DTT in the UK: key success factors

Martin L. Bell, Director of Communications, DTG

http://www.dtg.org.uk
UK Digital Terrestrial

- 6 digital networks co-existing with 5 analogue networks;
- DVB -T, 2K carriers, MFN, 4 muxes: 16QAM; $R_c=3/4, T_u=1/32$
  2 muxes: 64QAM, $R_c=2/3, T_u=1/32$
- total data rate 120Mb/sec
  28 TV, 16 radio, 4 text services;
- TX power 17dB below analogue
- Core coverage 74% households from 80 transmitter sites
  (analogue: 99.4% from over 1000 sites)
What is the Digital TV Group?

- The DTG is a DVB ‘User Group’ supporting the adoption of DVB standards worldwide;
- It provides an interoperability test regime for open-market products in digital television;
- It gives market support and promotion for digital technology in home entertainment systems;
- It is an industry lobby group to government and regulators in favour of open standards and horizontal markets.
- It supports the Government-backed Digital Action Plan.
DTG membership

Broadcasters:
BBC, BSkyB, ITV, ITVA, Carlton, C4, C5, S4C, QVC, TDN

Transmission companies:
Crown Castle, NTL Broadcast, Telewest

Regulators
ITC, DCMS, DTI, Oftel

Associations:
CAI, Consumers Assoc, Deaf Broadcasting Council, Hearing Concern, Intellect, RNIB, RNID, RTS
DTG membership

Retailers:
Comet, Boxclever, Dixons, Retra

Manufacturers:
Daewoo, Hauppauge, Hitachi, Humax, JVC, LG, Maxview, Micronas, NEC, Netgem, Nokia, Novapal, Pace, Panasonic, Philips, Pioneer, SAGEM, Samsung, Sanyo, Sharp, Sony, Tality, Teledis, Thomson, Toshiba

Technology providers:
DTG Milestones - 1

creation of UK ‘D’ Book; promotion of DTT concept based on open standards

eyearly support for DVB; founder member of DigiTAG
early evaluation of available APIs and adoption of MHEG-5
early information campaign to retailers and aerial installers: provision of coverage database
publication of industry-agreed guidelines, notably on widescreen switching
DTG Milestones - 2

establishment of DTG Testing Ltd

DTG study ‘Impediments to Analogue switchover’ leads to Action Plan concept

industry and consumer promotion of free-to-view DTT throughout 2002 (post ITV Digital; pre Freeview)

Publication of an initial series of 10 Technical Monographs

study on DVB-T modes prepares for change to 16 QAM
Digital Broadcasting in the UK:

- **Summer 1998**: Digital TV launched on satellite (BSkyB)
- **November 1998**: Digital TV launched on DTT
- **September 2001**: BSkyB ceases analogue transmissions
- **April 2002**: ITV Digital closed down by its shareholders
- **November 2002**: Freeview channel line-up launches
UK Digital TV Take-up

<table>
<thead>
<tr>
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<th>Oct 2003 est</th>
<th>%age TVhh est</th>
<th>Q2 growth</th>
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<tbody>
<tr>
<td>BskyB</td>
<td>7.0 m</td>
<td>28.3%</td>
<td>+ 2.8%</td>
</tr>
<tr>
<td>D Cable</td>
<td>2.2 m</td>
<td>8.9%</td>
<td>+ 1.8%</td>
</tr>
<tr>
<td>DTT</td>
<td>2.2 m</td>
<td>8.9%</td>
<td>+11.2%</td>
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</table>

Nearly 50% of UK TV households have digital TV
Free to air DTT is digital TV’s fastest growing sector

source: DTG estimate
source: ITC Multichannel Quarterly
The Revolution:

**Market reaction**

Wide range of free-to-view adapters now available

Sales currently 25,000 per week

iDTV sales growing strongly

Product diversity imminent: twin tuners, integrated PVR, integrated DVD-R, integrated DAB, PC card
Free-to-view digital converter boxes

prices start at £50 (69)

Bush  Daewoo  Dijam  Echostar  Ferguson  Fusion  Goodmans  Grundig  Hauppauge  Humax  Labgear  Netgem
Nokia  Pace  Packard Bell  Panasonic  Philips  Pioneer  Sagem  Samsung  Sony  Stromg  Thomson  Triax
Integrated Digital TVs

Bush
Fusion
Goodmans
Humax
LG Electronics
Panasonic
Philips
Sharp
Sony
Toshiba
Key success factors

Regulator fast-tracked licence reallocation
All free-to-view line-up appeals to many non-pay homes
DTT offering now complements DSat and DCable pay
low cost receivers; second boxes increasing
BBC required to promote digital TV
coverage improvements and use of postcode database
have greatly reduced returns
cross-industry approach to technical issues arising
Conformance & Interoperability Issues

Vertical market operators ensure conformance by contract;

In the horizontal market there is no authority to ensure conformance - it relies on voluntary agreement and the manufacturer’s liabilities;

The DTG is providing a testing house for manufacturers of product for UK market;

Conformance is an issue for head-end equipment and for software applications also.
DTG Test Centre

Receiver Conformance Testing
testing to UK ‘D’ Book specification

Test Materials
for MHEG-5, SI/PSI, Audio,
Audio Description, Object Carousel

Interoperability Testing
pre-broadcast testing of interactive
applications

Development Support
dry hire of Test Centre facilities

Engineering Channel
pre-broadcast validation of downloads
and schedule management

Services to Industry

www.dtg.org.uk/testing
info@testing dtg.org.uk
Current DTG outputs

Guidelines for the use of Benchmarked Aerials
*jointly published with the Confederation of Aerial Industries*

Object Carousel Interchange Specification
*for the exchange of MHEG-5 and other content between different authoring systems and carousel generators*

‘I-Book’ - Recommendations for the Provision and Display of IP Services on TV
*principally concerned with TV browser compatibility issues*

MHEG-5 v1.06 Specification
*Updated and improved: submitted to the ETSI-MHEG group*

TDN-DTG Joint Receiver Specification
*updated functional specification: will also appear in revised ‘D-Book’*
Current DTG projects

Mobile TV Applications Group
looking at possible new services using spectrum released at switchover

Production Systems Group
working on publication on High Definition TV programme-making

PVR Group
establishing a TV Anytime testbed

Schedule Delivery Group
working on open standard system to service EPG for low-cost digital converters and requirements for TV Anytime devices

Wireless Home Network Group
conducting feasibility study for a Digital Video Sender for home distribution at 5.8 GHz

Common Authoring Group
defining common authoring for delivery to multiple platforms
Reports to Government Departments

PRODUCT AND INTEROPERABILITY TESTING AND SUPPORT

The main recommendations centre on learning from the vertical market experience, and investigating how the weaknesses and gaps that have been exposed in the current DTT platform may be addressed within a horizontal market model.

IMPROVING UK AERIAL INSTALLATIONS

raise awareness of the importance of using benchmarked aerial and cable products, and other best practices; develop a test suite for active aerials

RECORDER TECHNOLOGY

including hard disc & DVD recorders; analogue legacy; connectivity issues; TV Anytime and PC-based home media centres.
The DTG Postcode database

Digital Terrestrial Television
FREEVIEW

Predicted Reception for Postcode
CO6 3NP

Can I get Freeview at this address? YES, all channels available more details

Your existing aerial may need to be repositioned or renewed

Aerials for FREEVIEW reception must be in good condition

For more information:
Freeview www.freeview.co.uk
BBC Reception Advice www.bbc.co.uk/reception
or call ITC Technical Information on 01962 848647

For advice on whether an aerial upgrade is required, either:
consult your local retailer, OR consult a Free-to-View aerial contractor.

Link to information for retailers and installers about transmitters and aerials

The Confederation of Aerial Industries lists dealers in your area:
call (020) 8902 8998, or consult the CAI website www.cai.org.uk

If you receive your TV through a communal aerial system, please check with your landlord or managing agent.

Download the CAI leaflet entitled 'Digital TV and Your Aerial'

This leaflet explains:
The DTG Postcode database

Digital Terrestrial Television
FREEVIEW
Predicted Reception for Postcode
CO6 3NP

Your existing aerial may need to be repositioned or renewed

NOTE:
- The Logical Channel Number (LCN) is the channel your receiver
  allocated to the service.
- In Wales, S4C is on LCN 4 and S4C2 on LCN 13. Channel 4 appears
  on LCN 8.
- In Scotland, T4G is available on LCN 8.

<table>
<thead>
<tr>
<th>LCN</th>
<th>Channel Name</th>
<th>Sudbury</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BBC ONE</td>
<td>YES</td>
</tr>
<tr>
<td>2</td>
<td>BBC TWO</td>
<td>YES</td>
</tr>
<tr>
<td>3</td>
<td>ITV 1</td>
<td>YES</td>
</tr>
<tr>
<td>4</td>
<td>Channel 4</td>
<td>YES</td>
</tr>
<tr>
<td>5</td>
<td>five</td>
<td>YES</td>
</tr>
<tr>
<td>6</td>
<td>ITV 3</td>
<td>YES</td>
</tr>
<tr>
<td>7</td>
<td>BBC THREE</td>
<td>YES</td>
</tr>
<tr>
<td>9</td>
<td>Teletext</td>
<td>YES</td>
</tr>
<tr>
<td>10</td>
<td>BBC FOUR</td>
<td>YES</td>
</tr>
<tr>
<td>11</td>
<td>Sky Travel</td>
<td>YES</td>
</tr>
<tr>
<td>12</td>
<td>UK History</td>
<td>YES</td>
</tr>
<tr>
<td>16</td>
<td>QVC</td>
<td>YES</td>
</tr>
<tr>
<td>17</td>
<td>TV Travel Shop</td>
<td>YES</td>
</tr>
</tbody>
</table>
The DTG Postcode database

Digital Terrestrial Television

Freeview: Reception Enquiry for CO6 3NP

Can I get Freeview at this postcode?

Predicted Reception

CO6 3NP

Your existing aerial may not be suitable

Aerials for FREEVIEW

For advice on whether an aerial upgrade is required, either:
consult your local retailer, or consult a Free-to-View aerial contractor.

The Confederation of Aerial Industries (CAI) can be contacted on 020 8902 8908, or call 0845 200 6777.

If you receive your TV through a community antenna, contact your community owner or managing agent.

Download the CAI's leaflet explaining:

© DTG

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Digital Terrestrial Television

Freeview: Channels available for CO6 3NP

Predicted Reception

CO6 3NP

Your existing aerial may not be suitable

Aerials for FREEVIEW

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© DTG

Digital Terrestrial Television

Freeview: Transmitter and aerial information for CO6 3NP

Predicted Reception for Postcode CO6 3NP

Details for retailers and installers

The following transmitters serve this area providing these multiplexes:

Sudbury

Show list of services ranked by multiplex

The existing aerial may need to be repositioned or renewed

© DTG

NOTE:

The line above which reads “the existing aerial may need to be repositioned or renewed” refers to postcodes which may be either:

- served by a transmitter with out-of-group channels
- served by more than one transmitter providing digital coverage OR
- using an analogue relay in an area served by a digital main station.
Free of charge to over 4,500 industry professionals
Email your details to: office@dtg.org.uk

Digital News
The Magazine of the Digital Television Group
Number 26
August 2002

SPECIAL 32 PAGE ISSUE
What is the DTT’s view of digital terrestrial TV? Why will it succeed when ITV Digital failed? How much will it cost? Who will be responsible for the rollout? Will this be the year that DTT真正 gives a unique insight to the DTT future in an exclusive on-air interview with Ken Bridger (pages 4-6).

DTT: 1,000,000 reasons for confidence
Industry expects substantial DTT uptake over the year

By Jorge Harris
Digital News

There are studies and evidence supporting the success of digital terrestrial transmission, and few questions remain unanswered.

The Electronic Commerce No. 1 were the first to set the stage for the future of DTT. By the summer, they were to give a unique insight to the DTT future in an exclusive on-air interview with Ken Bridger (pages 4-6).

The DTT’s Technical Director, Peter Reed, has identified the following points:

1. The DTT has a clear vision and strategy for the future.
2. The DTT is a multi-channel service, with the option for more than one channel per provider.
3. The DTT has a strong track record in delivering high-quality digital services.

The DTT has been delivering high-quality services for over 10 years, and is committed to providing high-quality services for the future.

Highlights

Freeview a hit - every 2 seconds

Every two seconds, there’s another hit to the DTT’s Postcode database. It is a strong indicator that Freeview is a success with the UK public. Anecdotally, evidence suggests a buzz of interest in retailers. "For the first time, people are asking about digital terrestrial without being prompted," a store manager in Sainsbury told the DTG this morning (11 November).

The DTT is currently the only satellite channel provider capable of delivering high-quality digital services. The two main digital services are: Freeview, which includes a standard-definition service, and HD Digital, which includes a high-definition service. The two services are available in the UK and Ireland.

At pace, supplying the key EDA digital adapter, a spokesman said "The situation is very busy and we are very excited."

The only concerns the horizon took the form of a spot with the Discovery Channels about the justification for the BBC’s joint-venture UK History Channel and a complaint from Northern Ireland that the service didn’t include the Irish language service TG4.

As Tony Ball told a small celebration of the launch, "Freeview represents a simple proposition with the power of the BBC behind it. This is the third DTT launch in four years and should be the last!"

Read the whole of ‘Freeview a hit - every 2 seconds’...

Latest

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DTT Testing
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DTT Postcode
Database
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New Irish communications commissioners appointed (1st November)
Elia D’Arcy is first chair of new regulator

Negotiable needs digital DTH merger for financial survival (1st November)
May have difficulties in meeting year-end forecasts

www.dtg.org.uk

Can I receive?
Click here to find out
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www.dtg.org.uk
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