



**Delivering an interoperable,
efficient, stable and innovating
horizontal digital TV market**

Industry Consultation

Published: 2 July 2010

Closing date
for responses: 20 September 2010

Background

The Digital TV Group (DTG)'s mission is to enable the development of fully compliant and reliable digital TV and media products and services, primarily for the horizontal market, through world-class specification development, conformance testing and consensus building. The DTG is the independent industry body responsible for the technical development of UK digital terrestrial television (DTT).

In accordance with that mission, the DTG is inviting responses to a consultation on how an interoperable, efficient, stable and innovating horizontal digital TV market might best continue to be delivered. The consultation is open to any organisation or individual with an interest in digital terrestrial television (DTT) in the UK.

Views will be presented as a set of options in a report for consideration by the DTG's governing body, DTG Council, in the autumn. The final report will be published by the DTG in late 2010.

This consultation explains the current DTT ecosystem, discusses some of the issues, and poses a series of questions for consideration. Please respond with your views by **20 September 2010**. The consultation also offers respondents the opportunity to highlight any relevant issues not covered by this document that they believe the Group should consider further.

How to respond

There are three ways to respond:

- **Online:** this is the easiest and quickest option, and the one we would strongly prefer. To respond online go to: www.dtg.org.uk/dtvconsultation
- **By email:** please complete the coversheet and attach your response in Microsoft Word format, and send to: dtvconsultation@dtg.org.uk
- **By post:** please complete the coversheet and post your response to: Consultations, Digital TV Group, I Nine Elms Lane, Vauxhall, London, SW8 5NQ, UK.

Confidentiality

We would like to publish responses, in part or in full, on our website. If you would like to keep all or part of your response confidential, please state so in the online survey or coversheet for email/postal responses. Unless you request confidentiality it is assumed that you grant the DTG permission to publish your response to this consultation.

If you have any questions regarding this consultation please contact:
dtvconsultation@dtg.org.uk

1. Introduction

- 1.1 Nearly three in four UK homes (18.6 million, or 72.6%) are watching DTT on any television receiver, and two homes in five (10.1 million, or 39.6%) rely on DTT as their sole means of digital reception¹. Since the launch of the platform there have been sales of 57 million Freeview branded receivers (Integrated Digital Televisions (IDTVs), Set-Top Boxes (STBs) and Digital Television Recorders (DTRs)².
- 1.2 The success of the DTT platform – marketed to consumers as ‘Freeview’ – has been reliant on an alchemic combination of commercial agreements, regulatory oversight and goodwill among a diverse range of organisations including broadcasters, transmission network providers and consumer electronics (CE) manufacturers.
- 1.3 The stability and ongoing development of the platform is underpinned by a set of standardised specifications that are applied throughout the broadcast chain. These specifications are continually reviewed and enhanced by industry experts via the DTG’s working groups and are published by the DTG as the ‘D-Book’, the detailed interoperability specifications for DTT.

2. Current DTT ecosystem

- 2.1 The DTT ecosystem is complex and constantly evolving as innovations introduce new technologies and new players.
- 2.2 The DTT platform is a horizontal market: digital TV products (such as integrated digital TV sets, digital set-top boxes and digital television recorders) can be produced by any CE manufacturer and introduced to the UK market bearing the Freeview trademark and digital switchover certification mark (commonly known as the ‘digital tick’) which indicates products are designed to work through digital switchover, so long as they meet the performance requirements of a BIS accredited conformance testing regime. In addition, any retailer can market those products to consumers and any channel can apply for carriage on the platform.
- 2.3 No single player in the horizontal digital TV market is able to control the entire ecosystem. Platform management and innovation therefore relies on close coordination and consensus among symbiotically related players across the broadcast chain.

¹ Digital Television Update – Q4 2009, Ofcom

² Source: Freeview

2.4 The DTT ecosystem diagram includes:

- **Policy and regulation:** Policy for the DTT platform is directed by two government departments: the Department for Culture, Media and Sport (DCMS) and the Department for Business, Innovation and Skills (BIS). BIS owns the digital switchover certification mark and licenses it to Digital UK, the industry body coordinating digital switchover, to administer and the Registered Digital Installers Licensing Body (RDI-LB). Ofcom is the independent regulator and competition authority for the DTT platform, with responsibilities that include: content regulation; coordinating spectrum assignment; allocating broadcast licences; and allocating multiplex³ licences. The BBC Trust approves BBC service licences, and routinely reviews services to ensure they are adhering to their remit. The Trust also commissions regular independent investigations into the efficiency and value of the BBC.
- **Content provision and playout:** A channel or broadcaster commissions or acquires long and short form content, which can be produced either independently or 'in house'. Channels produce a schedule for content playout which will then be delivered to a playout provider (usually twice daily).

The playout operation ensures content is played out to the national or regional broadcast schedule. A single playout provider can service multiple broadcasters.

- **Service information (SI):** Digital Television Multiplex Operators Ltd. (DMOL) administers the allocation of Logical Channel Numbers (LCNs)⁴ for the multiplexes and initiates Service Information (SI)⁵ changes, liaising with the Central Collator provider, Siemens. If there is a Digital Switchover (DSO) event (such as a transmitter group switching from analogue to digital), or a broadcaster wants to move, add or remove a channel, they will make a service change request through DMOL who will contact Siemens to implement the change. The technical specifications for these changes are defined by the DTG D-Book. The channels provide scheduling information and metadata about the programme. This information is collated by a data provider who generates an Electronic Programme Guide (EPG)⁶ for the platform from the numerous channel streams. The data provider then provides a feed of the service information which goes

³ A multiplex (mux) is a mechanism to deliver multiple DTT services into a single stream over a single radio frequency (RF) channel. The DTT receiver de-multiplexes and decodes the stream into consumable content. UK multiplex operators are: Arqiva, BBC, BBC Free to view Ltd., Digital 3&4 (ITV and Channel 4) and SDN.

⁴ An LCN is the numeric identifier given to a service (usually a channel) to enable a viewer to easily identify the service

⁵ In this context, SI is non audio visual (AV) data essential for a receiver to decode DTT services

⁶ An Electronic Programme Guide (EPG) is a continuously updated application which provides viewers with scheduling information for current and upcoming programming.

into the encoding and multiplexing process via the Central Collator. The Central Collator sits at the heart of the SI distribution process, pulling in all SI, EPG and regional information. The Central Collator is also responsible for cross carrying all the information across all of the multiplexes to ensure that service information is kept up-to-date regardless of changes to the schedule.

- **Distribution & Transmission:** The encoder / mux system is where the audio, video and SI are packaged. The encoded mux is then sent to the transmitter, operated by Arqiva, for distribution across the airwaves. Arqiva uses network information provided by Siemens to deliver complete UK DTT regionality.
- **Licensing and marketing:** DTV Services Limited is the entity established to provide the marketing and communications for UK DTT using the 'Freeview' brand name. Digital UK is responsible for planning and implementing DSO and communicating it to the public. UK DSO will be completed by December 2012.
- **Interoperability:** The DTG D-Book provides the technical foundation of the platform; it is the lynchpin of interoperability within the horizontal market, providing a consistent set of technical specifications which run through the entire broadcast process and provides the industry's comprehensive interoperability test and conformance software suites, regimes and facilities, ensuring stability and a smooth delivery of services. The DTG manages the operation of the UK's Engineering Channel, a facility available to receiver manufacturers for the upgrading of the software resident in DTT products deployed in the UK. Software upgrades are provided to the DTG by manufacturers; this update is checked to ensure that it targets the correct receivers and doesn't adversely affect any others. DTG then authorise Red Bee to play out the software upgrade over the air via the Engineering Channel.
- **Interface:** The CE industry designs and manufactures DTT receivers which are marketed and distributed via a wide range of direct retail channels, often referred to as the 'supply chain'.

Intellect and Retra are the trade bodies responsible for the consumer electronics and independent electrical retailer industries respectively. The Confederation of Aerial Industries (CAI) represents the DTT and satellite aerial industries.

- **Consumer feedback:** The Digital UK call centre is currently the primary conduit for consumer feedback. This information feeds into the switchover process. Since the decommissioning of the Freeview call centre, there is no longer a call centre for the issues relating to the DTT platform. These calls are fielded by a combination of Digital UK, manufacturers, broadcasters and retailers. The Digital UK call centre will be closed in 2012.

3. Issues for discussion

3.1 Current DTT ecosystem

The DTG welcomes feedback on our analysis of the DTT platform (paragraphs 2.1 - 2.4 of this document), and seeks respondents' views on whether the diagram in **Appendix A** accurately represents the current DTT ecosystem. Feedback is also sought on how the DTT ecosystem is likely to change over the next five years.

3.2 Roles and responsibilities

Some DTG members have expressed concerns that roles and responsibilities as reflected in this consultation (see paragraphs 2.1-2.4 of the consultation document and Appendix A: Ecosystem Diagram) are not fully apparent and understood.

This consultation seeks to establish how efficient stakeholders believe the current structure of the DTT market is and if there is a consensus that there is a need for added clarity over roles and responsibilities. The Group also welcomes feedback on how the current structure of the DTT market could be improved.

3.3 Communication and coordination

DTT platform management relies on communication and coordination among key players both on a day-to-day basis and when problems arise. This consultation seeks stakeholders' views on the current quality of communication and coordination on the platform and will gather feedback on improvements that can be made moving forward.

3.4 The horizontal market

The DTT platform functions as a horizontal market. No individual player has complete control over it; coordination and consensus is required for its ongoing stability and innovation. The consultation gathers feedback on the strengths and weaknesses of innovation and interoperability in the horizontal digital television market and asks if some of the strengths of the horizontal DTT market might be applied to other DTV platforms.

3.5 Interoperability

The 'Digital Tick' was developed as a certification mark to help consumers through switchover. The logo identifies digital TV products and services that are designed to continue working through switchover.

With nearly 25% of the country having completed DSO this consultation will establish how important stakeholders consider the 'Digital Tick' to be and seeks to ascertain what impact, if any, will result from the disappearance of the 'Digital Tick' logo. The consultation will also ask if stakeholders believe the certification mark should be adapted (or another mark should be introduced) for platform innovations, such as Connected TV and 3DTV.

3.6 Innovation

In 2009 the DTG published the 6th edition of the D-Book, paving the way for the launch of high definition services on Freeview; with D-Book 6.2.1 (published in March 2010) enabling services such as iPlayer to launch on the platform. Later this year the DTG will publish the 7th edition of the D-Book containing the specification for hybrid Connected TV devices and services (such as 'Project Canvas', Sky and Virgin Media). The Group is now seeking to establish how important stakeholders believe it is for DTT to remain a competitive DTV platform.

This consultation also asks stakeholders how effective they believe the horizontal market is at delivering product and service innovation and seeks feedback on how innovation might be better managed in the future. The DTG acknowledges that the differing lifecycles of products and services requires the knowledge and experience of the entire industry if they are to be effectively managed.

4. Questions for consideration

There are three ways to respond:

- **Online:** this is the easiest and quickest option, and the one we would strongly prefer. To respond online go to: www.dtg.org.uk/dtvconsultation
- **By email:** please complete the coversheet on the page below and attach your response in Microsoft Word format, and send to: dtvconsultation@dtg.org.uk
- **By post:** please complete the coversheet and post your response to: Consultations, Digital TV Group, 1 Nine Elms Lane, Vauxhall, London, SW8 5NQ, UK

Your details

Name:

Job title:

Representing (self or organisation/s):

Postal address:

Email address:

Telephone:

Confidentiality

What would you like the DTG to keep confidential? (Please tick)

Nothing

Whole response

Part of response

Which part?

Declaration

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that the DTG can publish in part or in full. In supplying this response I understand that in certain circumstances the DTG may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations.

Name

Signed (if hard copy)

Consultation Questions

4.1 Current DTT ecosystem

We welcome feedback on our analysis of the DTT platform (paragraphs 2.1-2.4 of the consultation document), and ecosystem diagram (see **Appendix A** at the end of this document.) Please provide your comments.

1. Do you agree with our analysis? YES/NO
Please comment further:

2. In your opinion, does our diagram accurately represent the DTT ecosystem?
YES/NO
Please comment further:

3. How is the DTT ecosystem likely to change over the next five years?
Please comment:

Roles and responsibilities

Some members have expressed concerns that the roles of main players are not fully apparent and understood.

4. Do you agree that there is confusion over the roles and responsibilities of the main players?
YES/NO

If you answered 'yes': What impact has that had/is it likely to have on your organisation?

Please comment:

If you answered 'yes': What impact has that had/is it likely to have on the DTT proposition?

Please comment:

Add any additional comments here:

5. How efficient is the current structure of the DTT market?
(1=Very poor; 5=Very good)

1 2 3 4 5

Please comment further:

6. In your view, are there responsibility gaps?
YES/NO

Please comment further:

7. Are there overlapping responsibilities?
YES/NO

Please comment further:

8. How might the structure of the DTT market be improved?
Please comment:

9. How might the roles of players in the DTT market be changed?
Please comment:

Communication and coordination

DTT platform management relies on communication and coordination among key players.

10. In your opinion, how effective is communication among key players?
(1=Very poor; 5=Very good)

1 2 3 4 5

11. How might communication be improved?
Please comment:

12. In your opinion, how effective is coordination among key players?
(1=Very poor; 5=Very good)

1 2 3 4 5

Please comment further:

13. How might coordination be improved?

Please comment:

The horizontal market

The DTT platform functions as a horizontal market. No individual player has complete control over it; coordination and consensus is required for its ongoing stability and innovation.

14. What are the strengths of the horizontal digital television market?

Please comment:

15. Could some of the strengths of the horizontal DTT market be applied to other DTV platforms?

YES/NO

Please comment further:

16. What are the weaknesses of the horizontal digital television market?

Please comment:

Interoperability

17. How important is the 'Digital Tick' conformance mark?

(1=Not very important; 5=Very important)

1 2 3 4 5

Please comment further:

18. What impact, if any, would result from the disappearance of the 'Digital Tick' logo?

Please comment:

19. Should the meaning of the 'Digital Tick' conformance mark be adapted (or another mark / marks be introduced) for platform innovations, such as Connected TV and 3DTV.

YES/NO

Please comment further:

Innovation

How important is it to your organisation that DTT remains a competitive platform (1=Not very important; 5=Very important)

1 2 3 4 5

Please comment further:

20. Given that DTT functions as a horizontal market, how effective is the market at delivering product and service innovation? (1=Not very effective; 5=Very effective)

1 2 3 4 5

Please comment further:

21. How might innovation be better managed?

Please comment:

22. Please comment further on any issues raised by this consultation document or highlight any relevant issues not raised in this document that you believe the Group should consider further:

