INTERACTING WITH YOUR TELEVISION

Key Lessons From The UK

A Report by BEN CUNNINGHAM

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1. INTRODUCTION

The Kenneth Myer Foundation is set up to encourage Australian producers to go overseas and study a new or developing area of Film and TV, and bring that knowledge back to Australia.

My proposal to the Foundation was that digital interactive television is coming to Australia, so I would like to learn about it from UK producers who are the world leaders in this form of broadcasting.

By seeing what is happening, where its going, and perhaps what mistakes were made along the way, it is my hope that Australia can benefit from this 'advanced test model', so that our transition to digital interactive TV may be a smoother one.

This booklet is intended for 3 different audiences: TV students, producers new to interactive TV, and iTV professionals interested to learn from the mistakes made in the UK.

I have divided this Booklet into 3 main sections so these audiences can enter at their appropriate level:

1. What's it all about – the basics of interactive TV
2. What's happening now – current UK services and how they are made
3. Key lessons for Australia

My information gathering involved a combination of work at BBC interactive, interviews with leading producers and consultants in the UK, and academic research. But just as importantly, I used of the interactive services across the broadcast platforms of satellite, cable and free to air digital TV to make up my own mind about what was worth watching.

The nature of this material means it is likely to become obsolete quickly. So I have included at the end a list of web resources which will stay current long after this report runs off the printers.

I am not pushing a product and I do not have an agenda. The opinions expressed in this report are based on my own observations and experiences or are clearly marked as those of my interviewees.

I hope you find some of them useful.

Ben Cunningham
November 2003

SECTION A: WHAT'S IT ALL ABOUT THEN?

For those new interactive TV, I will explain some key concepts and essential background information to help you make sense of the rest of this report.

This section covers why digital TV is being pushed as the next development in broadcasting, the 3 categories of interactive TV as it now stands, and the 4 main broadcasting platforms in the UK.

2. DIGITAL TV

Digital TV is coming to mainstream Australia. Regional pay TV operator Austar is broadcasting digital satellite to the rural areas, free to air TV has been broadcasting digital in parallel with analogue since 1 January 2001 and Foxtel is rolling out a digital network some time in 2004.

Why should we care about digital TV? Because digital TV, when fully realised, means more choice, more participation, more functionality and more robust picture and sound. We will be able to do a lot more with our TV's, just like we can do a lot more with our mobile phones now.

For example, with the press of a button we will be able to:
Vote on Australian Idol
Play along with 'Millionaire'
Bet on a football game
Check the lotto numbers
Request Songs on Channel V
Find out more about a product
Request a movie to watch
Play games on your TV

These extra things we can do through our TV are made possible by interactive television. Plenty more uses will evolve over time.

Interactive TV will not change our lives dramatically in the short term. But as with the Internet and mobile phones, it will gradually be embraced by most people, because it will make our consumption of media even easier.

Why does the Government care so much about introducing digital TV?

Because digital broadcasting is a more efficient use of the spectrum. It can provide a superior transmission service and allows the Government to auction off the old analogue spectrum to other businesses for a considerable profit.

In the UK, digital TV was launched in 1998 and 5 years on has reached a penetration of 50%. This number is expected to accelerate now that the free to air digital service 'Freeview' has been launched (see chapter 8).

Currently, Australia has a 0.7% digital TV penetration, but this is expected to grow with digitisation of subscription TV and falling price of digital receivers.

So Digital TV is coming to Australia, along with new opportunities this changing landscape will provide.

3. INTERACTIVE TV

On the way to London with Qantas, all the passengers were handed headsets to watch our individual screens offering a choice of movies, TV shows, radio stations, news, flight information or games to play.

There was so much great content to choose from that between meals and sleep breaks I didn't even manage to do everything that the entertainment system offered before landing at Heathrow.

I'm sure if I did a survey on that flight, most people wouldn't know what interactive TV was. But they were using it and enjoying it, without even questioning the technology.

There is an argument that interactive TV is a contradiction, because television is a passive experience. But people have been actively engaging with their TV's for years. Whether it be cheering on their football team, hurling abuse at politicians, sending in letters or telephoning the studio.

Interactive TV is an umbrella term covering all the ways technology is making it easier for viewers to engage with the content on TV. Now people can email, SMS, or press the red button on their remote control to vote, send messages or select different content.

Currently, I like to divide interactive TV into 3 categories:

1. Pre existing interactivity
2. 24/7 services
3. Enhanced Programming

We will take a quick look at each of these in turn:

PRE EXISTING INTERACTIVITY

Both 24/7 services and enhanced programming require an expensive infrastructure to be set up before they can be deployed.

Viewers require a digital set top box, usually with a back channel via modem or cable. Broadcasters require a network of digital transmitters, satellites or cable. They also need a multi streaming area and technical unit where all software and other applications are tested and played out.

But interactive technology already exists which does not require this expensive infrastructure.

SMS messaging or voting, **premium rate telephony**, **email** and **websites** are simple ways for audiences to interact with the shows content and influence its outcome. This interactivity suits the free to airs better, as it doesn't require the expense of setting up the backend infrastructure.

These technologies are already imbedded in the everyday lives of the public. So interactivity can be enjoyed now, without having to wait for a mass conversion to digital television. Furthermore, SMS and premium rate telephony makes money.

Australian Idol used SMS and premium rate telephony to get audiences to participate and generate large volumes of revenue. This was a windfall for channel 10, who could add SMS revenues to the revenues of advertising, sponsorship, product placement and merchandising. This show has been a ratings and financial success through using existing interactive technology found in the hands of most consumers, the mobile phone.

Even in the UK, where 24/7 and enhanced TV infrastructure is well established, they continue to use this simple interactivity.

Channel 5 is teaming up with BskyB to launch a 'Flaunt Chart Show' where the playlist is determined by SMS votes cast by viewers the previous week.

Saturday Kitchen on BBC 2 is a cooking show where the viewers vote for the dessert they would like to see prepared at the end of the show. Voting is done by telephone. Viewers are also invited to send in questions for the chefs by telephone, email or interactive messaging on their remote controls. I worked on the show as an intake producer, operating the software which collated all the viewers votes and questions.

Websites provide amazing levels of interaction, allowing users to really drill down into the detail of the subject matter. The Internet is conducive to information gathering and is often described as a 'lean forward' application.

The website for Big Brother 1 in the UK recorded 3 to 3.5 million page impressions per day during its run.

The web is still often the smartest choice for an alternative media platform. It is now expected that all TV shows have a web presence. The web has even given birth to its own TV shows. (see 'Celebdaq' and 'Fightbox' chapter 5)

Broadband is growing in popularity and provides very satisfying levels of media rich interactivity. Music, Games, Photographs, films can all be enjoyed at high resolution. As broadband becomes more widespread, I expect to see its applications become even more complex and entrenched in our lives. (see the BBC's broadband experiment in Hull in chapter 4)

24/7 SERVICES

These are services accessible any time of the day or night, unrelated to scheduled programming. A lot of these are similar to services you can get through the Internet, but specially adapted for television. Most of these services attract a small charge of 50 pence or more to access them via a modem. Typical services available in the UK include:

Electronic Program Guide (EPG)
This is the essential navigation system in a multi channel world. An interesting by product of the EPG is its tendency to encourage genre based viewing. What do you feel like watching? music, documentaries, movies?

Gambling
Sports betting, horse racing, lotteries and casino style games are available in all Sky TV homes. This is an area of large potential revenue generation, but requires careful regulation for obvious reasons.

Gaming
TV Games are quite rudimentary at the moment but are becoming more sophisticated. They are usually arcade style games, or based on TV game shows but include kids games and storybooks.

News
24/7 news services started out as text based articles but Sky news and BBC news are now offering multi stream looped video news. So viewers anytime can access local, world, business, sport, entertainment, and science news. The BBC is pushing for digital technology to enable really local news services to be enjoyed by the regions.

Weather
Forecasts around the country can be accessed from the text menu.

Movies
Pay per view near Video on Demand (VOD) movies are looped every 15 minutes over the large number of digital channels on cable & satellite.

Community Noticeboards and Data services
These include classifieds, community notices, dating and horoscopes.

Communication:
Messaging via T-mail or texting through your remote control can bring communication to the masses without a PC.

T-Commerce:
Through the TV, viewers can browse products & make purchases by pressing buttons on their remote or making a phone call.
Products include food, general retail, mobile phone (ring tones, games, logos, top ups) banking, gas, electricity, travel and events.

Government information and services
As part of the UK governments online strategy, they are offering access to information on jobs and money, local areas, health, learning, home and family and public transport.

Customer service
Subscription TV allows viewers to access their accounts or get technical help.

THE MAIN 24/7 INTERACTIVE SERVICE PROVIDERS IN THE UK

SKY ACTIVE
Subscribers to BskyB (the digital satellite pay service) can access all the above services through pressing the ‘interactive’ button on their remote. This takes them to Sky Active. Most services attract a call rate of approximately 50p.

BBC
When BBC viewers press the red or ‘text’ button on their remote they access the BBC’s 24/7 text and information service called the ‘BBCi bridge’.
Viewers can watch looped video of the latest news, weather, sport and business updates. Soon they will be able to access looped video of last weeks prime time highlights. They can access text content related to current programming, the TV Guide, Cbeebies games and storybooks for children, as well as static news, sport and weather, road and rail information.

Viewers can also vote or text message through the BBCi bridge. So this is the quickest way for the BBC to set up viewer interactivity.

TELETEXT
This is the oldest digital 24 hour service in the world!

Teletext is a TV data service available in the UK since it was launched by the BBC as Ceefax and ITV as Oracle in 1974. It was digital information sent through an unused spectrum of the TV signal.
It was widely used to access news, weather, finance and sport results. But a very popular aspect was cheap last minute holidays you could buy only through this service. The market for Teletext Holidays has seen new competition from the internet, but old habits die hard, and this continues to be a popular service in the UK.

ENHANCED TV

Enhanced television is the name given to interactivity broadcast concurrent with or following on from a scheduled program.

This interactivity can be extremely expensive multi streaming or the enhancement could be HTML data and graphical enhancements which appear as overlays on the video.

Below are examples of enhanced TV demonstrating a variety of enhancements from the simplest to the more complex.

Note that many applications use pre existing interactivity to include people who do not yet have digital TV. This is an important consideration during the transition from analogue to digital.

Big Brother

Viewers are asked to vote for the housemate they want to evict, using SMS, telephone or interactive messaging through their TV remote.

The new series of Big Brother in 2003 had a 24 hour multiple stream live feed of the house accessible via a red button call-to-action which features during Big Brother programming.

Interactivity via the Sky platform is a little more ambitious with viewers first reaching a menu screen that leads to a variety of services. There is a mosaic/vote application and a Big Brother quiz. There are also opportunities to bet on events in the house with Surrey Sports. In the Sky Gamestar area there is a Pac-Man style Big Brother "Pay-per-Play" game charged at 50 p via a premium rate call.

(broadband bananas July 2003)

Top of the Pops

A surprisingly popular application on this UK Pop show was the 'sing along karaoke' application. By pressing red on the remote, viewers can see the words to the song synchronised with the music.

Who Wants to be a Millionaire?

Play along multi choice game shows are a fantastic application of enhanced television.

Launched on BskyB in 2003, this application allows viewers to answer the questions posed by the presenter at the same time as the studio contestants. To answer each question, the viewer enters the number corresponding to their chosen answer on their Sky remote control. Viewers compete not only on the amount of questions answered correctly, but on the time taken to answer. Both these elements contribute to the viewer's position in a leader board. Points at each new round are set to zero - the final scores are totalled at the end of the program.

One feature that contributes to the value of advertising around the program is that the application discourages viewers from channel hopping during the ad-breaks. Skipping channels exits the application and loses the viewers' score. (broadband bananas July 2003)

Wimbledon Tennis

The BBC's interactive Wimbledon service is an excellent execution of an iTV proposition with the linear program.

This service provides multiple video feeds from 5 tennis courts. So a viewer can choose the game they'd like to watch. Other enhancements include an SMS chat or a live update of scores. Outside normal hours of play, viewers can use the menu to access match highlights and interviews. The service was available on Sky Digital and most features were also on Telewest and Freeview.

However broadcasting 6 streams (1 mosaic menu and 5 courts) for one program is extremely expensive. The BBC invests in this type of flagship application because its popularity helps the BBC to drive its digital agenda.

Wimbledon had 4million viewers in 2003 on Dsat. The click through from the available audience was 37%, with 63% staying for more than three minutes. This was judged to be a strong performance and a terrific service by the viewers.

The Chelsea Flower Show

The English are mad for their gardening, and this flower show is the jewel in the summer calendar, this year attracting the patronage of the Queen and Ringo Starr. The Chelsea Flower Show is the Big Day out for middle aged people, with some gardeners spending up to 1 million pounds for the chance to win 1st place.

I worked with the BBC's interactive team to make the interactive elements of this service which is in its 2nd year.

The TV show is live for a week from the grounds of the garden, and the interactivity is broadcast simultaneously.

The idea is that if you can't get to the Chelsea show physically, or afford the £60 ticket, you can enjoy it interactively.

Viewers have a choice of 3 streams from a mosaic menu. On stream 1 is the live TV show. Stream 2 shows a looped video of garden tours (5 minute tours of the gardens in competition, with 6 new gardens a day). Stream 3 has expert gardening tips (with 6 new tips a day).

Also, you can vote using your red button for the 'people's choice award' which was announced at the end of the week.

Chelsea Interactive used the same BBC format as Wimbledon except it used 4 streams instead of 6.

Walking with Cavemen

This was an ambitious BBC documentary, following on from their success with Walking with Beasts.
The viewer journeys with our earliest ancestors, to witness life, death and drama from millions of years ago.

The interactive TV service provides viewers with additional layers of factual evidence behind the remarkable discoveries and following each program, viewers were presented with a 10 minute documentary telling the stories behind the key fossil findings that transformed our knowledge about human origins.

The Walking with Cavemen website (www.bbc.co.uk/science) is also an impressive stand alone resource containing fact files on each hominid, family trees and in-depth information. There is also a flash game called 'Ape to Man' requiring the player to complete 7 tasks mimicking key milestones in mans development.

Advertising

Some interactive advertising can be classed as enhanced programming, as it allows the viewer to interact with the broadcast commercial in real time or switch to a dedicated stream.

And some are more of a hybrid application, where an enhanced advert leads the consumer to a 24/7 T-Commerce application.

A Dominoes interactive advert on Sky links directly to the Dominoes shop on Sky Active, where the viewer can browse or order pizza's.

Some interactive advertising is more like direct marketing, where a viewer might press red to receive a catalogue in the mail.

Music Videos

Interactive Producer Weapon7's recent work for EMI saw the first interactive pop video broadcast on MTV2 in the UK for the rock act "Hell is for Heroes".

The approach was different since there was no obvious red button prompt, but by pressing red when a man in a red tracksuit appeared in the video, the viewer could access a secret area with additional information on the band.

4. BROADCAST PLATFORMS

In the UK, there are 3 main platforms digital TV can be accessed through:

- Terrestrial (Free to Air)
- Satellite
- Cable

Its part of the BBC's charter to provide its digital services across all platforms (although the functionality of those services may vary due to the limitations of the platforms). This provides a real challenge to BBC producers and technicians to coordinate these services across all platforms.

There is a fourth broadcast platform, DSL, which is broadband TV. The BBC is experimenting with this platform in the North England town of Hull.

Below are the facts and statistics for each platform, courtesy of the BBC:

DTT (digital terrestrial TV)

Freeview is the main service with 1.6 million households.

There are five commercial channels on free to air television: BBC1, BBC2, ITV, Channel 4, Five. They are all broadcast simultaneously in analogue and digital form.

Following the collapse of the first experiment with free digital TV, 'iTV Digital', a consortium called 'Freeview' was formed by BskyB, BBC and Crown Castle, (a transmitter co) to launch 24 free digital channels on 30 October 2002.

Freeview offers the five free to air channels, along with a package of 12 extra channels and digital radio for a one off payment for the set top box. There is no further payment required.

The channels are the BBC 8 (BBC 1,2,3,4, News, CBBC, Cbeebies, BBC Parliament) as well as UK History, iTV2, Sky News, UK Style extra, 2 Music Channels, the 5 existing channels, and 6 BBC radio channels.

There is also limited interactivity using multi streaming or localised text and graphic playout from the box.

Needs – upgraded digital aerial and set top box (STB) or and integrated digital TV (iDTV)

Bandwidth used – depends on the licenses granted by the broadcasting regulator. Currently its sending data at the rate of 140 mbps to the viewer.

No return path – As yet there is no return path for the viewer. There is talk of making a broadband connection to future devices.

Multi Streaming – DTT has 2 dedicated streaming channels, so viewing is enhanced by switching between coordinated streams (This requires coordination with other programs in the schedule that may need streaming)

Note - DTT broadcasts in a straight line, so hills do get in the way of reception areas here (see chapter 8 for a story on the success of Freeview)

DSAT (Digital Satellite)

BSkyB is the biggest provider, with 6.6 million subscribers.

Sky has spent a lot of money rolling out expensive digital satellite based on its large sport offerings, attracting young families and sport lovers. It is still to recover its massive investment, but is said to be now making profits on a quarterly basis.

Needs – satellite dish and set top box (STB)

Bandwidth – depends on leasing transponder space on the satellite. Sky is currently transmitting at 1000 mbps.

Return path – possible via a modem in the STB (at cost of a phone call)

Multi streaming – Dsat can have up to 7 multi streaming channels.

DCable (Digital Cable)

Cable TV is available by subscription in the particular areas licensed to the cable companies. Customers can also get phone and broadband services through it.

Telewest is the largest cable provider and provides multi-channel TV, telephone and internet services to 1.74 million UK households. Its cable networks pass 4.9 million homes in the UK. It also has a content division, Flextech which has partnered with the BBC to be the largest supplier of basic channels to the UK pay TV market. (www.telewest.com/ourcompany/index.html – 29 May 2003)

NTL is the smallest digital cable player in the UK. Their main focus is on selling broadband access to homes and businesses, and bundling it with telephone and TV services. As at 2003 they had approximately 500,000 customers. Although they have excellent bandwidth, they have spent so much money rolling out cable networks that they have not been able to upgrade their infrastructure to handle more than simple interactive services.

The cable companies are smaller, but have the potential to provide a full bandwidth return path (which is always on) at no extra cost to the consumer. They are bundling their services with telephone and broadband Internet, which Sky cannot do. NTL and Telewest have a joint initiative to trial 'Broadband TV' Services.

Needs – STB and connection to a cable network.

Bandwidth – Is potentially very large, but can be reduced per channel over a large number of channels. Telewest are currently broadcasting at about 750 mbps.

On demand – The majority of iTV services on cable so far in the UK are stored on remote servers where they can be requested via the set top box. They are not multi stream but interactive text or walled garden services.

Return path – is permanent and always on, at no cost to the viewer.

Multi Streaming - Cable can re-transmit the Sky multi stream broadcasts and has the bandwidth to do more.

Broadband (ADSL)

'The Hull Project' is a BBC experiment in Broadband TV.

The whole town of Hull in northern England have TV's wired to a central server which delivers to them a combination of traditional TV, true video on demand, 24/7 local news and information, and enhanced programming.

Other features include the ability to forward wind, rewind, pause, watch DVD style extras, program book marking and engage in live chat.

The viewers are freed from the constraints of the TV schedule, but are offered a menu from which to choose and watch anytime. The viewers have no hard drive, it is all centralised from a server.

For example, during the Commonwealth games, all events were stored on a server and could be recalled by the viewer anytime.

Needs – to connect to an ADSL network (via phone line) and a STB.

On Demand – it's a one to one connection with the viewer. Most services are "out of band" ie not broadcast to the viewer but stored on a server and requested via a set top box.

Multi streaming - is also available for enhanced programs that require it.

Bandwidth – It is currently broadcasting at 4 mbps, which approximates VHS quality.

Return path – DSL provides an 'always on' return path at no extra cost to the user.

This is an indication of what is possible in the future of broadband.

SECTION B: WHAT'S HAPPENING NOW IN THE UK?

My aim in the UK was to focus on the process of creating enhanced television. I believe enhanced TV presents the greatest creative challenges to a producer and demonstrates wider principles applicable to the other forms of interactivity.

This section explores what the BBC is achieving with enhanced television, how they make it, and where current iTV practitioners think the industry is at.

5. CASE STUDIES

Now we will take a closer look at some BBC programs which illustrate the following developments and trends in the enhanced TV market:

- Event Television
- Multi platform applications spanning the internet, mobile phones and interactive TV
- Multi streaming content
- Websites breeding TV shows

EVENT TV

Event TV describes those programs that excite the minds of the nation and spark those 'water cooler moments' coveted by marketers and programmers. Big Brother, Test the Nation, Australian Idol are all examples of event TV.
It is a trend we can expect to continue, as when done properly, it has an immediacy that compels audiences to watch them now or risk being left behind in conversation.

In the following example, the BBC proved that Event TV need not involve teenage idol worship to be a success:

'GREAT BRITONS'

This is a brilliant example of how interactive TV can truly enhance the audience's experience of the subject matter.

The show on BBC2 profiles the lives of 10 Great Britons including Churchill, Brunel, Darwin, Shakespeare, Newton, Diana and asks the nation to vote for their greatest Briton.

'Great Britons' could have been a yawn a minute series of biographical documentaries. Instead, it excited the nation, making front-page news for the 5 weeks it ran, stimulating debate amongst people from school students to pensioners.

It began as a campaign long before the final 10 subjects were determined.

Nomination stage

Over a 2-week period the public were asked to nominate anyone they like as a 'Great Briton'. They could phone in or go online to register their nominee. 30,000 nominations were generated, which then had to be collated to a list.
The BBC then manually transcribed this information to distil the list down to the top 100 greatest Britons.

The Top 100

The top 100 and top 10 were collated but kept secret. Production started on the top 100 launch show as well as the top 10 documentaries being commissioned.

The top 100 was then released to the press. This sparked its own debate, as people realised how shallow Britain really is. Many great artists and poets were left off the list, while many pop stars stayed in.

The Series Launch

Then a couple of months later, the hype began again with the launch of the Great Britons program. This was in the form of a 3-hour program counting down from 100 to 11, then revealing the top 10 in no particular order.

The Top 10
This consisted of 10 x 1 hour docos screening twice a week.

The interactive application allowed viewers to vote for each of the 10 selected candidates via telephone and the web. In addition to voting for one of the 10 candidates, viewers could also rank their favourite by Legacy, Genius, Leadership, Bravery and Compassion.

For example, on a score of 1 to 9 Princess Diana was rated:

LEGACY	4	****
GENIUS	3	***
LEADERSHIP	3	***
BRAVERY	5	*****
COMPASSION	6	******

The Viewers were asked to register additional information about their age and place of residence so this data could be crunched for interesting demographics. This part of the vote was not really science, but a bit of fun.

The show was hosted by Peter Snow, who usually covers the federal elections in the UK. He would introduce the Great Briton of the night, and give an update on where the nations preferences were lying at that point in time. A real time graphic display was presented showing from 1st to 10th place where each person was in the polls. This reinforced the feeling the vote was happening live.

At the end of the show, the host would show the nation how tonight's episode has changed peoples views and swung the votes. He would then comment on interesting facts about the voting based on viewer demographics. Eg the current favourite of Women aged over under 30.

At the end of the series, there was a final studio debate where champions of each had a final chance to argue their case for 3 minutes. Then the winners were revealed as:

1. Winston Churchill
2. Isambard Brunel
3. Lady Diana Spencer

The Vote Rationale

The BBC wanted to generate a voting pattern in viewers that lasts over the 10 episodes and enticed people to view all of the 10 biographies. In fact it succeeded in drawing audiences to watch other biographies so they could comment on other candidates. The ability to give your 2 cents worth on each personality meant people were more compelled to keep watching the series.

The BBC decided not to do any elimination rounds as in Big Brother, but to allow people to come back and vote again after learning more about each person.

Viewers could vote by Phone/web/or Interactive TV (the SMS system could not deal with the traffic at the time the show went to air) Also they didn't have the time to list a different mobile number for the 10 candidates.

The BBC put limitations of 1 vote per viewer per show per platform (1 phone, 1 web and 1 iTV vote per person per show). Block voting was disqualified. Votes were open all the time, and the public could also vote at most public libraries at voting stations.The phone number or the web addresses were kept on screen throughout the show.

The percentage of votes across platforms was roughly iTV 9%, phone 45% and web 45%.

There were 2 million votes in total, and 68% of all voters were aged over 45.

One of the surprising outcomes was the 'grey vote' which this event demonstrated that over 55's can get excited about interactivity too.

Cross promotion

Schools, art galleries and museums were behind the project. The top 10 were exhibited in the portrait gallery, where schools would take their children on tours. They also had voting stations so the kids could have their say.

Madame Tussauds wax museum also expanded their range to include a special display of the top 10.

When people voted on their mobiles, they received a text message back to their phone sending them to the web site, or suggesting they buy the book of the series.

THE BIG READ

Following on from the success of Great Britons, the BBC decided to stimulate debate and interest in reading with another 'Event' called 'The Big Read'. This was a similar idea, where the public were invited to vote for their favourite novel.

'The Big Read' generated 138000 nominations!

As of November 2003 the BBC has determined the top 100, and is asking people to vote for their favourites out of the top 21 books.

MULTI PLATFORM CONTENT

A multi platform interactive service is where program content is made available across different media platforms such as TV, internet and mobile phones.

One such service was 'Bitesize' provided by the BBC to help students in year 10 prepare for their GCSE exams, (to enter yrs 12 and 13 or to leave school) with a package of TV programs, websites and mobile phone games covering revision topics in the 17 major subject areas.

While at the BBC I worked on Bitesize, filming volunteer teachers and conducting feedback trials by students.

'BITESIZE'

The Website- (www.bbc.co.uk/schools/gcsebitesize)
The website offers a full interactive revision service on all GCSE subjects. It fields 700 questions a day, and each one gets answered. They are building up a searchable database for public use, with over 22,000 Q and A combinations.
About 600,000 British students access the website during exams.
This website is recommended by teachers and has been used by 90% of the target audience.

The Interactive TV service
This consisted of daily video loops of topics, through which viewers can also access notes, quizzes or submit a question to a teacher via text.
Each day features a new topic such as physics, chemistry, English etc which is repeated for that day.

The Interactive TV service is provided across the 3 platforms of satellite, cable and Freeview.

When questions were sent in through the TV, the producers analysed the most frequently asked questions on each topic, then filmed the topics with volunteer teachers, to be screened on the following weeks schedule.
Other questions were answered through a database of answers and sent back via email.

The Mobile Service
Students could text a question, and 15 mins later the answer would be texted back. (£1 for 15 Q&A's)
There is also a Java game, where for 30p, a quiz of 190 multi choice questions can be sent to your phone (downloaded for the cost of a phone call)
There was also a WAP quiz, where you pay for the time browsing the web, so WAP is not great value.

Bitesize is one of those services worthy of the BBC charter to educate, inform and entertain the nation free from political interference and commercial pressure.

MULTI STREAMING

Multi streaming is how an interactive program offers the viewer of choice of different content by providing a number of visual and audio channels within the same program.

Technically, each video stream is a separate channel, but from the viewers' point of view, they seamlessly switch between streams without leaving the program.

Multi streaming is made possible in the multi channel digital world due to the greater efficiency of the spectrum. But do not confuse it with multi channelling, which describes the large number of individual channels available in the digital world.

The BBC is gaining a reputation as world leaders in the field of multi streaming.

Following on from the success of 'Walking with Beasts' in 2002, the Interactive Factual and Learning department at the BBC created the interactive application for 'Walking with Cavemen' (see enhanced TV in chapter 3)
Viewers could dig deeper into enhanced content during a broadcast to find more facts, behind the scenes video or choose alternative commentary.

But some viewers do not like to stray from the linear broadcast while it is on. They would prefer to have an interactive experience after the main broadcast (more like a DVD experience).

The BBC has developed post program applications to cater for this. One such application was the BBCi 'Pyramid Challenge', a multi choice documentary adventure following a Factual drama.

'BBCi PYRAMID CHALLENGE'

This was the world's first interactive TV adventure story.

After the initial terrestrial broadcast of 'Pyramids' which shows us life in Egypt through the eyes of a pyramid slave, Pyramid Challenge was screened..

"Pyramid Challenge - The Book of Buried Pearls" is an interactive choose your own adventure, where viewers gain clues to a code which enables them to enter a competition for a holiday to Egypt. It was then looped 24 hours a day over a 5 day period to digital satellite and terrestrial (Freeview) homes, after which the competition closed.

The program uses the switching of four separate video feeds so that the viewer can choose their own path throughout the adventure by using their remote control.

The narrative of the show encourages the viewer to use their powers of observation and common sense to guide Ian Wright (seasoned adventurer from the Lonely Planet guides) through a series of challenging situations in modern-day Egypt.

The program follows Ian's journey from London, via Aswan, deep in the south of Egypt, to Saqqara where the pyramid was invented, and on to the Great Pyramid itself at Giza. There viewers face their final challenge - to unlock the pharaoh's hidden chamber.

If they choose the right path (choose the correct video streams) they are awarded a number that makes part of a secret code to unlock a tomb and have the chance of winning a dream holiday to Egypt.

Pyramid challenge was produced by Gideon Bradshaw, who sat opposite me in the BBC's interactive factual and learning department.

Gideon told me that one of the many challenges of making 'Pyramid Challenge' was the relatively low budget allocated to the interactive application, compared to the lavish production budget for the main feature. The challenge was to come up with ideas for interactive content which could match the production values and be compatible with the linear show. Gideon's solution was to create a multi choice documentary based on the adventures of a modern day explorer. This documentary style meant they could stay within budget and deliver cheap but smart solutions that complement the main show.

Mark Goodchild, executive producer of interactive factual and learning says: "Pyramid was a success for us. For the audience using the service, there was a very high retention rate. They were compelled to stay with it right throughout. The content was compelling and gave the audience an end goal which they responded to."

While I was in London, iF&L were working on their next interactive challenge called 'Death in Rome' to follow on from factual dramas based on 'The Colosseum' and 'Pompeii'.

A full DVD of 'Pyramid' and the 'Pyramid Challenge' is available in the AFTRS library. This DVD simulates the interactive experience enjoyed by Sky viewers.

WEB SITE BECOMING A TV SHOW

Another trend developing in the UK is for popular websites to spawn their own TV shows.

'CELEBDAQ' Celebrity Stock Exchange

A web trading game and celebrity TV show which derives content from the website.

The Web Site (www.bbc.co.uk/celebdaq/index.shtml)
Celebdaq is a celebrity share trading game played on the internet where you invest and trade in stocks of celebrities, which pay dividends in proportion to the number of column inches they generate each week in the press. Stock values vary as demand for celebrities change. Players start with 10,000 pounds, and make money through dividends and buying low and selling high. A £100 prize is given away each week.

The TV show (BBC3)
Hosted by Business news journalist Patrick O'Connell, Celebdaq offers share tips, advice, and in depth analysis of the market. Each week he is joined in the studio by top city traders, industry traders, celebrity investors and fellow 'daqers' sharing their insight.

O'Connell says: " You can't shake a stick in Britain without poking a celebrity in the eye. The famous have become commodities, and 'daq investors trade them like orange juice futures…The TV show is electrified by the millions of trades being made. This is not about, 'press the red button now', this is about half a billion trades that have been made on the site since July."

I asked Martin Trickey, the web producer on Celebdaq, how it all began:

"The idea began when Conrad Green, who worked on Big Brother came to the BBC and talked about the concept for a celeb stock exchange as a TV show. We pitched it and got a BBC3 commission in February 2002 to launch the show for November.

"But we thought the show should start with a history, so we wanted to launch the website in July. None of us had done this before, and we had little time, so we shopped around to seek tenders for an off the shelf program. We bought 'Pop Ex', a pop group trading game that was a close fit. We got a 1-year licence, with an option to renew for another year. We have since bought the whole thing outright.

"The thing took off with huge growth, and we were fire fighting for 3 months. The Pop ex people started playing Celebdaq too. We got a data base analyst in to clean up the program, and now it runs much better. We now have 275,000 registered users."

"The TV show launched, and there were teething problems with finding the right balance for the format. At one point the TV show stopped mentioning the web trading game! It was been re-commissioned and we have since found the right balance between mentioning the trading game and talking about celebrity gossip.

"We are thinking about expanding into SMS, Broadband, Mobile Gaming and books. The website is in the top 10 BBC websites, ahead of the Eastenders website, so I am very happy."

'FIGHTBOX' -

Fightbox is an Internet combat game and 30 minute TV show.

Fightbox brings together live audiences with virtual action, giving the viewing audience a brand new experience. It fuses new game and studio technology to bring this futuristic gladiatorial sport to life. … Using software supplied on the

Fightbox website, Fightbox players have built, nurtured and trained their own virtual warriors for final combat in front of a live studio audience.

The website (www.bbcfightbox.co.uk)

Fightbox is a game you can play on the internet, where you can design, build and train your own warrior, and gain experience and points fighting the Sentients in combat.

The top 60 scorers have the chance to enter their creations in a combat TV show. The website launched on May 25 2003, three months before it launched on TV . It is hoped that apart from generating contestants, the website will establish its own TV audience.

The TV Show(BBC3)

"The FightBox Tournament is the ultimate challenge. The 60 greatest Fightbox players gather in the Arena to battle for the title of Supreme FightBox Champion.

To win, however, they will have to face more than just each other, battling through the deadly eliminator challenges, trapped in the Arena with the mighty FightBox Sentients.

All of the competitors downloaded the free fightkit to design and create their own fightbox warriors and enter them for qualification. The victor will see their warrior join the elite ranks of the Sentients.

FightBox will test all of the competitor's abilities - only the most skilful players and agile and powerful Warriors will stand a chance of victory and becoming Supreme FightBox Champion."

- Fightbox Website

The TV show features arena style combat between virtual creatures. A live studio watch the arena through large video screens (so they can see the fully rendered warriors do combat). The screens are digitally removed in the final edit so it looks like the audience is directly cheering on.

The aim of 'Fightbox' is to tap into the hugely popular gaming market and reach these audiences with a TV show. Its influenced by Robot Wars, but is trying to appeal to an older and cooler demographic.

This game allows anyone with internet access to compete against the nation in combat, with the aim of qualifying for the TV show. But to make the game web accessible and cheap, there has been a compromise in graphics and gameplay. It does not look as sophisticated as most modern console games, but its close. There is a plan to sell the game as a PC game at Xmas, but the BBC can't favour those who have bought the game when selecting qualifiers. This highlights the difficulty of creating concepts for public broadcasters (If it was a commercial entity, then only those who bought the game could be on the show!)

6. HOW TO MAKE ENHANCED TV

The BBC's Interactive Factual and Learning (iF&L) department has been operating for 18 months, and is one of the only production houses in the UK making true enhanced programming. Although new challenges are always presenting themselves, iF&L have quite a few runs on the board and can speak from experience about what works for them.

Below is a description of their current process of putting together an enhanced TV program, along with a list of issues to think about along the way:

STEP 1. THE iTV PROPOSAL

The Interactive proposal is written to outline how interactivity will enhance the linear program. So you need to ask yourself:

What is the Linear Program?

A strong linear program is the key to any interactive application. People will only want to interact if the program compels them to. Interactivity cannot save a poor program. Further, the linear program you are enhancing must be able to stand-alone because for the foreseeable future, a percentage of the audience will not be able to interact with it.

What is the Enhancement and why?

Why is there an enhancement to the TV show? Is it a good enough reason? If it is just a bolt on idea then it is a waste of time. The interactivity must be an inherent part of the show and enhance the experience for those who choose to interact with it. Otherwise, don't bother.
In answering these questions you should also think about:

a) How the viewers watch the program. Do they yell answers at the TV?
b) What's the objective of the application? Is it to increase ratings, audience retention or revenue?

What media platforms will the audience participate through?

How will you deliver the interactivity? Will there be SMS? A website? Can people telephone in or email? Is there a live audience element? Do enough people have digital interactive TV?
Who is your audience? Who are you aiming at and why? Are they watching on pay TV or free to air? What are their lifestyle habits?
It's a good idea to be as inclusive as possible for slow technology adopters.

What is the Content for Each Platform?

What content (if any) will you offer on Web, Mobile, and TV? This will be decided in a series of editorial meetings. You must offer fresh content on different platforms to give people a reason to go there.

Do you use an existing format or build a new application?

Over time, a number of applications can be re-used for other shows. For example, The Chelsea Flower Show uses the same format as Wimbledon. Or perhaps you

need to make more time for a purpose-built format. Plan forward for advances in technology if the show will go to air in more than a year's time.

What are the technical considerations?

Is the proposal restricted by the technical limitations of the broadcaster? Digital Terrestrial, Dcable, Dsatellite? Consider the availability of channels to multi stream at the scheduled time.
What are the delivery times and technical requirements for the audiovisual materials (including graphics and text) to play out from the interactive operations area. What are the technical requirements for the other media platforms – mobile, web, etc. Do you need any specific software to be written or acquired?

What Resources will we need?

How many teams, what expertise do we need to create and deliver content across all those platforms. This will be decided in the resource meetings.
In the BBC, the New Media department handle the contracting, building, testing and delivery of the applications needed to broadcast the interactive service.

What is the Budget?

How much does it cost to deliver your vision? What can you deliver for the money? What you hope to do and what you can afford to do are factors that will battle each other as the budget evolves. Obviously a text or vote application is much cheaper than a full multi streaming application.

Marketing - plan the cross platform marketing messages!

The biggest obstacle iTV producers face in getting people to use the service is in telling them what it does. Marketing the interactive service is vital, and the TV show has to push audiences to interact and move between media platforms.
As interactivity is an instant gratification, the promos which prompt people to press the red button now get the biggest responses.
Tell the audience what they will get out of the interactive experience – what's the payoff? If they don't know why they should take part, then they won't.

Finalise the iTV Proposal

All the above information will be included in the iTV proposal, which is the pitch document for the application.

STEP 2. PRE-PRODUCTION

If the iTV proposal is commissioned along with the linear program, pre-production commences on both the linear program and the enhanced content.

Plan the teams and how they will work together

Ideally the production team for the linear program will be the same as that for the enhanced content. At present this is rarely the case.
Sharing researchers, content, sets and locations is ideal.

Schedule and Budget

The broadcast channel, the linear production team, the iTV team, the technical teams, marketing will all have inputs to the schedule and budget. They will be evolving documents!

Negotiate the rights

Its not just TV rights you have to consider now. Make sure you secure all ancillary rights to disseminate the content across the various platforms. eg online, mobile etc. as well as for multiple looping.
Also secure the ongoing rights for the Interactive TV software applications which will drive the functionality of your show.

Design & testing of your concept

Usability and Design are key considerations for your iTV application. Its functionality impacts on how it will look and how appealing it is to use.
User testing can be as simple as a paper storyboard or a power point shown to colleagues, or as complex as a full prototype tested using consultants and test groups. The type of testing you can afford to do will be dictated by your schedule and budget. But make sure you allow time to make the necessary changes arising from testing.

The Software is needed earlier than you think!

A single bug in the application could crash every Set top Box in the country so Sky TV likes to have the 8 weeks to test the software applications.
So its prudent to ensure the Software application is completed 3 ½ months before Transmission.

STEP 3. PRODUCTION

Allocated teams create the following content:

- Audio Visual content for linear program and for enhanced content.
- Software applications for iTV
- Graphics and text for iTV
- Mobile content
- Web content
- Marketing promos for all platforms

You should co-ordinate the shooting schedules for enhanced content or promos with the linear schedule to avoid doubling up on sets, actors, props etc.

STEP 4. POST PRODUCTION / TESTING

Then assemble all these elements in a rough cut or demo model, which is tested and refined until you are ready to compile the 'online version'.

Further testing
Do you do further testing at this stage? You may choose to do audience tests with demo model of the program. If so, allow time for re-edits and re-shoots to fix obvious problems.

STEP 5. DELIVERY/TECH REVIEW

The deliverables are handed over to the broadcasting technicians to check that they meet all the requirements for each broadcast platform (cable, sat, terrestrial)
There will be over air testing of the application through a trial channel from the multi streaming area (MSA). Applications are usually tested using set top box 'farms' to ensure the service is working on all platforms.

This is often tested, tweaked, and then tested again.
You might choose to implement user testing at this stage as well (but only do so if you have planned to reflect this is the production schedule)
Similarly, other content is technically tested over other media platforms of web, mobile etc.

STEP 6. TRANSMISSION and MONITORING

Correct transmission should be monitored by a presentation control room who can notify appropriate people of any problems.
Decide what is the most reasonable level of monitoring of playout. In practice it may end up being team members who monitor it from home.

STEP 7. RATINGS AND FEEDBACK

Ratings

The interactive ratings process in the UK differs slightly from the linear ratings system.
It is usually measured in terms of the 'percentage of available audience'. This means the percentage of all the Digital TV homes watching your program that chose to interact. For 2003/2004, the target figure for the BBC is 30%.

BARB in the UK can provide figures for Dsat only. And can measure the percentage of available audience, as well as how many stayed with the service (retention). It can also provide figures on the demographic of those using the service.

Digital cable can measure page impressions much like the Internet.

The consensus is that current ratings methods are not satisfactory. They do not distinguish between a 2-week interactive application and one that lasts for 20 minutes. So it does not compare like with like. Only Dsat is being measured to a satisfactory degree. Freeview does not get measured yet. Effective measurement is the only way to convince advertisers of the audience pulling power of applications.

Feedback

It is prudent to set up a system of feedback from an audience about the iTV service and to monitor this regularly. Remember, the viewer is king.

Post-match analysis

It is also beneficial to hold an debrief session for all those involved in bringing the enhanced program to air, to share learning from the processes strengths and weaknesses for next time.

STEP 8. ARCHIVING

At present, it's not possible to instantly capture the entire interactive experience as it plays out. But this will soon change with the development of PVR technology to capture the entire experience at playout onto a hard drive, to be replicated at any time.
At the moment, the separate components of video streams, software applications and other content, such as graphics and text are captured separately, in the traditional forms of storing those media.
Approximations of iTV services can be captured on:

- Video – recorded 'walk-throughs' of the interactive service can easily be captured.
- DVD's - may be commissioned after the application to replicate the full interactive service (one of these is available from the AFTRS library for Pyramids).

MORE ON THE PRODUCTION TEAM

I asked John Kent and Marc Goodchild of the BBC Interactive Factual & Learning (iF&L) team what some typical headaches in iTV production were.

Marc Goodchild:
"Well, graphics need to be created up front. You cannot wait for post production as these graphics are needed for on screen navigation.

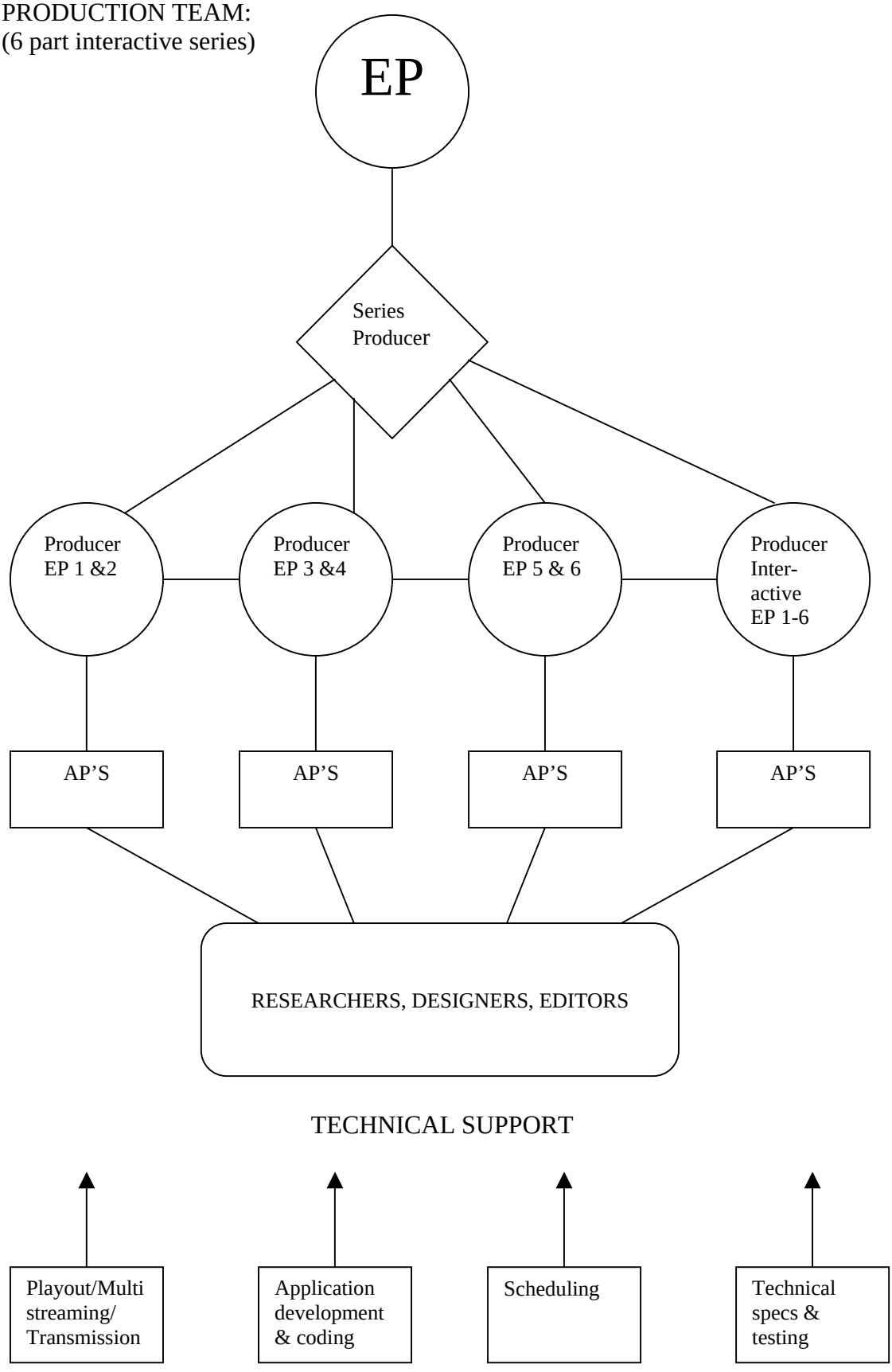
"Also, producing becomes complex matrix management - you are dealing with software engineers as well. And the culture clash between these two industries needs to be managed. TV works to a set schedule and must deliver for a set broadcast date. Traditionally, most software launches 'when it is ready'. In TV, priorities are continually shifting, and this makes it difficult for the software engineers who are not used to working to a deadline.

"Language is also a problem. Often there are no names to describe what you want to do, so you have to continually make mock-ups so people 'get it'. Production Values is another issue. The main feature program may have a huge budget of 2 million, but we are challenged to create 2 other streams of content on 1/10th the budget, with compatible production values".

John Kent:
"At the moment, there is a Factual and Learning department at the BBC (which makes the linear programs), and there is Interactive Factual and Learning, which sits outside the linear production cycle. So with 'Beasts', it had been in planning for a long time before our interactive team were brought on. It's Marcs aim to catch up to the point where they are involved from the very beginning."

Ideally John says there should not be a separate department for iTV but they should be integrated. According to Kent, the ideal structure for a 6 part interactive series would be as follows:

PRODUCTION TEAM:
(6 part interactive series)



7. SPOTLIGHT ON INDUSTRY

Q & A INTERVIEWS

While in London I interviewed many practitioners in interactive TV, from the BBC, BskyB and private production companies.

Below is a summary of the most poignant answers to the following questions.

Why do we need Digital TV, what is the emphasis for the government?

Matthew Tims CEO Two Way TV:
"We don't need Digital TV – but the government wants back the analogue spectrum to resell it for other purposes in other industries. Its not altruistic in the slightest."

What are the advantages of iTV for the Broadcaster, for the consumer?

Matthew Tims:
"For the viewer, the pitch is that iTV is:
It's more useful, more fun
It's more involved and less passive
Their viewing habits won't change substantially.
You have more say in what you want. Things are more available.

"For the Broadcaster, they get:
Improved reach, ie larger, newer audiences
Once there, we have ways of keeping them there (eg running scores are wiped if you change channels)
Increased revenues (collecting micro revenues)
Selling iTV advertising slots and t-commerce sites
Targeted advertising
(all of this increases the value of the advertising real estate)"

In your opinion, what interactive services should we be focussing on?

Matthew Tims:
"There are two types of iTV worth bothering about
1. Things audiences already like doing which interactivity makes easier
2. Richer enhanced experiences. The BBC can afford to do these multiple perspectives, but they are expensive and wouldn't survive in the commercial world.

Anything in between is a waste of time and will fail."

Do you think T-commerce services are best left to the Internet?

Justin Hewelt, Co-founder of broadband bananas:

"These services are great for those who don't have a PC. TV is quicker to access than a PC, so if the service is quick and useful and easy to navigate, then people will use it. Some shopping makes more sense in this environment than others eg the Simpson's pizza promotion worked well, and makes sense with viewers who habitually eat pizza while watching TV.

QVC – the shopping channel gets about 30% of its orders through the red button. For some, this is quicker and more convenient than phoning customer service."

Do you think traditional TV producers feel threatened by iTV?

Marc Goodchild, Executive Producer, Interactive Factual and Learning, BBC:

"I think there is a normal amount of fear of the unknown. Producers don't want to lose control of their own shows. A lot of this concern disappears if the producers are empowered to come up with the concepts for enhancing their own shows across the various platforms and remain in control of this process. But there needs to be wider scale education amongst producers of the potential of interactive TV.

Justin Hewelt, Co-founder of broadband bananas:

"Drama and Documentary producers won't feel any real impact from iTV. People want to sit back and become immersed in these programs and iTV generally would interfere with the telling of the story.
But certain TV shows lend themselves well to interactivity, such as light entertainment, current affairs, pop music, reality TV, news & sports. These producers will have to understand interactive TV so they can realise the full potential of their programs with this new technology. They needn't be threatened by it, as it presents opportunities."

Matthew Tims:

"I think TV producers are puzzled by it. They have had difficulty getting to grips with what it can do.
At the moment, the broadcasters are pushing it, but it should be the production houses that are pushing the new ideas for it. Then we will see the real innovation.
It's a process of education, and a process of reducing the costs of getting iTV to air.
Interactivity has to be inherent in the shows concept, not a bolt on.
So far, we are constrained by technology and money. Soon it will get to the point where the only constraints are creativity and bravery (as with the rest of TV).

"My message to TV Producers is – apply what you already know and use it to deliver to the audience. Don't worry too much about the technology, leave that to the developers. Communicating with the audience is what matters."

What applications are making money?

Matthew Tims:
"Almost none. Voting on shows like Big Brother and I'm a Celebrity make some money.
Quiz show games and paying to play for prizes makes some money. People will pay for Games.
T-commerce has worked for QVC (30% of business is through red button alone).
Gambling is about scale. The scale is starting to reach the point where its becoming profitable on iTV.
Horse betting and Bingo were becoming old. The clientele was fading away. This is making this kind of gambling accessible again (but casino style games are likely to be highly regulated).
Sky has been massively loss making. It is starting to be profitable now on a quarterly basis (but in total is still well into the red)
But this gamble has given Sky market dominance."

What iTV services are working for viewers?

Matthew Tims: “Apart from the ones I have mentioned which are making some money, sports applications like football and Wimbledon are popular. Multi streaming shows like Walking With Beasts are also well received, but people wouldn’t pay for them.”

Do you think that Video on demand is the right goal to be aiming for ?

Matthew Tims: “True VOD is still unproven as a business model. A lot of US cable operators see it as a Holy Grail for the users. But the cost of delivering this is very large, and in a lot of ways, its inefficient to have large servers streaming movies to individual viewers for immediate consumption. It takes up a huge amount of bandwidth.
With the advent of PVR’s, people will be able to record new releases off Pay TV and watch them when they want anyway.
There will be a demand for real VOD for those classic or cult movies that are not new releases, but if you can get them off broadband, that might satisfy you. It will depend how fast you want it.”

What’s the cheapest way of delivering enhanced TV to the Audience?

Matthew Tims: “That is difficult to answer. Using multi streaming is VERY expensive. It would have been extremely expensive for the BBC to provide its Wimbledon service. In this market, only the BBC or Sky could do it.
Down loading applications to the Set Top Box (so the enhanced services play off the box as you use the remote) is absolutely the best way, but even that has its costs in setting up the infrastructure. It’s a factor of economies of scale.”

What excites you the most about working in interactive TV?

Marc Goodchild:
“Having the potential to redefine what TV is and what it can be. It is liberating to be a pioneer in this field and we are lucky that the BBC’s remit to us in Factual and Learning is to try new things. We can afford to experiment with applications we believe will work. And it is a work in progress to try to see how this field will develop.
The problem is that people are anxious to bed down interactive TV and write a rule book for it. I think this is a problem and there is a risk in trying to define its potential too early. Look at the killer application of the mobile phone. Texting was almost a last minute addition which Nokia engineers added as a free extra function. They were allowed to experiment with what they could do, and ended up discovering a fantastic application.”

Do you think the industry has a future?

Matthew Tims: “ I think the industry has become better defined, but less visionary and duller as a result. The walls are closing in a bit. As an industry, its still a bit unproven. The Broadcasters feel they have to offer it. But are they making any money out of it? Big events? Yes. Gambling? Yes.
Over time it will become significant. I’d like to think other worthwhile stuff will come out of it, like accessing your Doctor through the TV. Television is still the best way of reaching a big audience. So it has a reasonably rosy future.
In the future, it will all be considered TV. Hopefully people will forget the novelty, and just use it and enjoy it, like they have with Mobile phones.”

8. DIGITAL TV SWITCH OVER

- THE UK'S WINNING COMBINATION

While Australia looks sceptically at the target date of 2008, when it is hoped there are enough digital TV viewers to switch off the analogue signal, the United Kingdom looks well on the way achieving their target, with its free to air multi-channel digital television service 'Freeview'.

The UK has achieved a very successful penetration into UK households, with 41% of homes receiving digital TV via satellite and cable pay TV. But the remaining 59% of the population need more incentive to convert to digital.

Freeview is now providing that incentive – for the benefit of all the players.

All the consumer has to do, is buy a digital Set Top Box (retailing for between 60 to 99 pounds), connect it to their TV, and they can receive all the existing free to air channels, as well as 20 extra channels including entertainment, documentaries, children's, news and music.

They pay no subscription fees, and can enjoy the robust picture and sound quality of digital TV, with the extra choice of a multi channel environment.

By all accounts, Freeview has been a phenomenal success so far. It launched on 30 October 2002 and by mid July 2003, sales of Set Top Boxes and Integrated Digital TV (iDTV) sets had reached the million mark, setting a UK record as the fastest selling consumer product in its first year, ahead of DVD's and Sony's Playstation 2.

Andy Duncan, director of marketing, communications and audiences at Freeview says "People like the idea of extra channels and the benefits of digital television, but what's really appealing is that there's just a one off payment and then it's plug in and play with no need to sign up to a contract.' He adds that 'Not only is the take up of Freeview good, the levels of satisfaction are very high with 80% of users saying they would recommend it to their friends".

So in the UK, Freeview is putting the Government on track to achieve its switch over targets. However, at present only 75% of homes can receive Freeview. This is expected to increase to 94% by 2010.

Once Freeview reaches a certain critical mass, other developments are expected to follow, including further sport and movie channels, an improved 7 day EPG, developing PVR capabilities and connecting to broadband internet.

All this has been achieved without any focus on High Definition television (HDTV). George Auckland, Head of Innovation at the BBC's Interactive factual and Learning Department, said that in his experience, viewers had become so used to ghosting and fuzzy reception, that when they received digital TV pictures, many thought they were seeing HDTV.

As the Australian free-to-airs promote their digital television offering, the question arises: Is it enough to make people want to go out and buy a set top box?

The fact that consumers have not been rushing out to buy these set top boxes indicates that at the moment, there is no compelling consumer proposition for digital TV.

UK Research into Sky digital homes in early 2001 indicated the 3 main reasons subscribers took up Pay TV was:

1) More channels
2) more sport and
3) better picture quality

with the preferences being in that order.

If the UK market is any indicator of consumer preferences here, it seems the Government will not reach its digital target, until they open up the digital spectrum to more free TV channels.

In the UK, the multi channel option seems to be proving that this is what consumers want.

SECTION C: KEY LESSONS FOR AUSTRALIA

This next section of the booklet ties together the key lessons I believe Australia can learn from the vast 'test case' for interactivity that has occurred in the UK over the past 5 years.

9. GUIDING PRINCIPLES FOR ITV

It is not desirable to write a rulebook on what interactive TV can and cannot do. Just as TV has evolved over the past 50 years, successful concepts for interactive TV will be limited only by technology and imagination.

The following are ten guiding principles to be considered when dreaming up a new iTV proposal. These principles are based on the collective experience and wisdom of some leading iTV producers, on what seems to work, and what doesn't:

1) **It has to be useful**, **entertaining or make sense**.

iTV works best when it facilitates EXISTING needs more easily by making it easier, quicker, cheaper for audiences to do what they want to do.

For example EPG's are useful. They tell you what's on and when (without disrupting viewing), and take you there by pressing a button.

As another example, people already play along with 'Millionaire', so give them the ability to play along and win prizes by guessing the right answers.

The application should be seamless – consistent with and complementary to the objectives of the linear program.

2) **Be aware of consequences of asking people to leave the TV environment.**

People don't like to be asked to leave a program while it's on. For this reason, the BBC is now getting people to interact at the end of the program. However, this then takes the audience away from the linear schedule.

Interacting during the show may not be disruptive if you are sending in your POV, messaging or voting.

Another solution is putting permanent loops on 24:7 eg Chelsea, Bitesize, but this is expensive.

3) Keep it simple. Don't confuse them.

Give people a few choices which are entertaining or useful.

Make it easy to use and understand. Too much choice can be overwhelming.

4) **The experience has to be a TV experience.**

iTV is TV all the same. People want a TV experience, not a web experience on TV. Interactive TV has to keep its human soul. Don't bog the experience down too

much in menus and text. People want TV that is moving, quirky, fun, and spontaneous.

Shifting from moving pictures to still text is very jolting for the audience and takes them away from the 'TV experience'.

5) **Offer new content on each platform**

When re-purposing content for each new platform, it has to be new or more convenient (otherwise why go to that platform to view it?) Unique content will drive people to other platforms.

6) **Just because you can doesn't mean you should.**

Too many iTV developers are technology geeks who get caught up in what's possible rather than what is useful.

There's got to be a good reason to enhance a program with interactivity, otherwise it is a waste of money and a disappointment to the viewer.

TV producers must lead iTV development, not techno geeks.

7) **Make it clear why a viewer should interact. What's in it for them?**

If you cannot sum it up in a word or a sentence, it will be a confusing proposition for the audience. Ask: 'What would make it worth the viewers while to press the Red Button?' They don't care how it works, only what it can do for them.

But don't make them work too hard, you need to balance effort and reward.

If you are charging them for it they need to see some value. Red button voting needs to be cheap so people don't care about the cost. Red button fatigue has already been detected in England. For many, pressing the red button has not delivered on expectations, so they stop wanting to do it.

8) **What's the business model?**

All applications should be structured around a strong business case and revenue model. Will it increase revenue, ratings or retention? (see chapter 10 for more on this)

9) **Engage with moments of micro-boredom.**

But do it simply and quickly. Pop up Video did this well, with little factoids that popped up during a music video.

Its better to 'hop' within a program than across channels.

10) **The linear TV show has to be able to stand-alone.**

Only if the main TV show is fantastic, will the audience care enough to want to interact with it. Interactivity will not save a program.

10. THE BUSINESS CASE

In the world of digital television, only the BBC can afford to create interactive programming for philanthropic reasons.

For everyone else, there's the cold hard reality that, unless you prove the business case for a service, it will be dead before it's even born.

Interactive applications on digital TV can only be economically justified if they generate ratings, retain an audience, create new revenue streams, create new ways to advertise or increase subscriptions.

Lets look at each of these:

1) RATINGS and RETENTION

More eyeballs on the screen means you can charge increased advertising premiums. A program would hope to achieve this by:

a) Getting more viewers or 'increasing the percentage of available audience'. Some enhanced TV has been able to do this. Usually it is big event TV. Big Brother, Great Britons, Test the Nation and Wimbledon are fine examples of this.

b) Keeping the Viewers glued to the screen during the show or 'audience retention'. Examples of this are 'MTV Tennis time' where you play pong on screen during the broadcast of music videos, but your running scores are lost if you change channels. This was used in Banzai and other game shows as well.

c) Demonstrating long-term customer retention. Its costs less to keep a customer that to get a new one. Subscription TV providers must keep a customer for 2 years to pay for the free set top box.

Measuring ratings and retention

Current techniques for measuring audience ratings and audience retention for interactive TV are rudimentary and leave a lot of room for improvement.
(See ratings in 'How to make enhanced TV' chapter 6)

Perhaps they are deliberately vague to disguise the poor ratings performance of interactive services to date. However poor ratings may be as much a factor poor marketing as they are of poor execution of an idea.

Until iTV can accurately demonstrate its ability to attract more ratings or hold an audiences attention this aspect of iTV will fail to attract traditional advertising dollars.

2) NEW REVENUE STREAMS

Interactivity is generating new revenue streams in the following ways. And the list is growing:

a) Transacting through your TV or 'T-Commerce'. This can range from 24 hour shopping channels to ordering take away. Minimising the distance between the ad and the transaction is a powerful thing.

b) SMS voting, messaging and entering competitions. These generate high volume micro revenues. And there is an existing infrastructure to handle this volume via the mobile networks. The popularity of SMS continues to grow.
c) 'Pressing the Red Button' or interacting through your remote control. A modem connection is needed if you do not have cable TV. Games, gambling, voting, messaging, entering competitions, requesting recipes or information can all be provided for a small charge. The trick is not to overuse this, or overcharge, or people will become wary of using the red button.
d) Pay Per View sports, events, movies and adult content.
e) Gambling, sports betting, horse racing and lotteries.
f) Pay per play games. Simple but addictive TV games have proven that, like the 20c video game arcades of old, people will pay small amounts to play these games.

CASH MAKERS

So which of these services are making money?

T-Commerce has had mixed success. Viewers do not generally like to browse through their TV's. Trawling through endless menus is a very dry experience and not what we sit on our couches to do.

As Matthew Tims, CEO of Two Way TV says, "Shopping malls on TV aren't working. People don't like to browse on the TV, it's not the right medium for it. And the same can be said for banking or other financial services. It's not a TV experience. The shopping experiences which do work are those 'prompted' by the TV show or those compatible with TV culture. There may be a call to action to order a pizza now, or order a brochure, or call now to buy this kitchen whizz. These are simple propositions that the viewer can understand immediately. The TV talks to you, shows you, and you can decide whether or not to act."

A service which does prompt viewers to make a purchase is QVC – The Shopping Channel. I went in to see the QVC studios in London. All day they film this talking shopping catalogue, where each product is demonstrated live by a host and an 'expert' in the studios kitchen, the bedroom or wherever. Viewers wishing to purchase the item may do so on the website, by telephone, or through their remote control. 20% of QVC's sales are now made through the remote control.

QVC shopping channel generated net sales in 2001 of 186.8 Million pounds

T commerce may become a more attractive proposition in future. At the moment, there's not much reason to do banking through the TV when it's a text driven process? Maybe banking through TV will work as a proposition when you can 'visit' sales assistants virtually through a videophone on your TV. iSeeTV is a new company offering this type of service with video call centres (where you can even

record the conversation) This is a great Saturday morning couples proposition, so you can stay at home and mind the kids while you apply for a mortgage.

SMS and voting through the red button

Compelling audiences to vote using SMS is continuing to prove profitable, as SMS can generate large amounts of micro-revenue. Red button interactivity can also attract micro revenue, but SMS has the advantage as it does not need the infrastructure required for red button interactivity. Programs like Big Brother, Fame Academy, Help I'm a Celebrity Get me Out of Here, Pop Idol all use SMS interactivity to generate large supplementary cash flows for the broadcasters.

Gambling and betting

SkyBetVegas, AVAGO, Fancy a Flutter and a number of other operators provide casino-style games such as Roulette, Blackjack and Dice on the Sky Digital platform.

In 2002 SkyBet Vegas generated £72 million in revenues.

The UK Gaming Act specifies that gaming must take place on licensed premises (this restriction does not apply to so-called "fixed-odds betting," the term used to denote betting on sports or chance events, where bettors are aware of the odds of their winning and of the amount of money they stand to win each time they place a bet), and so it is a possibility that ITV gaming, which by definition is conducted remotely, is therefore illegal.

As it happens, an independent committee set up by the UK government to review the country's gaming laws has proposed legislation that would take new digital TV and Internet gaming technologies into account; however, the UK parliament recently postponed a vote on that legislation until 2004. This means that the new legislation, if passed, will not take effect until 2005.

The saving grace for these Casino style games will come from a pending case which is deciding whether random number generated casino games might amount to 'fixed odds betting'.
(www.itvt.com 'New Sky Policy Prohibits ITV Gaming Services on SkyDigital' July 2003)

Regardless of this outcome, the sports, lotto and horse betting are likely to remain legal and have huge revenue generating potential.

Games
Interactive Games played through the TV have proved to be a money earner, though revenues are not at the level of gambling.
These games are simpler than the Playstation, Nintendo or Xbox style games. The STB's can only handle games at the complexity of gameboy level.

Playjam, a dedicated games channel on Sky gets 250,000 views a day on average, peaking at 500,000 on Friday and Saturday. Many games are pay to play. (www.opentv.com, 2003)

These iTV games are good for 'quick hit' satisfaction, and players are willing to pay small amounts (10 to 50 p) for the privilege to play them.

Martin Batten, Managing Director Minds Eye Productions, an iTV games developer for the Sky platform says: "The industry in the UK is doing quite well, but the question is how much below 7 million homes could we break even? If it's less than half of that I have to say it's probably not worth my while! In many cases we're looking at less than a quarter with no return path!"

Batten is keen to find a route into these markets, but the business model seems unclear at this stage. "We can only probably create a market if we throw a lot of investment capital at it, which is what our competitors have done before, however I'm not sure how long they can hold out with that level of investment. Its just a huge cost to deliver for other platforms, already we have to integrate our applications across 28 different Sky boxes, this requires a huge amount of resources in terms of management, time etc, it's a phenomenal piece of work." (www.broadbandbananas.com news July 2003)

Adult Content

The porn industry in the USA turns over 3 times more than the film industry. It has been and always will be a profitable business. Enough said.

Pay Per view movies , sport or events

This has been available for a long time on analogue cable services and will continue on digital TV. Video on demand and Near VOD technologies are said to be the 'holy grail' for interactive TV. I'm not convinced.

VOD is expensive to operate and may be superfluous once PVR's are introduced. The advent of the PVR and broadband will mean that most people will be able to capture a number of films to their hard drive to watch when they want, regardless of scheduling.

3) NEW WAYS OF ADVERTISING

Another economic justification for iTV applications is if they create new ways to advertise. Some effective ways of reaching the consumer include:

a) Interactive advertising –impulse purchases prompted by interactive ads allow you to order at the press of a few buttons on your remote. This is not new (remember the late night ab master commercials) but iTV makes it easier. The context of the ad within the TV experience affects how likely it is the audience will react.
b) Direct Marketing can be more effective by impulse requests for information. Eg press the red button now for a free brochure or test drive or to enter a competition.
c) Targeted Advertising – advertising can be tailored to better fit the profile of the viewer, based on their viewing habits. PVR's are being designed which can do this even better.
d) New advertising real estate is being created, such as moving banner ads on the EPG's. Dedicated Advertiser Locations (DAL's) are on their way. These are new broadcast spaces, where the viewer can be taken for deeper content, samples or transactions.

e) Sponsorship - Enhanced content in support of a scheduled broadcast, or stand alone services, such as games, weather, info listings etc provide sponsorship opportunities which can build brand association.

Although iTV advertising is in its infancy, its importance is expected to grow. IDS is Flextech/Telewest's advertising business in partnership with Sky. Their report (IDS Landscape Report 2003) shows that in 2002, 17% of Sky Digital viewers had interacted with an interactive advertisement, double the figure of the previous year. The report also shows that 55% of those who have interacted are aged 16-34, an attractive group to advertisers.

90% of media professionals in a poll in the UK (April/May 2002) commissioned by weapon7 and Chinwag expect interactive advertising to become an essential part of the marketing mix. There is no doubt that iTV presents significant opportunities to reach audiences in new ways. I also believe that in this endeavour, iTV will work hand in hand with PVR's to more accurately target consumers with advertising that is relevant to them. The theory is that people won't mind watching ads if they are more relevant to their lifestyle.

4) DRIVING SUBSCRIPTIONS

For subscription TV, Sky Satellite is the leader in the UK. Research shows the main drawcards for Sky subscribers are more channels, more sport and better picture quality. However movies are what they spend most of their time watching, followed by sport. Interactivity registers as a lower priority for these subscribers. (BBC New Media, Sky Digital Homes, Jan 2001)

Although Sky is the recognised pioneer of these services, it cannot afford to create the rich multi streaming applications the BBC can, such as Wimbledon, Walking with Cavemen and Pyramids. Sky has invested a lot of money into the infrastructure for interactive TV. But interactivity for Sky is not demonstrably increasing ratings or subscribers. I would suggest that Sky are hoping to recoup this money through new revenue streams and new ways of advertising.

Guy Gadney, Manager of Interactive development at Foxtel said that Foxtel assesses each interactive application based on a matrix of how it:

- Gets subscribers
- Keeps them
- Generates revenue

(Gadney 2003, pers comm. 9 Apr 03)

So it seems any new iTV applications on Australian pay TV will have to pass the scrutiny of the business development executives.

11. HARD LESSONS

We, the industry, have spent £750 Million building interactive digital platforms. So far the main uses for it are betting, games, voting and wanking. Was it a waste of money?

- David Docherty, ex BBC Director of New Media.

There have been some bad decisions along the way for implementing Digital TV and iTV. What are the Key Lessons for Australia in all this?

Nori Matsuoka, was an iTV producer at BskyB, and is now creating interactive TV for the BBC. She believes that "in this industry, iTV is becoming a dirty word: 'it doesn't work'. But why doesn't it work? By asking this question we might find a way to make it work." Nori had the following advice to add:

- "Its wrong to assume that if an interactive service is there, people will use it. The novelty is not enough. People need to not only know its there, but be given a good reason to use it.
- "You need to define the service you are providing for the viewer. Is it an entertainment proposition? Is it an information proposition? These are different uses with different consumer habits attached.
- "Understand how viewers consume media and use different devices. For example, WAP on mobile phones wasn't popular but SMS is. Digital cameras on mobiles are being used for different purposes than first anticipated. People are rarely sending photos to others, but they are enjoying having a digital camera on their person at all times. Who is the audience we expect to use the service? What are their habits?
- "Don't employ web people to create TV. They just don't get it.
- "Understand that making enhanced TV costs a lot.
- "Always shoot the extra content for enhancements at the same time as the linear production. They are a complete package.
- "When considering an enhancement for the program, you need to clearly understand what is the unique selling point (USP) for the viewer is.
- "Enhanced TV will not save a bad program. The novelty of interactivity is not enough. If no one likes the show, they won't interact.
- "Do not ignore the basic rules of TV. Interactive TV not the web, it is not new media, it is television.
- "Ask the question WHY?….What is the reason for doing this? If the answer is " because all pitches have to include an interactive proposition" then throw it in the bin and save everyone a lot of time and money.
- "Less is more. Do less, but make it really worthwhile.

- "Look at people trends rather than technology trends. This will be a more reliable guide on what will work."

According to **Matthew Tims**, the outgoing CEO of Two Way TV, these are the lessons he would like to pass on to Australia:

- "Don't confuse the audience too early, lead them gently along into new territories. TV is by its popular nature, unadventurous. So the best approach is to start with a bedrock of things you know people like, eg retrofitting existing formats, like game shows and sport, as these are familiar to viewers. Then launch off this by trying something different and see if it takes off.

- "Use focus groups with caution**.** Because this is so new, focus groups will tell you what they think they want, but not what they actually will watch. For example, people think choosing your own camera angles in a sports match sounds cool, but when they try it, they get bored after 5 minutes, and realise that the camera angles chosen by the TV directors are better. So how do we identify these needs? By observing habits, diary keeping, interviews. Do they shout at quiz shows or politicians, sing along with Top of the Pops or write down a recipe? Understand the viewer's lives and where TV fits in (This may be a humbling experience for some!)

- "Don't fall in Love with the technology; it's the consumer offering that's important.

- "Try to have some great new interactive content available at launch.

- "It will cost much more to upgrade to a digital network than you think."

Simon Smith, a creative Director at weapon 7, an iTV developer points out that so far, the so-called 'killer applications' of interactive TV have all been 'flashes in the pan', roughly occurring every 6 months. "There's been karaoke, shopping, games and chat" he says, but "none of them have resulted in any significant development in the take-up of iTV."

He feels almost moralistic in his stance towards interactivity and is concerned about the future. "If something doesn't happen soon that actually works in interactive TV, it will just end up being a channel for all the things we've tried to keep off television for the last 50 years. Unless iTV delivers something soon, it will just be like the internet and a vehicle for porn, gambling and crap!"

He remains positive about iTV's opportunity based on reach, "For me the killer application on iTV is TV itself, and we shouldn't forget about the audience it can bring. Whilst games consoles might be breaking into the marketplace, there is no game on Playstation or X-Box that could deliver as many game-plays as Sky digital so it's an incredibly powerful platform. Not to mention that it can deliver individual game-plays at 75p or £1."
(broadband bananas news July 2003)

12. GB iTV SEMINAR 2003

The 2003 Interactive Television conference held at the British Academy of Film and Television Arts (BAFTA) was a sobering snapshot of an industry disappointed that it has not delivered on its own promises. Below is a transcript of my notes on the seminar:

"GB iTV 03 - Interactive Television, slow burn or damp squib?"

BAFTA, 195 Piccadilly, London
9 July 2003

Tonight's topic:

In the last few years, the UK's interactive TV industry has had considerable success in attracting audiences to individual programmes and sporting events, and several key players are now moving towards providing 24/7 interactive offerings. But how far have we actually progressed towards developing and delivering original, imaginative forms of content for this new medium? What are our thoughts on the following comment:

"Interactive TV must become more imaginative if it is to keep the publics interest and attention beyond novelty stage."

- Jonathan Webb, Flextech

First Speaker : Jonathan Webb, Director of Interactive Programming & Controller of Challenge & Trouble, Flextech

Jon started marketing at Unilver, then moved to the Family Channel in 1994, which was taken over by Flextech in 1996 and Relaunched as Challenge TV. He is now also director of Flextechs brand development.

"Is it just me or does the mention of Interactive TV leave a sour taste in your mouth?

"This is the mid life crisis of iTV. Four years ago we promised that iTV would change the world with new revenue streams, amazing programming and bigger audiences. It was going to be bigger than the Internet. What we didn't mention was the huge costs, the inflexible technology and the general confusion about what it is and what we are trying to do. A lot of current iTV is just content bolted on, and frankly, its quite underwhelming.

"We should be striving to create new immersive content. Games, horoscopes and other things I call 'snacks' are quite developed already, but I don't think these Broadband type applications are what iTV is all about.

"What are the real benefits iTV can offer our viewers?

These are all valid, but at the top levels, you are connecting more emotionally	1. Informative, Expert view, Behind the Scenes, Stimulating, shared experience.
	2. Personal challenge, become part of the show.
	3. Fun, control, have a go.
	4. Distracting, immediate, filling time between shows.

"When interactive TV reaches the top layer of engagement we will be offering viewers the full complement of experiences and connecting with our audiences on an emotional level. Make it an emotional experience rather than a cold, technical experience. DVD is already doing this, quickly and simply. Just put it in and play the disk. We need seamless event based interactivity. This is the future.

"These are the stages a viewer move through before they are willing to interact:

Just watching → Emotionally connected → Intuitively Interact → Participate.

"A viewer will not want to participate unless you have moved through the first 3 stages. Too many iTV applications I have seen are expecting people to engage at the 'just watching' phase when they really don't care to.
We should get the audience to interact at the point where they really care.

"Interactivity will NOT rescue a mediocre show.

"I have had moderators sit in with families to observe their viewing habits. The moderator asked the teenager why they were not choosing to interact during the show, and the teenager replied they did not want to miss what was happening on the main program. Do not take viewers away from the main show. Maybe at the end you can do this, when it's appropriate.

What makes great Enhanced TV?

I wish I could watch court 2…. I wonder what my IQ is…? What are they thinking..?
I wish I knew the words to this song… Let me decide what to watch….
I know the answer…

"We need to understand the audience and give them what they love to do.

"We can lead the world in iTV formats. Why aren't we?

1. Interactive is still isolated from the programming department. The whole thing should be commissioned together.
2. MILIA and MIP should be the same thing. Its TV, not technology.
3. We should integrate production cycles for applications and programs.

"Whether its red button, web or text, its ALL interactive TV. Pick the right medium for the message. Mobile can be a great way of interacting with TV.

"How can we prove our value to Broadcasters?

1. We need new measurement systems. Unless we can show numbers which prove the added value of iTV in attracting and keeping audiences, then advertising dollars will not flow in to sustain the industry.
2. Why are we doing this anyway? Is it for Revenue –or Ratings? Each goal has a different business model.
3. Who forgot to invite advertisers to the party? (note - there was only one person from advertising in the audience at this seminar)

> "The first rule of technology: We always overestimate the speed at which technology will change behaviour but underestimate the depth of change over time."
> - That Famous Guy 2000.

The Second Speaker : Peter Good, Head of Interactive TV, Channel 4

Peter started out at MTV, and was responsible for launching MTV and, MTVBase. In 2000 he joined Channel 4 as Head of Interactive TV. His team launched Banzai in 2001, followed by the interactive version of Big Brother. In November 2002, they launched 4 Active, a permanent iTV presence behind Ch 4 and E4, providing access to games, quizzes and votes.

"I didn't know a lot about iTV when I first got the job. At that time, sport and news were the two biggest interactive things, but I was looking for a show which was a good fit for iTV, and 'Banzai' came along. Banzai got up because it was a great TV show with or without the interactivity. Then we did a '15 to 1' play along, then 'Big Brother'. On E4, while 'Friends' was playing we would stream live Big Brother behind it, so people could flick behind in moments of micro-boredom. We found that messages going out like 'you have 2 hours to vote' would prompt large spikes in iTV usage.

"For me the 2 most frustrating things about interactive TV are the cost of building applications, and the time taken to get things to air.

"Also I believe it's not about the technology, it's about the format for the show. Banzai was a good format. We are gradually learning about our audience and which formats lend themselves to iTV applications. It's about finding the right medium for he right program at the right time.

The Third Speaker : Emma Somerville, Head of Interactive 24/7, BBC

Emma set up the first teletext website in 1993, then moved to BiB (later Open Interactive), which was taken over by Sky. There she looked after ETV services and content for Sky Active platforms. Emma joined the BBC in September 2002. BBCi's interactive 24/7 group is responsible for permanent 'stand-alone' iTV services like news, sport, weather, travel, providing text and rich graphics, games, quizzes and video services.

"Yes, we are in a mid life crisis for iTV. Confusion is one of the symptoms of this. Confusion for the audience and industry, who don't know what we should be or how we can measure our success. Not surprisingly, our mainstream TV colleagues feel threatened when New Media come along and say 'I know how to make your program better'.

"The BBC is aiming to unify the user experience, and commissioning iTV and programs at the same time. But there are still timing issues with developing formats.

"There is some quick fix interactivity which can get things to air quickly. These might be 24/7 text info, or eTV formats which can be re-used.

"We need to consider the iTV schedule now as well, because an after show experience may disrupt the next program on the schedule."

The Fourth Speaker : Jeff Zie, Development Director, Open TV
Jeff has driven Playjam into launch and beyond and now plans and implements Statics activities. Jeff was previously at BSkyB new media where he was director of operations and Product development, responsible for enhanced TV and online activities.

"The BBC is in a unique position where it has a guaranteed source of funding. But a lot of iTV outside that environment is driven by its money making potential. It is driven by the spread-sheet, not creativity.

"Stand alone services with set functionality can make money. There are different capturing mechanisms to get those 10p micro-revenues. Playjam asks users to pay to play by pressing the red button, and it goes to their phone bill. This is simple and easy and is working. The cost effectiveness of this is down to volume.

"Where is iTV going? DVD beat us to it. There the user is in control, and it's an immersive experience. Broadband may beat us to it too.

"At the moment, I am focusing on the core businesses which we know can make us money, and for us that's gaming. I'd like to do something worthy but for now its about survival. I think there's some hope – to make it through the next couple of years we will see some interesting things happen."

Audience discussion:
The seminar was then opened up for discussion with the attendees. These were some interesting comments which came out of the ensuing discussion:

"We need to attract advertising dollars, by changing the way we measure our successes. We need to produce real numbers which impress the 'suits'. The BBC does this well with Wimbledon. They can quickly produce real and impressive numbers on the audience and usage."

"We shouldn't blame the limitations of technology for our lack of creativity. We haven't really pushed the creative boundaries of what we have now. There are a lot of old formats which had interactivity built into them BEFORE digital TV. We have to work now with what we've got. Similarly, low budgets call for creative solutions."

"In cooking shows, people are paying for recipes sent to them by MMS pictures and text. This is an example of a new idea using existing technologies."

"Amazing things can now be done on the internet, CD-Roms and Games Boxes. These technologies have been with us for a while. The ideas for iTV will come when we get used to the technology."

"We can embed more interactive elements into the video itself, so the application doesn't have to work so hard. For example, getting audiences to press red when they observe something in the show, rather than waiting for a prompt to appear."

"In the UK, there are 2 camps:

1. The BBC – can offer lots to the audiences, with no commercial pressure, and can push the creative boundaries.
2. The rest of the industry – needs revenue models to survive. The industry is short on cash and jobs, and needs to survive now. In time the cultural stuff will come."

13. THE FUTURE MEDIA LANDSCAPE

"The future is here. It's just not widely distributed yet"

- William Gibson

I believe all the elements for our multi media futures are already present, but will evolve together to make our lives even more convenient.

The following is an analysis of the other existing interactive technologies which will grow in usage and transform our daily consumption habits. This is the context in which Digital TV will be operating.

DVD

There is still debate going on about whether audiences want interactive drama. This choose your own adventure type application has been experimented with before. A true success has yet to emerge.

Many argue that it doesn't work, because the linear story chosen by the writers is always the one designed to heighten drama, excitement and emotion, and tell the best story.

DVD provides interactivity for drama in the form of extra content (behind the scenes, interviews etc) and alternative commentary. We can also skip forward to favourite scenes, and read cast and crew bios.

Maybe this is as interactive as anyone really wants their drama to be.

DVD's have been hugely successful retail phenomenon, and have temporarily saved the declining video market.

However, just as CD's are being replaced by digital music stored on a hard drive, so will DVD's. Why store it on disc if you can watch it by download for $5 a movie, then delete it off your hard drive?

CONSOLE GAMES

Xbox sell a number of 'Xbox Live' enabled games. They sell sports games where you create your own league to challenge other player's teams live. This is a broadband gaming arena, but you need to already have a high speed Internet service to use it. You also get a communicator headset which allows you to talk live to your opponents wherever they are.

PlayStation also sell a network adapter to allow you to play your current titles in 'online gaming' where you play others around the world in the same game space.

This large-scale multi player gaming is a fantastic peer-to-peer fully interactive experience.

The massively popular video game market is now worth an estimated $30 billion US (18.4 billion pounds) It's a global market that rivals movie box office sales. With a broadband connection, these companies will be able to generate more sales through impulse downloads of games onto hard drive using credit card.

So do these console games pose a challenge for Interactive TV?

Mark Goodchild believes “these console games are very popular because they are a good product, marketed very well. A lot of these games now have a strong narrative and are very cinematic, immersive interactive dramas. They also take up a lot of time to play. This time can directly impact on the BBC’s audience share. So in that sense, they are competing against us.”

So what about iTV gaming? How does that industry feel?

Matthew Tims, CEO of iTV gaming company Two Way TV says “I see them as different markets. The STB’s cannot reproduce these games, they are too limited. We find that the iTV games players are generally women in their 30’s. They are not a console games audience. They can play a game for 5 mins, 10 mins and get fun out of it. Most console games require a greater investment in time. Time which this market doesn’t have.

“The Xbox is often plugged into the 2nd TV. Players are young males who are opting out of TV. So culturally they are miles away. Technically they are not doable. The complexity of games on a STB meets at about Gameboy level. They are good at ‘quick hit’ satisfaction and deliver at the right level of complexity for our market.”

BROADBAND

Broadband is a rich multi media experience with powerful, always on, interactivity. It can deliver any media you want, at any time.

At the moment, the price structure makes broadband prohibitive. In Australia, only 3% of the population has it. In the UK, its 5%.

So as a mass appeal method of delivering interactive services, we have to wait for prices to come down before it will really take off.

The BBC’s experiment with broadband TV ‘BBCi Hull’ (www.bbc.co.uk/humber/bbci_hull) is exploring the potential of Broadband as a method of delivering interactive TV (see chapter 4 ‘Broadband’ for more on this).

For me the most interesting aspect of Hull was the user generated content - Empowering the users to share their own content. Video diaries, confessionals, skate video’s, short films etc. One local kid, Ben Borthwick, has become a bit of a star with his video diaries and unique sense of humour on camera. This is proving popular and an indication of things to come.

Web TV failed as a concept, and was very clunky when used on a normal 4x3 TV. But browsing the web on a big wide screen is easy. You can sit back at the same distance you would for a movie and read the screen. Sure it’s a different experience to watching TV, but you will be putting a different hat on, engaging a different part of your brain when leaning forward to do this.

I think broadband has a very exciting future. When broadband is combined with the functionality of a PVR (with a hard drive and content menu), it will be able to deliver on its full interactive potential.

PVR's (Personal Video Recorders)

These are a powerful piece of hardware that may change the way we watch TV. They are like a Video Cassette Recorder, but they use a hard drive instead of tape. They can:

- pause and rewind TV as you watch it.
- automatically Record all your favourite shows (up to 100 hrs worth)
- capture programs which are then accessed by an internal menu.
- act as a portal for Broadband services.

BskyB are selling them in the UK as Sky+ to enhance their current set top box. In May 2002 the Independent said of the new Sky+ PVR: *"Nothing short of a siege and a hostage negotiator will get you back to videotape"*

It is hoped future functionality will allow them to capture Interactive TV applications as well. So you can enjoy all the multi streams in your own time, effectively turning your TV into a DVD.

OpenTV's Vincent Dureau supports the view that there is significant value in combining storage with interactivity. 'PVR is not just about making Pay TV better, its about being able to record the interactivity as you record a television programme, so you can still choose multiple camera angles, get access to supplementary information or navigate through an interactive programme even after it has been broadcast" says Dureau.
('Foxtel confirms iTV launch for 2004'. www.foxtel.com)

I spoke to a BBC employee, Aleks De-Gromoboy, who owns a TiVo PVR and he was almost evangelical in his praise for it.

He said it is 'Life changing' and has 'altered his TV viewing habits dramatically'. It's effectively 'TV on demand'. He no longer watches broadcast TV and just watches what his PVR has captured on its hard drive for him to view. He says he doesn't really know what channel anything is on anymore. And it doesn't matter. He gets to watch what he wants, when he wants.

This 'time shifting' has obvious ramifications for prime time scheduling. Television events will become more important for broadcasters to attract 'live eyeballs' to their screens during ratings season.

The TiVo PVR records the program, ads and all, but can forward wind through them. This aspect of the PVR makes traditional advertisers nervous.

NDS, which will be providing PVR technology solutions to Sky and Foxtel, have introduced the concept of 'King Ads'. This is where advertisers can pay a premium to feature advertisements that cannot be fast forwarded.

These developments will also mean product placement or 'in program advertising' is likely to become a more important part of the advertising mix.

PVR's can also deliver audience profiling and targeting which is the hallowed ground for advertisers. They can already look at your viewing habits and record programs which they think you will like. They can then use this information to deliver more relevant ads to you.

PVR's in the UK have been slow to take off, because a lot of them are sold on a subscription model (to cover the subsidy on the box and the EPG service).

PVR's should really take off when prices come down and you can enjoy the service without a subscription. New models will be able to harness Freeview.

PVR's have the potential to solve a lot of problems and limitations of the current infrastructure.

For example, they can allow broadcasters to use bandwidth more efficiently by pre downloading the interactive application to PVR's to be played out in synchronisation with a broadcast.

Also, rather than having to loop a movie on a channel, they can put it on once at 3am, and PVR's around the nation can capture the film overnight (in a trickle of bandwidth if needs be) to be watched at full resolution when it suits the viewer.

HOME ENTERTAINMENT GATEWAYS (Bringing it all together)

In the near future all these will become one: Your TV, DVD player/burner, computer, broadband connection, Games Console, PVR, Digital Receiver/ Set top box, CD player, stereo and radio.

They will play through a big wide screen with surround sound.

In addition, other functions will be added, such as a web cam, telephone, personal organiser, central server, multiple room control. This will allow a seamless combination of on-line, broadcast and stored content.

This combination of media will enable us to do many things, such as:

- Watch a Star Wars movie, then seamlessly enter the star wars universe by playing the Lucas Arts game with your peers over a broadband connection.
- Watch the Winter Olympics live on TV, then try your hand at Ski jumping on the console game of the winter Olympics.
- Surf the web, and enjoy it from a distance, because your screen is so big.
- Capture films, TV shows or music off broadcast and broadband, and share your favourites with your friends.
- Send your friends or family home movies or slides set to a soundtrack (with commentary)
- Play music from your jukebox.
- Watch your favourite TV shows whenever you want.
- Search for cult movies and capture them onto your hard drive to watch whenever.
- Establish your own 'peer' channel, with a collection of home movies and segments recording your adventures with your frineds, set to your own soundtrack.
- Set up a video teleconference with your family or friends, or to consult with a nurse about nappy rash.
- Take a virtual tour of a new home, and speak to a real estate agent face to face.
- Get customer support from a face-to-face video call centre.
- Play along with your favourite game show, and enter your score for a prize.
- Bet on your Melbourne cup favourite while you watch the race from home.
- Bet on the World Cup quarterfinals; watch the game, then play the game on Fifa 2006 with other players around the world.
- Contribute restaurant or movie reviews.

This level of convergence may sound ambitious, but it is already happening with the Sony PSX.

The PSX plays PlayStation games (including online via broadband), DVDs and CDs, can pause, rewind and record live TV, burns CDs and DVDs, can instantly read images from Sony digital cameras and will likely play them back in slideshow format.

There has been a lot of research on people's habits when using the screen, such as the lean forward aspect of computing verses the lean back usage of watching a movie. But behaviour is modified by the reason you are using the screen at the time.

Jonathan Webb, Director of Interactive Programming at Flextech believes DVD's and Game consoles are already delivering what iTV was promising. He is excited by the time when the TV is connected to a hard drive and a BB connection. (Webb, pers comm., 9 July 2003)

MOBILE AND PDA CONVERGENCE

Mobile phones and PDA's will experience a similar type of media convergence.

Mobile phones can already play games, send text, email, surf the Internet and listen to music.

NEC is developing TV mobile phones, which it expects to be popular with commuters. The prototype has a battery life of around an hour when displaying TV programmes, a time the company hopes to double. (Goodwins, NDNet UK 14 July 2003)

The market for interactive games played on the mobile phone is growing rapidly. Analysts are predicting the mobile phone market in Europe will grow from 200 million Euro in 2002 to 3 billion in 2008 ('mobile phone games set for blast off' www.reuters.co.uk 6 Nov 2003)

So as people carry with them a portable TV, radio, music box, games machine and telephone, with Internet access, we can see the emergence of the personal media gateway.

INTERACTIVE TV

As you can see, digital TV is just part of the home and personal media pie. Media is simultaneously fracturing and being brought together by these convergence devices.

The question is, whether interactive TV in its existing form will survive, or be swallowed up by the multi media cocktails described above.

Rather than fight against these other platforms, we can work out clever ways to work in conjunction with them. We are already seeing this put to good effect with mobile phones as event television like Big Brother and Australian Idol use SMS to excite the nation and make money.

I believe that a lot of the iTV applications which might be struggling now will be freed and empowered when all these platforms converge. And a lot of the technical limitations we currently experience will become irrelevant.

FUTURE TRENDS

Despite convergence of the above media we can expect certain current trends to continue:

Peer to peer
We are seeing the power of peer to peer now with music sharing, gaming and mobile telephony but the home media centres will expand what you can share and play with your peers. Other user-generated content might evolve to the point where groups have their own backyard TV channels.

Event Television
The ability to capture TV on your PVR without caring about scheduling or channel means even more importance will be placed on Event TV. Large-scale conversation making, high rating TV that means everyone will want to watch it live.

Interactive TV technology allows us to turn TV shows into events, because the public can now participate easier than ever before.
Event TV is a great platform driving Interactive TV usage as it allows greater levels of participation, and gets the nation talking.
They are also, by their very nature, BIG, and suited to multi-platform applications of SMS, web and Internet.

Harnessing the Power of the Mobile Phone
Mobile phones have grown explosively to the point where even the most resistant luddites are getting one.
Phone contracts mean this technology is being upgraded every 2 years, so applications can evolve with this technology. In fact most mobile phones are more powerful than current set top boxes.

SECTION D: SUMMARY

It is hoped that this booklet cuts through the hype surrounding iTV to explain what it is, what it is doing now and what it can do in the future. We have seen with the Internet how over hype can damage an industry with very real benefits.

The following summarises the findings of my experience in the UK:

14. MY CONCLUSIONS

I have mixed views about the interactive TV I watched in London.

A lot of the interactive applications were overly complex and cluttered. They demanded too much work from the viewer in navigating menus, and didn't convince me why I should care to interact.

But some applications were amazing, like the multi streaming enhanced programming mentioned in chapter 5. But most of these enhanced programs are VERY expensive to do, and only the BBC can afford to do them at the moment. And at the end of the day, they are an expensive simulation of the DVD experience.

Enhanced TV is not delivering amazing numbers yet. I believe this is due to poor promotion, audience confusion and pushing interactivity before people are committed emotionally to the programs.

It appears to me that BskyB's aim is to concentrate on developing new revenue streams through T-commerce, gambling, sports betting, pay per view, games, voting and competitions. None of these applications are going to win them a cultural prize, but at the moment, its about generating cash flow to recoup their massive investment.

The jury is still out on a lot of these 24/7 services. Some are beginning to make money, while many continue to lose money. But by the time BskyB breaks even, they will be in a position of market dominance.

<u>The iTV industry in the UK</u>

At the moment, iTV is far from being a core feature of the digital experience. Its initial over claims and unreliability led to some disillusionment. There is evidence of red button fatigue and declining exploration amongst established users.

The main attractions of digital TV remain greater choice of personal interest channels and a better quality picture.

So interactive TV has not delivered on expectations. But these expectations were fuelled by hype and unsound business models. Because of this, there are a lot of disappointed people in the industry.

Maybe iTV has been beaten to the punch on many fronts by DVD, Broadband and Console gaming. These are the interactive experiences consumers will measure their expectations against and this is the environment interactive TV will have to survive in.

But iTV technology will keep evolving, and we will accept it into our lives if it makes it easier for us do what we want to do.

So what does this mean for Australia?

Digital TV is great and clear. But clear pictures and sound are not enough to entice people to spend extra money to receive essentially the same service.

In Australia, the first step is to entice people to convert to Digital TV. As we have observed with Freeview in the UK, digital take up can be driven by providing more free channels with quality programming. People perceive they are getting more value and will spend money to convert.

But repealing the moratorium on extra channels on free to air would require a trade off with the subscription TV industry so as not to sink it. Subscription TV might ask for equal access to sports rights, so the public can get to see ALL the games which Free to Airs don't show on TV. In the UK, sports are a key driver of subscriptions, along with new release movies.

How quickly this happens depends on how urgently the government wants to change the status quo. At the moment I don't sense any urgency on this front.

I believe high definition has been a red herring in the quest for mass digital TV uptake. The DVD quality picture is so good with digital, many will assume its HD anyway. Further, HD is expensive to broadcast.

For now it seems the Free-to-Airs are happy to use the existing interactive technology of SMS and mobile technology. Big Brother and Australian Idol have demonstrated this to be a profitable strategy, and along with the UK, Australia is leading the world in SMS interactivity.

Australia cannot count on the ABC for BBC style enhanced programming. The ABC is fighting its own funding battles. The BBC survives due to TV licence funding and can continue to provide amazing enhancements if they deem it worthwhile.

For Foxtel, stage 2 of set top box deployment is when things will get interesting. This is when people understand the benefits of the PVR and are willing to pay for them. But I don't think Foxtel can rely on this technology to increase subscribers without improving their basic content on offer. I expect Foxtels will pursue the revenue streams BskyB have developed in the UK.

As we have seen, a lot of the existing applications in the UK are not working. But some of them are. It's simply a matter of adapting to these valuable lessons as we evolve with the technology.

Until then, we can enjoy interactive TV right now, by voting for our favourite idol/housemate/couple using the explosively popular mobile phone.

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GLOSSARY OF TERMS

(a more comprehensive glossary can be found at www.itvt.com)

ADSL –Asymmetric digital subscriber line. A form of broadband using normal phone lines which doesn't disrupt the phone line. Also called DSL.

DAL – Dedicated Advertiser Location. These are spaces, like web pages, where the viewer can be taken for deeper content, samples or transactions.

DSL – see ADSL.

EPG – Electronic Program Guide

IDTV – integrated Digital Television. This is a TV with an inbuilt digital receiver which replaces the need for a set top box to get free to air digital signals.

Multi streaming – This is where extra content is broadcast on extra 'streams', so a viewer can select content within a program by selecting a new stream. This is effectively switching channels within the same program.

Multi Channelling - refers to the large number of channels available on subscription TV and on the digital spectrum.

Red Button – this is the button on the remote control which has been designated to activate most interactive services. It is an attempt to standardise interactivity. Although some services are triggered by the green, yellow or blue buttons.

PDA – Personal Digital Assistant. This describes hand held PC devices like the Palm Pilot. Some mobile phones are incorporating features of PDA's.

STB – Set Top Box. This is the device which receives the digital signal and converts it into pictures on your TV. Normal TV's need one of these to get digital. Subscription TV issues a set top box so you can get the cable or satellite signal.

T-commerce – this is shopping and transacting through your TV. Some interactive applications can now process credit card details securely through the TV.

T-mail - this is sending email through your television, using a remote keyboard.

Walled Garden – this describes interactive services tailor made for your TV which look like websites, but are not accessible from the internet.

WEB RESOURCES

Want to find out more? Check out these websites to stay up with it:

HIGHLY RECOMMENDED

www.broadbandbanas.com
Many cite this as the website to keep up with iTV developments. It's also a worldwide networking organization for the iTV and Broadband Industry. The site has excellent video samples from shows, as well as news and other resources. It also has an excellent collection of papers and presentations.

www.itvt.com
Interactive TV Today (itvt) competes with broadband bananas to be the leading source of information on the rapidly emerging interactive tv industry. It has an excellent GLOSSARY which helps clarify a few things.

www.broadcastpapers.com
The broadcast industry's online source for business and technical white papers. It Contains a growing list of over 40 papers on interactive television.

OTHER SITES OF INTEREST

MEDIABULLET
www.mediabullet.co.uk
UK news site for TV, cable, satellite and radio.

EUROPE MEDIA
www.europemedia.net
The information hub for Europe's new media

C21 MEDIA
www.c21media.net
International TV format news

DIGITAL TELEVISION GROUP
www.dtg.org.uk
Group formed to set the technical standards for Digital Television in the UK. A central hub of information with full support of the UK industry.

ITRI
www.itri.tv
The Interactive TV Research Institute at Murdoch University, Perth.

AUSPAYTV
www.auspaytv.com
The Home of Australian pay television news and information.

COMMERCIAL TELEVISION AUSTRALIA
www.ctva.com.au
Association of Australian Free to Air Commercial stations (formerly FACTS). Now promoting the benefits of free to view digital television.

DIGITAL BROADCASTING AUSTRALIA
www.dba.org.au
Formed to help make a smooth transition for the consumer from analogue to digital television in Australia. Members include all free to air stations, and a range of consumer electronics companies.

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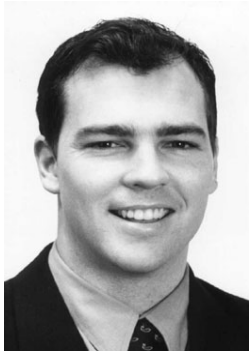

Ben Cunningham BComm LLB (Hons) practiced Intellectual Property and Commercial law for 5 years.

In 2002 Ben attended the Australian Film, Television and Radio School to study Television Producing.

Upon graduation, he was awarded the Kenneth Myer Scholarship to study and work in Interactive Television with the BBC in London.

Since returning to Australia, Ben has worked in television for SBS.

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