whether they use the US strategy of offering a range of medium-to-high cost standard-to-high definition receivers with a strong emphasis on picture quality, or the UK approach of promoting a range of cheaper, versatile products. It notes that in Australia, this will only be achieved once broadcasters and specialist datacasters have agreed on specifications for receiving equipment.

Paramount to the technology's future success will be its ability to generate revenue. CSM states that there is a prevalence in Australia of a business attitude not dissimilar to that adopted in relation to many Internet-based initiatives. "A generalised belief that the new technology must be understood and responded to because it is 'the way of the future' but, at the same time, a scepticism about its short-to-medium term relevance in particular business contexts...Operators will, obviously, need to make specific efforts to effectively market digital television to the advertising, business and investment communities as part of their strategies for the introduction of digital services."

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Summary of conclusions and key issues

Datacasting in Australia

- Australia could become a world leader in the development of DTT datacasting which, along with high definition TV (HDTV), is set to revolutionise television and how we use it.
- Digital broadcasting will offer existing broadcasters and new datacasters unique opportunities. They will have more bandwidth than broadcasters in the UK and less competition from digital pay TV than US broadcasters.
- DTT datacasting can provide many of the benefits of the information economy to the majority of Australians who do not have a personal computer or subscribe to pay TV.

Datacasting services

- Services under consideration by Australian broadcasters and potential datacasters include:
- TV electronic program guides;
- "portal" EPGs adding lifestyle information and other electronic services to the basic TV and radio guide, supported by advertising;
- new information complementing or prompted by TV news, sports and lifestyle programs;
- video and audio downloads of popular and special-interest material, including near-video-on-demand;
- broadcast of popular websites including some targeting regional needs;
- comprehensive multimedia information and entertainment services, including some interactivity;
- Internet/TV hybrids;
- other interactive applications (TV competitions, shopping, banking ,gambling and gaming as well as education and government/community services).

The international experience

- Datacasting is in its infancy in countries which have begun DTT, including so far simple EPGs, teletext-type information services, multimedia downloads and supplementary program information from the Web.
- Satellite datacasting in Europe is leading the way with comprehensive EPGs, interactive information and email services, electronic shopping malls and direct retailing of games and software.

The marketing of digital TV and datacasting

- The prevailing culture of television is about passive viewing of a familiar, standardised appliance. Digital TV will offer a new range of equipment options including super high-quality display units and computer-like set top boxes delivering a wider range of services to the home.
- DTT will need to be strongly promoted by the television industry and electronics manufacturers. Marketing will need to include cost-effective hardware, compelling content and a clear message about the capabilities of HDTV and datacasting.

Convergence, standards and interoperability

- Interoperability of TV reception equipment will be an important factor in the penetration of DTT and datacasting.
- Australians will demand reception devices which are cost-effective, convenient and serve their needs. They will also want sensible interoperability and easy linking of datacasting devices.

Content creation and production issues

- TV production industry and Web developers will need to undergo cultural re-orientation to fully explore the potential of digital datacasting.
- The marriage of film and TV program-makers and creators of online content and services to make exciting and relevant digital television will be an important step in the development of DTT and datacasting.

Digital Broadcasting Australia

- The development of Digital Broadcasting Australia as a forum to promote cooperation between broadcasters, pay TV operators, datacasters, manufacturers and the broader communications industries is, therefore, an important step in the successful launch of digital services.

The convergent future

- Datacasting could provide the arena for important steps in the process of communications convergence. Several players are considering services which would team DTT and full access to the Internet and other online services.
- If successful, these hybrid systems would have a profound effect on TV and the Internet.