

**DTG Response to Ofcom Consultation: Licensing Local Television –
How Ofcom would exercise its new powers and duties being proposed by Government**

16th March 2012

The Digital TV Group’s (DTG) response to this consultation principally relates to the questions in 4.104, “Do you agree with our approach to technical standards? Do you have any views on the choice of transmission mode or encoding standards?” and to the paragraphs on technical standards, (4.98 to 4.103).

In making its response, the DTG recognises that local TV will benefit viewers and may well strengthen the attractiveness of the digital terrestrial TV offering. It recognises that placing technical requirements for interoperability on the channel and multiplex operators could be seen as adding cost that might adversely affect those businesses. The DTG has therefore kept its recommendations to what it believes is the minimum required for interoperability. The Group believes that this level of interoperability will make local TV service accessible to the widest range of viewers and will therefore strengthen rather than weaken the business proposition. The DTG has also made some more general observations, and has identified which comments are firm recommendations for interoperability and which are observations.

The DTG’s detailed comments and recommendations are as follows:-

Ref	Digital TV Group comment	Supporting rationale for DTG comment - how it benefits industry and/or viewers	Supporting evidence for DTG comment
1	<p>Broadcast Technical Requirements: The new services should comply with the UK profiles of international standards embodied in the DTG D-Book (<i>firm recommendation for interoperability</i>).</p> <p>There is a strong rationale for all aspects of the local TV broadcast signals to be compliant and the following components of service</p>	<p>To maximise the compatibility of the new TV services with the existing platform and with the UK base of DTT receivers. This will ensure that the consumer experience is as good as possible, that the new services are accessible and existing services are not disrupted. This benefits viewers.</p> <p>Industry will experience fewer</p>	<p>The D-book provide the UK profiles of the international and European standards including ETSI EN 300 744.</p> <p>The D-Book is constantly reviewed by industry and therefore always current – it is the reference used by the industry so it is appropriate for licences to refer directly to it.</p>

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	information should be broadcast:-	costly enquiries and product returns.	
1a	<ul style="list-style-type: none"> Use of UK Logical Channel Number signalling (<i>firm recommendation for interoperability</i>) 	Compliance with the UK method of signalling of the Logical Channel Number is required to ensure that the services appear in the expected place in viewers' (on screen) channel lists and Electronic Programme Guides. This will benefit viewers who will find it easier to find their local channel and will in-turn benefit local TV operators by driving higher viewing figures.	<p>The Ofcom technical reference parameters, as currently worded, are insufficient as a reference in the service and multiplex licence requirements to ensure that the local TV services appear in the intended place on receiver channel listings and the Electronic Programme Guide.</p> <p>Research submitted to Ofcom in response to an earlier consultation by a third party suggests that there is some evidence of a correlation between channel number and viewing figures (see¹ footnote). So correct display on receivers of a well understood channel number for local TV is likely to give a worthwhile commercial advantage to the operator.</p>
1b	<ul style="list-style-type: none"> Use of Target Region Descriptors for the appropriate TV region (<i>firm recommendation for interoperability</i>) 	Compliance with the UK's Target Region Descriptors is required to ensure that viewers' receivers offer the correct regional choice in cases where two or more local TV services were receivable. Viewers will benefit by getting the intended local service on the appropriate channel number.	All Freeview HD and current and recent Freeview branded receivers are required to be able to interpret broadcast Target Region Descriptor data, and offer viewers the choice of region where more than one is available. This may be important for overlapping local TV services. During the early stages of switchover, viewers experienced difficulty in getting the correct regional TV services. The Target Region Descriptor was introduced to overcome the problems experienced.
1c	<ul style="list-style-type: none"> Guidance Descriptor (<i>observation</i>) 	The guidance descriptor is used to label events with guidance for the viewer. The descriptor contains a text field which contains the guidance text for the event e.g. "contains strong language and	Many broadcasters do use the Guidance Descriptors, so there may be an expectation among viewers that they will get similar information for services carried on the local multiplex.

¹ http://stakeholders.ofcom.org.uk/binaries/consultations/psb2_phase2/responses/DiscoveryNetworksUKAnnex2.pdf

		scenes which some may find upsetting".	
2	Broadcast signal testing: The DTG strongly recommends a regime of broadcast signal testing against the UK's DTT receiver 'zoo', hosted by the DTG, prior to service launches (<i>firm recommendation for interoperability</i>).	This is to minimise the possibility of problems in viewers' TV sets and receivers caused by the launch of the new services. Viewers benefit by improved reliability of receivers, and the industry benefits from fewer enquiries and product returns. Ofcom should ensure that there is funding provision for this.	To address problems experienced with receivers due to changes to broadcast signals during switchover at Ferryside, then at the Selkirk and Beacon Hill transmitters, the government (DCMS) funds scenario testing of broadcast streams for each switchover region against the DTG receiver 'zoo'. The receiver problems experienced ranged from complete loss of service to loss of a few channels. Receiver manufacturers report that, as receivers and the broadcast signals become more complex, there is an increase in "no fault found" product returns. Testing of changes to broadcast signals against the receiver zoo help to alleviate this.
3	Cooperation with other multiplex operators: The DTG further recommends a requirement for ongoing cooperation by the local TV multiplex licensee with the other multiplex operators and with the DTG to ensure continued interoperability. Licensees should be required to cooperate with industry via the DTG on standardising any new aspects of their services that are not covered by existing standards, such as additional languages (the current specifications cover only English, Welsh, Gaelic, and Irish) (<i>firm recommendation for interoperability</i>).	While DTG standards anticipate the technical needs of prospective local TV services where possible, it seems likely that new technical requirements for local services may emerge. The local TV operator will benefit by offering its viewers the same platform improvements as they experience on other channels. The wider industry and viewers benefit from consistency of experience across the whole platform.	A detailed white paper covering these <i>issues</i> , "UK DTT features for support of Local TV services" is available on the DTG website: http://www.dtg.org.uk/publications/books.html
4	Choice of exact radio-frequency transmission mode(s): The transmission	Viewers will benefit by being more likely to receive the services on	

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	<p>mode(s) should be specified by Ofcom and should be either: an existing D-Book mode with receiver performance specified; or a new mode to be chosen in discussion with the DTG Radio Frequency (RF) Group with the intention that it should be compatible with as great a proportion of existing receivers as practical, and with the intention that the transmission mode selected be assimilated into the D-Book, including performance requirement. Ofcom should take steps to avoid the proliferation of modes.</p> <p><i>(firm recommendations for interoperability).</i></p>	<p>existing receivers and being assured of receiving the services on new receivers.</p> <p>If there are strong technical or commercial reasons to use different modes at different transmitters then Ofcom should take steps to limit the number of modes in use so that receivers can be optimised and tested for a low number of standardised modes. Even an addition of one or two modes would be a significant burden for manufacturers.</p>	
5	<p>Cross carriage of full service information: The DTG agrees that there should be a requirement to cross carry full service-information, including the Event Information Table which provides information for the Electronic Programme Guide <i>(firm recommendation for interoperability).</i></p> <p>Other data, such as for advanced recording features, will also be cross-carried between national multiplexes and receiver behaviour designed</p>	<p>The user experience for viewers of Freeview and Freeview+ is heavily dependent on full cross-carriage of specific service information (DVB SI) signalling.</p> <p>This will ensure that viewers of the local TV service continue to have a consistent experience such as with accurate recordings.</p>	<p>The new recording features have been developed to keep pace with developments mostly on satellite and cable platforms and are seen as desirable for attracting and retaining viewers.</p>

	around full cross-carriage. To maintain a consistent viewer experience the DTG requests that consideration is also given to the cross-carriage of these other components in a local TV multiplex. (observation)		
6	Choice of broadcast standard and video coding standard – There are arguments in favour of using DVB-T2 for improved interoperability with receivers and for improved spectrum efficiency, the DTG recognises that there may be a commercial rationale for using DVB-T and MPEG2, to maximise the number of existing receivers that can display the local TV services. Ofcom should consider, in its approach to licensing local TV, how local TV keeps pace with technology changes on the wider platform (observation) . The advantages for DVB-T2 (combined with MPEG-4 video coding) include:		It seems likely that DVB-T and MPEG-2 will continue to be used on the DTT platform and implemented in all receivers at least in the medium term. As the more advanced technologies DVB-T2 and MPEG-4 become more widespread, these are likely to be increasingly adopted for broadcast signals.
6a	<ul style="list-style-type: none"> Improved spectrum efficiency, giving either greater multiplex capacity or coverage or a combination of both(observation) 		DVB-T2 is reported by broadcasters to give better fringe reception area coverage than DVB-T modes predicted to have similar overall coverage
6b	<ul style="list-style-type: none"> Adoption of an existing UK DVB-T2 mode such as that proposed for the new multiplex for Northern Ireland would remove the need for 		

	extending receiver compatibility and performance tests (see 4 above) (observation)		
6c	<ul style="list-style-type: none"> • Launching new services in DVB-T2 mode is likely to drive the switch of the whole platform to DVB-T2 more quickly (observation) 		
6d	<ul style="list-style-type: none"> • DVB-T2 receivers are all of recent design and all receivers are required to meet higher compliance standards, so improving the consumer experience of local TV 		
6e	<ul style="list-style-type: none"> • The use of DVB-T2 would enable the cross-carriage of service information in a more efficient way than for DVB-T, thus taking up less of the multiplex capacity (observation) 		This is because of the efficient coding scheme for service information in use for UK DVB-T2 broadcasts
7	The DTG recommends that Ofcom bear in mind the potential impact of loss of coverage of other TV services if the local TV multiplex transmitters are not co-located with transmitters for pre-existing multiplexes, and the inconvenience and cost to viewers that may result (observation)		
8	The DTG observes that Figure 3 in the Ofcom consultation document is a simplified version of the interconnections and flows between		

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	different parts of the broadcast network. A more complete ecology diagram showing the complexity of interactions is shown at figure 1 below (observation)		
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Summary of DTG responses:

1, 1a, 1b - The broadcast services should comply with the DTG D-Book, to include Logical Channel Number and Target Region Descriptor	Firm recommendation for interoperability
1c the Guidance Descriptor should be broadcast	Observation
2) a regime of broadcast signal testing and its funding should be established	Firm recommendation for interoperability
3) licensees should be required to cooperate with other multiplex operators. They should also cooperate with the DTG on any aspects of their broadcast signals that are not D-Book compliant, such as new languages	Firm recommendation for interoperability
4) allowable RF transmission modes should be specified by Ofcom with reference to the D-Book and proliferation of modes avoided	Firm recommendation for interoperability
5) full DVB service information should be cross carried on the multiplex	Firm recommendation for interoperability
6) Ofcom should consider the pros and cons of DVB-T/MPEG2 and DVB-T2/ MPEG4, and should consider how the local TV service would upgrade to the latter, if not at launch	Observations
7) Ofcom should consider the impact on coverage of DTT if local TV transmitters are not co-located with national transmitters	Observation
8) The DTG's ecology diagram (Figure 1) may be helpful for prospective licensees	Observation

Annex - About the Digital TV Group and the D-Book

It is the DTG's role to deliver interoperability to meet the commercial and business requirements for UK digital television services in order to meet high consumer expectations. This is achieved through four steps:

1. Publishing an interoperability specification agreed by the industry, based wherever possible on international standards with UK specific elements only where essential (such elements are fed back to international standardisation processes)
2. Providing a single test regime accepted by the industry to confirm that products conform to the specification
3. Providing a testing service acceptable to service providers to confirm that products conform to the specification and to confirm minimum performance of their services
4. Operating the above under a trademark licence-based conformance regime

The D-Book is the technical specification for UK digital terrestrial television (Freeview and Freeview HD).

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.

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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 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.

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, accessing e-government services and allowing viewers to complete transactions via their television. 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. Connected TV is the convergence of 'traditional' broadcast digital television and the Internet to deliver new services, applications and programming (both linear and on-demand). 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.

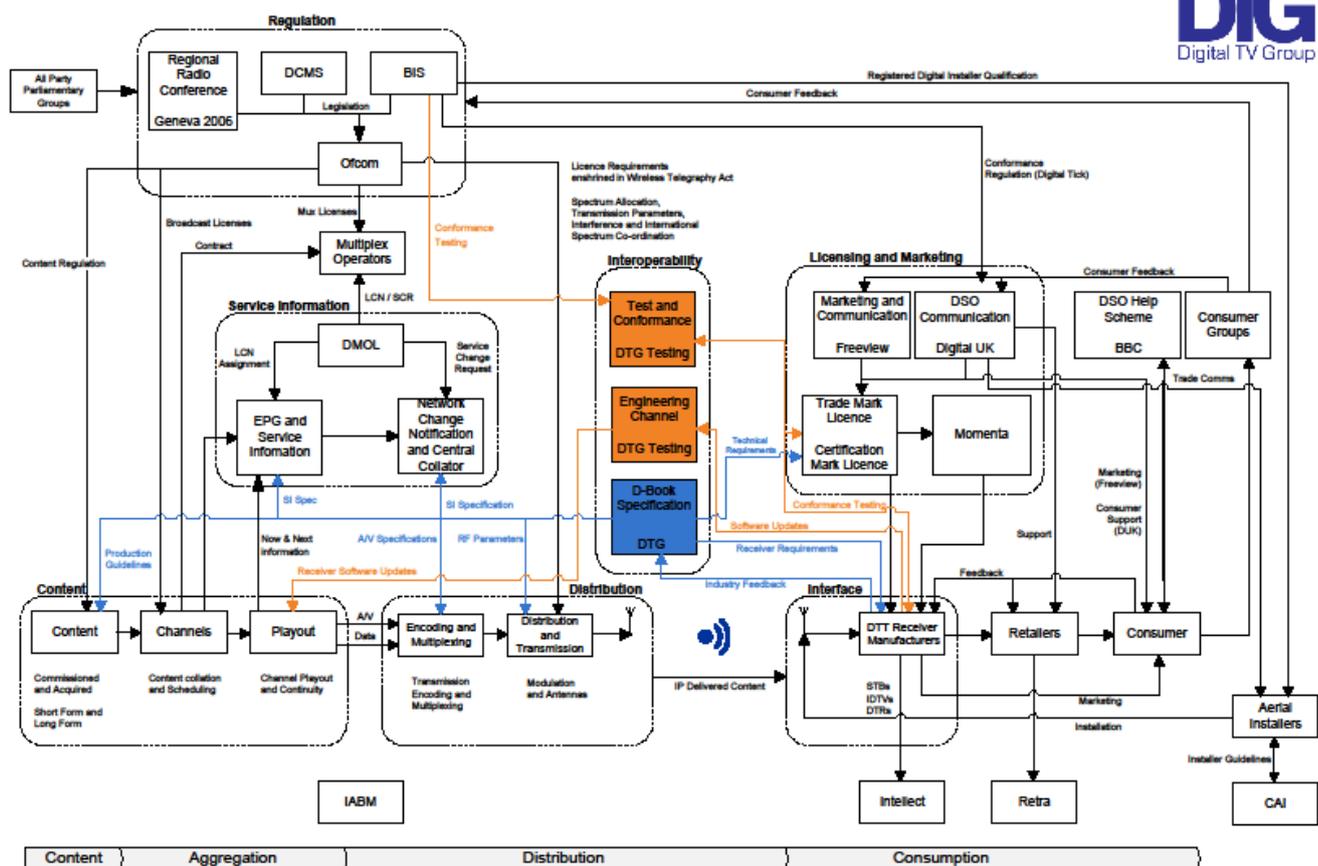
Since the DTG was established over a decade ago, the Group has worked closely with our members to adapt international standards such as DVB-T and DVB-T2 to create an interoperable UK digital TV platform that consumers can rely on.

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.

The D-Book is available to members of the Digital TV Group. Membership is offered for an annual fee on a non-discriminatory basis.

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Current UK DTT Ecosystem

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Figure 1 – Current UK Digital Terrestrial TV eco-system

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