Broadband Media in Australia
Tales from the Frontier
by Marion Jacka

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About the Author

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Abbreviations and Acronyms

ABA	Australian Broadcasting Authority
ABC	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ADSL	Asymmetric Digital Subscriber Line
AFC	Australian Film Commission
AFTRS	Australian Film Television and Radio School
AIMIA	Australian Interactive Multimedia Industry Association
AOL	America Online (US)
ARIA	Australian Record Industry Association
BBC	British Broadcasting Corporation
BMAA	Broadband Media and Advertising Alliance
CICS	Creative Industries Clusters Study
DCITA	Department of Communications, Information Technology and the Arts
DSL	Digital Subscriber Line
DVD	Digital Video Disk
EPG	Electronic Program Guide
FFC	Australian Film Finance Corporation
HBO	Home Box Office (US)
HDTV	High Definition Television
HTML	Hypertext Markup Language
IP	Intellectual Property
ISP	Internet Service Provider
ITV	Interactive Television
MHP	Multimedia Home Platform
MMDS	Multichannel-Multipoint Distribution Service
MST	Mixed Signals Technologies (US)
NIDA	National Institute of Dramatic Art
NOIE	National Office for the Information Economy
PBS	Public Broadcasting Service (US)
PC	Personal Computer
PDA	Personal Digital Assistants
PSTN	Public Switched Telephone Network
PVR	Personal Video Recorder
SBS	Special Broadcasting Service
SPAA	Screen Producers Association of Australia
TV	Television
VOD	Video-on-demand
WAP	Wireless Application Protocol
WWW	World Wide Web

Glossary

Application Program Interface, are the common rules (a syntax or standard set of functions) which allow applications software to communicate with the operating system. They are software specifications which application developers need before they can write programs for a particular operating system or architecture.

ADSL, Asymmetric Digital Subscriber Line, is a technology that allows the use of a copper line to send a large quantity of data (for example a television picture) in one direction and a small quantity (for example a control channel) in the other. Unlike a regular dial-up phone service, ADSL provides a continuously available, 'always on' connection. ADSL is asymmetric in that it uses most of the channel to transmit downstream to the user and only a small part to receive information from the user. The same line can be used simultaneously for several purposes. It is one of a family of DSL technologies.

Bandwidth indicates the capacity available to transfer information. In analogue systems, it is measured in Hertz and in digital systems in binary digits (bits) per second. The greater the bandwidth, the faster the end user will receive the information they require or obtain access to the service to which they are trying to connect.

Broadband is generally defined as a bandwidth of greater that 2 Mbits/s. Broadband communications networks can carry large amounts of information — for example, voice, video information and data channels — simultaneously.

Datacasting is a range of new interactive services made possible by digital television including, technically speaking, access to the World Wide Web, video-on-demand and games. Described in the *Broadcasting Services Act* as a service which delivers content in the form of text, data, speech, music or other sounds, visual images or in any combination of forms to persons having equipment appropriate for receiving that content, where the delivery of the services uses the broadcasting service's bands. In Australia, datacasting is subject to content restrictions.

DSL, Digital Subscriber Line technology, refers to a family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary phone lines into high-speed digital lines, and capable of supporting advanced services such as fast internet and video-on-demand. ADSL (Asymmetric Digital Subscriber Line), HDSL (High data rate Digital Subscriber Line) and VDSL (Very high data rate Digital Subscriber Line) are all variants of xDSL.

EPGs, Electronic Program Guides, are on-screen guides to help the viewer find and select desired services such as TV programs. Where there are many channels available, the EPG may be the only convenient way for the viewer to find the desired program or service.

Fixed Wireless Access is a way of providing a fixed telephone service without a fully-wired connection. Instead the telephone signals are sent over the air between small transmitters and receivers. Since no holes in the ground have to be dug, it is generally cheaper to roll out than a wired system.

HTML, Hypertext Markup Language, is the language that allows users to use hypertext links and to view web pages. Hypertext links allow you to jump from one place to another on the web.

Internet is a worldwide system of linked computer networks enabling users of any of the host computers to get information from any other host computer (and sometimes communicate directly with other users). The links between computers may be local, or long-distance links over telecommunication networks. Technically, what distinguishes the Internet is its use of a communication protocol called ITP.

ISP, Internet Service Provider, is a company that provides access to the Internet to individuals and other companies. ISPs also provide other related services such as website building and virtual hosting.

MMDS, Multichannel-Multipoint Distribution Service, is a radio communications system using microwave transmission providing point-to-multipoint line-of-sight transmission to receivers at fixed points.

Multimedia applications allow the combination of a group of distinct capabilities to be integrated into the one operating system — for example, including text with sounds, video or music. Bandwidth and multimedia operating systems allow video conferencing, Internet telephony and streaming video over the Internet.

Narrowband are communication technologies with a data transmission capacity of under 2 Mbit/s.

PVR, Personal Video Recorder, is a new technology that allows the viewer to control live TV by recording, pausing, rewinding and instantly replaying programs. PVRs allow viewers to record straight on to a computer hard disk, rather than tape, and can hold a considerable amount of programming. The viewer can time-shift their viewing, skip commercials or watch, for example, five minutes behind real time. So, for example, you can take a phone call, and then carry on watching where you left off. A PVR can automatically record the user's favourite programs every time an episode is broadcast without the user setting each up to be recorded individually.

Portal is a term, generally synonymous with gateway, for a World Wide Web site that is a major starting site for users when they get connected to the web or that users tend to visit as an anchor site. Portals usually include, or link to, a range of content services or channels, and provide email and chat facilities.

PSTN, Public Switched Telephone Network, is the generic term for public dial-up telephone networks.

Set-top box is a device that enables a television set to receive and decode signals transmitted in a form which the set was not originally designed to receive. In general, conventional analogue televisions require a set-top box for cable and satellite TV and all digital transmissions, whether cable, satellite or terrestrial. Set-top boxes are also available that, when connected to the telephone line or cable, can enable a television set to become an Internet terminal.

Streaming involves sending a video or audio signal in a way similar to broadcasting, so the user can watch or listen to it as it comes in rather than having to download entire files before accessing them.

t-commerce is e-commerce on the television screen.

Walled garden is a secured area containing a variety of information, features, activities, and other items that can only be entered by a special access code or some other electronic means. As applied to interactive television, the concept of providing viewers with access to a controlled set of aggregated websites, rather than providing them with only the means to browse the web.

WAP, Wireless Application Protocol, is a standard way for wireless devices, such as cellular telephones and receivers, to gain access to the Internet. It can support email, the World Wide Web, news groups and Internet Relay Chat.

Webcasting is, broadly speaking, a term to refer to the provision of audio and video content over the internet in streaming or downloadable form.

www, World Wide Web, is a global system for linking multimedia content across the Internet to allow remote access, regardless of the location.

Overview

The focus of this report is the creation of local content in the emerging broadband media environment. The starting point for the project was an interest in examining the ramifications of convergent trends for Australian content creators. The report examines:

• the progress made with the establishment of new entertainment services;
• the kind of content these new services are providing; and
• the ramifications for local content providers.

The report unashamedly takes the view that the presence of Australian voices, images and perspectives on the media screens of the future will be an important part of the digital revolution, delivering the promise of enriching and better informing our society. Convergence will increasingly place media, communications and information at the centre of most people's lives. As well as international material, we need to access and share local experiences and stories. While this is a fairly uncontroversial objective, there is considerable debate about how it can be achieved. This report aims to make a contribution to the debate by taking a practical look at some major current developments and their ramifications with regard to local content creation and delivery.

The report draws on published Australian and international sources as well as interviews with key industry personnel in Australia, including executives of established production companies and new media companies, and senior personnel in broadband and broadcasting services. Twenty-four interviews were conducted over the second half of 2000, with some of these being followed up and developments monitored in the first half of 2001.

The report is divided into six chapters. The content of these chapters is as follows:

• Chapter 1 discusses convergent developments and trends and contains a snapshot of the main developments in Australia.
• Chapters 2 and 3 discuss broadband Internet and interactive television developments internationally and in Australia.
• Chapter 4 examines cross-media content, content created specifically for online distribution and new distribution mechanisms for traditional linear content.
• Chapter 5 deals with the involvement of the established independent film and television production sector in new media by drawing on a number of case studies. It also looks at some examples of companies which are creating content specifically for the Internet.
• Chapter 6 provides an overview of support in Australia for new media content production by the public broadcasters and film support agencies.

Australia is on the verge of embracing broadband communications, with the emergence of broadband Internet content services and the introduction of digital television, both of which could lead to multichannelling and new interactive television services.

Internationally, developments in broadband communications are leading to new interactive, hybrid forms of content, delivered through the television set and the personal computer (PC). At the same time, more outlets for traditional linear programming are opening up with the introduction of new digital channels and video-on-demand services.

Media services are said to be converging — interactivity is coming to television, and the Internet

is developing into an entertainment platform. It is generally felt that different delivery platforms are suited to different uses, and most observers believe that television and the Internet will, in many ways, pursue quite distinct paths. Television is likely to remain the dominant entertainment medium, although it may be altered by the addition of niche channels and interactive services.

We are seeing the emergence of an interactive content industry developing alongside the traditional broadcasting industry. New interactive forms of content will be found on broadband content services delivered to the computer and television as part of a suite of interactive television (ITV) services. The extent and timing of these developments are uncertain and depend upon the rollout of broadband delivery systems and the response of viewers to these systems. There is considerable uncertainty about how much interactivity viewers want on their television screens and how much entertainment they want on their computers, and particularly about the extent to which they are prepared to pay for these services. The opportunities for content owners include:

- the development of material for a range of media platforms — traditional broadcast television, ITV, broadband Internet services and mobile telephony (termed 'create-publish-once' material); and
- the creation of original 'stand-alone' material specifically for the Internet.

The interactive content industry is leading to new industry structures and business models. In particular, an important new group of players is entering the sphere of content development and distribution. These are the 'enabling' technology companies, which provide the software and middleware for the new applications. These companies are entering into alliances with broadcasters, broadband network operators and content producers to develop interactive content, with hopes of gaining a share of the potential new revenue streams.

The consensus is that the business model for broadband Internet distribution and interactive television will be a combination of micro-transactions, subscriptions, pay-per-play and advertising. Many observers believe that people will pay if the content is compelling — just as they pay now for some services on the Internet. However, the development of profitable business models will be a slow process, as the large investments in infrastructure initially required are said to leave limited resources available for content. This presents a dilemma because without compelling content many consumers may not be motivated to pay more for broadband Internet connection or for new interactive television services. In the television sphere, progress is dependent upon the availability, cost and takeup of suitable digital reception equipment.

In addition to the difficulties involved in developing revenue models, potential content providers face other obstacles to the realisation of broadband content. These include:

- the costs involved in developing and repurposing content for multiple and often competing platforms; and
- the complex effect copyright and rights management will have on the new delivery systems.

Notwithstanding the many uncertainties, figures from the US, Europe and the UK show an increasing number of householders with broadband Internet connections and digital television services.

There is much discussion about determining the 'killer applications' for the new services. Overseas experience shows that games and game shows are successfully drawing viewers. The

other genres that lend themselves fairly readily to interactivity are news, sports, reality television, lifestyle and entertainment programming. Experiments continue with drama and while interactive 'soaps' are predicted to be viable, it is widely acknowledged that the genre is not so well suited to interactivity.

Broadband Internet content is delivered via dedicated sites and major portals where operators aggregate material from content providers in themed channels. Broadband applications include video-on-demand, live webcasting, computer games, and entertainment and information services. Entertainment content includes short films and animations, and material specifically developed or repurposed for the broadband environment. While some dedicated sites are proving viable, the trend is for content to be syndicated to major networks. The broadband Internet sphere will differ markedly from the open narrowband world in that content will be primarily found in 'walled gardens' — closed networks available on a subscription basis.

There is a very close connection between broadcast television programming and content on broadband services. Interactive or enhanced versions of traditional broadcast programming feature on interactive television services and the 'walled gardens' of Internet content also found on these services are often related to television programs.

Developments in Australia are very dependent upon the development of the various platforms. There has been much debate about the low takeup of digital television, the constraints on new services posed by the digital television arrangements and the slow rollout of delivery mechanisms for broadband Internet services.

Broadband Internet in Australia

Broadband Internet connection is at a very early stage in Australia. A limited numbers of households are currently connected. Factors affecting the development of broadband content opportunities include:

- the pace of the rollout of ADSL services;
- the cost to the consumer of broadband connection;
- access to broadband networks for potential content providers; and
- the scarce financial resources available for content development.

It appears that, at least in the early period, the major broadband portals will be similar in terms of content to their narrowband counterparts — they will provide a mix of information and entertainment. Overseas developments and local trends suggest that most broadband content delivered to the computer will be in the form of short films, animations, music videos, magazine-style entertainment material, sports, news and finance, albeit with rich media formats providing a more satisfying, television-like experience. There is considerable interest in repurposed television content, magazine-style entertainment material, and webcasting of festivals and live events.

Content is mainly sourced from established media players, both Australian and international, because of risks anticipated in working with new players lacking established business models. The situation therefore favours major media companies who have large amounts of content, who work across media, and who are better placed to bear the risks involved in revenue-sharing arrangements or low licence deals.

The role of content packagers in providing themed channels of content — already significant in pay television — will also be important in broadband. Network operators are looking to source material from content packagers rather than from individual producers. There is reportedly an

interest in sourcing more local entertainment content, such as short films, and material drawn from television programming. However, a lack of local content packagers, as well as limited funds for content development, seems to be restricting the amount of local content. It may be necessary to consider some form of intervention to encourage the establishment of packagers specialising in Australian content. The Telstra/Beyond Online agreement will hopefully provide a valuable model for other Australian broadband networks and content providers.

Interactive television

Overseas, interactive television delivered on digital platforms provides enhanced programming, video-on-demand, access to 'walled gardens' of repurposed web content, t-commerce and services such as email, banking and shopping. The main applications in terms of program content are gaming, game shows, interactive sports and news, with enhanced programming also applied to some other genres such as lifestyle programs and documentaries. While some areas, such as games and betting, are showing promising revenue returns, interactive television — and indeed digital television generally — is not yet profitable in Europe and the US because of the considerable capital investment involved.

Advocates of interactive television stress that its function is not just to bring the computer to the television screen, and that development of interactive services has to be suited to the viewer's experience of television as a friendly, informal entertainment medium.

A major issue is the existence of different software platforms and technologies, which oblige producers to adapt content so that it can operate on competing platforms. There are, however, moves to develop common standards, and also technologies that will adapt content so that it will operate on any platform.

In Australia, the main developments in the interactive television area are Austar's interactive service, the ICE interactive trial and more recently the announcement by commercial free-to-air broadcasters and pay television operator Optus Television of plans to introduce interactive services. Regional pay television operator Austar is moving to two-way interactivity. There is an interactive games channel, an Electronic Program Guide (EPG), and interactivity has been applied to the Weather Channel and to the music channel, Channel V. Future plans include adding interactive applications to the Lifestyle Channel and to news and sports, as well as introducing interactive advertising, retail and banking.

The introduction of interactive television in Australia involves a number of uncertainties, including the cost to consumers of set-top boxes, and the impact of the digital television regulations which stipulate precisely which interactive services free-to-air broadcasters can supply.

Enhanced programming will pose a number of challenges for content providers, including questions concerning the ownership of rights, control over enhancements, and how the costs of enhancing program material will be met.

New media content development

Content owners and developers in Australia are starting to produce or repurpose material with broadband distribution in mind. Some examples include major media companies such as the Australian Broadcasting Corporation (ABC), Fairfax via f2, and AAP; film and television production companies such as Beyond International and Becker Entertainment; new media companies; and specialist sites such as Urbancinefile, online music site, The Basement.com.au, and the innovative film site mysteryclock.com.

Online entertainment was affected by the severe downturn in the dot com sector in late 2000. There are, however, examples of online businesses continuing to develop successful entertainment content for narrowband distribution and also for emerging broadband platforms.

It is now common for established Australian film and television production companies to develop related websites for promotional purposes. However, progress is slower in moving to broadband interactive content, with producers acting cautiously in response to financial pressures and uncertainties surrounding the transition to digital television.

Established film and television producers consider involvement in new media crucial to the future development of their companies but are often constrained by a shortage of resources. The sector generally is not well placed to take the risks involved in experimenting with new media.

It is unlikely that the market will sustain new players producing specifically for broadband in the foreseeable future. Content providers need to have another business model and work across media sectors or need to tap into other areas such as website development carried out on a service basis.

Public support for new media content development is occurring through the ABC and the Special Broadcasting Service (SBS), and via initiatives of the Australian Film Commission (AFC), state film agencies and the National Institute of Dramatic Art (NIDA) in conjunction with the Australian Film Television and Radio School (AFTRS). In all cases, the organisations face budgetary constraints. In comparison with countries such as Canada, public investment in new media content in Australia is modest. A commonly expressed view of industry practitioners is that adequate resources for content development are as crucial to new media as to traditional audiovisual product.

Many broadband applications will be in the more commercial areas of programming or in areas where there is a degree of 'natural protection', such as news and information services. To achieve diversity in new media content, it will be important that public broadcasters have adequate resources and for the independent sector to be supported to develop innovative media content.

There will be a close relationship between broadcast content and content for new platforms. It will be important for Australia to maintain and develop its audiovisual sector through support mechanisms such as content regulation (albeit adapted to the specific circumstances of digital media), increased levels of subsidy, and to explore ways in which new media content development can better be supported.

There is a need for accurate quantitative and qualitative data about the Australian multimedia content industry. Inevitably, with a snapshot study of this kind, many other areas of research suggest themselves. Research could include:

• the Australian games industry — how it can be positioned to pursue opportunities as broadband media develop; and
• new media content development strategies and programs overseas.

Recent developments

On 31 August 2001, the Government announced two initiatives 'to progress the development of content and applications in the creative industries of Australia'. The first is a study to be undertaken by the Department of Communications, Information Technology and the Arts (DCITA) and National Office for the Information Economy (NOIE), on the subject of clusters in the creative digital industries. The Creative Industries Clusters Study (CICS), as it is known, will review Australia's strengths and capabilities in producing digital content and applications, and look at ways the creative industries can form strategic alliances and develop new business models.

The second initiative is the establishment of a new grants program administered by the AFC for the funding of innovative broadband content. A sum of $2.1 million, to be distributed over three years, has been allocated for this. The grants program has been established in recognition of the role of content in driving broadband takeup. Its objective is to enable Australian practitioners to produce local product to compete against work produced overseas.

These initiatives have been warmly welcomed. It is hoped that they will provide the basis for substantial, ongoing government support for Australian digital content production and distribution.

1   Major Developments

> Through broadband technology, a vast array of information and technology will be 'piped' into homes — ranging from videos and games, educational services, music, and newspapers, magazines and libraries.
>
> Welcome to the world of convergence — a world in which one can combine video, data and voice on one platform at super-fast speed. Watch as your computer, television, telephone and the Internet is integrated into a single system.[1]

The terms 'digital revolution', 'communications revolution' and 'convergence' are commonly used to describe the changes occurring in the media and communications industries. Broadly speaking, digital technology is leading to a blurring of the previously separate spheres of broadcasting, communications and the computer.

The Productivity Commission has defined convergence as the 'blurring of the boundaries between types of services and their means of delivery, and between types of data such as text, audio and video'.[2] Some commentators talk of convergence as an inevitable technologically determined process leading to a particular end-point. However, making predictions about the ultimate outcome a hazardous endeavour, given the range of business, market, political and cultural factors involved.

The Productivity Commission final report on Broadcasting notes that the term 'convergence' is used in many different ways, and 'denotes a general phenomenon — that is, the ongoing effects of digital technology in media and communications which, at least in part, must remain speculative'.[3] The terms 'broadband' and 'broadband communications' are often used in connection with digital technology and its emerging products and services. Broadband communication networks can carry large amounts of information — such as voice, video information and data — simultaneously, and is generally defined as having a bandwidth of greater than two megabytes.

Broadband communication can be brought about through a range of delivery systems, such as cable, advanced cable, DSL, wireless, fixed wireless and satellite — all of which are in various stages of global rollout. *Broadband Daily* offers the following description:

> Broadband is a high-speed interactive television and PC cable service (with a growing commerce angle), DSL service delivered by incumbent and competitive telcos; wideband wireless Internet connections, digital broadcast-delivered enhanced services; streaming media offerings and two-way satellite Internet connectivity.[4]

Broadband allows much more content to be delivered over various 'pipes'. This increased capacity, along with the addition of 'back channels', also greatly increases the scope for interactivity. With the development of broadband, communications convergence is occurring between the television and the computer. The computer is becoming more like television as broadband delivery provides the ability to carry rich media content including video, and the television is becoming more like the computer as interactivity and web-like services are added through IP-enabled set-top boxes.

There is considerable debate about the extent to which the television and the PC will merge. Some take the view that the two are going to merge and will become virtually indistinguishable; that they will end up as one device with a number of screens spread around the household. Others — perhaps more realistically — believe people will continue to use the

computer and the television for rather different purposes. Mitchell Kertzmann, CEO of software platform provider Liberate Technologies, is of this view:

> The goal is not necessarily to re-create a PC experience on the television. We think people will still have PCs and use their broadband connection from their cable company.[5]

Jan Steenkamp, CEO of interactive television company Open TV, expresses a similar view:

> Our view is that the television-viewing experience is very different from the computer-viewing experience. I almost categorise it as going to the movies and going to the library. Both are very important functions, but the one is a one-to-one intense retrieval of information-type environment. The television is a laid back, relaxed, entertaining, one-to-many type environment. For that reason there will at the back end of these systems be a large degree of convergence — of information, data carriage and standards. But in the front, the communication and the translation of that information will remain different. For me it's a little schizophrenic to think one can be the other.[6]

Digital television means multichannelling with the potential for a greatly expanded number of television channels to be offered on free-to-air and subscription networks, be they terrestrial, cable or satellite. But broadband also means the emergence of 'new media' platforms with interactivity incorporated in various ways, leading to new types of services and content. These range from video-on-demand to interactive broadband content delivered via the television or the PC.

Until recently, the term 'new media' was mainly used with reference to what are now earlier forms of media, such as CD-ROMs and narrowband Internet. Broadband means moving into the next phase of 'new media'. The main new media developments are the emergence of the following distribution platforms:

- interactive television;
- broadband Internet; and
- third-generation mobile telephone networks (still at a very early stage).

Viewers are told that the growth of broadband communications systems means greatly increased choice, both in terms of what is available to watch and when it can be watched. Personal video recorders (PVRs) such as TiVo and Replay allow viewers to record large amounts of material and to time-shift their viewing, so they can, for example, skip commercials or watch five minutes later than real time. While this may result in traditional commercials losing their effectiveness, the advertising industry is developing new interactive ways of reaching consumers — by, for example, t-commerce links embedded in programming.

As channels proliferate, another key element will be electronic programming guides (EPG). These will help people navigate their way through the myriad of options available in the multichannel environment, becoming powerful tools in themselves. An EPG can display information about what is currently on each digital channel, and what is coming up next, as well as details of future programs. Viewers may also be able to use the on-screen menus to order pay-per-view services, or to gain access to interactive services. As the UK White Paper on Broadcasting pointed out, EPGs raise new issues for regulators, as 'there will be possibilities for some programs to be highlighted by where they appear in the guide or by presentation'.[7]

The players

Broadband Daily refers to a number of players 'claiming a stake in the broadband turf'. These are cable operators, television broadcasters, telecommunications companies, satellite companies, PC makers, software developers, content producers and Internet service providers.[8] As the *Convergence Review* pointed out, convergence is leading to new industry and business models. For the uninitiated, trying to determine who is doing what and for whom can be difficult. The familiar model of the broadcaster operating the service and owning the infrastructure on the one hand, and content producers supplying programs on the other, is changing significantly. As well as unfamiliar players such as telecommunication companies moving into the entertainment business, a whole new group of players has entered the arena. These are the enabling technology companies, who provide the new platforms, and the software or 'middleware' providers who supply the interactive services and applications.

In the interactive television space there are:

- free-to-air and subscription broadcasters operating the new digital television networks;
- interactive television companies, which provide software platforms for delivering enhanced content and applications to television set-top boxes (for example, Open TV, Liberate and Microsoft TV);
- individual content creators, both major media companies and smaller independent companies; and
- content providers, who package content into channels.

An organisation can occupy dual roles — for example, the major international media conglomerates and other broadcasters which operate television networks also produce content through subsidiary film and television companies.

In the Internet space there are:

- network operators — often telecommunications companies — who operate the broadband communications networks;
- streaming media companies, who work with content owners to distribute video over the Internet;
- webcasters — the term often reserved for new players operating 'destination' websites providing audio and video content, such as AtomFilms, Ifilm and television.com in the US. However, the term includes other services such as portals which provide online streamed or downloadable video content;
- content providers, who provide packaged channels of content to broadband networks; and
- content producers.

Again, roles can be blurred, as in the case of media companies that both produce content and then package it into themed channels, such as the financial information media company Bloomberg.

Broadband Internet and interactive television are usually considered distinct spheres, reflecting the current state of market developments. However, as with most aspects of convergence, developments and the terms used to describe them sometimes blur. For example, one account described interactive television as 'interactive video and audio services delivered over Web-enabled television sets, media-rich personal computers, games platforms and the like'.[9]

Main developments in Australia

Recent developments that have signalled that Australia is on the cusp of broadband communications include:

- an increase in webcasting, and, in particular, audio and video streaming;
- the introduction of digital terrestrial television, leading to HDTV broadcasts, multichannelling and interactivity via program enhancements and datacasting;
- the emergence of broadband Internet services;
- the introduction of interactive services on pay television; and
- some early examples of mobile telephony delivering content.[10]

The advent of convergent media companies

As the Productivity Commission noted, many major media companies are evolving from being traditional media companies to having substantial new media interests. PBL has ecorp and ninemsn, Fairfax has f2, and the Seven Network has i7. The ABC has developed ABC Online, is undertaking more audio and video streaming, and in March 2001 established a broadband unit.

New businesses have been established to occupy opportunities in the unfolding environment. These include technology companies aiming to provide interactive services and applications and start-up content providers. In some cases, web design companies are diversifying by becoming involved in activities such as interactive television, an example being Massive Interactive. And new players are establishing or aiming to establish broadband networks and services.

A number of global companies have operations in Australia, often in conjunction with Australian businesses. Examples referred to by the Productivity Commission include Microsoft (PBL's partner in ninemsn), US broadcaster NBC (the Seven Network's partner in i7), and AOL, which has developed its Australian business in partnership with major European media firm Bertelsmann.[11] Chapter 2 on broadband Internet and Chapter 3 on interactive television, and some of the case studies, provide other examples.

In broad terms, the main developments are:

- print media companies moving into online operations;
- television networks developing online properties;
- telecommunication companies developing narrowband and broadband content services;
- ISPs providing narrowband and broadband content services and in some cases looking at establishing subscription television services;[12]
- fledgling broadband networks being established, such as TransACT in the ACT;
- new businesses being established to provide broadband services;
- foreign technology/new media companies setting up in Australia, often in alliance with local companies;
- production and post-production companies in the audio visual sector moving into new media activity;
- new companies being established to develop and/or provide content for emerging interactive services.

The term 'convergent media company' is now commonplace, and extends to smaller players as well as major media companies. As the events of 2000 showed, viable business models

have been elusive for many Internet players. After the initial dot com frenzy there was a significant shakeout. Australia has seen its share of dot com collapses in the entertainment area. Examples are the demise of content producers Kgrind and Rush Television, Internet radio service bigfatradio and Network Ten's youth portal, scape.com.au. In addition, some of the major media companies, such as News Limited, have reviewed their new media activities. However, the broad trends outlined in this report continue — indeed, they have gathered pace — and there are reports almost daily of new alliances and developments.

Big Brother comes to Australia

Big Brother is undoubtedly demonstrating that media convergence is no longer on the horizon but is happening now. This has significant implications for advertisers and programmers.[13]

The television and online phenomenon has, if nothing else, woken the industry up to the fact that a multimedia production can attract a mass audience.[14]

In the UK, the first series of *Big Brother* was screened on Channel 4 with digital media company Victoria Real designing the parallel website. Edited packages of material were broadcast nightly on television, while unstructured webcam coverage was streamed over the Internet 24 hours a day. This dual strategy attracted huge audiences — there were more than 300 million page impressions and 26 million live video streams delivered over the 68-day run. On television, the show had an audience of 6.9 million on one night — the banishment of 'Nasty Nick' — and an audience of 10 million plus for the finale.[15] Large audience numbers were also achieved for the television show and the website in the US, and in the Netherlands, where the program originated. For the second series, an enhanced television application, *Big Brother Interactive*, is running on Channel 4's digital channel, E4, alongside the 'traditional' version on Channel 4.

The *Big Brother* experience was repeated in Australia, with the television program being produced for Network Ten by Southern Star Endemol, and launched in late April 2001. The website was built and maintained by Sydney-based new technology company Massive Interactive. The first television instalment on 24 April 2001 averaged 1.6 million viewers across the full show and peaked at 1.9 million. More than half a million people logged on to the website within the first hour and the site reportedly registered more than 16 million hits the day after the first episode was screened.[16] The television audience did not continue at such uniformly high levels, with OzTam figures of 1.2 to 1.4 million for the weeknight episodes in May, peaking to just over 1.5 million for the Sunday night eviction episodes.[17] The website continued to attract large numbers of Australian and international visitors (though the numbers were not as high as immediately after the initial launch).

2 Broadband Internet

Streaming media has captured the fancy of every top Internet and media company, and streaming media works best over broadband. Web video-on-demand, video Internet commercials, short-form videos and all manner of online entertainment, news and advertisements are popping up more and more as broadband penetration increases.[18]

Narrowband Internet has major limitations as a medium for video content. While there has been an increase in streaming, watching video material is a frustrating experience for narrowband users. Dealing with plug-ins, waiting for the video to start and then watching jerky motions on a small pop-up screen, with sound fading in and out, tests even the most dedicated. As a result, narrowband content is primarily text and graphic-based with byte-sized bits of video content. Audio content has been more successful on narrowband, as it uses less bandwidth. Because of this, it will probably continue to dominate the webcasting scene until broadband achieves sufficient penetration.

It is with the greater availability of broadband access that hopes for the Internet as an entertainment medium lie. Broadband is able to carry rich media content, providing a full-screen, full-motion viewing experience and promising a significant shift in the medium. By providing fast Internet access, broadband will bring about major improvements in the quality of video that is delivered over the Internet, and will lead to an increasing number of websites offering rich media.

According to Chris Flintoft, Manager, Broadband Development at Telstra:

[Broadband is] a lot more than high-speed Internet. [It] means new products with interactivity and a broadcast television experience. It is not television on the Internet or fast access to web pages. It is a completely new medium. The experience is quite different to what happens now where you get a pop-up bit of video. There will be the full integration of text and video and key distinguishing features will be:

- full-screen video delivered to multiple devices — televisions, computers, mobile phones;
- television-quality video;
- interactivity; and
- personalisation.[19]

Video content can be provided via streaming and in downloadable form. Streaming provides real-time access to programming and does not require users to download entire files before viewing and/or listening to content. Most video content on the net is streamed because most users do not have fast enough access to download large multimedia files quickly. Furthermore, content owners have copyright and security concerns about downloadable video content.

According to the Nielsen/Net Ratings, November 2000 saw more than one-third (36 per cent) of the 95 million active US web surfers using streaming media, representing a 28 per cent increase over the previous year.[20] The rollout of broadband Internet delivery over the next few years is predicted to lead to widespread adoption of video streaming and other forms of webcasting. The International Webcasting Association has estimated that 250 million users will be viewing webcasts annually by 2002. Reports show that the market for streaming media content will grow from US$78 million in 2000 to US$2.5 billion by 2004.[21]

Chris Groner, author of *The Business of Media Streaming*, which draws on European and US experiences, argues that widespread rollout of video streaming will run alongside the

convergence of the television set-top box and the computer.[22] Groner predicts that the Internet will increasingly become an entertainment platform supplying multiple devices — desktop, televisions, set-top boxes or mobile handsets. Groner says that broadband will extend the range of online content beyond short-form material and will offer on-demand content, including sport, films and animation. Applications identified include:

- gaming on demand, offering both computer games online and online betting linked to streamed material;
- niche and personalised programming, serving small markets that would not be viable in a broadcast environment;
- live webcasting; and
- broadband video-on-demand.

Broadband content will be offered by broadband network operators and specialist dedicated sites. Narrowband Internet is primarily an open system, with users having free access to sites around the world. Once content goes up on a site, it is available to any user who logs on — wherever they are. While subscription charges apply at times to go further, by and large — with the exception of pornography and some specialist areas such as financial news — it has proved hard to extract payment from users. Advertising and sponsorship have thus been the main sources of revenue, and the potential of these has proved to be limited. Only the major portals have been able to attract significant revenue. In short, no established revenue models have emerged.

Broadband content will be provided to a considerable extent via network operators — Internet Service Providers, telcos and others, such as providers of direct-to-home satellite services. This is due in part to the congestion that arises through placing large amounts of video material on the general Internet. There are various ways of dealing with the congestion issue. Most involve the use of private networks where 'walled gardens' of content will be available on a subscription-type basis. The term 'walled garden' refers to web-type content collected and presented by the service operator, often in 'themed channels'.

As Moya Dodd, Director of Broadband Development for f2, puts it:

> People have to fight their way through Internet congestion to get to you — so what you want to do is have your content outplaced within those networks. Having a cable modem is like having a freeway at the end of the drive analogy.[24]

Broadband users will be able to access some media-rich sites without additional payment. Currently a number of sites can be accessed both via a broadband operator's service and also by going directly to the site. However, in the crowded Internet space, content will be most readily available through major portals and networks with service operators aggregating content from a range of sources. In addition, it is likely that stand-alone broadband sites will increasingly make premium content available on a paid basis. It is anticipated that consumers will be prepared to pay for readily available quality content, and moreover the costs involved in producing and delivering rich media content will make such payment imperative.

Tom Kennedy, Managing Director of Beyond Online, points to the significant difference between the broadband and narrowband worlds. He suggests that broadband will provide a viable revenue source for content providers who will be able to syndicate content to different network operators around the world:

> [Syndication] is the interesting thing about broadband. Now with the Internet, as with the *Beyond 2000* site, everyone can see it. It is very hard to extract revenue from that process because I have

Streaming media companies

ibeam

California-based ibeam Broadcasting is a leading distribution network for streaming content in the US and has clients such as Disney, Time Warner and Viacom. It has established a joint venture with SES/ASTRA, the operator of Europe's direct-to-home satellite system. Based in London, ibeam Europe will combine ibeam's technology with Astra's satellite system to build a network that streams media as close as possible to end-users in 20 countries. By bypassing the congestion of the Internet, this allows for higher quality streaming at a lower cost. Besides distribution of content via satellite, ibeam offers targeted streaming ad-insertion, pay-per view management and syndication tools.

Madge.web

A UK-based provider of streaming media services and applications, Madge.web operates the Madge Broadcast Network (MBN) in conjunction with Realnetworks. MBN, said to be the largest pan-European-managed network for streaming media, bypasses the congestion of the public Internet. MBN is 'tethered' to the real broadcast network in the US, which means US companies can distribute content in Europe and vice versa. The network has been used to provide daily updates from the Edinburgh Festival, as well as audio commentary from sporting events and numerous live events. The network was used by Granada Media to stream content to the website launched to support its comedy series *Cold Feet*.[23]

really given it away and I really have to bring advertisers on to support it. But broadband is like cable television, it is conditional access, it goes back to a television model. So broadband in Canada is different to broadband in Australia, and so on. I can sell my content into each telco or network. You need specific hardware, you need a cable modem and specific subscription services. It will be very much like the cable television process except it will be non-linear programming. It's the sit back/lean forward thing — you might just sit back and watch a program or you might want to interact with it — so you will bring up the browser and go in and get more information.[25]

Exactly how content producers will get paid for putting their material on broadband services is another question. Roger Lynch, CEO of Excite Chello, suggested that there will be premium content that will be purchased by Internet providers, such as sports rights or rights to popular television shows. This material will have a higher status than the more 'run of the mill', less proprietary content such as news or sports information. Broadband providers are unlikely to pay licence fees for the latter because such content is widely available and there are so many content providers vying for ISP distribution. As Lynch says: 'You might see revenue share deals but frankly they don't have anything so proprietary that you need to pay large sums of money to get it.'[26]

How broad is broadband?

The main platforms for broadband connection, cable and, more recently, digital subscriber lines (DSL) have a number of strengths and weaknesses. These are identified in the Groner report:

> The advantages of cable modems include ease of installation, low levels of consumer investment in hardware and full two-way services. Disadvantages include the high costs of upgrades to the fixed line network, the absence of national networks or centralised architectures, network congestion as traffic increases, and high up-front costs to operators for consumer equipment which can only be recouped over time.

> The advantages of DSL, which uses existing copper networks include lower upgrade costs, bandwidth scalability in accordance with the number of users, and a secure connection with the exchange. Drawbacks are lower upstream data rates than with cable modems, distance limitations, possible congestion, high initial subscription charges to consumers and high wholesale rates charged by incumbent telecom operators.[28]

Broadband Internet penetration is most advanced in the US, where it has grown considerably since early 2000, and is expected to experience continued rapid growth over the next few years. A study by Telecommunications Reports International found a combined figure for DSL and cable connection of 6.4 million at the end of 2000 — around ten per cent of US customers with high-speed Internet access.[29] Interestingly, actual connections were ahead of most forecasts.[30] Price Waterhouse projected that 17 million US households would be accessing the Internet through cable modem or DSL by 2004, out of a total of 73 million Internet homes.[31]

In Western Europe (including the UK) there were around 380,000 broadband households towards the end of 2000, with most of these in the Netherlands and Austria. More widespread rollout of ADSL is predicted to lead to significant growth over the next few years, with total European penetration predicted to reach close to 11 million in 2003.[32]

Broadband Internet connection is less advanced in the UK than in the US and some other parts of Europe. More widespread adoption is dependent on the rollout of ADSL connection, which is underway, with British Telecom (BT) broadband Internet service BTOpen World launched in 2000. This will operate as a portal initially offering ten channels. However, progress in the UK has been hampered by problems for other broadband providers in

Broadband facts and figures

- There were an estimated 3.57 million broadband homes worldwide in April 2000.
- Of these, almost 2.6 million were in the US, 500,000 in the Asia-Pacific region, 340,000 in Western Europe, 25,000 in Latin America, and 145,000 in 'other locations', including Canada, Eastern Europe, the Middle East and Africa.
- In April 2000, most connection was via cable modem services. Since that time, DSL connections in Europe and the US have gathered pace and over time are expected to equal or outstrip cable.
- The total number of broadband homes is predicted to reach 8.8 million worldwide by the end of 2001, with 840,000 of these in the Asia-Pacific region.
- The numbers are expected to increase rapidly from 2001, rising to 80 million worldwide by the end of 2004, with just over 14 million of these in the Asia-Pacific region.[27]

accessing BT's exchanges. Chris Smith, the UK Minister for Culture, Sport and Tourism, has acknowledged that, due to delays with the BT rollout, it is unlikely there will be widespread broadband access in Britain before 2005.[33]

Behind the hype

There are a number of issues to be resolved before the promise of broadband content is realised. Rolling out DSL services is very costly and technical and service problems can be encountered. For example, rollout in the US has experienced installation problems, with phone companies promoting services that are not ready, 'carriers filing for bankruptcy and irate customers getting the technical runaround'.[34] As in the UK, there have been marked delays in new providers accessing infrastructure owned by major incumbents.

In mid 2000, *International Business Asia* reported a number of factors affecting broadband takeup in Asia. The report pointed to the distance limitations of DSL technology, and the cost involved for telecommunications carriers and cable operators in upgrading systems and equipment. Other reasons cited were high prices, the lack of a single obvious reason to get the service and the fact that many web content providers in the region do not provide high-quality content.[35] This points to the 'chicken and egg' situation that applies generally. While compelling content is considered to be a major attraction, operators have limited funds to spend on content in the absence of sizeable subscriber bases. Yet, without high quality content, many consumers may not see sufficient reason to pay the considerably higher costs that broadband connection involves.

The situation has been compounded by the decline in online advertising revenues in the latter part of 2000 and early 2001 in all major markets. Moreover, network operators such as telcos are spending most available funds on technical development, leaving little for syndication fees to content providers. Peter Crowley of UK ISP Freeserve, which began rolling out a consumer broadband service in September 2000, said that takeup of broadband had been slower than hoped:

> I think the hard thing we are going to go through over the next couple of years with broadband is because there's a small audience. The really good content can't afford to be on the medium.… The portals have to make money to be able to commission content and so the consumer has got to pay for the content somehow. But in broadband today, no portal is making money — it's only an investment to attract customers. From Freeserve's point of view we are not prepared to invest big money to get the big content, because there isn't an audience yet. We're more prepared to invest in the research and looking at the business models.[36]

As well as problems with developing revenue models, content owners looking to distribute their material on broadband services face crucial security and digital rights management issues. Fear of copyright infringement has made the major rights holders reluctant to put material (other than promotional clips) online, with the studios closely watching how the issue of online music delivery unfolds. There are indications that content owners are 'on the verge of taking their biggest step yet in cyberspace', preparing to make some of 'their most precious possessions' — movies and television shows — available for streaming or downloading on the web.[37] Sony, for example, is said to be heading an alliance that will begin offering movie downloads to consumers by mid 2001. Twentieth Century Fox and Walt Disney are reportedly working together on a streaming movie service.

As UK writer John Hazelton says, 'the conventional wisdom is that streaming video is easier to secure but produces a lower-quality image, while download material is harder to protect but offers the near-VHS quality picture that consumers of movie and television material will expect'.[38]

In addition to the security concerns, content needs to be distributed online in ways that are compatible with broadcast and movie distribution licences. A number of businesses have sprung up in the US offering security and digital rights management services and solutions. The assessment of MGM's President of Home Entertainment, David Bishop, is that the systems in place are 'good enough for now', though they will require constant improvement.[39]

There is much speculation about what the 'killer' application Broadband will be. Gaming is often mentioned. Some see reality shows of the *Big Brother* type as a natural broadband proposition. Another contender is sport, proven to be the big driver of pay television. To date — as the Olympics illustrated — Internet sports rights have been difficult to obtain, because of existing arrangements with broadcasters. However from the 2004 Olympics onwards, Internet rights are to be separated from broadcast rights. And there are a number of interesting ways in which sports content can be packaged for broadband (see the snapshot below). Some broadband players take the view that even with the improved viewing experience that comes with broadband people will be reluctant to watch 90 minutes of football or a whole movie on their computer screen.

In the early stages, it is likely that much broadband content will be similar to that found on narrowband sites — short movies, animation, music videos, lifestyle material, news and information. However, this will be specially purposed for broadband, with the rich media material providing a different and more satisfying entertainment experience.

The success of short film sites and animation on the Internet, suggests there will be a place for linear content in the broadband Internet sphere. Archived episodes of television programs are also being placed on broadband services, often within themed interactive channels devoted to the program. The distinguishing feature overall is that of interactivity: the linear content just mentioned is usually placed within an interactive environment. Simply replicating what is currently available on broadcast television — that is, long-form linear programming — is not likely to work on broadband services delivered to the computer, even if it is technically possible. Rather, broadband Internet is creating its own medium, building on narrowband content but also extending it significantly.

What is happening in Australia

The ABS reported that there were 2.3 million Australian households connected to the Internet in December 2000. This represents 33 per cent of all households. The rate of home Internet connections has grown rapidly, increasing by 52 per cent between 1999 and 2001. This led the ABS to assert that 'Australia is among the leading countries in terms of proportion of population who are Internet users'. The most popular uses of the Internet at home during 2000 were email or chat rooms, general browsing and finding information related to work.[44]

According to AIMIA, Australian surveys reveal that approximately two-thirds of all Internet page links are to US sites and less than one-third to Australian sites. Of the top ten most popular sites accessed by Australians, approximately 75 per cent of page links are to US-based sites and 25 per cent to Australian sites.[45] Of the ten most visited sites recorded by Hitwise, three were Australian (ninemsn, Yahoo! — the Australian and New Zealand site — and Commonwealth Securities), and the rest were US sites including MSN, Yahoo! and Napster.[46]

According to Red Sheriff (who provide an internet audience measurement and ratings service from their site), the top three Australian sites in 2000 were ninemsn, followed by yahoo.com.au and telstra.com. Leisure, sports and entertainment sites were popular with home users, while work users mostly went to work-related information and reference sites.[47]

Sports and broadband

A UK example of a broadband sports application is provided by the joint venture between Granada Media and premier league football club, Liverpool FC. The company Liverpool FC Broadband will develop archive matches, games and betting services for online platforms.[40]

Kamera Interactive, a Swedish Internet television company, is working with broadband Internet provider chello to offer webcasts of Swedish premier league ice hockey during the 2000/01 season.

Subscribers to the RoadRunner broadband service in Columbus, Ohio, will receive local amateur sports footage as a result of a partnership with Sportscapsule, an online video service that enables users to edit and stream their personal sports video over the Internet. Subscribers can create their own content and vote for the best content, to be broadcast on Time Warner's local television channel. If successful, the service is to be rolled out in other RoadRunner markets across the US.[41]

In contrast to the narrowband situation, broadband Internet is in its very early stages, with numbers of broadband-connected households low. Precise subscriber numbers are not readily available as these involve confidential commercial information, but it would appear from media reports and industry estimates that the figure as of April 2001 was between 150,000 and 200,000.[48]

Broadband connection is currently mainly available to households in Optus and Foxtel-cabled areas, and to a lesser extent via satellite and MMDS. Currently the main operators offering broadband connection are Optus, Austar/chello, Telstra and Primus. Developments in Australia are dependent to a considerable degree upon the availability of DSL connection, given that cable access exists mainly in Sydney, Melbourne, Adelaide, Perth and Brisbane. As one commentator puts it, DSL is awaited by those who don't have cable Internet access, and is 'the great broadband hope of regional town dwellers'.[49] The factors affecting growth are cost and bandwidth availability. Current monthly plans range from $54.95 to around $90 per month, depending on the plan and the provider, and installation fees are also charged. Paul Budde estimates that 20 to 25 per cent of all Internet users will move to broadband when the price is right — around $25 to $50 per month.[50]

US-based Strategis Group predicts that the number of broadband customers in Australia will grow to 600,000 by 2003, with 60 per cent of these using cable modem services and the rest using DSL. Telstra had previously forecast a total of one million broadband customers by 2005, expecting to have 625,000 of these generating a net revenue of $300 million.[51] Telstra has reportedly revised these figures down to a total uptake of 2.5 million.[52]

Broadband is being promoted as providing quicker access, always-on services, and access to content-rich sites. For many consumers, it appears that the primary attraction is the high-speed Internet access. However, given the way Australian consumers have embraced narrowband content, one would expect access to media-rich content to be an attraction factor as well. Commentators agree that people with faster connections access more broadband content. An Ernst and Young study found that Australian households with broadband access consume 20 per cent more entertainment time than households without high-speed access.[53]

Towards the end of 2000, a broadband alliance — the Australian Broadband Media and Advertising Alliance (BMAA) — was formed by Swedish broadband company the Fantastic Corporation, Telstra, BMC Media and Beyond Online. The aim of this initiative is to educate potential broadband advertisers, content providers and technology developers on broadband opportunities. A spokesperson for Fantastic stressed the need to develop a superior standard of advertising and marketing to entice and satisfy subscribers who have paid for a particular content genre:

> Our research has shown that people aren't attracted to the noisy advertising space on the Internet and are willing to adopt a subscription model because they don't want the clutter of the Internet.[54]

The founders of the group said they would be seeking membership among online marketing and advertising content developers, publishers, advertising agencies and online advertising sales groups working in the broadband environment.

The major operators provide a suite of content services along with high-speed Internet access and see the content on their broadband portals as a way of attracting and keeping customers.

UK examples of broadband content

BT Openworld
BT launched its broadband Internet service Openworld with ten channels — news, sports, jobs, actions, games, shopping, travel, money, entertainment and music, costing the user £40 a month.

BT will be an aggregator and licensor, not a producer. John Raczka, Senior Vice President, Consumer Content, said half of Openworld would be 'a rich palate of differently branded sites and the other half would be a shopping mall approach'. Around the time of the launch, BT had entered into over 100 content deals with entities such as CNN, Reuters, AtomFilms, 365 Corporation and the Sundance Channel.[42]

Ichoose television
British webcaster Ichoose television was launched in February 2000, offering eight genres of programming including music, movies, sport, fashion, lifestyle, travel, games and outlook. Ichoose television has deals with a number of content providers, including EMI and its affiliated labels. They will showcase and promote their artists' music videos on the website and viewers will be able to choose from the library of videos on demand. Ichoose television has a one-year deal with National Geographic for an initial package of 17 nature programs, and has commissioned UK independent producer Rapido Television to produce three short Internet-exclusive programs per week in a one-year output deal. These include Carnal Confessions, Planet Peep and a series of monthly themed specials. Other content includes archive news programming from British Movietone news, streamed content of unsigned artists from Channelfly.com and live streaming every Friday and Saturday night from UK nightclub Ministry of Sound.[43]

Optus@home

Optus@home is a high-speed broadband Internet service operated by Excite@home Australia, a joint venture between Cable and Wireless Optus and the US-based Excite@home. The Optus@home partnership gives Excite exclusive rights to the Optus broadband cable. The joint venture also operates the dial-up portal excite.com.au, one of the most-visited Australian sites.[55] The broadband service is available in Optus-cabled areas in Sydney, Melbourne and Brisbane. It is available on a stand-alone basis, and is also bundled with Optus pay television and/or telephony offerings. The cost of the broadband service varies according to the plan. Under the Lightning Fast Plan, the minimum cost is $1,098 for a 12-month contract, comprising an installation fee of $199 and a flat monthly subscription fee of $74.95. The Optus@home promotional material emphasises the advantages of its access to rich media content and speed:

> On Optus@home you can watch video, news, action-packed movie trailers, and sports highlights — all without the wait. And that's just the beginning. Optus@home is constantly developing new and exciting broadband content for our high-speed subscribers.

As with narrowband sites, subscribing to the service gives automatic access to the suite of content available via the homepage. This offers a number of channels — news, sports, finance, 'pop art' (entertainment), games, shopping and lifestyle. Sigrid Kirk, Manager, Broadband Portal, described the approach to content in the following way:

> We are content agnostic. We want to bring as much breadth as possible to content. That means working with the leading content players in news, finance and entertainment and taking the cream of their content.[56]

The main foreign content providers for Optus@home are Bloomberg (finance), CNN (news), Astrology.net and Brilliant Digital Entertainment (entertainment), as part of international content deals with Excite@home in the US. In three cases, local sites are part of major global brands. These are TD Waterhouse (stock and trading data), ZDNET (technology news) and Sportal.com.au.[57] Australian content providers include:

- ninemsn, which provides news, sports, and a range of material from Nine Network programs;[58]
- f2 (Fairfax's online arm), which provides the information services Domain (real estate), Drive (automobiles) and My Career (employment);
- UrbanCinefile, which provides movie-related content; and
- Whoopi!, a Melbourne-based company, which provides music and entertainment content (see Chapter 5).

Other local content providers are travel.com.au, ITV World (technology video), AAP (news) and My Money (personal finance).

Sigrid Kirk and Director of Content and Programming, Amy Smith, made several points about Optus@home content acquisition.

- Content is primarily sourced from established media players due to the risks involved in working with new players who do not have established business models.
- Until it reaches critical mass, the market will not sustain new players producing content specifically for broadband. Content providers need to have another business model and work cross-platform — whether that is television, newspapers or magazines: 'What is

working best at the moment is working with companies who have established corporate businesses because we know they will be around.'[59]

- The strong preference is to source content from established providers who offer material pre-packaged, with such matters as rights issues, licences and content classification already dealt with, rather than dealing with numerous individual content producers.
- At this stage they are looking for broad appeal content. A lot of what is pitched to them is very niche and therefore not considered suitable.
- In terms of possible future developments, there is interest in television content repurposed specifically for the web, local short-form entertainment content, and festivals and events like Mardi Gras, Tropfest and the ARIA awards. However, acquisition of such programming is currently hindered by the lack of a content provider.

The pop art channel provides entertainment material of various kinds. The movie section includes trailers and reviews from Urban Cinefile and a movie guide sourced from Horan Wall and Walker. Material relating to the Optus pay television service, such as a television guide and clips, has been provided in the past and there are plans for an upgraded television listings space, to include information on the free-to-air commercial services. There is also a section called *Showcase* which has short animation, multimedia content, video clips and short films provided by Brilliant Digital Entertainment, a US company with production facilities in Australia (see Chapter 5).

The most popular area of the service is news, closely followed by games, with pop art not far behind. These three content areas are well ahead of all the others. The games section has a multiplayer gaming area which is the only part of the site partly open to the broader public because it needs critical mass. The gaming area is receiving roughly 80,000 sessions a week — a session being when one person plays. Some of the sessions can last for several hours. Optus@home provides the gaming servers, but not the games themselves; players must buy or download these. Kirk says: 'It is hard to get intelligence on what our competitors are doing, but we believe we are the No. 1 multiplayer service in Australia.'[60]

Cross-media content — *Space*

Space was a one-hour weekly art and entertainment magazine show broadcast on the Ovation channel on Optus television. It was composed of short segments which were digitised every week for Excite@home. Every clip went on the broadband site so that people could view the show again in part or in full. Fact sheets were also produced to go on the narrowband site and some material went to WAP. Sigrid Kirk had this to say about *Space*:

> We believe it is the first show that has gone to television, broadband and narrowband and WAP. We will see a lot more of this — one of the buzz terms in the content industry is producing for multiplatform use. You may have to enhance, change the content a bit, but basically you are getting four bites of the same cherry.[61]

Kirk and Smith have been finding it is mainly the short, clip-type material that works — there is not much interest in longer formats. They felt this would continue to be the case in the medium term: 'When you get interactive television with web interface as part of the television screen, is when there will be more of a merger [between web-type content and long-form broadcasting material].'[62] They emphasised the value of rich media content:

> Part of our strategy is to focus on rich broadband content though we also have some functional material such as the directory. It is also part of the strategy to optimise the content and experience for broadband users to make it very high quality. You have the ability to deliver big chunky files — let's give it to them.[63]

Local content

The promotional material for the service reveals that about 90 per cent of the material will cater to the local audience. In explanation, Smith pointed to the fact that much of the content is sourced from local media companies such as those mentioned. The music channel has both a local and an international flavour while the general entertainment material has a local focus covering events in the music and movie scenes in Australia. As indicated, there are a number of areas of local material that Excite@home would like to develop in the future. These include webcasting of special events, commissioning of short-form material created for the web, and repurposing of local programs made for Optus television and other broadcasters. 'With all these,' Smith said, 'it is a question of finding the right content partners and business models.'[64]

All the material on *Showcase* (the section with short films and animation) was foreign as at the end of 2000. Smith advised that this was due to the lack of a content provider for Australian material. A press interview of February 2001, quotes Smith saying they were looking to create an area for Australian films and talking to 'folks who want to set up a brokerage'[65]

Excite@home is contacted on a fairly regular basis (20 to 40 calls a week) by content providers seeking distribution deals. Material pitched includes 'everything from cooking shows to agricultural material to weather, to content about software. It's very niche and [it is] looking for broader appeal content at this stage.'[66] Another concern is that the material is often too text-based and lacks an interactive element.

Smith and Kirk stressed interactivity as a key element of broadband content, citing an interactive music program to illustrate what they would like to do:

> A music program with clips, a presenter, entertainment gossip and hopefully interactivity. That is something we would like to do more of — it has the potential to show the difference between what we offer and television.[67]

The commercial arrangements vary depending on the content and the content provider. Revenue share tends to take place when the provider wants to receive branding. The payment of licensing fees tends to happen with 'light label' or third-party labelling, where the provider doesn't necessarily want branding and their business is purely licensing content. Some content providers pay for space because the focus of their business models is to attract users to their sites. This last arrangement represents a small proportion on the broadband site, but it is much higher on the narrowband site. The deal with ninemsn includes the swapping of services such as search, directory and free email. 'They get distribution on the broadband network while we get access to services that we didn't otherwise have.'[68] Smith advised that, in terms of local content, they would be open to revenue sharing or fees. 'We realise it has got to work for both parties.'[69]

chello broadband

Austar's broadband Internet service was initially provided by chello broadband Australia, a subsidiary of chello broadband NV, which operates in Europe, Australia, New Zealand and Chile. chello broadband NV is a subsidiary of United Pan-Europe Communications NV (UPC), itself connected to Austar's foreign parent company, United Global Com (UGC).

chello broadband Australia (www.chello.com.au) was launched in March 2000 when the company advised that the full rollout to Austar service areas in regional Australia would be completed by the end of 2000.

The service is delivered using a MMDS (wireless) and satellite platform. As it is not a cable

service, high-speed delivery is one-way only, with the return provided at modem speed via a telephone line. The cost to the consumer is between $95 and $199 for installation and there is a fixed monthly fee of $65. chello has been experimenting with a two-way system through satellite and wireless with a view to this being established in 2001. According to Austar, the total number of Internet subscribers for both the narrowband and broadband services was 80,000 as of February 2001.[70] Information on the number of broadband subscribers alone was not available, but chello Content Director Bernie Sheehan advised that takeup had been slower than hoped.[71]

In July 2000, it was announced that negotiations were underway between chello's parent company, United Pan-Europe Communications (UPC), and US-based Excite@home, with a view to merging their broadband Internet operations to create a joint venture to be known as Excite chello. This merger would have had major implications for the Australian market with the merger of chello and Optus@home expected to follow. The merger did not proceed, there was an announcement in December 2000 that final agreement could not be reached due to a number of 'difficult business issues'.[72]

In February 2001, in a move described as 'the latest victim of the trend in dot com downsizing', a restructure of chello's arrangements with Austar was undertaken.[73] It was announced that while the chello broadband portal and high-speed Internet service would continue to be offered to retail customers, it would cease to be a stand-alone business in Australia, with Austar taking over management of the service including network configuration, sales and marketing. The chello brand would continue but Austar was to be responsible for content licensing from international and local partners.

The chello broadband service has a suite of content channels providing news and current affairs, weather, sport, finance, games and some entertainment content. As with the Optus broadband service, content is mostly sourced on a packaged basis from established players. Sources of content include Reuters for international news, AAP for finance and Australian news, the ABC for regional and rural news, ZD Net for technology news and Sportal.com for sports news content.

Film previews are sourced from local film distributors, cartoons and games from Nickelodeon, short films from AtomFilms, and weather from the Weather Company. The commercial arrangements are a mixture of revenue shares and licensing fees. Arrangements with AtomFilms are handled through chello's head office in London, which negotiates a licence fee for all chello territories.

Bernie Sheehan of chello, discussed some of the difficulties chello has experienced in accessing rich media content. With the demand for broadband growing, AAP is producing finance videos encoded at different speeds for narrowband and broadband. Video news content is not yet produced by AAP since there is considered to be an insufficient demand. News material could be produced especially for chello but the cost of doing so was considered prohibitive. Sheehan noted that news video material is more expensive to produce than finance content, as it involves shooting on location, whereas finance videos are shot in the studio with a 'talking head'. Sheehan mentioned the situation in New Zealand, where chello is partnering with TVNZ and using their video footage in areas such as news, sport and finance.

A further example of content access difficulty was in the music and entertainment area, where complicated rights issues can arise. Like Optus@home, chello sees the value of having music and entertainment content packaged by a content provider.

chello had been receiving content from K-Grind but, since the demise of that company, there

have been no Australian music videos on the site. Sheehan again contrasted the situation in New Zealand, where chello is in partnership with a local company, Upload Television, which films local music events and encodes and packages the material for chello for broadband distribution: 'We [chello New Zealand] get a lot of fantastic New Zealand music clips. We get five different videos from them every week — mostly New Zealand artists and all top artists.'[74]

chello has been contacted by Australian production companies about carrying material from their archives. Sheehan said this is problematic because the material is out-of-date or needs a lot of repurposing, and chello does not have the resources to do this. It is hoped that spinoffs of Australian television programs will be possible in the future, but this is 'difficult to support at the moment'[75]. chello may also carry content based on programs on Austar's pay television service in the future. 'When there are platforms that work across all media,' Sheehan said, 'we will be more connected. There will be WAP, interactive television, broadband and narrowband Internet.'[76]

Other areas of interest are a country music channel, content relating to four-wheel drive users and regional television programming such as highlights from the Gold Coast. But these represent something of a wish list. Sheehan emphasised that the broadband service is very much in start-up phase; they are not yet in a position to commission original material and will not have significant budgets for local content in the foreseeable future. In terms of future possibilities for local content, chello was talking to ITV World (see Chapter 5):

> We still don't know what length of programs people are prepared to watch. At the moment, our video material runs from two to 20 minutes — we don't know if people are prepared to watch longer than that. Also we don't know what the demand is for streaming television over the Internet. Would people be interested in watching that or are they more interested in highlights? Again, we are talking to TVNZ about that.[77]

Telstra Big Pond Broadband

Telstra's broadband Internet service is delivered in three ways — over the cable pay television network, by satellite and by ADSL. Chris Flintoft, Broadband Development Manager, advised that there were in total around 80,000 customers in February 2000. Subscriber numbers had grown quite rapidly in the last part of 2000 and were expected to reach 100,000 in the first part of 2001.[78]

Delays in the rollout of Telstra's ADSL service have been the subject of much media comment. Telstra's two-year plan, which started in August 2000, involves extending coverage to 90 per cent of the country and is on track according to Flintoft. Under a 12-month contract, the minimum a customer will pay for Big Pond ADSL is $1,135 (comprising a $259 installation fee and monthly payments of $73). The minimum residential cable contract costs $918.40 (comprising an installation fee of $259 and monthly payments of $54.95).[79]

Telstra had not heavily promoted its Broadband consumer offering, reportedly keen to avoid the US experience where the rollout of DSL marked by an inability to deliver advertised services. However, a more extensive marketing campaign was launched in early 2001.

As of March 2001, Telstra was not providing a separate broadband content suite. However, this was to be established through 2001, starting in May with a program guide to Telstra broadband and narrowband content. Meanwhile, the content available on the narrowband site is available and works better for broadband customers, particularly when streaming is involved.

The broadband content will focus on sport, entertainment and news, with interactive elements such as chat, instant messaging and polling. There will be content specifically

developed for broadband, repurposed broadcast material and Flintoft predicted that 'games will be a big driver'[80].

Like Optus and chello broadband, Telstra is an aggregator, not a producer, and wants content already packaged. Flintoft anticipated dealing with a number of main providers who will manage material from other smaller players. Arrangements with content providers will be mix of payment of licence fees and revenue splits.

In early July 2001, Telstra announced an agreement with Beyond Online for the provision of three channels of broadband content — sports and leisure, entertainment, and science and technology — to be available to broadband customers from October. Beyond Online will develop, build and manage the three channels, integrating Telstra and Beyond content and also sourcing additional content. Tom Kennedy, Managing Director of Beyond Online, advised that the channels will be predominantly Australian-focused, though 'best of breed' foreign content will also be included on the entertainment channel.[81] The science and technology channel is expected to be primarily drawn from Beyond's large catalogue of material in these genres. Discussions are taking place with potential Australian content providers — both newer independents and more established companies — who have a body of material suitable for the broadband medium. The strategy is to build the channels locally and subsequently syndicate them to overseas markets where broadband is more advanced.

Telstra has also been one of the pioneers of live webcasting in Australia. In conjunction with Brainwaave, for the last two years it has webcast the Sydney Gay and Lesbian Mardi Gras. Flintoft said that this provides a good example of the potential of the medium — 'with content like Mardi Gras you can provide the main event with multiple camera angles, activities around the event, related interactive activities and a lot of archive material'.[82]

The narrowband Telstra site has a netcast centre which includes the basement.com and Wild FM, and broadcasts special events such as The Big Day Out and Tropfest. To quote Flintoft:

> For Telstra the business of broadband is in syndicating content as well as providing it to its direct customers. Telstra syndicates some content now — for example, the Mardi Gras webcast to clients in the US and Asia. This will increase in the future and the broadband unit is in the process of setting up a digital rights management system.[83]

Overview of broadband Internet in Australia

Content owners and developers in Australia are starting to produce or repurpose material with broadband in mind. These include media companies such as the ABC, Fairfax via f2, Horan Wall and Walker and AAP; film and television production companies such as Beyond and Becker Entertainment; new media companies such as Whoopi! and itv-world; and specialist sites such as urbancinefile, The Basement.com, and mysteryclock.com. A number of these are discussed in Chapter 5.

Broadband Internet is in its infancy in Australia. It appears that, at least in the early period, the content parameters of the major broadband portals will be similar to those of their narrowband counterparts in that they will provide a mix of information services and entertainment content. However, the content will be presented differently, with video material across the full range of content areas — including news, lifestyle and entertainment — providing a more television-like experience with interactivity. There will also be an increase in webcasting of live events.

Content is primarily sourced from established Australian and foreign content providers. Often these providers syndicate their content to a number of outlets and are in a better position than

The Basement.com.au

Telstra has been involved in the establishment of The Basement.com.au, regarded as one of the most successful Internet entertainment businesses. Telstra provided the technology to establish the site and in return has exclusive access to content (though one can also go straight to the site itself and view it without broadband). Broadband connection makes visiting the site more satisfying but it is also accessible to narrowband users.

The Basement.com.au describes itself as 'an Internet-only station with live DJs playing music, music videos and live artist performances 24 hours a day'. The material is in audio and video form, so the user can see the announcers, view clips and access interviews with artists. Live concerts are also streamed from the Basement jazz club with the studios built next door to the club in Sydney. The features section includes archived past performances. The basement has spent $3 million setting up, half of it supplied by Telstra. It is expected to break even by mid 2002. The site receives about 3,500 page impressions a day. As of February 2001, the highest number of listeners/viewers for a concert streamed live was 1,700 for the Whitlams.

When everyone has broadband and when the content can be taken out of the computer and placed onto the television screen, CEO Hamish Cameron envisages that people will watch a concert live from the Basement in their lounge room, complete with 30-second advertisements, just like television.[84]

individual content developers and startups to accept revenue deals or relatively low licence deals. Where the Australian broadband operator is foreign-owned or related, as with Excite@home and chello, the content tends to be part of an overall arrangement with the parent company. One can assume that, in a global deal, Australian rights are a small part of the total licence fee.

As is the case with narrowband portals, there is a local focus for specific types of content, such as news, information services, sports and entertainment of the 'what's-on' type. Some of this is provided via local channels operated by global online companies. For other genres, such as purpose-built entertainment content and games, there appears to be a ready supply of pre-packaged foreign material, but much smaller amounts of Australian-produced material. Indeed, out of the three services canvassed, it seems that only Telstra Big Pond is sourcing certain entertainment material from local providers.

The Telstra/Beyond Online agreement for the provision of three channels of content including an entertainment channel is a significant development, and should provide a valuable model for other Australian-based broadband services and content providers.

There are limited funds available for content, and particularly for commissioning of original content. Consequently, content arrangements often involve swaps between established players, as with ninemsn and Optus@home. The primary issue is how the content is going to be funded and whether users will pay extra for premium content. As Amy Smith of Excite@home puts it: 'It's a very expensive proposition to make the footage and digitise it. The ongoing question is: would a user pay 20 cents to watch a music video, would they pay $5 to watch a new-release movie on broadband?'.[85]

Industry sources predict that broadband operators will move to charging users extra (in addition to basic connection charges) in the future, particularly for certain premium content. There will be demand for repurposed local television programming and there will be issues over payments for these new rights. Bernie Sheehan of chello talked of the need for broadband and interactive television rights to be included when pay television contracts are negotiated, as, 'it is much harder to go back later and try and get the rights'. Australian producers are now receiving requests for broadband rights to be included when television deals are negotiated.

In Australia, as elsewhere, the issue of what content will drive consumer takeup of broadband is still unclear. Web content consultant Gerry Gouy speculated that sport and pornography would be lucrative, but pointed out that these are problematic because sports rights are tied up in mainstream media, and the portals may not see pornography as fitting the public image they wish to present.[86]

It would seem from overseas experience, which is supported by the Optus@Home experience here, that interactive games will be a major attraction. Interactive games often involve players paying a small fee to play and compete for prizes. Some applications, such as interactive sports content, also involve wagering. As discussed in Chapter 3, these types of services are excluded from the recently legislated prohibition on interactive gambling.

f2 — a would-be broadband operator

f2, the online division of media company John Fairfax Holdings, operates a narrowband portal which hosts a network of more than 30 sites. The main areas these cover are shopping (including auctions, city guides and directories), news (smh.com.au and theage.com.au), business, investing, personal finance, employment (my career.com.au), property

(domain.com.au), motoring (drive.com.au), technology, travel and sport. f2 has a broadband unit, the role of which is to establish and operate production systems to enable f2 to produce rich media content. Currently the broadband unit produces video content to enhance various of the f2 sites and also produces special features from time to time.

f2 is aiming to be both a producer and distributor of new media content and had hoped to become a datacaster, using the broadcasting spectrum. Along with others, Fairfax ultimately decided not to bid for a datacasting licence on the belief that the regulatory restrictions made it financially unviable. Following the collapse of the datacasting auction in April 2001, Fairfax was pressing for a review of the datacasting rules. In predicting where f2 would go with its desire to move further into broadband content distribution, Moya Dodd, Broadband Director, commented:

> Well there are alternatives — broadband Internet platforms, corporate networks to desktop-satellite, microwave, DSL. But none of these has the ubiquitous reach of television. A lot will depend on the approach the network operators take to their own offerings — will it be walled gardens? Who are they going to let into the garden and on what terms?[87]

These comments raise a complex regulatory issue that will become increasingly relevant in Australia as it has elsewhere — access for third-party content providers to broadband infrastructure owned by established operators who also provide content services.

Australian Competition and Consumer Commission Chairman Professor Alan Fels has argued that potential suppliers of retail programming need to have access on non-discriminatory terms to networks, 'if competition is to develop in digital service provision and diverse service choice is to be made available to consumers'.[88] Professor Fels has warned that further regulatory intervention might be required if the networks are not sufficiently opened up through market forces.

3   Interactive Television (ITV)

The range of services expected to be available with the help of digital set-top boxes in the home and content servers in the high end is extensive. And VOD, email, television-based commerce, Internet access, PVR functionality, programming-related content and electronic couponing are just the beginning.

Viewers will soon have the means to drill deeper into television content for statistics, information on cast members, or even the means to buy products related to the programming. In addition, computer features like email, personal calendars and chat rooms will also find their way to the television screen.[89]

High hopes are held for interactive television (ITV) with, for example, US research group Forrester predicting in early 2000 — perhaps somewhat optimistically — that by the year 2004 it will generate US$11 billion in advertising and $7 billion in t-commerce. These hopes are founded on new revenue streams derived from subscription fees for interactive services, higher advertising revenues from tightly-targeted interactive advertising and impulse e-commerce generated by television.[90]

Figures from Datamonitors show there were 16.7 million interactive digital television households in Europe and the US in 1999; predictions are that this will grow to almost 61 million by 2003. Television Business International predicts that, despite the failure of early trials, 'interactive television is now set to experience growth comparable to the explosion in Internet usage over the last five years'.[91]

Interactive television provides enhanced television programming, video-on-demand, t-commerce and Internet-like services, including 'walled gardens' of web content. At present, the main developments in terms of content are interactive gaming, game shows, interactive sports content and news, with enhanced programming also applied to some other genres such as documentary. Program enhancements are of two types — those which provide features such as additional information and camera angles, and those which, in addition, allow the viewer to interact with the program in the sense of sending information back.

In the US and Europe, interactive television is provided mainly by digital and cable network operators, either as part of the suite of digital services customers subscribe to, or as add-ons, with consumers paying additional subscription fees for the interactive service. In some cases, such as games, users pay 'micro fees' to go further into the interactive service initially accessed for no additional charge.

Television Business International has emphasised the significant benefits of interactive television for the various players involved. For cable operators, it has significant revenue potential and the chance to gain a competitive advantage over telecommunication networks providing broadband services. Interactive television also offers a way of maximising infrastructure investment in the digital network. For broadcasters and advertisers, it creates a 'sticky viewer' and a one-to-one relationship with consumers. It also provides a way for broadcasters to retain customers, given the emergence of the web. For program creators, according to *Television Business International*, it allows feedback from the viewer, providing the opportunity to better understand audiences.[92]

In terms of the technology, the starting point is the digital set-top boxes which are deployed to add new tiers of programming. Then the operator needs to choose a platform and services. The platform acts as an operating system on the set-top, with the main providers being Liberate, Microsoft, Open TV and Power television. Open TV software is in over 9.3 million set-

top boxes worldwide, and claims to be the leading interactive television platform.

Several types of services can be distinguished:

- an overlay on the broadcast-channel content;
- a virtual channel where much of the e-commerce activities will take place, along with access to email and other services; and
- access to Internet content through television. While unrestricted web access can technically be provided, the shift is to providing 'walled gardens' of web-type content selected by the broadcaster and specially purposed for television viewing.

Interactive television was launched earlier in Europe than in the US, with France's Canal Plus operating interactive platforms since the mid-1990s in conjunction with Open TV. The leadership position of Europe is related to the earlier rollout in Europe of digital television and also to the fact that the European market had been served for some time with Teletext, a television information service. According to Open TV CEO Jan Steenkamp, Teletext created a generation of Europeans used to extracting information through their television services.[93] France, Italy, Spain and, more recently, the UK account for the majority of European interactive users.

Although the US started later, there has been a fairly rapid growth, with the result that, by 1999, the US accounted for 8.9 million of the total 16.7 million interactive households in Europe and the US.[94]

Europe

In the UK, the takeup of digital television — and thus the availability of interactive television — has been spurred on by cable companies subsidising set-top boxes or providing them free. BSkyB built a mass market of subscribers by giving them free set-top boxes and now 3.4 million BSkyB subscribers receive Open TV interactive content via satellite.

Sky Digital launched its Sports Active service on its digital sports channel Sky Sports Extra in August 1999. This offered a mixture of extra camera angles, highlights, an instant replay facility and a statistics service. Sky Sports offers 'true interactivity', allowing viewers to change camera angles, or follow an individual player around the field. In June 2000, Sky began transmitting Sky News Active, which features both text and multiple video loops, supplementing the main Sky News program.

Sky Movies Active was planning to offer trailers of forthcoming movies on all three Sky movie channels, plus the Sky Box Office pay-per-view service. It will also offer trailers of other films on release, cinema listings, competitions and behind-the-scenes information about films on Sky channels. The service will be offered free to Sky Digital subscribers, with Sky taking a cut of cinema ticket sales booked through Sky Movies Active.[95]

The BBC has been experimenting with interactivity, with its first full-scale service being the Wimbledon tennis championships. The Wimbledon service was available to Ondigital (the British digital terrestrial service) viewers. When these viewers switched to a BBC channel carrying tennis, a banner would appear at the bottom of the screen telling them about the interactive offering which included news, statistics and a quiz.[96]

BBC Worldwide has struck an agreement with Two Way TV to create a number of new interactive games based on BBC shows. *A Question of Sport, Mastermind, Antiques Roadshow, Ask the Family* and *Film 2000* will appear on the Two Way TV channel as interactive games

that viewers can play at home.[97]

In France, Canal Plus has developed over 40 interactive services and applications, including electronic program guides, interactive news services, teleshopping, interactive advertising, on-demand weather forecasts and something called Interactive Notebook, which allows viewers to recall excerpts from a show they might have missed. The interactive services are available to anyone subscribing to the basic package of channels on Canalsatellite. The most popular services are the Electronic Program Guide, the weather information service, the I-sport news service and interactive games channels. Canalsatellite expected to generate 'real revenue' from interactive services in 2001, from transactions, service hosting and database rentals.[98]

United States

Interactive television has been adopted by a number of cable operators in the US and in early 2000 was reportedly beginning to reach the critical mass needed for significant deployment.[99] Datamonitors reported around nine million interactive television households in 1999 and predicted growth would reach 31 million by 2003.[100]

WebTV was the earliest application of interactive television in the US. Founded in 1995, WebTV's initial aim was to bring the Internet to television, via a set-top box and online service — an experiment which, according to most commentators, was not particularly successful. The more recent WebTV Plus service offers viewers watching programs such as NBC's *Nightly News* or Discovery's *In Search of Liberty Bell*, the chance to click on an 'I' icon to visit a related website offering interactive polls, games and information, while WebPIP (picture-in-picture) technology enables the interactive web content to be combined on screen with the television show.[101]

The initial attraction for cable operators in the US was the ability to offer video-on-demand (VOD) with operators then moving to add other services.

What works

Those involved in interactive television see services and applications such as email, shopping and banking as big attractions for viewers — particularly for those who don't have Internet access via computer. In terms of programming, the genres that appear to lend themselves readily to interactivity are news, sports, game shows and general entertainment programming. More recently, interactivity has been applied to documentary, with the Discovery and National Geographic networks both undertaking initiatives. It is often stressed that interactive television is not about bringing the Internet to television; it is about enhancing television and in effect creating a new hybrid medium:

An article in Broadcasting and Cable:

> I think interactive television will fall somewhere in the middle of the PC and television experience. You're not going to lean back quite as much as you did, but I don't think you're going to lean forward as you do with your PC. It's also going to be entertainment-based, and you're still going to want to watch your favourite shows and sporting events and content.[104]

Open TV CEO Jan Steenkamp says:

> What we've identified is that the television viewer is not a computer Internet viewer at the time that he's watching television. He's there for the entertainment, he's there for relaxation, he's there for enjoyment.[105]

Games on television

> It is only recently that the television industry has woken up to the potential of games. Now it seems no digital platform is complete without a games channel.[106]

According to speakers at the Open Roads conference in Sydney in February 2001, television games described as 'quick, simple and highly addictive' attract average television watchers in contrast to the players of the more complex console and PC games.

Games companies Two Way TV and Static have developed their games channels primarily for digital television platforms rather than the web. In the UK, Two Way TV is carried on all the cable networks, reaching about seven million homes with digital set-top boxes. Games have been 'phenomenally' successful for NTL, Britain's largest cable operator, according to Jeremy Thorp, Group Managing Director of Interactive Services. NTL's interactive games channel went live on all its networks in September 2000, offering 30 games at launch.[107]

While the games channels provide revenue from subscription charges and pay-per-view, much of the gaming revenue in the UK comes from players who receive a game service for free and then pay to upgrade their service in a bid to gain the highest score in their county — or indeed in the world. They are rewarded by having their names displayed on a leader board and also with prizes offered by the provider.

According to Tom Holster, Director of game developer Deepend, such developers concede that traditional broadcasts will still take up the lion's share of screen time. They have accordingly developed a way to generate more transaction-based revenue while traditional broadcasts are being shown. An example is Play Along Football. This gives viewers the chance to interact with the English Premier League by forecasting details of games — for example, when goals will be scored, by what players, and what the score will be at half-time and full-time. The service costs £2 each time it is played and offers leader board uploads and end-of-season prizes.[108]

Issues

> For content producers and owners, all this activity means that a whole range of interactive elements can be added to their networks or individual programs.[111]

A major hurdle is the existence of different competing software platforms and technologies. As things stand, producers have to adopt their content to work on each of the competing platforms. The situation is improving due to efforts to develop open standards. According to OpenTV CEO Jan Steenkamp, it is currently difficult to create a set-top box with a neutral standard, as the cost of the box would be prohibitive, but 'as we see the set-top boxes growing we'll see more standards being incorporated'.[112]

It is also possible to enhance the same content with different middleware packages, as Bloomberg — which distributes its content to multiple platforms around the world — has done. However, this option is not available for smaller content providers because of the costs involved.

Liberate Content Director Terry Powell argued that the television industry has coped with adapting content for different broadcast standards for some time:

> It doesn't stop people making television programs. We will end up with some standard ways of doing things but there remain differences between platforms. But they are actually issues of converting your content, not reauthoring it. People are already doing that. Clearly for them it's a cost but it's no different to what's happened on television in the past or the Internet.[113]

As always, revenue is a major issue. The growth of interactive television and the emergence of

Gaming channels

Two Way TV
The model developed by Two Way TV is suitable for both broadband Internet and television uses and is adaptable to all delivery software including Open TV, Webtelevision and Liberate. The games Two Way TV developed allowed soccer fans watching last year's World Cup series to virtually manage their own 'dream team' of favourite players, with the team's value fluctuating according to the actual match performance of those players. Players spend on average 80 minutes playing four to five games a day. They pay £4.95 per month, plus 50 pence per game if they want to win prizes.[109]

Static/Playjam
A free-to-air, advertisement-funded lifestyle games channel Playjam developed by UK digital television and design company Static, launched on Sky Digital and France's Canal Satellite towards the end of 2000. Static is also supplying games to the Britain's ONDigital and NTL. Static recently struck a deal with Turner to create branded games for Cartoon Network, taking characters from its animation library, and the company is talking to production companies in the UK about joint ventures to create interactive content.[110]

new revenue streams has been slow. A big issue will be how revenues are split between the various players, with reports that broadcasters, for example, are dissatisfied with their share compared with that of the enabling technology companies. Forrester Research Analyst Josh Bernoff has predicted that 'there will be three more years of wrangling over interactive standards and revenues'.[114]

Many questions concern how much interactivity people really want via their television set. For advertisers, the big plus of t-commerce (e-commerce on the television screen) is that it offers the opportunity to really know the target audience and market to them directly, through capturing data about individuals' viewing choices and media-watching habits. However, it remains to be seen whether viewers accept the increasing commercialisation of television programming and, in particular, how they will react to the intrusion that might accompany new advertising strategies. Do people really want to shop while watching television? Will they respond to invitations to purchase Ally's earrings from Tiffany's or her sweater from The Gap as was proposed by a demonstration video shown at the Open Roads conference in Sydney in February 2001? And to what extent do viewers want to interact with programming? Advocates point to surveys showing the numbers of people who now have their television and computer in the same room and move between the two. For example, a study done in January 2000 for Showtime Networks showed that 25 million US households simultaneously use online services and watch television — an increase of 36 per cent from January 1999.[115]

Notwithstanding the many issues involved, it does seem interactive television is here to stay, with most analysts predicting growth — though at varying degrees in different markets.

Australian developments

Discussion of interactive television is now a common feature of industry conferences in Australia. Speakers at the Open TV Open Roads Conference for interactive developers predicted that interactive entertainment could be a leading source of revenue for digital television operators, particularly pay television operators. A number of speakers predicted that games and game shows would be the driving force in Australia and would lead into the world of t-commerce:

> They'll be able to provide strong revenue sources via subscription, pay per view, or submission-based systems, as they already are in other parts of the world.[116]

The main concrete developments are the introduction of some interactive services by pay television operator Austar, and the ICE Interactive trial in Orange.

Austar

Austar launched its Open TV service in 1999, with the first phase of interactivity providing an interactive weather channel, an electronic programming guide and a games channel — all of which provided one-way interactivity. In February 2001, Austar announced a move to a two-way interactive service, to be provided through an agreement with Oracle for the provision of that company's interactive television platform.[117]

This represents phase two of Austar's interactive strategy and will provide email, interactive advertising, retail, more games and banking — most of which are expected to be available by mid-2001. The next phase will involve the addition of interactive news and sports. John Paul, General Manager of Austar Interactive Television, said interactivity was less likely with entertainment, 'as it is pretty pure'.

Games are provided by Two Way TV Australia, which has the exclusive Australian licence for Two Way TV from the UK. The games provided range from trivia-style quizzes to arcade games. When the agreement with Austar was announced, Jim McKay of Two Way TV Australia said the model obtained revenue from a subscription charge, but would eventually adopt itself to a pay-per-use mode, with the channel also gaining revenue from sponsorships and advertising.[118]

In February 2001, Austar had 420,000 subscribers to its pay television service, 250,000 of whom have digital set-top boxes enabled by the Open TV software for one-way interactivity. At that time, around 80,000 of these boxes had the return path to enable two-way interactivity.[119]

At the end of 2000, interactivity was added to music channel Channel V, provided by channel provider XYZ Company, which is jointly owned by Austar and Foxtel. Channel V viewers can click on a logo in the corner of the screen to get a menu of information services, as an overlay on the main screen. These will provide music information such as concert guides. The enhancement is generic in the sense that the same enhancement applies to all programming. It is expected that future developments will see enhancements which are linked to the program — either embedded in the source material or coming up at the same time.

Austar's John Paul explained that the approach is being developed jointly by Austar and the channel provider XYZ Company:

> With Channel V it's a matter of sitting down with the content provider and reaching agreement about what they want to do. It's a matter of us guiding them as well as the other way around.

Interactive applications are expected to be added to the Lifestyle Channel, also provided by the XYZ company. The EPG provides a guide to programming on the Austar service and enables the viewer to surf the service while watching one channel. In the EPG, the viewer can also set up a reminder to watch, particularly a program, which will come up at the appropriate time while he or she is watching another channel. The applications for Channel V and the Weather Channel are written by Massive Technologies, a new media company which is part owned by Austar (see below).

For John Paul, interactive television has to be user-friendly and it is not about putting the web on television:

> They are two different areas and that's why the web on television which combines the two dynamics does not work. The television is a very simple device — it's passive, it's your friend and it always works and if it doesn't, it probably means it's terminal. So the key to provision of services is understanding the environment and maintaining it — you want to maintain that friendly, passive environment and not over-complicate it because if you do you have stuffed that relationship. It's like a magazine — you can just look at the pretty pictures or you go in deeper. But if you over-complicate it you will destroy the medium.

Austar viewers use their existing remote to trigger the interactive applications; they will also be provided with a simple keyboard to operate the two-way applications. The idea is to make the whole process seamless. John Paul pointed to the different approaches in France and the UK:

> In the UK they had a whole suite of services ready and switched them all on at the same time and waited for people to interact, whereas in France they had one enhancement on one channel. It asked would you like to view the sports scores and you pressed OK and then asked if you would like to purchase a jersey. So people were interacting without really knowing it — it was very subtle, which is the way to go.

Viewers can also just watch programs in the normal way. Paul points out: 'You can get rid of

the OK button — you should never burden the viewer with having to use it.'

The ICE Interactive trial

ICE Interactive is an Australian company formed in February 2000 by global technology companies Oracle and Liberate Technologies and venture capitalists Burdekin Resources. The company has run a pilot of connected interactive television for 150 homes in Orange, New South Wales, in conjunction with WIN Television, Pizza Hut, MasterCard, the New South Wales Government, SBS and a range of other local content partners such as community organisations and local advertisers. Vice President, Operations, Martin Keywood, said:

> The purpose of the pilot was for ICE to prove its ability to develop and deploy interactive television applications and to provide an opportunity for its pilot partners to experiment with interactive television concepts in advance of the Australian rollout of services.[120]

The pilot was originally intended to run from September 2000 to the end of the year, but was extended to February 2001 to allow additional applications and content to be trialled. Homes in the pilot received some enhanced WIN programming and a range of services including email, Internet access, chat and an on-demand interactive program guide. There were also ichannels covering sports, finance and general news, weather, and community information; t-commerce with Pizza Hut and MasterCard; and a WinNet site. The ichannels were selected web channels providing web content repurposed for television. For example, access was provided to the first two levels of the New South Wales Government's website.

Pizza through television

The ICE Interactive trial has been cited as the first Australian example of an interactive advertisement automatically linked to t-commerce. Viewers could order pizza plus soft drinks and garlic bread. WIN broadcast a trigger within the Pizza Hut commercial which was picked up by the set-top box and prompted the user to enter the Pizza Hut ordering application.

The enhanced WIN television programming occurred with the travel program *Destinations* (see the snapshot box). Keywood advised that it was only possible to include this one example of enhanced programming: 'Developing enhancements for programming needs to occur as part of the production cycle and takes time.' *Destinations* was a new program produced under WIN's control, so it could be included in the time frame of the pilot. The ichannels and other services appeared on the screen along with normal television services so that people could switch backwards and forwards, look at both at the same time, or return to full screen to watch television programming.

The pilot used set-top boxes that received free-to-air broadcasts and mixed this with HTML-based applications and content supplied over a PSTN back-channel using the ICE applications platform and Liberate middleware. Content for the news channels, the program guide and the weather was automatically loaded into the ICE applications platform from data feeds provided by AAP, Pagemasters and the Bureau of Meteorology for access on demand.

From WIN's point of view, it was important to experiment with interactive television.

> This gives us an opportunity to look at the future. In our case you can't wait [for standards to develop]. There are no rules so the only way you can do it is stick your toes in and experiment.[121]

SBS joined the Orange pilot in mid-December, contributing content from its news and soccer sites repurposed for the television medium. Will Berryman, Head of New Media at SBS, commented that this requires 'a different mindset: you have to write less, the headline becomes more important and reliability is crucial — it has to work for the user'.[122] Also available was SBS television program information and audio content on demand which Berryman suggested was very popular.

Four education and training providers joined the ICE interactive pilot as content partners, with a community technology centre and three schools testing how PC-based online education can

be transferred to the interactive television environment.

ICE also has a broadband product that integrates video-on-demand with interactive television services. Keywood advised that it is hoping to sell this solution to hotels, campuses and strata housing developments. The ICE applications platform has been developed to support services to multiple devices: set-top boxes using Liberate, Open TV and MHP, as well as WAP phones, PCs and Personal Digital Assistants (PDAs).

Independent evaluation of the pilot involved a weekly survey, an end-of-trial survey and interviews with 18 families. Keywood reported that the overall response was very positive, showing that people are willing to bank and shop over the television, and are keen to participate in interactive shows. For those without Internet access via a computer, the access to web information on government and community services was also welcomed.[123] Keywood believed that the pilot showed people have a lot of trust in the television as a way of accessing new services and information, and are prepared to pay for such services.

The future

As of May 2001, the Austar service was the only commercial application of interactive television in Australia. Following the Orange pilot, ICE is looking for a commercial rollout of its software and services, with potential clients being the free-to-air and pay television broadcasters, as well as educational institutions, hospitals and developers of apartment blocks.

There has been speculation that pay television could be ahead of free-to-air services in exploring interactive television. John Paul of Austar commented in November 2000 that the free-to-air broadcasters will 'go the same way broadly' but at a slower pace.

> There will be multiple camera angles but their model is very advertising-driven and ours is service-based. We are much more about providing a suite of services — they are purely about content so their enhancements will be much more content-focused.

Foxtel shareholders PBL and News Corps reportedly want to offer home banking and shopping as well as interactive television. However, it is widely acknowledged that Foxtel partners have been divided on the issue, with Telstra reluctant to see Foxtel offering more than traditional video content, given its investment in a separate broadband Internet service.[125]

In March 2001, the free-to-air broadcasters announced that they would be trialling interactive services later in the year. They have reached agreement on a common software platform called multimedia home platform (MHP), which was launched in Germany and to be available in Australia in either set-top boxes or integrated into television sets by 2002. The MHP platform is still in development so implementation within this time frame will depend on its finalisation and successful trialling. At the time of the announcement, the Seven Network Broadcast Services Director Judi Stack advised that Seven was developing interactive applications. Jerry Thorley of Network Ten said its interactive applications would focus on news, information and entertainment.[126]

In May 2001, it was announced that Optus had commenced an interactive television trial at a reported cost of more than $200 million. The trial is taking place in the homes of 300 Optus staff and involves additional television and radio channels, an EPG, email and access to Internet content, including 'a select number of reference and home shopping services.'[127] Information on confirmed content partners was not publicly available, but those reported to be interested included MasterCard, SBS, f2, the New South Wales Government and the free-to-air networks.

Destinations

ICE Interactive and WIN television broadcast the first enhanced television program in Australia with an interactive episode of *Destinations* that was researched, filmed and produced specifically for 'connected' interactive television. ICE collaborated with WIN's production team to develop interactive content to support the six segments of the program. Two competitions were included in the program for both pilot participants and other WIN viewers. A one-hour chat session was conducted by the host at the end of the program via the television screen.[124]

At the ABA conference 'Television and the New Media' in May 2001, a number of speakers, including representatives of the Nine and Ten Networks, emphasised the role of interactivity in driving digital television takeup. They also referred to the advertising sectors interest in integrating interactivity into advertising, including through t-commerce opportunities within programming.

The restrictions of the digital transition scheme affect the ability of the free-to-air commercial broadcasters to provide a full suite of enhanced programming and interactive services (see Appendix 1). Enhanced programming is possible, provided it is within the parameters of the rules which prohibit commercial broadcasters from multichannelling.[128] Other applications, such as interactive games, services such as email, home banking and the provision of 'walled gardens' of reformatted web content, would constitute datacasting. Commercial broadcasters can use any spare digital capacity for datacasting, subject to paying a charge and working within the datacasting content rules. The precise position is presumably dependent on what happens with datacasting following the cancellation of the licence auction in May.

A big issue in Australia is the availability of set-top boxes. The first generation of set-top boxes on the market to enable digital television are not equipped with the action protocol interface (API) required for interactive television. Journalist Sue Lowe pointed out that the problem Australia has with building a critical subscriber mass for interactive television is tied up with getting set-top boxes into homes.[129] In the UK, broadcasters such as BSkyB have been willing to subsidise the set-top boxes that drove digital takeup. There has been no suggestion that the commercial broadcasters here will follow this example. If the in-principle agreement on the MHP platform comes to fruition, the high cost of consumer equipment may still prove to be a barrier to widespread consumer takeup, with one source suggesting a MHP set-top box would cost $1,800.

At the end of 2000, Ramim Marzbani, of www.consult.com, predicted that interactive television is at least three to four years away, even for the early adopters, commenting that the free-to-air broadcasters would not adopt interactive television 'until they think they can make money out of it'.[130]

Interactive Gambling Bill

At the end of June 2001, controversial federal legislation was enacted prohibiting the provision of interactive gambling services to people in Australia. The legislation makes it an offence to provide interactive gambling services such as casino-type gaming, where these services are offered over the Internet or through online delivery systems such as interactive television and advanced mobile phone technologies.[131]

In the lead-up to the legislation, there was lobbying from the television and Internet sectors concerned about the ramifications of the Bill for games applications on broadband services. The final Act contains a number of exemptions, including interactive gambling services which have a designated broadcasting or datacasting link, and wagering services, including betting on a sports event before it has commenced. The Explanatory Memorandum states that computer games will not be caught by the ban, as these are primarily games of skill. It seems that most of the interactive games applications that have proved popular elsewhere will be permissable on Internet and interactive television services in Australia.

Ramifications of interactive television for content producers

Australian content owners considering interactive applications are faced with the problem of a lack of standards for the interactive platforms outlined earlier. While the need for common standards is widely acknowledged, realistically it will be some time before this occurs. As John Paul of Austar commented, there are a number of issues for content creators related to rights and control over enhancements:

> For example, if as the operator you want to put a note from Nintendo on say the Cartoon Network — 'Do you want to buy a game?' — the content provider might say you can't do that, you can't degrade the product.

> Do I create it from scratch with the interactive elements? Do I enhance my existing content? Do I prevent anyone else from enhancing it without my permission? [These are] all questions to which there is no answer yet.

For Paul, while Austar is driving interactivity now, in the longer term it is more the role of the content provider 'once they understand the technology' rather than the service operator. He pointed to the examples of CNN and Bloomberg, who are preparing for interactivity and are doing the research 'so they won't be dictated to by one service provider':

> In the ideal world we won't have to convince them — they will be coming to us with enhanced programming. We will in the future expect programming to be enhanced.

So what will this mean for the individual program maker? John Paul had this response:

> Yes, what's the food chain? We don't care who does it [that is, the channel provider or program maker] except we have to host it and it has therefore to interface with our backend services. If, for example, Discovery comes to us with an enhanced program that will be fine as long as it is compatible. They won't charge us — in fact we will charge them for the extra bandwidth it uses, that is, we will possibly split the revenue from sponsorship/sales. Sales/revenue splits are an ideal situation.

These comments raise the question: who is going to pay for the cost of enhancing program material — the broadcaster, the channel in the case of pay television, or the producer of the individual programs? Developing interactive applications and combining them with traditional broadcast material is a complex and costly process. For a start, interactive programs need considerably more content, the development and production of which has significant budgetary implications. Then there is the cost of the technological requirements — the user interface, back channel, the cost of programming the content with interactive software and the provision of extra bandwidth. The New Media Editor of British publication *Broadcast* reported that, taking all aspects into account, conservative estimates are that the cost of producing and delivering programming could increase fourfold.[132]

With pay television, foreign programming dominates schedules in some areas such as documentary, movies, drama and specialist news channels. In many cases, the content providers are the big players such as CNN, Bloomberg, the BBC and Discovery, who are moving into interactivity in their home markets. This raises the issue of whether Australian programming will be 'pipped at the post' by foreign programming where the additional costs of developing the interactive applications have already been met. As outlined above, the Austar games channel is being provided by one of the major UK games companies, Two Way TV — and indeed, Paul advised, there are no suitable suppliers in Australia.

On the other hand, in areas of programming which lend themselves to interactivity such as

lifestyle and music channels, there tends to be more Australian programming. In the free-to-air sphere, Australian programming is fairly strongly represented in genres suited to interactivity, such as news, sports, infotainment and lifestyle programming. The interactivity with some of these genres is likely to be more commercial and involve promoting products related to the content — such as CDs or products associated with lifestyle — and infotainment-type programs. In an interview with the author Mark Strong of Massive Interactive commented that, in the initial phase, interactivity will be based largely on commerce and 'you may not find a lot of interactivity that is just fun. This requires a lot of bandwidth and there are a lot of technical considerations.'

In Europe and the US, the platform providers and technology companies have to some extent driven developments and encouraged broadcasters and producers to move to interactivity. A number of the major international technology companies are involved in Australian developments — for example, Open TV and Liberate. Another is Yes TV, which is a partner in Total Television Australia, a new company established to provide interactive digital television services, including video-on-demand and Internet television across Australia and New Zealand. Will investment be available from such companies to Australian content providers to support interactive content development?

Even if our content providers receive this support, investment in interactive applications will rely to a considerable extent on content producers and broadcasters. A host of questions arise. What will the impact be on current licence fee structures? Will the costs of developing interactive content be shared between producers and broadcasters? Will producers be expected to supply enhanced programming? As is occurring elsewhere, will there be tensions over rights, with content producers expected to sign over interactive rights? Will new models arise in the commercial arrangements between broadcasters and content providers, such as content producers sharing revenues from e-commerce and interactive advertising? There are no clear answers yet, but these questions point to a complex and difficult set of negotiations which must be undertaken before the promise of interactive television can be realised.

Massive Media: An Australian enabler

Massive Media describes itself as 'a convergent solutions company offering strategy and development for all screen-based media'. Formed in 1996, it works across a range of areas — Internet, intranet, broadband and interactive television.[133] In 1999, Austar acquired a 50 per cent share in the company, a move which Austar described as giving it greater access to Massive's technology and skills in programming, content development and design.

Massive Media has developed a successful business model based to a considerable extent on its core business of providing Internet services. Chief Executive Ron Downey advised in September 2000 that the business has been able to operate from cash flow and revenue since its inception, and that projections indicated a turnover of $25 million in three years as a services company, with an expected $500,000 profit for the current year.[134]

Massive Media has three divisions, Massive Interactive, Massive Television and Massive Technologies. Massive Interactive, which specialises in online strategic, technical and creative services, has designed and built websites for a wide range of clients in Australia and internationally.

Massive Interactive was engaged to build and maintain the *Big Brother* site for Network Ten and Endemol Southern Star following the demise of Ten's Internet arm, in early 2001, with Massive facing 'a last minute scramble' to put together the Internet component of the show. General Manager Louise van Rooyen commented that Massive was required to guarantee the robustness of the site, given the large amounts of traffic expected.[135]

Massive Television develops interactive television applications mainly for Austar, but also for other broadcasters in the Pacific Rim region. Applications developed to date for Austar are the Weather Channel, Channel V and the GAMEspace portal — the interactive television interface for a variety of games from third-party suppliers. Massive has also developed the websites for Channel V and the Lifestyle Channel. According to Massive's Mark Strong:

> The strategic lessons we have learned from web design are influencing our work with interactive television. There you have to avoid the gratuitous use of interactivity. You are talking to people directly — you have to ask what people are not getting that they would like to have. You need to focus on the one-to-one relationship.[136]

The styles of games available through Austar's GAMEspace portal include arcade, puzzle and trivia games. Massive Television is also developing a subscription games channel which will be available to Austar customers in the second quarter of 2002. Mike McGraw, Managing Director of Massive Television, said:

> Games are very important for any broadcaster wanting to get involved in the interactive television market. They are extremely popular with viewers, build a community around specific games, and educate the new viewers on the conventions of other interactive television services, such as banking and email. In addition, they provide the broadcaster with additional revenue streams, such as tiered games and advertising. [137]

Massive Technologies has developed Metawrap, a tool to assist the delivery of content across multiple platforms. Metawrap enables data and content to be accommodated on platforms and devices such as the web, interactive television, handheld devices and WAP telephones. According to Rob Downey:

> We are developing a solution for content developers. With the shift to develop once, deliver many times, there is currently a problem in that people have to repurpose for different platforms. That costs, and there may not be a commercial return from some of the platforms. Our product is aimed at getting around that problem.[138]

The development of this product sees Massive moving into product development and licensing, alongside its traditional business of service-based work. Downey commented that this was a significant shift for the company:

> With this product we are moving into a totally new and different world. This is where you build a great product and make money while you sleep. With some of the interactive work we will be developing the IP here and licensing it — for example with interactive advertising we will be developing applications that can be used and reused — this is where the Blue Sky is.[139]

4   Is Content King?

> Clearly these new distribution platforms are finally coming of age.… [T]here is now an abundance of platforms for content to be exploited across.… With the infrastructure in place, the major platforms are now working with producers and developers to create content for these new outlets. From a business point of view this means more potential revenue streams. But from a branding viewpoint, it makes standing out in the crowd more of a challenge than ever.[140]

The major international film and television markets are giving increasing attention to new media opportunities and industry sources talk of the demand for content. According to UK Internet commentator Dominic Schreiber, quoted above, 'the major ISPs and portals are hungry for content'.[141]

After the round of dot com collapses in 2000, this year's Milia, the new media market in Cannes, was somewhat subdued. According to one media report; 'killer apps in short supply, but business models all the go'.[142] This was reiterated by Chris Warner, then Director, Film Development & Marketing at the AFC, who said the emphasis of the two-day think tank held during the market was very much away from technology and towards content. Warner said that questions concerning what the audience actually wants, and what the audience are prepared to pay, underlined much discussion.

In content terms, there appear to be three main developments:

Pearson Television

UK-based Pearson Television has been developing interactive versions of its games shows for the Internet through its partnership with online gaming site Uproar, and also for interactive television, working with technology company Mixed Signals Technologies in the US, and games developer Two Way TV in the UK. Initially, Pearson Television concentrated on existing properties, but it is now moving to create content with an interactive or web component right from the outset. Pearson has also set up an inhouse online game studio to develop original content purely for the web.[143]

- cross-media content — 'create once, publish many times'. This means the development of content for use across a number of platforms — traditional broadcast television, interactive television, broadband Internet and also potentially mobile platforms. This can involve:
  - repurposing of existing content assets for the interactive platforms; and
  - the development of new content with interactivity for the new media platforms incorporated at the outset;
- the production of new 'stand-alone' content specifically for online distribution;
- new distribution mechanisms for traditional linear content — that is, online distribution of short films, and potentially longer-form content through video-on-demand services delivered online or to the television.

The emphasis on interactivity does not mean the end of traditional linear programming.

Cross-media content

> The relationship between content for the Internet and content for interactive television will be a work in progress during the early days of interactivity, but there most definitely will be a relationship. The 'create once, publish everywhere' philosophy will have companies looking to leverage the same content across multiple platforms.[145]

For content producers, there is the option of adapting existing product, or creating new content with an interactive or web component incorporated from the outset for distribution across a number of platforms. The adaption is an option particularly when popular programs are involved, but given that programming can become dated, will not be appropriate in all cases. Increasingly, producers are considering cross-platform uses from the outset when developing new programming. This is not a simple matter of some reformatting and putting

material up on a website or broadband portal. There is growing recognition that the PC and television offer very different experiences, and content designed for one does not always translate to another.

Participants stress that, to truly exploit the potential of these outlets, producers need to think about how a program will work on all platforms right from the concept stage:

> If we just make television programs and then in some way try to bolt on interactivity to the linear stream, there may be times when you can offer people a valuable enhancement, but if we limit ourselves to that, we're missing a trick. I don't think users or viewers are going to be satisfied unless the content they are receiving is optimised for the platform.[146]

Simon Ludgate of Naked Media, a company launched in the UK to develop solutions for broadband, said:

> Changing the mindset is the hardest thing to get over. A lot of people see broadband as simply a digital carrier which will allow them to offer what they're already doing on the television over the web. But it's more than that.

John Paul of Austar emphasised that thinking about content for new media has to be based on how and why the viewer is using the medium:

> The issue is where is the person going to experience it — is it in the office, at home, in the lounge room, on the move? People experience content differently depending on where they are. Content in our minds — and it's the same with anyone in television — depends on whether someone is actively seeking the content or passively experiencing it. The answer to that question — how are people experiencing it — determines your approach to delivering content.[147]

Cross-media production raises a number of issues for content producers and, according to Dominic Schreiber, the goal of creating content that can work on multiple platforms 'remains something of a Holy Grail'.[148] There are concerns over security and management of online content; these were referred to earlier when discussing broadband Internet. There is also the cost involved in repurposing content for multiple, and often competing, platforms (discussed in Chapter 3 in relation to interactive television). Interactive content developers are working to create software solutions to assist producers to 'create once and publish many times', but content providers still face a bewildering choice of technologies:

> The potential is there to spend an enormous amount of money in reversioning for lots of different platforms. The task is going to be to develop centralised content production systems that allow you to push content out to different platforms in a way that is appropriate to that platform.[149]

The costs involved and the uncertain revenue sources mean that producers are often reluctant to embark on initial development of content for multiple platforms. Independent producers are facing difficulties in financing development and production costs for traditional product as television budgets become tighter. In this context, diverting funds to broadband is not easy. Internationally, the technology companies are providing support and some have realised the need to invest in content creation to build subscriber bases. Microsoft and Liberate run content developer programs providing training for producers and developers in interactive programming. Liberate Technologies has launched a US$50 million development fund and a company called WorldGate has established a new content creation alliance.[150] Open TV is teaming with France's Largerdere to develop interactive content for a US network.[151] In the UK, digital cable operator NTL established the £25 million NTL digital fund in mid-2000 to stimulate creative content in the development of digital content. Starting

BKN New Media

BKN New media, a subsidiary of British children's producer and distributor BKN International, was established to oversee the company's new web strategy. The division is to oversee the rollout of a series of websites, as well as operating a streaming media children's portal.

The sites are based on BKNI programs such as *The Roswell Conspiracies, Kong, The Animated Series* and *Capertown Cops*. The portal BKNKids.com is to offer archived episodes, web games and original interactive webisodes.

CEO Bill Sondheim said the content would be designed to suit the medium. In both games and streaming, the aim will not be to make content that is suggestive of a games console or the television.[144]

with enhanced television, the intention is that each phase of the five-year program will attract independent production companies to a different digital application.

Alliances between content producers, enabling technology companies, broadcasters and broadband operators will be important in supporting the development of interactive content.

Which genres?

Whether delivered via the television or the PC, interactivity is the distinguishing aspect of much new media content. As discussed in Chapter 3, the genres that lend themselves to interactive television are news, sports, game shows, lifestyle and entertainment. Magazine and lifestyle programs are suited to the byte-sized delivery formats of broadband Internet and lend themselves to t-commerce.

Interactivity as applied to documentary was boosted by the groundbreaking interactive television documentary on Frank Lloyd Wright, broadcast on PBS in the US, and which won the Milia d'Or prize at Cannes in 2000. Factual programming is considered to have the potential for more in-depth coverage in an online environment. The BBC series *How to Make a Human Being* had an interactive production unit on board. The approach was for issues which could not be dealt with fully in the narrative-focussed television series to be explored in broadband format. Existing factual series can be reversioned for broadband. For example, the BBC's natural history unit is 'shattering' existing programs such as *X Creatures* and *UK Wild* to produce short video clips.[153]

Discovery executive Jeff Craig said the approach to interactivity has to be suited to the documentary genre:

> I'm leaning towards an incremental experience so that it looks like something the director might have brought up and it will be hard to distinguish whether this graphic is something you have requested, or something you would see on the screen. What we don't want to communicate to the consumer is that we are going to take you away from the linear nature of the story. What we want to do is enhance it. Therefore throwing in a bunch of text that doesn't fit well with the broadcast design doesn't work.[154]

There is fairly broad agreement that drama may not be so readily suited to interactivity, since the audience prefers to be told a story, rather than choose the ending. However, some experimentation with drama is occurring. For example, CBS and Microsoft WebTV were reported to be integrating interactive television programming into CBS's comedy and dramatic series with the start of the 2000/01 season.[154]

Various experiments with online interactive drama are also underway. A UK case is *Online Caroline*, produced by a company called XPT for UK broadband service Freeserve, which has commissioned a second series. In Australia, as described in the next chapter, NIDA and AFTRS have been developing an experimental interactive drama called *Love Cuts*.

Andrew Chitty, Managing Director of digital media company Illumina which produces an interactive animation, *The Smithsons*, for Sky One in the UK, suggests that soaps have more interactive potential:

> Soaps will work in broadband if the right communities are built around them. In *East Village*, a New York based online soap, you could select a character, join their clique and get extra information on them, but you could only join one clique.[156]

Towards converged content

The relationship between traditional television programming and interactive online content is evolving. In Australia to date, the experience has mainly been with the early stage — that of the related website with producers often developing dedicated websites for their television properties. All major broadcasters have their broadcast arm and dot com arm, using the latter to a considerable extent to promote their on-air offerings and providing a link to the dedicated website where one exists.[160] This stage involves the online material being designed to provide promotional support for the television program. It might provide cast details, storylines, character breakdowns or further information on material and products featured in lifestyle programs.

In the next stage, the online material starts to take on 'a life of its own'. It becomes more layered and it provides a different experience of the television program content. This kind of relationship has been popularised in the case of high-profile reality television programs, with the classic case of *Big Brother* and other examples being *Survivor* and *Castaway 2000*. Some Australian examples are *Popstars*, produced by Screentime, programs by Beyond International such as *Gone Fishin'* and *Screamtest*, and Becker Entertainment's *Ground Zero*. These are discussed in Chapter 5.

The term 'parallel programming' is often used to describe this relationship, where the two versions cross-promote. Opportunities for interaction are extended with online viewer feedback informing the content of the television show. There is also greater opportunity to access ancillary information and to participate in chat rooms and viewer polls. As Tom Kennedy of Beyond Online pointed out, this is about bridging the gap between the two mediums — online and traditional television — and about 'how one can be a driver of audiences for the other'.

Stage three is where the two kinds of content 'converge', as with enhanced programming on interactive television services. Here the two versions become integrated, with a split-screen, 'picture-in-picture' situation, and the viewer 'drills down' while watching the program to experience and interact with the related, more detailed content.

Changes in the way viewers experience content reflect evolution. This ranges from logging on to the Internet separately from watching the television program (before or after the show); to using the two devices at the same time by having the television and PC in the same room; to, finally, the integration of the two viewing experiences by having a PC hooked up through the television, or ultimately via IP-enabled set-top boxes.

This is not to say that all related online and television content can be neatly categorised as above, or that ultimately everything is moving to the fully-converged situation. The more likely scenario in the so-called battle between the television and the computer, is a situation where all three relationships will co-exist. There will be an increase in 'converged content' — enhanced television programming with web overlays. At the same time, different delivery platforms are suited to different uses, and television and the Internet may in many ways pursue distinct paths.

Content creation for the web

> In barely a couple of years, animation has moved from being something done by people with little more than a software program and a quirky sense of humour to the newest offshoot of Hollywood. But, as with other online businesses, it is the little guys — rather than the established studios — who are defining this new medium.[162]

In the US, there are a number of sites carrying content specifically created for the web. Animation has been particularly successful on the web, as it is short and simple enough to be viewed on slower modems and machines. Animation can be quite affordable, with a minute of Flash animation costing a few thousand dollars to produce, whereas traditional cell animation costs at least twice that.[163] The main US companies involved in web animation are Mondo Media, Icebox, AtomFilms and shockwave.com; the last two recently merged. A further interesting example is Brilliant Digital Entertainment, an American company which develops and produces much of its content in Sydney and which provides content through Excite to the Optus broadband service.

A number of webcasters also air live-action material such as short films which are either streamed or provided in downloadable form. Traditionally, the main market for short films has been domestic, with limited commercial opportunities for international distribution. As the AFC notes, 'with the media landscape rapidly evolving, new opportunities continue to develop for short film'.[164] This AFC publication lists nine online exhibitors, all US-based except for the Australian IndieFilm Web. AtomFilms is perhaps the most well known in Australia — its content is syndicated to a number of portals here and it has distributed a number of Australian short films (see Chapter 5).

The online entertainment sector started to falter towards the end of 2000. A high-profile case was that of Pop.com, an online entertainment site planned by Steven Spielberg's company DreamWorks, Imagine Entertainment and Vulcan Ventures, which closed in September 2000 after missing various launch dates. Other high-profile collapses in the US were Pseudo and MXGOnline.com.

Like other dot com companies, these businesses were established in a period when venture capitalists and equity markets invested in start-ups on the promise of revenue streams — particularly from advertising — which did not eventuate. The closure of some ventures does not mean the whole genre of online animation and other short-form entertainment is under threat. Rather, as pointed out at the announcement of the shockwave.com and AtomFilms merger, they signal 'the inevitable consolidation of the online entertainment sector'.[165]

The option for Internet content creators is establishing a destination site or syndicating to major sites. However many do both and syndication, on either an exclusive or non-exclusive basis, is regarded as the more reliable revenue earner. Mondo Media has sold its series to portals such as Netscape Netcenter, Lycos, Shockwave, Warner Brother's Entertaindom and Excite. It has sold to BT in the UK and to Asian portals. Honkworm is mainly a syndicator with clients such as Budweiser, Nike and Playboy, and portals such as Yahoo! and Excite. Honkworm syndicates its web series for around US$5,000 a month. In addition, a number of these companies are finding outlets for their product on cable television services. As broadband takeup rates increase, there will be a growing market for short entertainment. As Honkworm CEO Johan Lindgren says: 'I think entertainment is going to be part of people's daily routine, just like the news and stock quotes. And that will be served up by the bigger portals as part of their overall offering, and not by smaller niche sites.'

Animation and other short entertainments on the web are mostly offered free to the end-user, but there are indications this may soon change. A number of entertainment sites are moving to charge for content. In early 2001 San Francisco online independent movie channel Alwaysi.com established a paid subscription service with rates for a 12-month subscription starting at US$4.99 per month.[166]

The US clearly has a head start in online entertainment, although a number of sites in the UK and Europe are now emerging. *Television Business International* commented: 'Animators

outside the US are well advised to get their Internet projects moving as the major US players are already thinking of international expansion.'[170] AtomFilms has an office in London from which it is planning to develop on European entertainment business. Icebox was looking for co-production partners to develop a co-branded site in the UK. Honkworm has established an office in Canada and is reportedly looking to move into Asia and Europe. These moves to develop localised versions of US sites are prompted by the need to avoid Internet congestion, as well as reflecting an interest in appealing to local audiences by offering some local material along with US product.

While a lot of online entertainment content has been developed by pure Internet businesses, traditional production companies are also diversifying into this area, such as French studio Millimages. A further trend is for businesses which started out developing stand-alone web content to develop cross-media opportunities. For example, Honkworm is looking at reversioning its web properties for film and television, and vice versa.

Some European examples

Hahabonk

An online comedy service which showcases short film and animation, and provides listings, chat and other interactive community functions plus an online shop, Hahabonk is not marketed directly to consumers and does not carry banner ads. The principal source of revenue for Hahabonk comes from syndicating its content to other websites. It also sells sponsorship around short films and animation. In addition, it webcasts live stand-up comedy and the monthly *Situations Vacant* sitcom trial at London's Comedy Pub.

Hahabonk was launched in April 2000 and has syndication deals with UPC's Extreme.com, BT's Uprush.com and bbc.co.uk. Clients also include Channel 4 and UKTV. During 2000, it produced 25 shows including *Bob and Hoskins* which launched on Channel 4's e4.com. Hahabonk has entered into a co-production deal with Chrysalis TV which entails migration of its webshows to television. It is run by a company called Empty Space, set up in November 1999 to develop entertainment properties that could be rolled out across all media. Empty Space reportedly has plans to take Hahabonk international, starting with local sites in Australia and the US.[171]

France

Traditional production studio Millimages is moving to web production and distribution alongside its television production activity. It is creating Flash games based on characters in its television series which will be sold to buyers of the series to show on their sites. Examples are *Archibald the Koala*, aired on France 3's site when the series was broadcast on the free-to-air channel, and games based on *64 Zoo Lane* and *Pablo the Little Red Fox*. In addition, Millimages is creating 52 one-minute Flash series for sale to websites. The company was seeking presales for these, with production costs of around FF20,000–30,000 per minute.

Overview

There is uncertainty about how much interactivity viewers want on their television screens, how much entertainment they want on their computers, and the extent to which they are prepared to pay extra for both.

In the online sphere, the areas which have been most successful to date in charging consumers for content have been pornography and specialist publications such as the *Wall St Journal*. The move to charging for online music in the wake of the Napster case will provide important lessons for other forms of entertainment content. The consensus is that the business model for the Internet, broadband distribution and interactive television will be a combination of micro-transactions, subscriptions, pay-per-play and advertising. Many take the view that people will pay if the content is compelling — just as they pay now for some services on the Internet.

A survey of broadband operators in Europe by the ARC Group concluded that e-commerce will become the key driver for broadband revenues by 2005. The operators also identified gaining access to content as the most pressing issue they are likely to face within five years. The inference of the two findings is 'a closer intertwining of content and commerce in the broadband world'. Interactive applications were ranked the next most important revenue generator, followed by premium video and television, and gaming services. Information services were placed fourth.[172]

Ramifications for the independent sector

On the question of whether convergence will mean continued or increasing domination by major media companies at the expense of the independent sector, there are two conflicting views. On the one hand, there is the view that developments will enhance the position of smaller independent producers. It is argued that the multiplicity of distribution outlets will improve the bargaining position of those selling content. As the costs of producing and distributing content come down, it is said that independents will be able to bypass the traditional gatekeepers and set up their own means of distribution.

One UK new media player, Richard Kilgarriff, argues that the broadband era will provide alternatives for smaller independent producers to broadcast television, characterised as it is by an over-abundance of supply and scarcity of demand.

> By the end of 2003, digital broadband channels with as little as 10,000 loyal viewers will become more economically viable than channels one hundred times their size which have less-targeted content. And small channels which create original programming for content communities, will be able to increase their revenues with syndication over a broader spectrum.[173]

David Wood, New Media Editor of *Broadcast*, hails the new media as the 'new creative fringe'. He is critical of the sameness of traditional media and sees the new media as the site of more creative content:

> It is a well known paradox of the western media that the more channels there are, the less variety we get. Increasingly new media is the place where audiences bored of a monotonous diet of soundbites can find something a bit more nutritious.… In short, new media offers producers the opportunity to come up with creative material that mainstream channels have turned their backs on.[174]

The contrary view argues that many of the structural features of the 'old media' will carry through and that most of the benefits will flow to the major media conglomerates and

others controlling the distribution mechanisms. For a country like Australia the concern is that, in a case of 'new media, old economics', the demand for entertainment content for new platforms may be easily met with foreign content. The production costs of foreign content have already been largely met, whereas the development and production of new Australian-produced material requires significant resources.

The most likely outcome lies somewhere in the middle of the contrary arguments posed here. There will undoubtedly continue to be opportunities for smaller players, but the challenges they face are considerable.

5   New Media Content Creation in Australia

Established production companies and new media

DCITA's *Convergence Review Issues Paper* pointed to the 'marginal nature' of the Australian film and television sector, which could impede its ability to compete in the digital age. The Australian industry has always faced the challenge of how to survive and develop, given the small size of the domestic market and the domination of the global entertainment market by foreign — and particularly US — product. This challenge is arguably sharper in the current climate, given the trends posed by digital technology and the related intensification of globalisation.

In the last two years, there have been various assessments and debates about the state of the industry. Most of the debate has related to feature films, television drama and documentary — the most high-risk areas of production, which receive public support through direct or indirect subsidy and where local content is regulated.

In September 1999 the Minister for the Arts and the Centenary of Federation, the Hon Peter McGauran, commissioned a report by the Australian Film Commission and the Australian Film Finance Commission (FFC) on the state of the Australian production industry, in response to industry concern that production levels were declining. The report concluded that a number of serious issues confronted the local industry:

- a shortage of development funding and low and static budgets for feature films;
- difficulties in financing of television drama, due to declining television licence fees from Australia's free-to-air broadcasters and a fall-off in overseas sales;
- the inability of the documentary sector to capitalise on growth potential in the international market because of inadequacies in development funding and production investment.[175]

In its 1999/2000 Annual Report, the FFC pointed to the contraction in international demand for Australian programs reflecting the wider decline in demand from key overseas markets for independent film and television programs. The FFC predicted that it was unlikely that international demand would increase in the next few years.[176]

In his opening address to the 2000 Screen Producers of Australia Association (SPAA) Conference, SPAA President Nick Murray presented a rather bleak picture in his critique of current policy. His main theme was the failure of the emerging multichannel television environment to deliver overall increases in the funding base of Australian production. Murray highlighted the television sector as his 'greatest concern'. He referred to the significant downward pressure on licence fees in the last decade and pointed to the networks wanting more for less, citing as an example the ABC seeking six runs (instead of the customary three) plus online rights.

In Murray's view, spending by pay television on local drama has simply spread production costs across a greater number of domestic windows rather than increased the overall amount of funds available for production. He expressed doubt that digital television would improve the situation, pointing to the lost opportunities involved in the Government's approach to datacasting, and arguing that questions about the costs of creating content for the new platform have largely been neglected.

A number of these concerns were echoed by the senior executives of several production companies interviewed for this project. All stressed the difficulty of financing television drama,

and particularly one-hour filmed drama, due to static licence fees from domestic broadcasters and declining levels of foreign presales. In this situation, a diverse production slate, tapping into new markets and finding new partnerships have become very important. Formats such as lifestyle, infotainment, magazine-type programs and reality television tend to be less expensive to produce than drama. They can be financed from the domestic market with a margin for the production company. Having a diverse slate thus makes production of riskier drama formats more achievable.

When Screentime was first established in 1996 by Bob Campbell and Des Monaghan, they intended to focus primarily on drama. As Campbell put it: 'That lasted until someone knocked on the door and said do you want to do an information show?'[177] Through its various divisions, the company is now producing drama, reality television and infotainment. Screentime specialises in half-hour drama, telemovies and mini-series. Screentime Access produces infotainment and reality/observational programming, including the successful *Popstars*. The company also has a separate operating division, Screentime NZ, based in Auckland, producing infotainment programming including reality/observational television for the New Zealand market. In 2000, Screentime extended its activities in New Zealand when it bought 48 per cent of Communicado, a production company which specialises in drama.

Becker Entertainment produces television drama, game shows, documentaries, sport and lifestyle programs for the Australian market. The company has reduced its involvement in drama in recent years, due to the financing difficulties outlined above. It intends to stay involved in feature films and possibly children's drama. The company also produces television for various Southeast Asian markets, mainly Singapore, Indonesia and Malaysia. This has resulted from the establishment of new private broadcasters, both cable and free-to-air, with television in these markets which were previously dominated by government-owned stations. In Southeast Asia, Becker Entertainment produces most kinds of programming, excluding news and current affairs, working with local crews. The viability of this business rests on achieving high volume, given the low margins involved.[178]

One option for Australian producers faced with the difficulty of financing drama has been to look for co-production partners. This is the approach taken by Media World, which specialises in animation. Media World is the producer of the successful children's series *The New Adventures of Ocean Girl* and *Silver Brumby*. Media World has established a production facility, Animation Works, in Perth with support from the Western Australian Government, which has an interest in developing the state's expertise in digital media production. In early 2001 Animation Works completed production of the first series of *Quads*, an adult animated series, an official co-production with Nelvana, a Canadian animation company with a significant involvement in the US distribution market. *Quads* will screen on SBS in Australia and has been sold internationally to Channel 4 in the UK, with a second series scheduled.

Lazar Krum of Media World explained that the option of co-production arrangements does not necessarily resolve the issue of adequate domestic finance. The international demand for animated product is somewhat greater than for live-action drama, and for Media World there continues to be interest from outside Australia in its ideas and in possible partnerships. But 'the issue is how do we put up our side of the production budget given the cost of animation in particular'. The domestic licence fee situation is 'a significant stopper to us becoming creative partners with the rest of the world'.[179]

The experience of Australian producers in overseas markets appears to fly in the face of the argument that channel proliferation creates demand for content and thus presents

opportunities for producers in countries like ours. The value of exports of Australian film and television programs has been static or declining in recent years and the trade deficit in the audiovisual sector has widened.[180] To the extent that channel proliferation internationally is creating opportunities for Australian programs, this has primarily been for acquisitions of completed programs rather than funding of new ones through presales or equity investments. As Campbell put it: 'It's driving libraries rather than new production — the money is relatively modest because these are smaller markets and secondary rights so it doesn't solve your economic problems.'[181] Richard Becker of Becker Entertainment felt there would be sales opportunities as the market fragmented, but 'they will be for specialised services paying very small licence fees'.[182]

Pay television in Australia has tended to provide a secondary market for completed Australian programming, rather than supporting the production of new programming, especially in the more expensive formats such as drama and documentary. Legislation was passed at the end of 1999 to enforce the requirement that pay television drama services devote ten per cent of total program expenditure to new Australian (or New Zealand) drama programs. The first year of operation of the enforceable scheme was 1999/2000, with the ABA reporting total expenditure by the 18 drama channels in that year of $7.6 million, with a shortfall of $5.5 million to be made up in the subsequent year.[183]

The requirement can be met by partnering with free-to-air broadcasters, leading to industry concern — as reflected in the earlier comment by SPAA's President — that it may not result in increased production levels. Opinion varied amongst producers interviewed regarding the extent to which investment in drama by pay television services will assist the financing of drama. Some considered that it will at least provide a means of topping up budgets but others were more uncertain about the result. On the whole, none of the producers interviewed saw pay television as providing significant new opportunities for their businesses in drama nor in other areas of programming.

New digital media

Australian production companies are increasingly turning their attention to the challenges and opportunities posed by digital technology and the emergence of new media platforms. A number of production companies have developed websites to support films or television programs and, consistent with general trends in reality television, some of these sites, such as *Popstars*, have attracted large numbers of visitors.

However, the production industry does not see significant new opportunities arising from the digital television arrangements in their current form (see Appendix 1). The free-to-air broadcasters cannot multichannel, but will be able to offer enhancements, along with high-definition broadcasts. High-definition television (HDTV) will have an impact on how programs are shot, post-produced and delivered to broadcasters.[184] With both enhancements and HDTV, there will be questions about who bears the additional cost involved.

Southern Star production executive Howard Parker has argued that the cost of post-producing and mastering in high-definition is likely to place an extra burden on budgets that are already stretched. Parker said: 'We're not seeing that delivering in that format [high-definition] will deliver any new markets or additional revenue and it's extremely expensive to do so.'[185] Parker argued that it was more likely that delivery of Australian HD material would be through up-conversion of programs from a widescreen digital master rather than from shooting in high-definition. By contrast, Gerry Thorley, Ten's General Manager of Network Operations, said Network Ten would be broadcasting high-definition locally-produced drama and insisted that

producers would need to move to HD production. There appear to be tensions between program buyers and suppliers on this issue.

New distribution outlets for Australian-produced content are potentially provided by new ABC and SBS channels under the multichannelling rules, and in theory by the introduction of datacasting services. However, the future of datacasting at the time of writing was unclear. The datacasting rules were strongly criticised by potential datacasters and Internet industry organisations on the grounds that the genre restrictions and the requirement for 'information only' programming made the medium unviable. The major potential players such as Telstra, News and Fairfax did not participate in the licence bidding process. As of May 2001, there were only three participants with one alone, transmission company NTL, interested in a national licence.[186] Subsequently, the Government cancelled the auction. According to Tom Kennedy, General Manager of Beyond Online, the datacasting regime has, to date, proved to be 'the biggest market opportunity lost'.[187]

In terms of new opportunities, the main immediate possibility would appear to lie with the new digital channels being established by the ABC and SBS. The Federal Government determined that, while the public broadcasters would be allowed to multichannel, there would be no increase in base funding for this specific purpose. The ABC is establishing two new channels — a children's channel and a youth channel. Both channels are to be funded from the ABC's $3.5 million multichannel budget. The children's channel will reportedly offer a mix of new acquisitions from international markets, archived material and, 'in due course', commissions. Ian Carroll, Head of ABC Digital Television, advised that the extent to which new material can be commissioned, 'heavily relates to budgets and finance. There will be a good cross-section of programs that are already successful on free-to-air television. We would love to be contributing to the amount of Australian children's programming, but at this stage we are going to have to make a modest start.'[188]

With regard to the youth channel, Carroll said:

> The youth channel is going to be about the culture of youth from music to information about relationships, sex and careers. We will be making quite a lot of new material, hopefully in all states, both within the ABC as well as commissioning from the freelance sector. We will use a relatively minor amount of acquisitions and archived material.

Due to budget restrictions, the youth channel will use lower cost technology rather than broadcast equipment and will work to a considerable extent with young, aspiring program-makers. Journalist Cynthia Banham reported that between 20 and 50 young television-makers using hand-held digital equipment and personal computers were working in the field, with a brief to film and talk to young Australians. She described this approach as the ABC's response to budgetary constraints and restrictions about the content it can carry on its extra channels.[189] Both the youth and children's channel will be accessible to households with a set-top box and will also be carried on the Optus pay television service.

As of May 2001, SBS was developing its plans for multichannelling within the parameters of its multicultural charter. SBS subsequently announced it would be launching a digital channel in the first half of 2002 which would target young people of multicultural backgrounds. SBS Managing Director Nigel Milan said SBS staff and some external people were developing ideas for programs which will, in part at least, utilise SBS web product. Milan said programs would be akin to the SBS's interactive issue-based website, *Whatever* and off-beat youth programs like the music show *Alchemy*.[190] SBS was reportedly negotiating with Foxtel and Optus to carry the channel on their pay television services.

For Southern Star's Parker, the emerging issue for production companies is producing for multiplatforms:

> What will start coming into consideration for program producers is making their future digital product not only for television broadcast, but for broadcast on the Internet or streaming to the Internet, and that we've got to understand. In a production house like [Southern Star], we are beginning to look more and more at areas other than television broadcast.[191]

The producers interviewed were taking a wait-and-see attitude to digital television, reflecting the uncertainty and controversy surrounding the scheme. No one saw digital television as fundamentally altering in a positive way the underlying issues of financing drama. Producers also stressed that, while the technology is enabling and interesting, the key will still be the ability to tell compelling stories in audiovisual formats — to make good programs. As Lazar Krum said:

> There is still the basic problem of the fees paid by the broadcasters — if these don't change, all this is going to be cosmetic. This digital technology is not dealing with the basic problem, which is how do we foster and develop the creation of content. What is the story, who's telling the story, that's the guts of it. People come and look at what we are doing technically. We have done two series, and apart from *Quads*, which is interesting, the digital aspect comes at the tail-end. But the key creative part is the writing, and the acting, because animators are actors, that's the key part. But the whole process is time-consuming and expensive.

Beyond International/Beyond Online

Beyond International is one of Australia's major film and television production and distribution companies. The television production activity of the group covers most genres, with Beyond Productions producing science, documentary and other non-fiction programming, and a number of joint-venture companies producing drama.[192] Beyond International has a well-developed new media strategy implemented through its relationship with Beyond Online, in which it has 22 per cent equity.[193]

Beyond Online is a convergent media and entertainment company, specialising in cross-media production and delivery for Internet and broadband markets. It holds the exclusive Internet exploitation rights for all television programs wholly-owned by the Beyond International group of companies, including rights to past and future series of the signature science program *Beyond 2000*. According to Ian Ingram, Executive Director of Beyond Online:

> The Directors of Beyond Online expect television, computer and telecommunications to converge over the next few years and believe the Internet will develop as a major distribution channel of entertainment and information.[194]

Beyond International has also established online access to facilitate international distribution of its extensive library of programs. The new corporate website, with its business-to-business t-commerce section, was launched at the MIPCOM market in Cannes in October 2000. It enables existing and prospective customers to access, view and license content online. In addition to licensing complete television programs and feature films, the site displays and licenses stock footage.

Over the last two years, Beyond Online has implemented its broadband Internet strategy by developing and launching a number of entertainment and information sites, starting with Beyond2000.com in October 1999. Most of these sites are linked to television programs produced by the Beyond Group. In the first instance, the sites have been aggregated on Beyond's portal, beyondchannel.com, described as 'a gateway to individual information and

entertainment sites specialising in particular areas of interest'. The intention is for the model to be a subscriber one, with the channel carried on a broadband Internet network and ultimately on other IP-enabled devices. It is expected that content will be also be syndicated to other broadband networks. A major step forward in this strategy occurred with the announcement in July 2001 that Beyond Online will produce three channels for Telstra's broadband service (see Chapter 2).

Tom Kennedy, Managing Director of Beyond Online, described the approach taken to leveraging television content:

> We have a range of assets through the Beyond Group — *Beyond 2000* being an obvious example of a project that had a 15-year traditional media life cycle. What we are looking at is how we enhance the value of those and how we move to an interactive content sphere and also the emerging markets that are developing for broadband.
>
> We have used *Beyond 2000* as the prototype as that is the flagship for the group. But we have since done a series of lifestyle-related content pieces and a few websites where we are looking at how we can bridge between the two mediums — online and traditional television — and how one can be a driver of audiences for the other and vice versa. So it's really looking at how the two interrelate, what are the benefits, how you can do things differently, and how it affects programming in terms of content.[195]

With more recent projects such as *Gone Fishin'* and *Scream Test*, creating the web version is an integral component of the development and production process from the outset, and there is a strong cross-promotional aspect with interaction by online visitors contributing to the on-air segments.

• *Beyond 2000*

Since it first aired in 1985, 14 series and over 500 episodes of the *Beyond 2000* television program have been produced. The program has been sold extensively overseas — Beyond International estimate it has reached audiences in over 70 countries. Beyond2000.com provides science and technology news, interviews, live chat, reviews, commentary and clips from past programs. The site draws on material from the television program which is augmented on a regular basis by a three-person editorial team backed by stringers around the world. Tom Kennedy describes how it has become a stand-alone product:

> We have spent a lot of time developing *Beyond 2000* into a weekly science program with some authority. We didn't go to the market for almost six months — we carried the development costs and didn't spend much on advertising except to make sure the search engines were picking it up. It gets syndicated almost daily by a lot of international science journals and wire picks it up almost three times a week as syndicated science stories. That makes it a known destination if you are interested in that kind of content.
>
> Interestingly enough, the program wasn't going to air in Australia at the time [of the launch of the site] so we weren't getting the spin-off. So it is a case of the website being completely stand alone from the program — we now have two separate identities. The website has audience and content that has nothing to do with the program except that the brand is the bridge.

The *Beyond 2000* site has advertising from major international brands such as Intel, with Kennedy pointing out that where there is a big international component to the audience, there is a need to attract sponsorship and advertising that straddles the domestic and international audience.

In August 2000, Beyond Online signed a content partner agreement with AvantGo for a mobile version of *Beyond 2000.* This will be carried on the AvantGo science and technology

channel which offers daily science and technology information for mobile data. Using AvantGo's software, users can download Beyond2000.com's daily top stories and synchronise computer mobile phones or PDAs with desktop machines.[196] Beyond2000.com now has a link to this service which takes the user to AvantGo.com to subscribe to the handheld version.

• *Gone Fishin'*

Gone Fishin' is a website and a sponsored television program, the first series of which was broadcast in 2000 with the second series going to air in the second half of 2001. The *Gone Fishin'* channel is being developed as a prototype broadband channel using Telstra's broadband network in conjunction with Swedish technology company, the Fantastic Corporation. The channel offers viewers the opportunity to explore content from the television program in more depth, and to interact with presenters through chat rooms and email. The channel also reviews upcoming programs and provides live, interactive discussion with fishing experts.

Kennedy described the process of building the dual product 'from the ground up':

> We wanted to produce a good magazine/sports/lifestyle program regardless of medium. We did some research relating to communities of interest and came up with fishing — it's pretty universal, and covers every demographic and cultural background. Fishermen are pretty vocal in terms of their likes and dislikes. So we gave them a whole range of areas for web boards and chat rooms where people could post their photos and fishing stories.
>
> The issue was, as this was a sponsored program, how do we build a cross-media program that gives value to those sponsors, both on air and on the website? We commissioned our television production unit to produce the show and they worked closely with Beyond Online in terms of the style and content. So there was a lot more integration than in the past. Normally what would happen in the old days is that they would finish the program and hand across the assets to us (the online people) to do something with.

Kennedy described how the feedback via the website influenced future episodes of the television program:

> We found that the content coming in from the website — for example, from 'what's biting where' — allowed feedback from the viewers and that started to drive the content for the next week which shocked the traditionalists in the building a bit. So keeping it current and close to market was good.

• *Screamtest*

Screamtest is a reality television program around the theme of six haunted locations which screened on Network Ten in March to April 2001. Each week, a different location was featured with four contestants aiming to win and proceed to the grand final. Contestants stayed in the haunted location and each had to chronicle their stay with video diary entries as well as complete a number of challenges. On the website, users can read background information on the location, rewatch the episode and view the contestants' video diaries. Viewers log on to the website during or after the program. They can vote for their favourite contestant and help them progress to the grand final.

The 'tests' section of the site has location background, location stories, 'what happened on the night', information on the contestants and a viewer challenge. Other parts of the site feature the contestants' auditions; the site's resident psychics; live chat; and 'screamboard', where viewers can discuss the show. Telstra.com spokesperson Ted Szukalski reported that an online chat with one psychic attracted more than 630 people; making it Telstra's most popular chat site to date. Ian Ingram, Executive Chair of Beyond Online, said the site had received about

two million visitors in all.[197]

In February 2001 Beyond Online announced a joint website and television promotion relationship with f2, Fairfax's online subsidiary, involving Beyond Television productions *Hot Property* and *Hot Auctions* and f2's real estate site domain.com.au. *Hot Property* and *Hot Auctions* are popular lifestyle programs broadcast on the Seven Network. The agreement involves f2 carrying episodes of the television programs on domain.com.au once they have aired on the Seven Network. More recent series and the full archive of back episodes can be accessed through the site. Nigel Daws, CEO of f2, said:

> Viewers of *Hot Property* will now be able to visit domain.com.au and review the stories aired on the show, while also allowing them to view properties for sale and rent as well as providing factual information about home ownership, buying, selling and renting.[198]

This venture is an example of how existing television material can be leveraged online by placing it in a context — in this case, a site providing real estate information. It is also interesting in that the episodes can be viewed in their entirety and thus will provide some indication of the preparedness of users to watch longer-form programming on their computer screens. It is a broadband content project — viewing the episodes is difficult with a narrowband connection.

For Beyond Online, the project is about extracting value from existing product by outplacing it on one of Australia's most visited sites and also about promoting the current or forthcoming series of the programs on television. For f2, the agreement means its real estate site is significantly enhanced by the video content.

Beyond Online's activity to date has mainly been in cross-media work (television and Internet), and has involved magazine/lifestyle-type genres. While sharing the general uncertainty about how interactivity might work with drama, Beyond Online has been working with NIDA on the experimental interactive drama *Love Cuts*, where its role has been to provide the technological support (see Chapter 6).

Another example of product developed specifically for the Internet is Puppet Government, the joint Seven Network/*Age*/*Sydney Morning Herald* election site for the 1998 Federal Election. In the longer term their approach is very much a broadband one, with Beyond Online preparing for wider takeup of broadband Internet, and ultimately working up to the stage where interactive content is carried on other IP-enabled devices including the television. In terms of revenue models, Kennedy stressed that there will be a combination of subscription revenue, sponsorship and advertising.

Additional sites linked to Beyond-produced television programs are www.lilhorrors.com based on the *Li'l Horrors* children's puppet series, and www.australiansatwar.gov.au. The latter is linked to the television series of the same name which commenced screening on the ABC on Anzac Day 2001. The site was developed in conjunction with the Australian War Memorial and the Department of Veteran Affairs.[199]

• *Brainwaave and Streamworks*

In 1999, Beyond Online acquired 51 per cent of Brainwaave Interactive, a website developer and streaming media company. Brainwaave's role within the group is to develop e-business strategies and 'convergence and broadband solutions for the Beyond Group'. Brainwaave develops websites for external clients as well as for the Beyond Group. Streamworks is the online broadcast division of Brainwaave Interactive. The business specialises in all aspects of digital video production, including live webcasts, and streaming video and audio to the Internet.

Most of the streaming work has been for Australian clients but some work is also being done for Asian and American clients. Kennedy outlined the streaming activity:

> We have been building up our skills in this area — developing relationships with the three main vendors: Realnetworks, Quicktime, and Microsoft. We are now probably the largest producer of streaming video — we do everything from corporate CEO addresses to Yoko Ono and Ricky Martin. We did the encoding for Fox Sports during the Olympics for here and the US. We are operating as a production service and a bureau service and have done work for Telstra, Optus@home and Channel V, amongst others, where they send us their tapes and we spit them back as files.

> It is a tiered model — linking back to Beyond in that we have a vast library of tapes to be encoded at some stage. So by doing live events, and working on other people's content, we are building our expertise and learning what works.

In terms of financial results, Beyond Online is still in start-up phase and not showing a profit. Revenue for 1999/2000 was $1.8 million, a significant increase on the previous year's figure of $245,000. The net operating loss for the year was just over $1 million. In the 1999/2000 Chairman's Report, Ian Ingram said:

> The Company has taken the conservative approach of expensing (and not capitalising) all of its content development and production, website investments and the one-off expenses associated with the public listing of the Company.

The directors advised that they expected to report significantly improved financial results for 2000/01 due to increases in revenue and lower recurring costs.[200]

Becker Entertainment

Becker Entertainment (www.beckerentertainment.com.au) is working with new media in a number of ways. Managing Director Richard Becker advised that the company considered it important to participate in interactive new media, not just 'regurgitate' linear product over digital platforms.[201] Most of the television programs and films the company produces have related websites with website design now done inhouse. Richard Becker explained this is to familiarise Becker producers with the new medium and also to realise the potential of the Internet as a cross-promotional tool for television programs:

> Of course, it's very hard to step outside what you have known all your life. One of the reasons we have internalised our web design and interactivity is I want my producers to be touched by it and to see the opportunities offered.

> For a long time we used to commission web companies to design sites related to television programs or films we were releasing. What we were doing was just making television programs — no one was considering the Internet aspect except as an afterthought.

> [Outside designers] are doing something based on a minimal brief not understanding the concept behind why the show may have appeal. Whereas the producers who have developed the show understand conceptually why an audience may be attracted and they are the best ones to understand how can I take this from a passive thing to an interactive one.

Becker described the approach taken to the revamping of the *Ground Zero*, a youth-oriented music program made for Network Ten.

> After several years of having a fairly standard site we are trying to make it as interactive with the program as we can. So we upload it every Friday night and the Internet provides you with a different way you can get your passive entertainment. So if you watch the show on television, you just watch the show as it unfolds. If you go on the net, you can go straight to a Santana interview, or straight to a clip or back into historical interviews or you can go anywhere you want. You don't have to be

dictated to by the producer's edit.

I think that at the very least the Internet should be doing more with television than, say, having a holiday program and providing the details of your local travel agent. That is not fulfilling the potential of what the Internet can provide by way of interactivity.

The *Ground Zero* site (www.gz.com.au) has various sections: the Garage for music tracks and video clips; the Team with messages from the presenter; and the Tomb where past programs can be viewed and where one can see interviews and special footage which may not end up in the television program. As the television show runs for up to two hours, the site provides a way for people who may have come in late to catch up. Becker commented that the *Ground Zero* program is well suited to a website with interactive elements because of the young demographic of the show.

The Garage section invites emerging bands to submit a videotape which is digitised and put on the site, providing an opportunity to expose their work and to get feedback. The site is apparently 'inundated' with tapes from all over the country.

With television programs, the cost of developing the related sites has been borne by Becker Entertainment, though usually the site will also be accessible through the broadcaster's website. Becker advised that this related website activity does not directly add value in a commercial sense, but means they are learning how to think about the new media, providing an added service for the audience, and preparing themselves for interactive television and the future.

Other examples of program-related websites are the site for the documentary series *Journey to the Ends of the Earth* to be distributed through the Discovery network, and the site for *Download* (www.playdownload.com.au), a children's game show produced for the Nine Network.

In November 2000, the Becker group announced the formation of a joint venture, Becker Interactive, with Online Media Group, to exploit online broadband opportunities. Rather than producing content and services for the local market, the venture provides services in Singapore on the Sing One broadband network. Becker Entertainment is the content provider while Online Media Group is the platform provider. Using a technology called bazool, the venture will deliver interactive multilevel programming, drawing on Becker Entertainment's extensive library of material built up from its Asian and Australian television production activity as well as shooting new material as required.

The rollout will be gradual, starting with news and travel. The latter will be an e-commerce service offering travel information and packaged holidays. The news service will draw on feeds from major news providers such as Reuters and CNN as well as new material from its Singapore-based news crew, and will provide viewers with the opportunity to drill down into the content for additional information. Ultimately the goal is to provide a range of content including radio channels, movies, arcade games, news and a variety of finance and entertainment information. The venture plans to roll out similar broadband services in Hong Kong and Indonesia, once the Singapore service is established.

The move into the Singapore broadband market is related to Becker's involvement in the Asian television market, the lower production costs there and the fact that Singapore is one of the best wired cities in the region with a relatively high takeup of broadband connection. It is also a response to frustration with the restrictions placed on datacasting in Australia. There will be some revenue flows to the joint venture from the outset, but it is expected to be some time

before costs are recouped and the service moves into profit.

Becker Entertainment also explored new media opportunities with the feature film *Subterano,* produced in conjunction with the FFC and German distributor MBM Medienvertriebs. The film is a 'high-concept-high-style thriller about a group of people trapped in an underground carpark trying to survive attacks from several bloodthirsty remote-controlled toys'. Richard Becker said it was suited to new media spin-offs because of the genre — a fantasy created in a Japanese comic-book style — and because it is aimed at a younger web-savvy audience for whom an interactive version is 'not a big jump'. *Subterano* will be marketed with a website intended to provide an insight into the characters and the toys in the film.[202]

A particular innovation will be a kind of 'anti-film' which will use the digital camera footage to create an alternate view of the story from the 'bad guy's' point of view. The outcome is still to be determined but will include a 'very special' DVD version. It may also be distributed on the net, or via some datacasting opportunity, and a further possibility is the development of a computer game.

A common thread in discussion of the emerging digital multichannel environment is the issue of how to stand out in the crowd. Richard Becker talked about visibility for independent producers:

> The problem is that this is going to fragment the market so much, so unless you have something that distinguishes you, you will get lost in the ether and no one is going to find you, no matter how good your product. There is value in having a brand and if you have money you can create a brand. The other option is to follow a traditional form of entertainment which is in effect creating a brand and then create something on the back of that.

Like others, he stressed that the key will remain the ability to create good content:

> We have to concentrate on the creation of the entertainment. Basically we see ourselves as producers, as storytellers, we want to entertain. It's all driven by ideas so if someone comes up with a good idea, you develop it to the point where you see whether it is more suited to a passive or interactive format.

He identified a number of issues for Australian producers, including the power of the major international media companies with their ability to attach conditions to output deals:

> A lot will be deal driven and companies like us will be disadvantaged compared to the bigger players coming out of the UK and the US. Money for development is a constraint — we don't have the resources for development that overseas companies have.

Becker stressed the importance of access to distribution outlets for independent producers. He is of the view that limiting the number of players in a market, as is the case with commercial free-to-air licences, reduces the bargaining position of the independent producer. He suggested that if entry into the datacasting market was open and licences not too costly, there could be scope for production companies to operate a datacasting service.

Becker believes that, notwithstanding the efforts of the seven major studios to capture the entertainment market, the digital environment has the potential to open up opportunities for independent producers:

> With the Internet, there will be a lot of choice. The majors will be selling but the indies and creative people will find a place. I think Australian businesses are pretty smart and I have confidence in our industry being able to maintain its position.

Screentime

Screentime (www.screentime.com.au) has developed a number of websites for both individual program requirements and for the company as a whole. Campbell advised that the company's corporate website had been developed and promoted for a number of reasons: to give broadcasters, program producers and distributors the information they need about the company and its programs; to facilitate easy contact for people interested in buying Screentime programs and program formats; to encourage producers and writers to submit ideas for possible development; and to provide program financiers with an in-depth look at what is in the pipeline. The corporate site now administered by Screentime was built by Mediasat, which also built the program-related sites. These have been built for a number of individual programs such as the first and second series of *Popstars* and also for the bands that evolved from the two series — Bardot and Scandal'Us. Campbell said:

> The response generated from the television series to the websites has been enormous. For example, the *Popstars* website for the first series was the number one website for television-generated Internet activity with an average of 190,000 sessions per month.

The sites have been used to provide fans with additional information about the program and the bands, and have promoted sales of CDs, concert tickets and merchandising. They have also been important platforms for the sponsors and joint-venture partners.

Bob Campbell thinks the full impact of new media is too early to predict. Notwithstanding the *Popstars* experience. He says, 'it is not clear that the punters want all these new services and interactivity'. He sees two kinds of opportunities for Screentime: Internet streaming as part of a suite of windows, and the opportunity to 'cut and paste' for information-based shows. As an example, he cited a five-day-a-week cooking show produced by Screentime NZ. This could possibly be reversioned for various outlets, such as a lifestyle channel on pay, video release and also the Internet. However, he expressed doubts about the likely financial return: 'But what will the money be like? Not much, probably — we might be lucky to pay for the cost of the tape.'

Media World

Media World pointed to the benefits that digital technology has brought them in the production process for *Quads*, where their production partners are in Canada. The program is being produced using Flash software by the Media World production team in Australia creating content here for the discrete website. The Nelvana team in Canada work on the product and send it back. In this way they can involve Melbourne, Perth and Toronto offices.

> During the *Quads* production, there was minimal work completed on paper, as occurs in the traditional animation process. In the past we had combined traditional animation with digital technology, but principally in the latter stages of production, as in the compositing, special effects and editing stages. We wanted to maximise the advantages that each process afforded us — that is, the expressive quality you get working on paper, combined with the production opportunities that digital technology increasingly offered.

> *Quads* was the first time we have produced animation digitally from start to finish, on a computer. The checking and approval protocols used in a traditional animation production were adapted to the new digital process, which also allowed for the involvement of production partners across a shared website. Essentially work was jointly created and approved on a daily basis, backed up, and stored on a discrete website. We and our partners could review the progress of the series at any time during the production process, communicating largely via email, regular telephone conferences and the occasional trip. This is a first for us — it couldn't have happened five years ago.

The use of Flash software primarily developed for online animation is significant. Colin South, Media World director, explained that using Flash technology instead of traditional animation techniques can help Australian companies survive in the increasingly competitive area of animation. One of Media World's first forays into new media was an interactive CD-ROM based on the animated feature *Silver Brumby* made with Village Roadshow. Lazar Krum explained, the company originally thought that when they created a series they would also create a CD-ROM. However, these plans were put on hold.

> We found that the multimedia production process was as complex if not more challenging than animation. It drained so many key creative and technical resources from our core animation activity that we decided to put interactivity on hold until the production and distribution process was more clearly developed. New software kept coming out every three to six months, which was not always compatible with pre-existing software and hardware, There were just too many variables which made the process unpredictable, enormously complex and expensive.

The company sees multimedia as part of its future development and now sees online distribution as providing more potential than CD-ROM. As Krum explained, this will involve working with new media developers:

> We want to continue to make an interactive product; however, how we choose to go about this remains open. There are a lot of talented, upcoming individuals and companies who are increasingly better informed about the opportunities new media can offer the industry. For example, Media World could focus purely on our demonstrated skill in designing, writing for and creating animation assets, then — in partnership with an interactive partner — realise these assets in a non-linear entertainment format. Or if the project and time is right, we could choose to produce the linear and non-linear animation products in parallel, as we have done in the past.

Media World has had interest from investors overseas in translating some of its animated programs, such as *Ocean Girl*, into interactive product. There have been discussions with Canadian new media companies about possible projects. Colin South considered it likely that, once the television program was established, Nelvana may be interested in developing new media applications for *Quads*.

The production industry and bandwidth

The Australian film sector is widely regarded as being a successful adopter of digital technology, particularly in the post-production area. Access to bandwidth has been identified as an important issue facing the film and television sector if it is to build on this record.

A paper prepared for the Prime Minister's Science, Engineering and Innovation Council stated:

> One of the major impediments facing the industry is the cost of, and difficulties experienced in gaining access to, the high bandwidth telecommunications capacity needed to transfer and exchange the knowledge products of the industry. There is evidence that these costs are significantly higher in Australia than overseas, and that this is holding back prospects for the industry. The assertions of the industry in this regard have been reinforced by the report of the recent National Bandwidth Inquiry.[203]

The report made a number of recommendations, including the establishment — with seed funding from the Commonwealth Government — of a forum which could address the bandwidth issue. It suggested this could be done by aggregating demand for bandwidth across firms and industries such as film, television and multimedia to negotiate with telecommunication providers on terms of access to bandwidth.

Subsequently, industry representatives formed the Film Industry Broadband Resources

Enterprise (FIBRE) to make a submission to the Government's Building on IT Strengths (BITS) Advanced Networks Program. The request was for funding support for FIBRE to carry out a detailed national assessment of the post-production sector's bandwidth needs. While the initial submission was unsuccessful, it was subsequently announced that DCITA had agreed in principle to meet FIBRE's operating costs.[204] As part of a package of funding measures for the film industry announced by the Government on 4 September 2001, FIBRE will receive $600,000 over two years commencing in 2001/02. Minister McGauran is quoted in the media release, explaining these funds are to 'develop and implement a demand aggregation case for affordable telecommunications bandwidth for the post-production sector'.

Australia: Online entertainment content

Initially, new media content produced in Australia was mainly in CD-ROM form covering a wide range of subjects from reference topics to education and training, health, and children's and adult entertainment. In the children's entertainment area in particular, a number of products have had commercial success. For example, *The Bananas in Pyjamas* CD-ROMs developed by GMD and published by Dataworks have sold around 250,000 units in Australia and internationally. As Stewart MacLennan of GMD said: 'Today B1 and B2 leap around on kids screens in Hebrew, Swedish, Finnish, German, French, Spanish and around ten other languages.'[205]

In general CD-ROM developers aiming at the retail market have been hampered by a number of factors. As Rachel Dixon points out:

> Lack of finance for local developers, poor distribution channels and dominance of those channels by foreign (especially US) product, present significant obstacles to the developers aiming at the retail market.[206]

The CD-ROM has been superseded to some extent by the Internet, though CD-ROM production continues in a number of content areas. Up-to-date information on interactive content development in Australia is not readily available. There were reported to be around 1,000 web development companies in Australia in 1998.[207] The AFC Multimedia Catalogue provide information on a large number of interactive titles, both CD-ROM and Internet material, across the full range of subject matters.[208] Due to resource limitations, the AFC is no longer tracking this area of production. AIMIA Awards give a sense of what kind of content is currently being developed. There are a number of categories covering entertainment – Best Children's Game/Entertainment, Best Adult Game and Best Arts and Cultural. In 2000, of the 21 shortlisted entries in these categories, eleven were CD-ROMs (mainly children's, arts and cultural titles) while the remainder were websites. The shortlisted entries are listed in Appendix 3.

While entertainment is not the primary reason for using the Internet, increasingly Australians are accessing entertainment-related material and sites. A study by Media Matrix showed that 63 per cent of Australian Internet users accessed entertainment on the Internet in 2000, with online gambling, music downloads and pornography particularly popular.[209] The study covered use of local and foreign sites and one can assume that a significant number of the sites in these categories were non-Australian. This result put Australia second only to the US in terms of the proportion of the population accessing entertainment on the Internet.

Of the top ten entertainment sites recorded by Top 100's Hitwise service in May 2001, three were Australian: ninemsn, bigbrother.com.au and abc.net.au. The seven foreign sites included Napster, www.real.com and windowsmedia.com[210] (see Appendix 2).

When considering figures relating to traffic on entertainment sites, it needs to be remembered that the term 'entertainment' is used generically and includes sites with entertainment-related services or information. A number of the top Australian entertainment sites recorded by Red Sheriff are in this category — for example, citysearch.com, ticketek.com.au and the sites operated by the major movie exhibitors. By contrast, sites providing entertainment content per se are better represented in the top international sites visited by Australians (see Appendix 3).

In the narrowband sphere, it is the major generalist portals such as ninemsn, i7, telstra.com.au, Yahoo! Australia and New Zealand, and abc.net.au which are most visited. Most of these have an entertainment strand with a range of content such as television-related material, movie and music information and clips, games, children's material and short adult entertainment animation. There is now a fair amount of streamed audio and video material available on these portals, and on some more specialised destination sites. The video content is mainly short bite-sized pieces, such as interviews, and music or video clips.

Increasingly, the user is offered a choice of narrowband or broadband for viewing video material, a number of online operators and content providers are producing or preparing for broadband. Whoopi! and ITV World, two 'start-up' companies providing original content to narrowband and broadband portals, are discussed below, as is Urban Cinefile, an example of an online venture providing film-related material to a number of portals.

We have not yet seen the development of significant numbers of dedicated broadband entertainment sites providing product such as short films or animation. However, mysteryclock.com, the site started in 2000 by filmmaker Alex Proyas, is an example of an experimental broadband site.

• *Whoopi!/Nethead Media*

Whoopi! was founded in early 1998 as Ttalk Broadcasting Asia Pacific, an online independent provider of Internet and technology news. Ttalk became Whoopi! in 1999. It has three main areas of activity: creation of original content; production services; and webcasting infrastructure.

Web content created by Whoopi! covers IT news, music, film and sport. Online shows produced by Whoopi! are: the daily *IT Talk Coffee Break*; *IT Talk Weekly*; *Undercover* — music industry news and comment in audio/video form; *The F Word* — a 30-minute video-based, weekly film review program; and *The Coach* — a daily and weekly program which provides 'insights' into the sporting world, including conversations with sporting personalities.

Clients for Whoopi's content include major Australian portals such as ninemsn, Optus@home, yahoo.com.au – AOL's Australian site, Foxtel, LookSmart, windowsmedia and musicstations.com. Whoopi! company director Jim Stewart said: 'We package the content, so as far as the user is concerned, the brand is whoever the site is.' In a media interview early this year, Stewart advised that Whoopi! avoided advertising revenue-sharing arrangements but 'still has a couple of these old models'. He credited part of the company's survival to its music focus, with the Undercover site well known in the industry.[211]

Nethead was incorporated in 1994 as one of Australia's first dedicated web development specialists. As the name suggests, Nethead's content also focuses on Internet and technology issues. It does this via comedy, producing audio shows such as *The Netboat*, a weekly comedy series, *Internet Old Boys' Coffee Break*, a three-minute daily show, and *Internet Old Boys' Weekly*. Whoopi! and Nethead merged in 2001 to form Nethead Media.

• *ITV World*

Established in mid-1999, ITV World is a privately-owned interactive technology company which provides software and production solutions across media platforms, including Internet/broadband and digital television. ITV World's activities include development of interactive television portals, 'walled garden' content, enhanced television programs, EPG and VOD systems and interactive advertising for clients including Microsoft, Telstra and Excite@home.[212]

ITV World packages news, business, technology, sport and entertainment segments for distribution to portals in Australia and Asia. Speaking of its content distribution activity, ITV World's Business Development Manager, Que Luu, said:

> We're surviving because we don't overproduce; we're only doing what we believe there is a market for. We syndicate our own content in Asia and Australia. We create about ten hours of content a week. It's not a lot at all. We'd like to do more in the next 12 months. There is more demand for streaming in Asia as broadband is more prevalent there.

> We're also surviving because we can offer core production services. Our bread and butter is pre-production, post-production and digitisation. The company also develops software for personalisation, interactivity and e-commerce for streaming and digitised television.[213]

Luu said ITV World avoids advertising revenue-sharing deals for its content:

> We put a real effort into production and if we do an ad share there is too little incentive for the distributor to sell ads or promote it. We do have some revenue-sharing deals but they are limited. These are usually in cases where it helps us to get branding out there so for us it's a marketing cost.

In February 2001, ITV World announced the launch of a new division offering interactive television applications for network operators in Asia, New Zealand and Australia, along with engineering expertise in a variety of platforms. The company has since received a $1.35 million Ausindustry grant under the Commonwealth's R&D Start program to develop a multiplatform solution that will provide an enhanced content management system for content and service providers.[214] In April 2001, ITV World acquired Urban Cinefile, as described below.

• *Urban Cinefile*

Urban Cinefile (www.urbancinefile.com), an online film magazine established in early 1997 by Andrew Urban and Louise Keller, contains a broad range of material about the film industry locally and internationally. Andrew Urban advised that the initial concept was to reach a large number of consumers with information and comment on film with an Australian perspective.[215]

Updated weekly, Urban Cinefile presents reviews, interviews, box-office reports, film industry news and features. Streaming audiovisual material includes interviews with actors and filmmakers, trailers and clips. There are various interactive aspects for the user, including competitions, the opportunity to put questions to actors and a DIY film event-listing service. Urban Cinefile is syndicated to telstra.com, AOL Australia, Yahoo! Australia and New Zealand, Excite and Ozemail. Review extracts are also available on Telstra's WAP service for mobile phones. It was expected that advertising would be a major source of revenue, but instead it has been this syndication to major portals that has shifted the venture into profit after a difficult initial two years.

The Urban Cinefile principals have been considering the possibilities afforded by broadband technology for some time. Urban speculated in August 2000 that the site may move to a

subscription model 'when the delivery and content' were right. In an interview in April 2001, he said Urban Cinefile was gearing up for the time when the Internet could move from the computer screen to the television set.[216]

In late April, it was announced that ITV World had acquired Urban Cinefile, with both parties seeing this as a step towards broadband delivery to the computer and to television. Jason Romney, CEO of ITV World, said:

> Urban Cinefile brings experienced content creators and a culture that embraces innovation. ITV World can bring that together with new technologies for distribution and interactivity. Our combined strengths and deep customer relationships will fuel the development of new Internet services and enable tools that speed up the Australian interactive television rollout.

Urban said:

> ITV World's content management technology and broadband content offerings are the means to retain and build on Urban Cinefile's position as Australia's premier Internet movie site.… it will enable Urban Cinefile to draw upon the technological support afforded by ITV World's advanced interactive television and streaming digital broadband platform.[217]

The merger will reportedly see Urban Cinefile content repackaged for interactive television, WAP and also delivery to personal digital assistants. Urban acknowledged it provided a way for Urban Cinefile to grow without needing to secure venture capital funding.[218]

• *Mysteryclock.com*

This website, created by filmmaker Alex Proyas' production company, Mystery Clock, has been designed primarily for broadband users as General Manager, Topher Dow, explained.

> It is a film site — with predominantly video material. We took the view it was not worth doing if it was designed for narrowband users. No one wants to watch jerky video on small windows. So we resigned ourselves to a smaller audience until more people have broadband.[219]

Alex Proyas is the director of the large-scale fantasy films *The Crow* and *Dark City*, for which he has attracted a large fan following around the world. In the first part of 2001, he was shooting an Australian feature film, *Garage Days*, with finance from Fox Searchlight and the FFC, to be followed later in the year by the sci-fi television series *Riverworld* for Canadian company Alliance Atlantis and the US Sci Fi Channel. Mystery Clock also produces television commercials for the international and domestic markets.

Proyas's distinctive aesthetic and style of filmmaking characterises the website, which has been described as 'part fanzine, part broadcaster and part ideas laboratory'.[220] The overall design of the site was developed in conjunction with Al Play, the interactive division of digital effects company Animal Logic, and is based on a cinematic model rather than a standard website.

The site has a section dedicated to Proyas and his films, and a number of areas with an interactive aspect, as outlined below.

• *Consequences* is an interactive screenplay project for which Proyas has written the first two pages. Visitors to the site are invited to add further contributions, with the best one for each scene being posted on the site until the screenplay is finished. Proyas plans to make a short film of the complete screenplay which will appear on the site.
• *Multiverse* is an animated four-minute fantasy special updated every six to eight weeks, taking note of feedback from site users.
• *Book of Dreams* is a series of short films based on dreams submitted by contributors.

- *Minute Movies* are short films likened by Proyas to 'commercials without a product', which also draw on ideas put forward by contributors.
- *Mind Games* are described as 'visual treats for the eyes and mind', in which Proyas 'hopes to get away from the prevailing Internet format and its notion of pages of a magazine that the user flicks between.'[221]

For Proyas, the site provides a chance to experiment:

> I love the fact that I can get my more marginal work directly to an audience. I can experiment creatively and I can do all this stuff that I can't do on mainstream movies.[222]

Dow talked of the site being 'like a sketch pad — it gives form to various ideas and allows a space for experimentation. It is another development tool.' For example, *Consequences*, where users are invited to submit scripted scenes, is a way of identifying and assessing potential writers. In order to achieve interaction between Proyas and contributors, and also among contributors, Mystery Clock is proposing to set up a bulletin board.

While Alex Proyas maintains overall artistic control, Mystery Clock works with emerging freelance writers and directors on a project-by-project basis to develop and produce content for the site. Dow said that limited budgets prohibit the engagement of established writers and that they are looking for people with filmmaking and storytelling skills, 'plus net savvy'.

There was some promotion of the site in Australia when it was first launched, but not internationally due to financial constraints. Dow said that overall use has been 'pleasing', with up to a few hundred hits on some days. The visitors are a mix of Australian and overseas users, including web design people, fans in Proyas fanzones, film industry members and the general public.

The site cost $100,000 to develop. These expenses and other ongoing costs are being underwritten by the overall business, as Dow explained:

> We are in a unique position — we see it as an adjunct to the rest of the operation. It is not intended to be a stand-alone commercial proposition. We are a development and production company and this is one aspect of that.

Initially it was thought that some revenue could be earned by franchising discrete aspects of the site to partially offset costs. To this end, talks took place at the end of 2000 with a number of overseas entertainment sites such as Warner Bros' entertaindom.com. However, interest dissipated due to the downturn in the dot com industry and the terms being sought were described as, 'ridiculous'. Mystery Clock was aiming for a deal where the host site funded six *Minute Movies* and in return had rights for two years, with ownership reverting back to Mystery Clock.

Dow explained that banner ads appearing with their content are a 'no no' and the partners are not prepared to give copyright away given the importance of building a library of assets, and the objective of building an identity for the company. Dow is hopeful that revenue sources will emerge as the audience and the profile of the site build. For Mystery Clock, adequate resources for development are as crucial for new media content as they are for traditional film and television product. Dow said they had been unable to identify any public sources of support for development to date.

Online distribution of Australian short films

The Internet has provided opportunities for Australian short films to reach potentially large international audiences, but the arrangements that apply vary considerably and do not necessarily mean a financial return for the filmmaker. The AFC advises that 'the majority of online exhibitors will screen short films for free, some will charge a fee (towards the cost of compressing the film for the Internet), and in rare cases web hosts will pay the film's rightsholders a royalty or licence fee'.[223]

Lawrie Zion, film journalist and commentator who hosted an Online Distribution seminar in 2000, outlined the issues online distribution raises for filmmakers:

> For short filmmakers, the emergence of the new medium contains real possibilities to bypass some of the more traditional distribution barriers. But as exciting as these developments are, they also raise some pretty critical questions. Is the online medium the right place to be distributing your work? Does it really increase artistic control or diminish it? What exposure opportunities do these new companies really offer and who ends up making money out of it?[224]

Further issues discussed at the seminar were exclusivity and the extent to which online distributors seek other rights. AtomFilms distributes short films offline as well as online, mainly to the television and airline markets. For this reason they usually seek exclusivity, explained Acquisitions Manager Anne Rosselini. In relation to rights, she advised that with some films they may take online rights only, but that it would be unusual for an agreement to be for offline distribution only. She outlined the financial arrangements:

> We don't pay a licensing fee, so it's an advance based on future sales. Once the advance is paid and there are sales, then you start getting money. And our advances are not huge at all, they're very modest.

Rosselini suggested that, while the criteria for acquisition is the extent to which the film will sell to a number of markets, the online environment does provide outlets for more innovative films:

> I'm looking for films that I know I can sell. I find a film that I know I'm going to be able to sell to all the markets, I know I'm going to be able to please the filmmaker — so my first thinking tends to be how commercially viable is this film, given what the market is today?

> The nice thing about the web is that it has opened up sales for documentaries and experimental works, two genres that you could never sell to save your life to the traditional markets. But they actually are finding a home on the web, so that's incredibly exciting. I also acquire films that I doubt I will sell to television, but I think we could probably syndicate online.

Mark Bellamy's film *Oops*, which received considerable exposure on the international film festival circuit, has sold to Los Angeles-based online exhibitor Media Trip. Bellamy received a lot of interest in the film from online exhibitors, but initially wanted to concentrate on achieving more traditional releases:

> Just about every festival I got into, I was sent a lot of stuff about Internet sites. It's huge. I don't think I had one offer for my two previous films. And with *Oops* I've had probably 12 Internet contracts offered. They even email or fax the contract and expect you to sign it. And what they're offering varies a lot, but I decided that I wasn't too keen to sign Internet rights. I couldn't see much value from it at this stage.

He ultimately signed with Media Trip for reasons outlined below:

> They're an entertainment portal, and they exhibit feature films, streaming and short films, and stand-up comedy acts. They differed from most of the other Internet companies in that they were very

professional. They had a very good site which I could look at — a lot of the other contracts I was offered, their site wasn't even up yet, or only had a front page.

But Media Trip looked good, though I didn't see much use for it [exhibiting online] when I hadn't created any television sales or anything. I thought that may infringe on its saleability, but Media Trip kept coming back to me, and ended up paying an advance payment. That basically took care of any problems of limiting television sales, because the money was substantial, and it was a lot more than you could make from television sales in Australia. And that's very rare, I think.

With Media Trip I've signed exhibition rights only. There are exhibition sites that just show short film for entertainment in return for selling advertising space on the site. And then there are sites like AtomFilms and others that are distributors of short films — they show the films and onsell them at the same time. And that's a whole different ballgame if you're signing distribution rights as well. I'm currently looking at assigning a distribution representative in the States and in Europe.

Another filmmaker, Matt Wheldon, spoke of his experience with *Blind Date*, a film which was screened at Australian short film festival Flickerfest and then picked up by AtomFilms, who licensed it for all territories for a finite period, excluding festivals:

In doing that I've had incredible exposure in the US. I couldn't afford to enter a lot of international festivals, because of the entrance fees. Atom has provided quite a bit of exposure to other festivals.

Wheldon warned that it is better to work through local distributors of short films, such as Flickerfest, and Tropfest in the domestic market:

Just a word of caution. I guess if I was doing things again, I would probably carve off Australia as a separate territory and look after the efforts here. The only reason I say that is because I think Atom's focus is mainly US-centric and probably at this stage it doesn't have enough legs on the ground to really sell through the Australian market.

Given that most users have low bandwidth, Atom's Rosselini said it is mainly animation and short films of around five minutes which work best at the moment. She and others felt growth in broadband connection would improve quality, enabling longer films to be exhibited online. For Bellamy, the quality issue was not a major concern:

The sound is weird and you've got nine frames a second or something. But all the films are the same. They all look that way and I think people realise it's the technology. And I think as the technology progresses too, it's going to catch up pretty quick.

Not all online distribution offers are as attractive as that which Mark Bellamy received for *Oops* and, as he and other speakers emphasised, it is very important for filmmakers to scrutinise the contacts offered:

There's one I got today — well basically you sign the film to them. The only way I could see of getting remuneration was the fact that you would go into some sort of draw to win a trip to LA to meet people from a film company, and one film would be chosen. And basically if you signed that document, you would be signing away the rights for your film for five or seven years. But also, they had the right to re-edit the film, insert advertising at any given point, cut, use segments — they could do anything with it. It was ridiculous.

Broadband services are well suited to delivery of short films, and as these services roll out further in Australia and overseas, they should theoretically provide increased opportunities for Australian short films. It remains to be seen whether the emerging broadband services will provide outlets for locally-made short films and on reasonable terms for filmmakers.

Australia: Games development

The games area is clearly an important one for both broadband Internet and interactive television. Indeed, many would say games are the 'killer application' of emerging interactive services. Telstra expects games to be big on its broadband content service and Austar is sourcing its ITV games channel from UK company Two Way TV. It has not been possible to examine the ramifications of emerging broadband services for the Australian games industry. The question is: how are local games developers placed to pursue the likely opportunities both in Australia and internationally? Appendix 4 provides an outline of games development in Australia, but this is an area requiring further investigation.

6   Publicly Supported New Media Content

In 1994, the Government introduced a range of initiatives under the *Creative Nation* cultural policy statement, which supported multimedia content development. It contained five initiatives to be supported by total funding of $84 million over four years. These included the establishment of Australian Multimedia Enterprise (AME); the Australia on CD program; and funding for the AFC ($5.2 million over four years), the Australian Children's Television Foundation and the Australian Film Television and Radio School for multimedia skills and content development.[225] The role of the AME was to support the development and seed funding of interactive multimedia projects. The Australia on CD project provided funding for ten CD-ROMs designed 'to showcase a wide range of Australian cultural endeavour, artistic performance and heritage achievement'. While there was some concern at the way aspects of the program, such as the AME, developed, *Creative Nation* marked an important recognition at federal government level of the need to address new media content creation.

When the current government came to power in 1996 it continued some aspects of *Creative Nation*, such as the Australia on CD program, while abandoning others. In 1998 the AME was sold to a private company, which took over the existing projects and the remainder of the funds to Treasury. Through the Department of Communications, Information Technology and the Arts (DCITA), the Federal Government currently supports a number of multimedia programs primarily focused on cultural networks and enabling cultural institutions to develop an electronic presence.[226] For example, the Department supports Australia's Cultural Network, being redeveloped as a major government portal, the Culture and Recreation Portal. It also runs the OZeCulture program, which aims to enhance the use of the online environment for the business processes of cultural organisations. In addition, the department administers IT industry development and infrastructure programs such as Building on Strengths (BITS) and Networking the Nation.[227]

Federal government support for new media content development occurs primarily through the public broadcasters, and through the AFC. At the state level, Cinemedia, the Victorian government film agency, has placed considerable emphasis on multimedia since its establishment in 1995. Over the five years to mid-2000, Cinemedia committed $8 million to multimedia projects with a further $3 million allocated to the Digital Media Fund for 2000/01.[228] Other state film agencies provide some support for new media as part of their overall funding programs. The Australia Council has a New Media Arts Fund, the focus of which is to provide opportunities for artists to produce interdisciplinary work, including work which uses new technologies. The focus is on interdisciplinary arts practice; applicants are referred to the Australian Film Commission and state film funding bodies for works that are solely screen-based.

In 1999/2000, the AFC allocated around $594,000 for interactive media activity — this was primarily for development and production ($491,000), with just over $26,300 being for marketing of new media product, and around $76,000 for industry and cultural development purposes such as seminars and training.[229]

Across the board, the emphasis in the early period of funding for new media content was primarily on multimedia, CD-ROM-based work. More recently, there has been a recognition that technology has overtaken this focus and the direction of support needs to be reviewed.

The Victorian Film and Television Industry Task Force recognised this trend:

> While the CD-ROM was probably seen as a significant potential means for carriage of content when

Cinemedia was first established, from the vantage point of today, interactive television and webcasting may well be more significant. It is certainly important that film, television and new media be seen as an interrelated set of opportunities for delivering locally-devised creative content to audiences.

The Task Force noted that several Cinemedia projects would fall into the category of 'visual art':

With art forms now crossing conventional boundaries this need not be a major issue except that other parts of government are currently funded to be in the 'visual arts' business. Cinemedia should be careful not to fund the visual arts at the expense of content creation for film and television and other new media channels.

The AFC has also reviewed its support for new media along with its other areas of industry support. This is motivated by similar concerns to those raised in the Victorian context — that support for interactive content needs to be revised given industry developments — in particular, the rise of the Internet as an entertainment medium, and the trend to cross-media product.

Recent developments

The public broadcasters are increasingly turning their attention to new media content development. ABC New Media was established in 1995 to initiate the ABC's involvement with multimedia. This section coordinates all ABC online activities and websites as well as multimedia projects. ABC Online is one of the most popular Australian websites, consistently rating in the top ten local sites. ABC Online has a considerable amount of content on over a hundred websites, which reflect the range of ABC's programs and services.

With the reorganisation of the ABC under the General Manager, Jonathan Shier, the new media area has been further highlighted. Some additional funds have been allocated to new media at the expense of other areas — mainly news and current affairs — and Shier has made a number of public announcements about the importance of the ABC further developing its new media activities.

A number of commentators have written accounts of the ABC's online activity, which cannot be fully discussed here.[230] Following is a brief overview of ABC online, particularly relating to emerging broadband content initiatives.

The ABC has increasingly been using streaming technology. As of March 2001, the 'audio and video site index' on abc.net.au listed 58 audio sites and 19 video sites. These include sites streaming ABC radio programs, television program-related sites, and a number of sites developed by the new media section including, for example, Kid's Games — a collection of quizzes, puzzles and games in the children's site The Playground — and *Headspace*, a monthly arts and culture magazine in The Space. In addition, there are specialist sites from other sections of the ABC such as Creatures, 'the arts end of Triple J with games, vids, the web and all the best of J culture'.

The ABC has established a broadband site — www.abc.net.au/broadband. As of June 2001, this carried ABC news, with children's and youth content 'coming soon', presumably related to the forthcoming new children's and youth channels. As with audio and video content on other ABC sites, the content is offered at two speeds so it is accessible to narrowband users.

ABC collaborations with film agencies

The ABC has been involved in collaborations with government film agencies which point to ways in which Australian new media content development might be better supported in the future. These are accords between the ABC and government film bodies whereby the partners combine to provide funding and a guaranteed delivery mechanism for the resulting product.

This approach is similar to the production accords that apply between the FFC and the public broadcasters for production and television broadcast of documentary programs.

ABC/AFC Documentary Online initiative

The AFC and ABC established the Documentary Online initiative to support documentary projects that 'explore the online environment in innovative, challenging and original ways'.[231] Funding of $100,000 per project is being provided for four documentary projects which will be streamed on ABC Online. The AFC is providing all the cash support, with the ABC providing the delivery mechanism and technical support. This includes administering the websites, incorporating the contributions that come in from users, and ensuring adherence to ABC editorial policies.

For the AFC, the initiative is seen as testing the waters in terms of viewer response to incorporating interactivity into traditional formats. It was felt that the documentary genre lends itself more readily to interactivity than drama, though there is also interest in looking at interactive drama in the future.

The ABC and AFC received an 'overwhelming' response to the call for submissions, with 116 submissions received in all and 11 shortlisted for further development. The following four projects were selected and are due to be completed by July 2002:

- *Escape to Freedom* — 'an exploration of the complex challenge Australia faces in responding to the plight of refugees' (Sohail Dahdal/David Goldie);[232]
- *Homeless* — 'an experiential website telling the stories of six individuals trapped in a state of homelessness in their booming global cities' (Trevor Graham/Rosa Hesp/Rob Wellington);
- *The Wrong Crowd* — a personal history of life in Queensland (Debra Beattie); and
- *A Year on the Wing* — 'an extraordinary journey with over two million wading birds as they attempt their annual migration from the Southern Pacific to Siberia and back' (Nell White).

AFC Project Manager Peter Kaufmann commented on the diverse range of content and style of the projects submitted: 'The range went from the traditional-style documentary to the innovative, from the deeply personal story to the issues-based film, it was a broad spectrum.'[233]

A previous AFC/ABC collaboration was Stuff Art, a program supporting digital media artworks, which involved the AFC, ABC Online and Triple J. Designed 'to generate innovative and compact online entertainment' over three years to mid-2000, 24 Stuff Art projects were produced with a total investment of more than $150,000. The site was reportedly well visited, averaging at one point between 40,000 and 60,000 hits a week. It won the Telstra/AFR Internet Award for best entertainment site in 1998/99.[234]

Cinemedia/ABC accord

The ABC and Cinemedia established a multimedia production accord in mid-1999. The aim was to 'stimulate the development of new and innovative Australian multimedia content'. Under the accord, the two bodies committed $3.2 million in cash and kind to support independent Victorian multimedia producers to develop online works. Cinemedia's half of the $3.2 million was provided in cash and the ABC contribution comprises cash and in-kind support. The accord guidelines state that submissions were sought for projects under a number of thematic categories: Online Arts and Culture; Radio Australia Online; the ABC Federation Project and Online Education. The projects supported were multimedia works, in some cases incorporating small amounts of video material.

As of March 2001, four projects had been completed and were available on the ABC website, with other projects due to be completed over the next year. Two of the completed projects were produced inhouse — *Artok* and *Charting the Pacific*. The other two completed projects are *Fest on the Net*, a net station broadcasting news, features, background information and reviews from the Next Wave Festival 2000; and *Why Bother About Patrick White*?, a multimedia work produced by independent multimedia creator Peggy Converse.

SBS

SBS New Media was established in February 2000 with two broad aims: to redevelop the SBS website to complement SBS radio and television programs; and to create new multimedia services based 'on SBS's distinctive style and specialist content areas'. Major initiatives in the first area are online news and current affairs content, radio audio-on-demand, and material complementing three SBS programs — *Going Home*, *Corroboree 2000* and *Bondi Banquet*. In the case of *Going Home*, a nightly topical drama program, viewers of the television show are encouraged to visit the site and contribute story ideas and feedback, providing information 'that's been very valuable for the program's production and the development of an online community of viewers'.[235]

In the area of new interactive services, the focus is principally on developing websites drawing on SBS television content at this stage, but new content will also be commissioned. SBS is developing these services with a view to them being deployed on various distribution platforms, including broadband and terrestrial digital television carriage 'as opportunities arise'. SBS calls these types of services 'Internet satellite' sites based on a business model 'designed to support content development through sponsorship and strategic partnerships'.[236] Will Berryman, SBS Head of New Media, commented that SBS is able to enter commercial arrangements with other outlets and will focus particularly on niche markets.[237] Sites developed to date are www.theworldgame.com.au developed in conjunction with sportal.com and www.theworldnews.com.au. Other sites being developed are an international cuisine site, www.theworldfeast.com.au, and a multicultural youth service.

Berryman pointed out that convergence can occur 'at the back end' by working with technology companies to change production methods. For SBS, this has meant using equipment bought for traditional IT purposes to make programs. New media work is being integrated into traditional production areas: 'We are converging production processes, and putting new tools in the hands of producers.' So, for example, a news journalist will send material to the website as well as to radio and television. SBS has 50 languages online and, as Berryman pointed out, operates Australia's only 100 per cent international news site. It also operates one of the most popular sports sites in Australia, the www.worldgame.com.au.

National Digital Access Initiative

Announced in April 2001, the National Digital Access Initiative involves a capital grant to screen development organisations in each state to establish digital production units. It has been established by the AFC in conjunction with Apple Computers Australia, Canon, Sennheiser and La Cie. The digital production units will include DVD computer hardware and software, digital video cameras and sound recording equipment. The units will allow filmmakers to carry out all aspects of production and finish a project on either DVD for television or cinema release, or stream it straight to the web. Based in screen development organisations, the units are mainly intended for use by emerging filmmakers.

State film agencies

In March 2001, Queensland film agency the Pacific Film and Television Commission (PFTC) announced an initiative in conjunction with production company, Red Heart (now Granada Productions) to identify young writers and animators in order to develop a new cross-media comedy series. The series will be delivered via a range of media platforms including print, radio, SMS text messaging, the Internet and cable television. Entitled *IT Girls*, it will follow the lives of three 'dynamic and contemporary' young women who work and study in various areas of information technology and the media. Red Heart was looking for writers and animators 'with fresh and original ideas who understand new communication technologies and how young people are accessing them'.[238]

In conjunction with regional pay television broadcaster Austar, the PFTC is also developing a 13-part cross-platform drama series, *Fat Cow Motel*, created by Queensland production company Hoodlum Entertainment. The PFTC has allocated $272,000 in development and production funding for the project. Hoodlum has also obtained a pre-sale and substantial equity investment from Austar Entertainment.

The PFTC advises that *Fat Cow Motel*, a Twin Peaks-style mystery thriller, will be delivered through Austar's cable television network and also through mobile phones, email and a dedicated website. Tracey Robertson of Hooligan Entertainment said that the audience will be able to watch the show on television, interact with it on the Internet and receive additional episodic plot insights via email and SMS messaging.[239] For example: 'Audiences will be able to help solve the mystery of *Fat Cow Motel* by getting mobile phone messages and emails from selected characters, or by viewing additional footage via the show's website.' The total budget for the project is $2 million and the producers were expecting to raise part of this from advertising and sponsorship associated with the website and other new platforms. Henry Tefay, PFTC Head of Production, said the project provided an opportunity for emerging producers to develop a major drama series for a cable television network. 'The fact that it crosses over into mobile phones and the Internet is terrific because it gives us an opportunity to explore new media and the issues of convergence and multiplatforming.'

NIDA/AFTRS interactive drama

NIDA's first major new media initiative was *Stage Struck*, an interactive CD-ROM produced under the Australia on CD program and released in late 1998. *Stage Struck* is an interactive theatre game largely directed at educational institutions. It has received considerable critical acclaim, including prizes such as the British Academy Award for Interactive Multimedia in 1998.

NIDA has been experimenting with interactive online drama in conjunction with AFTRS via two projects, *Byte Sized Theatre* and *Love Cuts*, both funded by a grant of $150,000 from DCITA. Proposals were sought for short interactive narrative or performance pieces for narrowband exhibition. Small amounts of funding were provided for 24 projects, with the completed works placed on the NIDA site in 1998.[240]

Love Cuts was written by David Low, based on a scenario by Amanda Morris, Head of Interactive Projects at NIDA, and Jason Wheatley, formerly of AFTRS, and directed by Denny Lawrence. The intention was to seek film or television directors who wanted to experiment with interactive drama. An aim was to stimulate discussion between film, television and new media people about the possibilities of interactive drama. Amanda Morris explained that the motivation was to test the view that drama is not suited to interactivity:

> There is a lot of talk about how people don't want interactive drama — that they just want to come home and be passive, and so on. Our view is that some people will want to interact with drama — how do you know until you get some product up?[241]

The project was scripted and filmed over a two-week period in 1998. Brainwaave worked with NIDA and AFTRS, providing the streaming expertise and other technological support. Post-production and completion has taken time, due to technical problems. The aim was to enable viewers to interact with the material and see their own sequences played back seamlessly.

Love Cuts was designed as a broadband product and discussions are taking place with Telstra about putting it on their broadband service. For Amanda Morris, the interesting aspect of broadband is the interactivity:

> Most broadband services are just putting clips up. But it's not television — they are not looking at the power of broadband. At Milia 2000 there were a lot of broadband people from Singapore, Europe, the UK and they were very excited about the potential of buying short films and documentaries. That's great, as it gives them a market but it is not really using the potential which is in interactivity.

In Morris' experience, while international markets have some interest in distributing Australian product, the obstacle is in getting it funded in the first place:

> One thing that hasn't been done is work on how any of this is going to be funded. Broadband people are looking for content and wanting to do deals based on revenue shares. But that won't get development and production funded.

Others in the industry echo these concerns. Will Berryman of SBS emphasised that the research and development process for content creation can take considerable time, citing a UK instance where Granada took two years to develop enhancements for a particular project. He commented that there is a lack of financial support for content development in Australia, with commercial operators mainly allocating available capital to infrastructure.

Towards a national broadband strategy

The public support for content development in Australia has been modest to say the least. By comparison, the Canadian Government has increased its support for new media content. The Government is investing C$108 million (A$140 million) in the production of Canadian cultural content on the Internet and to promote the development of the new media industry.[242] In making the announcement, the Government said:

> While the Government's 'Connecting Canadians' agenda has made Canada one of the most connected countries in the world, the challenge of creating and providing access to Canadian cultural content online in both official languages remains significant. Efforts to date by the Federal Government to promote the development of Canadian cultural content on the Internet have been preliminary and modest.

These earlier efforts include Telefilm Canada's Multimedia Investment Fund established in 1998 to provide C$30 million (A$39 million) over five years for interactive Canadian multimedia works for the general public.[243]

In the UK, the Department of Trade and Industry (DTI) helped to launch the Digital Content Forum, an industry body which brings together more than 20 organisations with an interest in digital content. The DTI advises it is working with the Forum to help implement the recommendations of the report, *UK Digital Content — An Action Plan for Growth*, dealing with issues such as the skills gap and promotion and marketing of the UK digital content industries at home and abroad.[244]

The Australian Interactive Multimedia Industry Association (AIMIA) pointed to the need for government support for digital content in a submission to DCITA in May 2001. AIMIA noted that government policy has assisted the development of infrastructure but argued that

'insufficient attention has been given to the other essential component for Australia's success in the global information economy – the development of a viable digital content industry.'[245] The submission pointed to Telstra figures on data from Australia which showed that Australia is by far a net importer of content with only modest level of exports.

According to AIMIA:

> We have a nascent digital content industry with the potential to produce and export digital media, but as a nation we have no strategies and no significant funding to support it.

AIMIA identified the following issues:

- the lack of direct financial support from government and other incentives to assist the development of the content sector;
- the complexity of managing intellectual property in the digital media area and the need for assistance in adopting developments in digital rights management systems and the management of cultural intellectual property;
- the lack of accurate quantitative and qualitative data about the Australian multimedia content industry;
- limited access for producers to affordable high-speed bandwidth; and
- the high cost for users of access to broadband networks, which means the critical mass of consumers required for commercial development of content does not exist.

The organisation made a number of proposals, including:

- the establishment of a body similar to the Digital Content Forum in the UK, which would maintain accurate information about the industry, and research opportunities and impediments to growth, both nationally and internationally;
- the establishment of a digital media fund to support the development and distribution of new and innovative content;
- investment financing similar to that provided through the FFC to the traditional film and television sectors with the object of complementing private-sector investment in content and content applications;
- making use of the Partnerships for Development Model to ensure that larger multinational corporations include content in their commitment to Australian research and development;
- formalised programs to identify and facilitate the distribution of Australian content to export markets;
- research and development funding for Australian companies developing commercial solutions to digital rights management; and
- intervention to ensure that producers of digital content have affordable access to bandwidth and that users have affordable access to broadband networks.

Several participants in this research saw the need for an overall strategy for content development. Such a strategy could include ways of encouraging alliances between content creators and technology companies, as well as direct funding for content development. It would also be useful to explore the possibility of extending new media accords to the commercial sector as has occurred between the ABC and film agencies. An important issue is the lack of Australian content packagers of broadband content. Operators stress that this inhibits their ability to carry local entertainment content. It may be necessary to foster the establishment of content packagers specialising in Australian content for broadband distribution,

particularly in the more high-risk areas such as short films, documentary, drama, animation, and children's material.

Accurate, quantitative and qualitative data about the Australian multimedia content industry is needed to monitor the development of broadband content services in Australia and to assess the balance between local and international material. Other potential research topics are:

• the Australian games industry and how it is positioned to pursue opportunities locally and internationally as broadband media develop; and
• an examination of new media content development strategies and programs overseas.

Digital Content Review

On 31 August 2001 the Government announced two initiatives 'to progress the development of content and applications in the creative industries of Australia.'[246] The first is a study of clusters in the creative digital industries to be undertaken by DCITA and NOIE. The Creative Industries Clusters Study (CICS) will review Australia's strengths and capabilities in producing digital content and applications, and look at ways the creative industries can form strategic alliances and develop new business models.

The second initiative is the establishment of a new grants program involving $2.1 million over three years for the funding of innovative broadband content to be administered by the AFC. In his media release Senator Alston, Minister for Communications, Information Technology and the Arts, referred to international trends which show that broadband takeup, especially by residential users will be driven by the development of appealing content. He said the fund would 'assist Australian practitioners to remain on the cutting edge and produce local product to compete against work produced overseas as the broadband content industry grows'.

The announcement also referred to the need for licensing models 'that adequately take account of new digital rights and technologies'. The Government intends to seek input on issues relating to digital rights management and investigate some of the main 'test bed' projects and public and private partnerships in operation.

These initiatives in response to AIMIA's submission and other industry input, can be seen as a significant step forward and will hopefully provide the basis for substantial, ongoing government support for Australian digital content production and distribution.

Notes

Chapter 1: Major Developments

[1]   'Asia: New economy — not just a pipe dream' in *International Business Asia*, 29 August 2000.

[2]   Productivity Commission, *Broadcasting*, Report No. 11, Ausinfo, Canberra, 2000, p. xx.

[3]   Op. cit., p. 105. On pp. 110-11, the Productivity Commission identifies four potential layers of convergence: in media products and markets; in media platforms; in corporate structures; and in media regulation.

[4]   *Broadband Daily*, 17 October 2000; www.broadband-daily.com/whats.htm

[5]   Quoted in 'Interactive television: Fulfilling the promise', *Broadcasting and Cable*, 10 July 2000, p. 32.

[6]   Quoted in *Television 2.0*, October/November 2000, p. 31.

[7]   Department of Trade and Industry and Department of Culture, Media and Sport, *A New Future for Communications*, December 2000, p. 19.

[8]   *Broadband Daily*, op. cit.

[9]   Anthony Perkins, 'Australia: Coming Soon — Interactive TV, *Asian Wall St Journal*, 3 October 2000.

[10] For example, Internet and media company Horan Wall and Walker is providing Optus with national entertainment content for WAP services: *Digital Broadcast Australia*, 10 November 2000, p. 8.

[11] Productivity Commission, op. cit., p. 121.

[12] For example, TPG TV, a major regional ISP and operator of fledgling pay TV service Boomerang TV, received 22 subscription broadcasting licences from the ABA.

[13] Mark Henning, 'AC Nielsen eRatings', *SMH*, 1 May 2001, p. 5.

[14] *Broadband*, 25 August 2000, p. 14.

[15] *Broadband Media*, 9 October 2000, p. 5.

[16] *Daily Telegraph*, 26 April 2001, p. 9. Given these numbers, a significant proportion of these would be visitors from outside Australia.

[17] *SMH*, 17 May 2001, p. 31.

Chapter 2: Broadband Internet

[18] *Broadband Daily*, op. cit.

[19] Interview, 20 February 2000.

[20] Craig Stephens, 'We like to watch', *SMH,* 16 January 2001, p. 28.

[21] Ibid.

[22] Reported in '*Big Brother* was big, bandwidth will be bigger', *Broadband Media,* 9 October 2000, pp. 5-8.

[23] *Television 2.0*, October/November 2000, p. 21.

[24] Interview, 24 October 2000.

[25] Interview, 16 October 2000.

[26] Quoted in *Television 2.0*, August/September 2000, p. 27.

[27] *Broadband Media*, 9 October 2000, p. 7.

[28] See '*Big Brother* was big, bandwidth will be bigger', op. cit, pp. 5-8. Digital subscriber lines allow data to travel at high speed over standard telephone lines and leave the same line open for phone calls. Digital subscriber lines are the main means of connecting those who do not have cable Internet access to broadband.

29 *The Australian,* 13 February 2001, p. 3. The number of DSL customers in the US grew 86 per cent in the fourth quarter of 2000 to 2.3 million. Cable access grew 19.1 per cent to 4.1 million users

30 *Screen Digest* compared actual connections at the end of 2000 with six different forecasts. Five of the six had forecast figures lower than those actually achieved: *Screen Digest*, April 2001, p. 155.

31 *Broadband Media*, 9 October 2000, p. 1.

32 'Special report: New Media', *Television Business International*, October 2000.

33 'The slow progress of fast wires', *The Economist,* 17 February 2001, p. 57. By early 2001, a number of service providers had pulled out of trials conducted by BT and the telecommunications regulator Oftel, as part of the 'local loop unbundling' process. This was due to concerns about BT frustrating access, and disputes between BT and internet service providers over who should bear the cost of setting up the ADSL network.

34 Dorothy Kennedy, 'Consumer profile,' *SMH,* 13 February 2001.

35 R. Mallari, 'Asia: New economy — not just a pipe dream', *International Business Asia*, August 2000, p. 18.

36 *Television 2.0*, January 2001, p. 31.

37 John Hazelton, 'To stream and protect', *Television 2.0*, January 2001, p. 22.

38 Op. cit., p. 23.

39 Op. cit., p. 24.

40 *Broadband*, 25 August 2000, p. 4.

41 *Broadband Media*, 9 October 2000, p. 9.

42 *Broadband*, op. cit., p. 16.

43 *Television 2.0*, January 2001, p. 7.

44 Australian Bureau of Statistics, *Household Use of Information Technology*, 8 May 2001, Cat. no. 8146.0. This study measures households as opposed to individual users within households. Another ABS survey that measures Internet accounts showed there were 3.4 million household subscribers: *Internet Activity*, *December Quarter 2000*, Cat. no. 8153.0.

45 AIMIA Submission to DCITA, April 2001. Sources cited are www.consult and top100.wheredidwego.

46 www.top100.com.au, accessed May 2001.

47 Red Sheriff, *The Top Ten Australian Websites in 2000*, 18 January 2001, www.redsheriff.com.au/cgi/news

48 Towards the end of 2000, industry reports (for example, Tom Kennedy of Beyond Online at the SPAA Conference) were of approximately 100,000 subscribers. Telstra has advised that its number have increased since. ABC New Media Director Lynley Marshall estimated in April 2001 that residential numbers were approximately 200,000: quoted by S. Bryden Brown, 'ABC video news on demand', *The Australian*, 'Media', 19-25 April, p. 9.

49 D. Kennedy, 'Broadband hope's hard truths,' *SMH*, 13 February 2001.

50 Paul Budde Communication Pty Ltd, *Australia — Broadband Market Forecast,* 12 December 2000.

51 *Digital Broadcast Australia*, 27 October 2000, p. 8.

52 Paul Budde, 'Telstra joins the band', *The Australian*, 4 May 2001, p. 24.

53 Reported in Jennifer Foreshaw, 'Broadband leading the way', *The Australian*, 27 March 2001, p. 35.

54 *Digital Broadcast Australia*, 27 November 2000, p. 20.

55 The site is regularly ranked in the top ten for Australian sites by Internet measuring group Red Sheriff. In March 2001, it was ranked eighth: www.redsheriff.com.au/cgi/news, 5 April 2001.

56   Interview with Sigrid Kirk, and Amy Smith, Director of Content and Programming, 8 December 2000.

57   ZDNet is a subsidiary of the US technology and commerce information company CNET Networks, which has sites in 25 countries (www.zdnet.com). TD Waterhouse is a US online financial services firm, which operates sites in six countries. Sportal.com.au is operated by sportal.com, 'the leading global provider of interactive sports content', which operates 10 sites around the world.

58   The programs involved are *Get Away, Sunday, Business Sunday, 60 Minutes, Weather, A Current Affair* and *Money.*

59   Sigrid Kirk and Amy Smith, op. cit.

60   Op. cit.

61   Ibid.

62   Ibid.

63   Ibid.

64   Ibid.

65   Quoted in Nicole Manktelow, 'Light, cash, action', *SMH,* IT, 13 February 2001, p. 1.

66   Smith, op. cit.

67   Kirk and Smith, op. cit.

68   Kirk and Smith, op. cit.

69   Kirk and Smith, op. cit.

70   Austar Media Release, 6 February 2001, in www.austarunited.com.au/press.asp

71   Interview, 13 December 2000.

72   chello Media Release, 5 December 2000, in www.chello.com/press_room/59/593796.html

73   *Digital Broadcast Australia*, 15 February 2001, p. 11.

74   Ibid.

75   Ibid.

76   Ibid.

77   Ibid.

78   Interview, 20 February 2001.

79   Telstra Ratecard, 6 March 2001, in www.bigpond.com/broadband

80   Op. cit.

81   Discussion with author, 9 July 2001. Announcement available at beyondonline.com.au/news

82   Op. cit.

83   Op. cit.

84   John Little, 'Rocky start for Net radio', *The Australian*, Media, 1-7 February 2002, p. 13.

85   Nicole Manktelow, op. cit.

86   Quoted by Nicole Manktelow, op. cit. He speculated that pornography could be provided on a restricted subscription basis, but 'won't work on an advertising model'.

87   Op. cit.

88   ACCC Media Release, 26 March 2001. Delivered in a lecture, by Professor Fels, entitled 'Regulation and the Future of the Telecommunication Industry', delivered as part of the Australian Telecoms Cisco Lecture series. After mandating access for third party service providers to Telstra's copper wires for the provision of ADSL (and other) services, the ACCC is monitoring how access arrangements are working.

Chapter 3: Interactive Television (ITV)

[89] *Broadcasting and Cable*, 10 July 2000, pp. 22-23.
[90] N. Meyer, 'Interactivity on the cusp', *Television Business International*, January/February 2000, p. 25.
[91] 'Special report: New media', *Television Business International*, October 2000, p. 116.
[92] N. Meyer, op. cit.
[93] *Television 2.0*, October/November 2000, p. 31.
[94] Datamonitors figures in *Television Business International*, October 2000, p. 116.
[95] *New Media Markets,* 2 February 2001, p. 5.
[96] N. Radlo, 'Pick your Own', *The Journal of the Royal Television Society*, August/September 2000, p. 9.
[97] *Television 2.0*, October/November 2000, p. 7.
[98] *Television Business International* January/February 2000, p. 28.
[99] *Television Business International* January/February 2000, p. 24.
[100] *Television 2.0*, August/September 2000, p. 24.
[101] *Television Business International*, January/February 2000, p. 26.
[102] *Television Business International*, December 2000, p. 24.
[103] *Television Business International,* January/February 2000, p. 26.
[104] Gary Liebermann, Morgan Stanley Dean Witter, in *Broadcasting and Cable*, 10 July 2000, p. 56.
[105] *Television 2.0*, October/November, p. 31.
[106] D. Schreiber, 'Game On', *Television 2.0*, September 2000, p. 17.
[107] Ibid.
[108] *Digital Broadcast Australia*, 15 February 2001, p. 13.
[109] *SMH*, 1 February 2001, p. 24.
[110] *Television 2.0*, August/September 2000, p. 19.
[111] S. Jacobs, 'Boxing Clever', *Television 2.0*, August/September 2000, p. 10.
[112] *Television 2.0*, October/November, p. 31.
[113] S. Jacobs, op. cit., p. 14.
[114] Josh Bernoff, 'Preparing for Smarter Television', *Television 2.0*, August/September 2000, p. 28.
[115] *Television Business International,* September 2000, p. 43.
[116] *Digital Broadcast Australia,* 15 February 2001, p. 13. Sponsored by Open TV, the conference was designed to bring developers working in the industry together, and aimed to focus on interactive television application programming and tools usage, business development opportunities and ITV markets.
[117] The information in this section is drawn from an interview with John Paul, General Manager, Interactive Television, Austar, undertaken on 7 November 2000, and the published sources as indicated.
[118] *Digital Broadcast Australia*, 4 August 2000, p. 2.
[119] Austar subsidises the set-top box, which costs the company about $200 a unit. Subscribers sign a 12-month contract: *SMH*, 20 February 2001, p. 3.
[120] A written comment to author.
[121] WIN Television Managing Director, Kerry Kingston, quoted in *The Australian*, 12 September 2000.
[122] Interview, 10 April 2001.
[123] Usage was highest in the 4.00-6.00 p.m. time period, continued at a lower level until 9.00 p.m., and generally reduced after 9.00 p.m.
[124] Digital Broadcast Australia, 12 December 2000, p. 5.

[125] *Canberra Times*, 11 September 2000, p. 14.

[126] *The Weekend Australian*, 31 March–1 April, p. 22.

[127] Jane Schulze, 'Optus in $200m punt on itv trial', *The Australian,* 20 May 2001 p. 17.

[128] The five free-to-air broadcasters can provide digital enhancements to their main digital programs, provided they are directly linked and contemporaneous with the main program — for example, different camera angles program.

[129] Sue Lowe, 'Sports and games to pay the way for interactive TV', *SMH*, 1 February 2001, p. 24.

[130] Dan Kaufmann, 'Interactive TV due next year', *SMH*, 28 November 2000, p. 3.

[131] NOIE, News Release, 'Interactive gambling', 28 June 2001, in www.noie.gov.au/projects/consumer/gambling/index.htm

[132] David Wood, 'Reality bytes', *Broadcast*, 29 March 2001.

[133] The principals and founders are Ron Downey (CEO), Louise van Rooney (Managing Director) and Derek Ellis (Creative Director), who together previously ran Terrabyte, a new media company in Auckland, New Zealand.

[134] Interview, 8 September 2001.

[135] Kirsty Needham, 'Exit now? At least you'll have the choice', *SMH*, 9 April 2001, p. 34.

[136] Interview, 8 September 2001.

[137] Massive Media Release, 29 August 2000, in www.massive.com.au

[138] Interview, 8 September 2001.

[139] Ibid.

Chapter 4: Is Content King?

[140] D. Schreiber, 'Platform deals', *Television Business International*, December 2000, p. 22. This issue of *Television Business International* previewed the 2001 major North American television market, Napte, held in January 2001 in Las Vegas, the theme of which was 'The Elements of Media Converge'.

[141] Ibid.

[142] Brian Buchanan, 'Reality dawns at Cannes', *The Australian*, 20 February 2001, p. 48.

[143] *Television Business International,* December 2000, p. 23.

[144] *Television 2.0*, October/November 2000, p. 6.

[145] Ken Kerschbaumer, *Broadcasting and Cable*, 10 July 2000, p. 34.

[146] John Holland, of 'branding company' Pittard Sullivan, quoted in *Television Business International,* December 2000, p. 22.

[147] Interview, 7 November 2000.

[148] *Television Business International,* December 2000, p. 23.

[149] John Holland, op. cit.

[150] *Television 2.0*, January 2001, p. 9.

[151] 'Special Report: New Media', *Television Business International*, October 2000, p. 112.

[152] Tom di Giovanni, PBS Director of Enhanced Programming, in S. Jacobs, 'PBS enters cable's walled garden', *Television 2.0*, January 2001, p. 10.

[153] P. Keighron, 'The big issue: Broadband survival', *Broadband*, 25 August 2000, p. 6.

[154] *Television Business International,* January/February 2000, p. 26.

[155] *The Myers Report*, 8 September 2000.

[156] P. Keighron, op. cit.

[157] *Encore*, 8 November 2000, p. 6.

[158] *Digital Broadcast Australia*, 11 October 2000, back page.

[159] *Encore*, October 2000, p. 6.

160 As is the case with ninemsn, the online property is owned and developed by the Nine Network in conjunction with Microsoft. This also operates as a portal providing a broad range of narrowband content and services as well as promoting Nine programs. The same applies with i7, the Seven Network's online property.

161 *Interactive TV Today (itvt)*, email newsletter from San Francisco-based www.itvt.com, 19 June 2001.

162 Tim Westcott, 'Change of Toon', *Television 2.0*, October/November 2000, p. 14.

163 Ibid., p. 15.

164 AFC, *Marketing Short Films Internationally*, August 2000.

165 *Television 2.0*, January 2001, p. 6.

166 www.internetnews.com/streaming 16 January 2001; see also www.Alwaysi.com

167 *Television Business International,* December 2000, p. 27.

168 *Television 2.0*, October/November 2000, p. 19.

169 *Television 2.0*, January 2001, p. 6.

170 Tim Westcott, op. cit., p. 14.

171 *Broadband*, 25 August 2000, p. 18, and in www.hahabonk.co.uk

172 *Broadband Media*, 9 October 2000, p. 4.

173 *Broadband*, 25 August 2000, p. 4.

174 Ibid., p. 3.

Chapter 5: New Media Content Creation in Australia

175 Available at www.afc.gov.au/resources/online/reports/ftvpireport/summary.html. 'Australian production' was defined as a project under Australian creative control where the key elements were predominantly Australian and the project was originated and developed by Australians.

176 *FFC Annual Report*, 1999/2000, p. 15.

177 Interview, 31 August 2000.

178 Becker Entertainment is also involved in independent film and television distribution in Australia and New Zealand, and exhibition through its ownership in Australia of the arthouse chain of cinemas, Dendy.

179 Interview, 12 September 2000.

180 The total value of audiovisual exports was $146 million in 1996/97. This dropped to $125 million in 1997/98 and returned to $145 million in 1998/99. The deficit in 1996/97 was $328 million. This increased to $440 million in 1997/98, and in 1998/99 increased again, to $493 million. Sales of Australian television programs declined from $117 million in 1996/97 to $98 million the following year. They recovered somewhat in 1998/99 to reach $111 million: AFC Research and Information, Supplement to *Get the Picture*, in www.afc.gov.au.

181 Prices paid in international markets for acquisitions are considerably lower than those paid for presales. Moreover, prices paid for cable/pay rights are generally lower than those paid for free-to-air rights. In addition, prices vary considerably between markets, with very small prices applying outside the major markets of the US and Western Europe. Arguably, sales of completed programs should bolster production companies' 'bottom lines', and thus contribute indirectly to the financing of new production. But this outcome is dependent upon having large libraries and a considerable volume of such sales.

182 Interview, 1 September 2000.

[183] ABA News Release, 29 June 2001, in www.aba.gov.au/about/public_relations/newrel_01/38nr01.htm. Under the legislative arrangements for the scheme, licensees and/or channel providers can incur a shortfall but this must be made up in the subsequent year.

[184] A high-definition program is defined as one originally shot in a high-definition digital video format, or a program produced in 16-mm or 35-mm converted to HD digital video 'without there being significant reduction in picture quality'.

[185] Jason Harty, 'Networks shoot for HD drama', *Encore*, November 2000, p. 48. Parker was reflecting the widely held view that there is no demand for high definition material from the traditional markets for Australian drama — Europe and the United Kingdom — because digital broadcasting there is in standard definition form.

[186] The other bidders — a Western Australian consortium, Australian Datacasting Corporation, and Barwix Pty Ltd, a company linked to regional broadcaster Prime TV — were interested in the licences for Sydney, Melbourne and Perth. Two licences in each licence area were on offer.

[187] Speaking about new media opportunities for film and television producers at the 2000 SPAA Conference.

[188] *Media Day*, 2 April 2001, p. 1.

[189] Cynthia Banham 'Digital Savvy Youth — the Answer to ABC's Woes', *SMH*, 30 May 2001, p. 3.

[190] Cynthis Banham, 'SBS to run digital TV for ethnic teenagers', *SMH*, 6 August 2001, p. 3.

[191] Ibid.

[192] These include Beyond Simpson Le Mesurier, Liberty and Beyond, and Beyond Reilly.

[193] Beyond Online was wholly owned by Beyond International until June 1999 when, in an underwriting agreement, control passed to Australian Asset Securities Ltd, a director-related entity. Beyond Online was subsequently floated on the stock exchange in March 2000.

[194] Investor Letter, found at www.beyondonline.com.au/investor.html

[195] Interview, 16 October 2000.

[196] Beyond Online Media Release, 9 August 2000, found at www.beyondonline.com.au/home.html

[197] Katrina Nicholas, 'Psychic chat a screaming success for TV series', *SMH*, 24 April 2001, p. 26.

[198] Beyond Online Media Release, 9 February 2001, found at www.beyondonline.com.au/news.html.

[199] Other sites developed by Beyond Online and found at the portal include sites for Beyond-produced feature films such as *Cut* and *Cubby House*; www.hotdogtheband.com.au, a site promoting the children's music group of the same name; and www.biennaleofsydney.com.au, which featured information on the 2000 Biennale of Sydney and the live webcast of Yoko Ono at the Sydney Opera House.

[200] *Beyond Online Annual Report 2000*, p. 4.

[201] Except where otherwise indicated, information in this section was provided in interviews undertaken on 1 September 2000 and on 14 March 2001.

[202] Jason Harty, 'Feature shoots while city rages', *Encore*, October 2000, p. 15.

[203] Department of Industry, Science and Resources, Occasional Paper no. 4, *Innovation in the Australian Film Industry*, p. 2, a paper prepared by an independent working group for a meeting of the Council held on 2 June 2000.

[204] Jason Harty, 'DCITA revives broadband project,' encoremagazine.com.au, 11 July 2001.

[205] A written briefing note provided to the author on 17 October 2000. Other successful children's titles published by Dataworks include *The Wiggles,* the *Hi-5 Activity Centre* and *The Magic Pudding Adventure*. See www.dataworks.com.au

206 Rachel Dixon, 'The interactive media industry in Australia', in AFC, *Get the Picture*, 5th ed., p. 37. In this essay, Dixon provides an overview of the interactive media industry as of 1998.

207 Op. cit., p. 38.

208 AFC, *Multimedia Catalogue*, 9th ed., January 2000.

209 Matthew Spencer, 'Aussies the worst for Net pornography', *Australian IT*, 27 February 2001, p. 34.

210 Information provided by top100 for the week ending 26 March 2001.

211 Nicole Manktelow, 'Lights, Cash, Action', *SMH*, IT, 13 February 2001, p. 1.1.

212 Media Release, 26 April 2001, in www.itvworld.com/news

213 Nicole Manktelow, op. cit., pp 1-2.

214 *Media Day*, 23 March 2001.

215 Interview, 30 August 2000.

216 Jim Buckell, 'Film files make urban dream', *The Australian,* Media, 5–11 April 2001, p. 9.

217 'We merge with itv world', Urban Cinefile feature, 26 April 2001, at www.urbancinefile.com

218 Katrina Nicholas, 'Itv world naps up a rare little earner', *SMH*, BizCom, 26 April 2001.

219 Interview, 13 March 2001.

220 Jason Harty, 'Mystery Clock clicks with cinematic website', *Encor*e, November 2000, p. 8.

221 Lynden Barber, 'Now screening in cyberspace', *The Australian*, 1 November 2000.

222 Ibid.

223 AFC, *Marketing Short Films Internationally*, AFC, Sydney, August 2000.

224 The seminar was organised by the AFC in conjunction with Popcorn Taxi. Speakers included Anne Rosselini, Acquisitions Manager for Atom Films, and a number of Australian short-film makers. The information contained here is based on notes provided by the AFC.

Chapter 6: Publicly Supported New Media Content

225 Paul Budde Communications Pty Ltd, *Australia Multimedia – Government Initiatives*, provides an overview of *Creative Nation* programs and some subsequent developments; available through www.budde.com

226 Other programs supported by DCITA include Australian Museums OnLine, which is developing some virtual exhibitions, and NAVA, which has received DCITA funding to develop VisualArts Net, which is both a community environment and a showcase for Australian visual artists.

227 The AFC publication *Multimedia: Where to Get Money, Information, Advice,* outlines federal and state government programs in the multimedia and information technology areas.

228 'Report of the Victorian Film and Television Industry Task Force', p. 79, available at www.arts.vic.gov.au/publications/filmtv.htm

229 AFC*, Annual Report 1999/2000*, Appendix 7.

230 Maureen Burns, 'ABC Online: A prehistory', *Media International Australia Incorporating Culture and Policy*, no. 97, pp. 91-103; Fiona Martin, 'Pulling together the ABC: The role of ABC Online', *Media International Australia Incorporating Culture and Policy*, no. 93, pp. 103-18; Fiona Martin, 'Encounters with evolving interactivity: ABC Online and the user-citizen', paper presented to Public Broadcasting Beyond 2000 conference, June 2000, University of Alberta Cultural Industries Research Centre, Banff, Canada.

231 AFC, Documentary Online Guidelines, at www.afc.gov.au/services/funding/guides/img/doco_online.html

232 Information provided by AFC. Names in brackets are the key creative teams for each project.

233 encoremagazine.com.au, 7 March 2001.

234 AFC, *Annual Report 1999/2000*, p. 22.

235 SBS, *Annual Report 1999/2000*, p. 52.

236 Ibid.

237 Interview, 10 April 2001.

238 Email from PFTC, 25 March 2001.

239 www.pftc.com.au/new/May/June newsletter

240 Can be viewed at www.nida.unsw.edu.au/interactiveprojects.

241 Interview, 2 November 2000.

242 The C$108 million is part of a total package of an additional $568 million in arts funding. 'There is also an allocation of C$56 million for the publishing and sound recording industries to help make the transition to the digital world', and an additional C$60 million to the public broadcaster, CBC, for Canadian programs: www.canadianheritage.gc.ca/bin/news.dll.

243 This is part of the Canadian Digital Cultural Content Initiative, which has a number of aspects, some of which are similar to Australian government programs, such as the digitisation of key collections of major cultural institutions: www.pch.gc.ca/cdcci-icccn/eng/intro_2.htm.

244 www.dti.gov.uk. Information on the Digital Content Forum is at www.dcf.org.uk

245 AIMIA submission, May 2001. Copy provided to author.

246 Senator Alston, Minister for Communications, Information Technology and the Arts, Announcement of Digital Content and Applications Review, available at www.dcita.gov.au/newsroom

Appendix 1: The Digital Television Regime

As discussed extensively in the media, the legislation applying to the introduction of digital television means Australia has opted for the HDTV route rather than a framework which would facilitate the greater introduction of new services.[1] The following focuses on what the arrangements mean in terms of new services rather than being a detailed description of the digital television transition arrangements.

Digital transmissions

The five free-to-air broadcasters (the three commercial networks and the ABC and SBS) commenced digital broadcasts on 1 January 2001 in the five metropolitan markets, and are to extend these to regional markets by January 2004. They have to provide standard-definition (SDTV) broadcasts at all times, and also meet minimum levels of high definition (HDTV) by the beginning of 2003. Existing analogue services are to be maintained until at least the end of 2008 and no new commercial TV licences are to be issued before the end of 2006.

Datacasting

The legislation makes provision for new datacasting licences. A datacasting service is one that delivers content in the form of text, data, music or speech, or visual images using the broadcasting spectrum. Detailed restrictions apply designed to ensure datacasters 'cannot offer a de facto broadcasting service'.

Datacasters cannot provide radio programs and most genres of television programs. They can provide 'information-only' programs, interactive services such as home shopping, banking and bill-paying, educational programs, email and interactive games.[2] They can also provide 'walled gardens' of internet content, provided this does not conflict with the genre restrictions, and general internet access, subject to anti-avoidance provisions aimed at preventing such services being used to circumvent the genre and audio restrictions.

Existing broadcasters cannot bid for datacasting licences. However, they can use part the spectrum they have been allocated to provide datacasting services, if and when they are not using it for digital broadcasts. In these circumstances, they have to pay a charge for the datacasting use of the spectrum.

Multichannelling

Commercial broadcasters are prevented from multichannelling except in limited circumstances, until a review in 2005.

The ABC and SBS are able to multicast certain programs including regional programs, educational programs, science programs, arts/culture-related programs, children's programs, history programs, foreign-language news bulletins, ABC-produced international news programs, stand-alone international social documentaries and 'an occasional' stand-alone drama program. Amongst the program types excluded are adult drama series and serials, documentary series, local one-off documentary programs, news and current affairs, quiz shows and infotainment programs.

Program enhancements

The five free-to-air broadcasters can provide digital enhancements to their main digital programs, provided they are directly linked and contemporaneous with the main program.

Examples include different camera angles, player rankings and career highlights, or additional information about a segment in a lifestyle or magazine program. Enhancements cannot amount to a separate multichannel program.

[1] The prohibited program types are drama, current affairs, sports (other than sports news), music, infotainment or lifestyle, documentaries, reality television, children's entertainment, variety entertainment, quizzes or games and comedy or programs which consist of a combination of these genres. Datacasters can transmit *extracts* of up to ten minutes of such programs. Restrictions also apply to 'Category B' programs such as news and current affairs, financial or business information bulletins and weather bulletins, meaning such programs cannot exceed ten minutes and cannot be joined together with similar segments to exceed ten minutes.

[2] Information-only programs are those which do not have 'a significant emphasis on dramatic impact or entertainment'.

Appendix 2: AIMIA Awards 2000 — Shortlisted Entries

Best Children's Game/Entertainment

Name	Format	Company	Location
Disney Australia	*www.disney.com.au*	Walt Disney Internet Group International	Australia/NZ
The Wiggly Circus	CD-ROM	Dataworks	VIC
Q Sport DisQ	CD-ROM	Q Multimedium	VIC
* Oz — The Magical Adventure	CD-ROM	Sausage	NSW
Zanyfun	*www.zanyfun.com*	Webmatchit Interactive	QLD

Best Adult Game/Entertainment

Name	Format	Company	Location
Jigsaw Puzzles featuring sea creatures of the Great Barrier Reef	CD-ROM	Eurekamultimedia	
* Shanghai Noon	*www.shanghai noon.com.au*	Spin New Media	VIC
Channel (V) Pizza Haven Web game	*www.channelv.com.au/ games/pizzahaven/pizzahaven_game.html*	Massive Interactive	NSW
YOKEM	*www.newtechmedia.com.au*	Newtech Media	NSW
Rememory: Real People, Real Stories	*www.rememory.com*	Rememory.Com Pty Ltd	QLD

Best Arts and Cultural

Name	Format	Company	Location
Making Chunky Move	CD-ROM	Drome Media	VIC
'Pretty Aprons'— From My Perch	CD-ROM	Alyssa Rothwell	NSW
Powerhouse Museum: Treasures of Ancient Greece	*www.phm.gov.au/ancient_greek_olympics*	Massive Interactive	NSW
* Strange Cities	CD-ROM	Tatiana Pente	NSW
Bangarra Dance Theatre	*www.bangarra.com.au*	Select Multimedia	WA

Best Children's

Name	Format	Company	Location
Kidznet	*www.kidz.net.au*	Hyro.com	QLD
Petromania	CD-ROM	fusion	SA
The Playground	*www.abc.net.au/children*	ABC Sydney	NSW
My first reading and spelling words	CD-ROM	Eureka Multimedia	NSW
Iread	*www.iread.com*	Scholastic Australia	NSW
* Oz — The Magical Adventure	CD-ROM	Sausage	NSW
Nambur Gambai	CD-ROM	CALC Multimedia	VIC

* The winners in each category are marked with an asterisk. *Oz — The Magical Adventure,* also won the Best of the Best CD-ROM title.

Source: The Australian, 24 October 2000, p. 51 and www.aimia.com.au

Appendix 3: Australian Use of Entertainment Sites

Hitwise Top Entertainment — all sites, week ending 26 May 2001

1   www.ninemsn.com.au
2   www.napster.com
3   www.bigbrother.com.au
4   www.abc.net.au
5   www.real.com
6   www.nbci.com
7   www.windowsmedia.com
8   www.pogo.com
9   www.zone.com
10   www.planetarion.com

Source: Information provided by Hitwise Australia
Note: All sites includes Australian and foreign sites.

Red Sheriff — Top Australian entertainment sites, April 2001

Site	*Unique visitors*
abc.net.au	875,000
bigbrother.com.au	688,000
citysearch.com.au	384,000
greaterunion.com.au	275,000
ticketek.com.au	266,000
emailcash.com.au	250,000
hoyts.com.au	220,000
village.com.au	171,000
entertainment.bigpond.com	129,369
ticketmaster7.com	127,000

Red Sheriff — Top international entertainment sites, April 2001

Site	*Unique visitors*
real.com	866,000
windowsmedia.microsoft. com	419,000
iwin.com	338,000
flowgo.com	284,000
napster.com	273,000
netbroadcaster.com	220,000
shockwave.com	213,000
twistedhumour.com	206,000
gohip.com	192,000
imdb.com	178,000

Source: Information provided by Red Sheriff
Notes: Figures are for Australian visits to the respective sites.
          'Unique visitors' are the number of individual visitors to the sites in the reporting period.

There are differences in categories between Red Sheriff and Top 100. For example, it appears that Red Sheriff treats ninemsn.com.au as a generalist site, not as an entertainment site. Ninemsn regularly appears in the top position in Red Sheriff's list of top ten Australian sites.

Appendix 4: Games Development in Australia — A Note

There appears to be little readily available information on the structure and economics of the Australian games industry. It seems that games developed by local companies represent a small share of the overall games industry in Australia. The Office of Film and Literature Classification (OFLC) classification figures provide some indication, though they only cover games on the market in a physical form as CD-ROMs or cartridges, and do not include games accessible online. In 1999/2000, OFLC figures showed that Australian games represented 2.1 per cent of all games classified. The major source of games was the US, with a 44 per cent share, followed by the UK with 29 per cent and Japan with 12 per cent.[1] P. David Marshall notes that the making of electronic games is a fundamentally international industry dominated by Japan and the US.[2] According to Marshall, Australian games producers are reliant on larger American and Japanese companies for distribution.

On the other hand, games development has grown in Australia in recent years. There are now more than 40 games development companies across Australia, mainly located in Melbourne, Sydney, Brisbane, Adelaide and Perth.[3] It appears these are mostly involved in developing console games though some also produce games for personal computers. Games companies range from start-ups and more established Australian-owned companies to operations established by some of the major international gaming companies. For example, in 1999 Infogrames, considered to be the world's second largest computer games company, bought local development company Beam, developer of the internationally successful game *The Hobbit*. The new company Infogrames–Melbourne House, is now Infogrames headquarters for development and publishing in the Asian region. US publisher THQ, also has its Asia-Pacific headquarters for development, publishing and distribution in Melbourne. A number of Australian companies, such as Blue Tongue Software, Torus Games and Tantalus Interactive, are involved in developing console games for the global market.

As part of its strategy of positioning Victoria as a centre for games development, the Victorian Government launched Game Plan at the end of 2000. A 'statement of support for the computer games industry', this aims to improve infrastructure, and develop local businesses and skills.[4] There are various aspects to the strategy including:

• improving networking between the venture capital and computer games industries;
• expanding the trade fairs and missions program which helps local firms participate in international exhibitions and industry events;
• promoting careers in computer game development and developing curriculum for the sector; and
• measures aimed at assisting emerging games developers.

Access to bandwidth has been identified by the industry and Victorian Government as a key issue, with Victorian Minister for State and Regional Development, John Brumby, saying that the lack of affordable broadband access was a serious inhibitor to the spread of technologies.[5]

The Australian Games Developer Association was formed at the end of 1999 with the aim of fostering the development of the local industry and acting as a lobby group in respect of federal and state governments. The Australian Visual Software Distributors Association (AVSDA), which represents the major distributors of computer games, has advised that it considers

emerging broadband services to be a major issue for the local industry and one it plans to address in the near future.[6]

[1]   OFLC figures as reported in AFC, *Get the Picture*, 6th edition, forthcoming.

[2]   P. David Marshall, 'Video and Computer Gaming', in S. Cunningham and G. Turner (eds), *The Media in Australia*, 3rd edition, Allen & Unwin, Sydney, 2001.

[3]   Multimedia Victoria, *e3 2001*, brochure produced for e3, international trade fair.

[4]   Multimedia Victoria, *Game Plan*, www.mmv.vic.gov.au/gameplan.

[5]   Australian Games Developer Conference, article 30/11/99, at pc.ign.com/news/12570.html.

[6]   Comment to author by Megan Simes, Chief Executive, AVSDA, 12 June 2001.

Useful Resources

Publications

• *Australian*
Digital Broadcast Australia
Encore
Get the Picture: Essential Data on Australian Film, Television, Video and New Media,
     Australian Film Commission, Sydney
Internet.au
Media International Australia incorporating *Culture and Policy* journal,
     Australian Key Centre for Cultural and Media Policy, Brisbane
Sydney Morning Herald, business pages and Tuesday IT section
The Australian, business pages, Tuesday IT section and Thursday Media section

• *International*
Broadcasting and Cable
Broadband Media
New Media Markets
(Information on the above available from UK-based Informa Publishing Group at
www. informamedia.com.au)
Screen Digest
Television Business International
Television 2.0

Some sites

• *Information/comment*
www.broadband-daily.com, information on broadband markets from US-based Broadband
Intelligence Inc
www.budde.com, Australian consultants and market research company
www.itvt.com, US-based site providing information on interactive television
www.itv-drama.org, US non-profit organisation formed to promote interactive drama

• *Government sites*
www.afc.gov.au, Australian Film Commission
www.canadianheritage.gc.ca, Canadian Government cultural site
www.cinemedia.net, Victorian film, television and new media agency
www.dcf.org.au, UK Digital Content Forum
www.dcita.gov.au, Department of Communications, Information Technology and the Arts
www.dcms.gov.uk, Department of Culture Media and Sport, UK
www.dti.gov.uk, Department of Trade and Industry, UK
www.mmv.vic.gov.au, Multimedia Victoria
www.nida.com.au, National Institute for the Dramatic Art
www.noie.gov.au, National Office for the Information Economy
www.pftc.com.au, Pacific Film and Television Commission, Queensland

• *Industry sites*
www.aimia.com, Australian Interactive Multimedia Industry Association
www.beckerentertainment.com.au
www.beyondonline.com.au
www.brilliantdigital.com
www.iceinteractive.com.au
www.itvworld.com
www.massive.com.au
www.mediaworld.com.au
www.mysteryclock.com
www.screentime.com.au
www.thebasement.com.au
www.urbancinefile.com.au
www.whoopi.com.au

• *Broadband services — Australia*
www.bigpond.com/broadband
www.chello.com.au
www.optushome.com

About the Screen Industry, Culture and Policy Research Series

The screen industries in Australia have been well served by high-quality research and information services established over some considerable period of time. They have underwritten policy development, provided government, industry professionals, journalists, students and the general public with accurate and well-organised data, and been highly regarded internationally. In addition, the industry is also served by lively journalism in periodicals and dailies.

However, there is a need for well-written and well-presented research which takes a longer-term perspective, and which addresses issues of direct relevance to those who participate in, analyse, commentate on, or study the industry. This Screen Industry, Culture and Policy Research Series is designed to address this need.

Each report in the series will review trends over a longer period or a wider framework than usual or possible in other information sources for the industry. Reports will bring substantial international comparative perspectives to bear on issues affecting the local industry. The series will seek to add value to debates central to the screen industries.

The series is a collaboration between the Australian Key Centre for Cultural and Media Policy, CIRAC (Creative Industries Research and Applications Centre) and the Australian Film Commission. Each have ongoing commitments to providing relevant research services to the industry and the community.

The **Australian Film Commission (AFC)** is the Commonwealth Government's primary development agency for the film and television industries in Australia. It provides support through a range of measures. These include commissioning and publishing research into issues affecting film, television and interactive media in order to encourage informed debate, analysis and policy development.

Creative Industries Research and Applications Centre (CIRAC), the research and applications component of the new Creative Industries Faculty at the Queensland University of Technology (QUT), was launched in 2001 to contribute to the research and applications needs of the creative industries locally, at a state level, nationally and internationally.

CIRAC aims to:

- map the growth and dynamics of the sector to show the extent and value of the creative industries in Australia and overseas;
- assist the growth and diversification of creative applications in the new information economy, providing know-how and facilities to partners from government to micro-business;
- produce both creative intellectual property for commercialisation, and cutting-edge industry-oriented research; and
- contribute to the development of a creative industries precinct, working with co-locating partners.

The **Australian Key Centre for Cultural and Media Policy** was established in July 1995 under the Australian Research Council's Research Centres Program. It is located at Griffith University in Brisbane.

The Key Centre aims to establish a theoretical, organisational and institutional basis for ongoing nationally coordinated provision of high-quality teaching, research and consultancy activities. These are intended to:

- lead to an enhanced understanding of cultural and media policy institutions and processes;
- serve the policy needs of the Australian cultural and media industry, government, non-government and community sectors; and
- provide the basis for exporting academic services by placing Australia at the forefront of international research and training in these areas.

Contact the AFC or CIRAC for further information about the series.

Professor Stuart Cunningham,
Director, Creative Industries Research and Applications Centre (Series Editor)

Catherine Griff,
Policy Advisor, Australian Film Commission

Other Titles in the Series
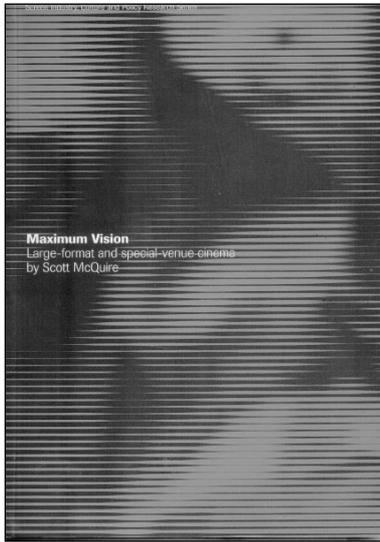
Maximum Vision:
Large-format and special-venue cinema

Scott McQuire
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In *Maximum Vision*, Scott McQuire analyses the increasing popularity of large-format and special-venue cinema and discusses the key issues facing these sectors in their quest for continued expansion. This is absorbing reading for anyone interested in the future of cinema.

• There is a growing interest in the commercial potential of the large-format medium, and a new endeavour to attract a broader audience to the giant-screen 'experience'.

• Image size and quality is at the heart of the appeal. This is both a strength and a burden.

• Beyond current debates about whether large-format production should be oriented towards 'education' or 'entertainment', 'documentary' or 'fiction' is a range of issues to do with the changing nature of LF exhibition and marketing.

• Other models for large-format exhibition include destination cinema for predominantly tourist markets and an emerging trend for multiplex developments which combine LF and mainstream. These developments reflect the growing importance of special-venue cinema, including 'film ride' simulators in theme parks and urban entertainment complexes.

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Other Titles in the Series

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Australian cinema successes in the 90s

Mary Anne Reid
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• Love and Other Catastrophes was the quintessential 'low-budget/no-budget' feature. Its story is a cautionary tale as well as a guide to financing your own film.

• *Muriel's Wedding* was one of the 'event' films of the '90s. How and why does a breakout hit happen? It almost didn't in this case, says director P.J. Hogan.

• And through *Kiss or Kill,* Reid explores the viability of the 'specialist' release and the role of diversity in a robust national cinema.

Using interview-based case studies with the principals and their Australian distribution agents, Reid discusses the pros and cons of different financing models, along with the often arduous job of procuring distribution deals.

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