Digital TV Group (DTG) submission to the Department of Culture, Media and Sport Communications Review

Requirement for Government and regulators to adequately engage with international legislation and standards bodies

The UK is a global leader in the efficient and innovative use of scarce spectrum resources. Positive action to retain this lead will bring significant benefits and growth opportunities for UK industry. In particular the UK needs to act swiftly to move ahead with strategies which meet the rapid growth in demand for mobile broadband services.

The sub 1 GHz spectrum is going to play an increasingly significant role in the international roll out of mobile broadband services and the UK needs to ensure that it leads innovation in improving the efficiency of use of this spectrum.

The pace of international standards development, legal and regulatory changes, and harmonisation in standards and spectrum management seem likely to increase. Government and regulators should plan to adequately resource UK involvement in such activities and the Government should make clear its plans for engagement to industry and the public on an ongoing basis. The Government should consider whether its oversight of such activities and related communication with UK industry requires enhancing.

Advanced spectrum access

We expect spectrum sharing, dynamic spectrum access and licence exempt spectrum use to increase world-wide. Early adoption of advanced spectrum access in the UK, if managed carefully, will benefit UK industry and consumers. The experience so far with TV White Spaces indicates that implementation of this type of service is complex. It requires cooperation across a range of stakeholders and international standards activities. There may be a benefit to UK industry and consumers from Government or regulators involvement beyond introducing the legal and regulatory framework, for example, Government support for coordination of implementation and pilot schemes.

Government should review the recent UK spectrum clearance activities and make an assessment of whether improvements to processes or new regulatory powers are needed for future spectrum clearance and/or to encourage efficient spectrum use.

Please see the note on the introduction of new technologies below.

Introduction and encouragement of new technologies

The UK has a long history of early adoption of new-media technologies and setting industry standards for such technologies. The UK continues to innovate in both of these areas.

In some cases the introduction of new technologies may require Government assistance, especially where cross industry cooperation is needed or where actions may be needed by parties that do not obviously benefit from change. The models used for the introduction of DTT and TV switchover have worked well. In cases where the introduction of new technologies requires enough order in the market and sufficient regulatory certainty to encourage investment by industry, the Government and regulators should support recognised industry frameworks for technology/system implementation. Good interoperability requires successful planning and organisation and needs to be considered from the outset when introducing new media technologies.

The introduction of new technologies to major systems requires: careful coordination and planning, clear timescales and responsibilities and consideration of whether consumers need support through the process. This should be reflected in Government and regulatory activities and possibly in the legislative and regulatory framework.

Television technology research

We have perceived a reduction in publicly funded television technology related research in the UK over the past 10 to 15 years.

TV switchover was enabled by strong research programmes in the BBC and collaborative research led by the DTI / ITC. Looking forward, we expect that television technology and platforms will change significantly in the next 10 to 20 years and Ofcom has indicated that it expects terrestrial TV transmission to change radically in that time.

We believe that this will need significant research into the technologies and pilot projects and technology demonstration projects. While it is reasonable to expect industry to contribute to these projects, the overall benefits to the UK of early adoption of technologies may justify additional public support for enabling research.

The importance of publicly funded research should be recognised in future legislation and in the BBC's charter review, with firm commitments to research. We believe that the UK industry could benefit from improved coordination and supervision of publicly funded TV technology related research and development (R&D) and Government should consider and discuss with the industry how this should be done. Consideration should also be given to how such a technology R&D programme would be coordinated with relevant consumer research.

New content delivery, storage technologies and business-models

Digital content will be increasingly available to consumers via a wider range of delivery and storage mechanisms. The future regulatory framework will need to reflect this change and the consumers' expectation that they will be able to use content and especially public-service and licence-fee funded content, flexibly and on a range of devices.

Areas that will require attention include:

- **Public service content and Connected TV**

  It seems likely that with the wider availability and use of online delivery of TV services, viewers may become increasingly reliant on these services and therefore Government should consider whether PSB requirements for availability should be applied to online delivery. For example, where PSB services are delivered online, they should be made available using open standards in the same way as these are required for delivery on DTT. Reductions in DTT coverage that will result from the introduction of LTE and other services in the UHF band may make this especially important to assure continued universal coverage.

- **Service discovery and availability**

  The discovery of services by consumers is achieved through an increasingly wide range of mechanisms e.g. logical channel numbers, electronic programme guide, search, editorial recommendations, peer recommendations, platform portal, manufacturer portal, red button and trailer bookings. Regulation should reflect these developments and provide appropriate levels of protection against harm and offence e.g. active choice.

  PSB and publicly funded non-linear and catch-up services are not covered by current regulation which is causing a mixed ecology of service availability and consumer confusion. We believe it is holding back economic growth by fragmenting the market, which means consumers won't invest.

- **Access Services**

Any future regulatory framework should continue to recognise the importance to consumers of usability and access services.

The Digital TV Group is well placed to assist the Government in developing ideas for future initiatives, future legislation and a regulatory framework to assist with Government's interaction with the TV industry on these matters.

![DTG Digital TV Group logo]

About the Digital TV Group (DTG)

The Digital TV Group (DTG) is the focal point of the UK's digital TV industry. The Group, a not-for-profit membership organisation, brings the industry together to enable the successful delivery and evolution of digital TV and associated technologies.

The DTG publishes and maintains the technical specification for Freeview, Freeview HD and Connected TV (the D-Book) and runs the digital television industry's ISO accredited test centre: DTG Testing.

The DTG has published and maintained the D-Book for over a decade and the specification is updated annually to keep up with the pace of development in UK DTT. The D-Book is compiled by DTG working groups comprised of the DTG's membership and staff who continually update and peer-review the specification.

The first edition of the D-Book was written in 1996 when the current UK standard for terrestrial broadcasting (DVB-T) was new and untried. Early editions of the D-Book enabled the publication of the European digital TV specification: the E-Book.
In March 2009, the DTG published the 6th edition of the D-Book—enabling the launch of an initial three free-to-air HD channels on Freeview by late 2009, as well as the introduction of a broadband return path which has the potential to be used for streaming on-demand video content such as BBC iPlayer, ITV Player and 4oD. It also introduced DVB-T2, the new modulation scheme that is being used in the UK to deliver these services.

In March 2011 the DTG published D-Book 7, the detailed interoperability specification for digital terrestrial television with extended Connected TV functionality. D-Book 7 provides an industry-agreed baseline specification for Connected TV products and services that Sky, Virgin Media, YouView and others can build on for trademark requirements to support their services.
The DTG's test centre: DTG Testing tests digital TV products applying for the Digital Switchover Certification Mark (the 'digital tick'), Freeview, Freeview + and Freeview HD logos against the D-Book standard. Any manufacturer wishing to use the Freeview HD logo on a product must pass the required DTG Testing Freeview HD tests.
Since the DTG was established over a decade ago, the Group has worked closely with our members to adapt international standards such as DVB-T and DVB-T2 to create an interoperable UK digital TV platform that consumers can rely on.
The DTG currently has liaisons with international standardisation bodies including DECE (Ultraviolet), ETSI, HbbTV, and the Open IPTV Forum (OIPF). The DTG has incorporated parts of these standards into D-Book 7 and adapted them to make them work for the UK market. Extensions have now been fed back to the standardisation bodies to enable the next generation of standards across Europe.

The DTG continues to allow Digital Europe to use areas of D-Book copyright under licence to encourage international harmonisation.
Following the publication of D-Book 7, the Group is now finalising the test and conformance regime for Connected TV products and services and supporting the development of next generation technologies such as LTE, TV white spaces and home networking.