Producing Digital Interactive TV

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• Where are we, where are we going?
• A complex landscape
• Evolving services
• Building Bridges
• Structure or chaos
• Interface design
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Interactive TV - what is it? On the TV…

• “It’s like a fast web site with full screen video”
• “It’s like a CD Rom with a TV programme”
• “It’s like you are the film editor & director”
• “It’s your own TV channel, you choose what you want and when you want it”
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Where are we, where are we going?

• We are new pioneers
• This Alexandra Palace, this is 1946?
• This is the Internet in 1984
• The real goal, as ever is to understand what the audience wants
• No one really knows what will work yet, but the ones who try are more likely to succeed
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Where are we, where are we going?
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Where are we, where are we going?

• How big an audience - 7 million interactive by 2001
• 32% of households will take up interactive TV
• 5 years time half of all programmes interactive
• Key early target groups will be Kids, Young Male Sharers, Young Parents
• Early genres - News, Sport, Education, Children's and Entertainment
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A complex landscape
Quick, choose a distribution platform!

- Internet
- Broadband Internet
- ISDN
- ADSL
- VDSL
- Digital Terrestrial TV
- FTA
- IDTV
- DTT
- ONdigital
- DTT
- Digital Satellite
- FTA
- DSat
- BSkyB
- Open
- NTL TV
- Internet
- CWC Navigator
- PowerTV
- Mobiles
- Communicators
- DVD
- CD ROM
- WebTV
- Games Console
- PlayStation 2
- Dreamcast
- Web Choice
- Digital Radio
- TiVo
- Replay
- Other DVRs
- IP to STB
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Where are we, where are we going?

% of Households in the UK

Interactive services available

Possible Announcement of timetable for Analogue switch

1997 US multi-channel penetration

FTA ATT 25%
FTA DTT 18%
Pay DTT 12%
Dcab 24%
Dsat 21%
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Evolving Services

Simple, evolving enhanced TV models
• Text & graphics available with video
• Dynamic data synchronised with vision
• Multiple audio streams with the vision
• Multiple vision streams - one event, parallel activity
• Multiple vision steams - alternative views of same event

Adding storage
• Access to background-stored, book marked items
• Multiple routes through a programme - non linear
• Personalised programming - virtual channels
Levels of Programme Enhancement

- Broadcast information service
- Scheduled enhancement
- Synchronised enhancement
- Programme

increased coupling with programme

channel schedule

programme 1

programme 2

BBC Broadcast © Gary Hayes, Senior Producer 2/10/99 Interactive TV
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Where are we, where are we going?

The future?

• Box storage - 500 hours intelligent storage in 5 years
• Faster processors in STBs - PC inside TV in 3 years
• Personalisation - Digital TV knows you in 2 years
• Transaction - Digital TV becomes a life tool, now!
• Broadcasters Navigators - truly integrated services
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Local storage - a future!

Storage possibilities - Introduction

- In the last 10 years there has been a 100 fold increase in the capacity/cost ratio of hard disks - doubling every 10 months

- In 2000, 10 GB of hard disk storage will cost $100, providing four hours of MPEG2 audio-visual storage

- The capacities below, doubling every 10 months or a pessimistic 18 months, are based on 5.5Mbit/s video stored on a $200 disk,

<table>
<thead>
<tr>
<th>Year</th>
<th>Pessimistic</th>
<th>Expected</th>
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<tbody>
<tr>
<td>2000</td>
<td>8 hours</td>
<td>8 hours</td>
</tr>
<tr>
<td>2005</td>
<td>80 hours</td>
<td>480 hours</td>
</tr>
<tr>
<td>2010</td>
<td>800 hours</td>
<td>28,800 hours</td>
</tr>
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</table>
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Local storage - a future!

• Storage possibilities - Benefits for content providers
• Usage reporting data - did people request & store
• Profiling the audience - aggregating individual tastes
• Targeted push/pull services - ads, trails, programme
• Downloading (Web, TV and eTV) in off-peak hours
• Transaction control - monetary based services
• Rights management - conditional access models
INTERACTIVE TV EVOLUTION - 1999 +
• Model 1 - Broadcast schedule services - ‘pushed’
• Note: a/v may or may not be synchronised with text/graphics
INTERACTIVE TV EVOLUTION - 2000 +

• Model 2 - Broadcast scheduled services, multiple audio/video
• Note: may or may not have a return path, some personalisation
INTERACTIVE TV EVOLUTION - 2001 +

- Model 3 - On demand services, ‘fat’ return path (Dcable/broadband)
- Note: content from broadcaster and/or service provider

Viewer Interface

Return path - anything on demand & contributions
INTERACTIVE TV EVOLUTION - 2001 ++

• Model 4 - AOD, ‘fat’ return plus unlimited storage
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Building Bridges

Golden Rules (already?)
• If linear works don’t mess with it
• Make sure you are adding value
• It is not technology for technologies sake
• Make sure you know what the viewer should be doing
• Understand your audience
• Have you a team with correct complementary skills
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Building Bridges

The concept. Questions, questions, questions
• The programme - is it a new format or existing brand?
• Can value be added through interactivity?
• How are you going to make audiences interact?
• Which is your ideal platform? Five and counting
• Does it have depth. Will people stay & come back?
• Will the involvement & personalisation create loyalty?
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Structure or chaos - types of non linear TV

Broadcast multiple routes - temporally limited

On demand routes - semi structured content, user controls time

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Building Bridges

Lets get going

• Is the editorial direction based on interactive relevance?
• Have you listed what is relevant or just what you have?
• Where is the content going to come from - web teams or new iTV teams?
• Are there templates already available which roughly fit your plans?
• Rights - can the material be used?
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Building Bridges
Designing choice
• KISS for your audience, guide by the hand in early days
• In this development period listen to the programmers & test, test, test & then test a little more
• Too much choice, endless menus, hierarchical horrors
• Breadcrumbs, no more where am I, lost switch off?
• Depth of interactivity reveals navigational metaphors
• In sync - build moments of passivity & activity
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Structure or chaos

The intention: to engage, entertain or inform. This dictates the type of interaction

• Discrete - viewer selects and receives in own time
• Continuous - time based selection in varied environs
• Concrete - viewer is represented in the interface
• Character - viewer is a character in the interface
• Resonant - what viewer does changes content
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Interfacing design for beginners

• What on earth can you really get on a TV screen
• Branding - make sure people do not overdose on logos
• Crossing over - where does broadcast & web design end and TV interface design begin?
• Creating the programme identity without hiding the interface?
• Fitting in to a family. Be different, but not that different
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And finally!

• Over to the programmers. Specifying the impossible
• Ignorance of platform is suicide
• Responding to change
• TV's do not crash, well they didn’t do
• Keep it live, keep it real
• Learn from our interactive past