Enabling or Disabling Technologies?

PART TWO
‘ooh my head hurts!”

Gary Hayes
Senior Development Producer
BBC New Media - Interactive
Enabling or Disabling Technologies?

MAIN TECHNOLOGY THEMES

• Even More Channels & Choice & Dilution & Information
• Personal Filtering, Capture & Life Tools
• ANYTHING is on Demand
• Consumers Are Mobile & Always Connected (to each other)
• Everything becomes faster, smaller, ‘bigger’ and cheaper
• Integrated Devices & Home Networks
• All of the Above (Humans do Change, Respond, Adapt!)
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MAIN TECHNOLOGY PROBLEMS FOR BBC

- Each platform has a different API
- Very limited control over platform carriage & development
- Distribution ‘pipes’ are varied (bandwidth)
- Distribution ‘pipes’ are vertical, un-connected
- Device capabilities are extremely varied (free to v.expensive)
- There’s always something newer around the corner
- BECAUSE of the above the audience is segmented
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The UK platform diversity ‘headache’ for producers
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The UK screen ‘headache’ for producers

MOBILES

PC

TV

Internet

ISDN

Stream a/3

Plug in/Integrate

Television/Internet

Broadband

Net & TV

Digital Satellite

Digital Cable

FTA

IDTV

DTV

Satellites

GSM

GPRS

3G

PC

Mobiles

Communicators

Digital Radio

Games

Console

PlayStation

2

WAP

ADSL

VDSL

Plug Ins

Stream a/v

DVRs

IP to STB

ADSL

TV

VCRs

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At the end of the day...

- Internet
- ISDN
- ADSL
- Stream a/v
- ADSL web
- VDSL
- Integrated TV/web
- Digital Radio
- Net Top Boxes
- PDAs
- Broadband Net & TV
- Digital Terrestrial TV
- Digital Satellite
- Digital Cable
- TV Internet
- Dcable portals
- FTA portals
- DSat portals
- FTA DTT
- DSat DTT
- IP to STB
- GPRS
- WAP
- 3G
- DVD
- CD ROM
- DVD
- Mobiles
- Communicators
- Games Console
- PlayStation 2
- Dreamcast
- VCRs
- CD ROM
- DVD
- Console
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Even More Channels & Choice & Dilution & Information - near DTT (MHEG5, Email, Shopping, Web)
- June 2000 - 774,000 viewers
- June 2001 - 1.6 mill

Dsat (OpenTV, Email, Shopping, nVOD)
- Nov 2000 - 4.95 mill viewers
- Nov 2001 - 6.5 mill

Dcable (HTML, Email, Shopping, Web, VOD)
- Jun 2000 - 453,000 viewers
- Sep 2001 - 1.5 mill

DSL to TV (HTML, Email, Shopping, Web, VOD)
- Nov 2000 - 100,000 viewers
- Nov 2001 - 600,000
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TV Audiences

<table>
<thead>
<tr>
<th>Platform</th>
<th>Users 2001 (mill)</th>
<th>Users 2005 (mill)</th>
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<tbody>
<tr>
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<td>15</td>
<td>5</td>
</tr>
<tr>
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<tr>
<td>DSL</td>
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</tbody>
</table>
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**DTV TECHNICAL ISSUES**

Digital Terrestrial (DTT)
- Very limited broadcast bandwidth, under-powered boxes, open API (MHEG5), few resources

Digital Satellite (Dsat)
- Tightly controlled, mixed box capability, closed API (Open TV), loads of bandwidth

Digital Cable
- Friendly API, Walled Garden Portal, naturally 2Way, mixed boxes, segmented providers (Telewest, CWC & NTL)

DSL
- Networks not evident, low contention, expensive infrastructure, another API per provider
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Consumers Are Mobile

- UK phone owners 30.6 million half of UK (Jul 00)
- SMS & WAP & mMail fastest ‘technology’ service uptake ever
- 500 000 net phones now - can't buy non-internet phone by end of 2001
- Mobile penetration will be 80% in 2005 - 70% of these mobile internet
- GPRS, UMTS, Bluetooth will mean AV to mobile by 2002
- Already in market mobiles that store via personalised TV
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Web Access

Mill

Users 2001 (mill)

Users 2003 (mill)

Via TV

Via PC

Via Mobile

Web Platform

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Web Access via TV Screens

Users 2001 (mill)
Users 2003 (mill)

Dcable
Net Tops
Games Consoles
IntWebTVs

Web Platform

Mill

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**ANYTHING is on Demand**

- 18% of Europe receive broadband PC on-demand services by 2005
- Dcable, DSL to TV, PDR’s - More than half of UK population prefer pay per use (choice) rather than subscription model

Replicated media

**US yr. 2000**

- CD ROM - 2130 mill
- CD Audio - 1840 mill
- VHS - 1000 mill
- DVD - 286 mill

In USA in 1999 over 1.9 mill DVD players sold in 2000 4.2 million

Japan - DVD’s now outselling VHS tapes

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Integrated Devices & Home Networks
- PACE supplying 350,000 units in the US next year
- The Pace box will enable more than 150 channels of analog and digital television, as well as digital interactive television services such as video on demand.

Nokia Media Terminal (& others)
- DVD + DTV + VOD local storage + Communication + Fast Internet + Mobile Docking + Digi Camera

Consumer ‘life’ devices begin to integrate with ‘entertainment’ systems
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**Personal Filtering & Capture & Life Tools & Offline**

*Personal Storage (Personal TV Systems - eg: TiVo, MySky)*
- by end 2001 900,000 people will be using PDR's
- by 2004 there will be 4 million
- by 2009 80% of the world's media consuming population will be using Personal Storage systems - whether PC or set top based

Price Waterhouse
- 95% of content in US will be viewed from off-line devices 2005
- Further see SIMON’S PRESENTATION!
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Panacea diagram? - Delivery in 2005

- Linear Programmes (including on demand)
  - Limited Interactivity
  - Will never die

- Web & Games
  - Highly Interactive

- Mobiles

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END OF PART TWO

‘Hope you enjoyed the show’

Contact

gary.hayes@bbc.co.uk

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