



DTG Response to RSPG Opinion on Multimedia Services in the frequency bands allocated to the broadcasting services - May 2006

Summary

The UK Digital Television Group (DTG), representing broadcasters, network operators and technology suppliers, believes that:

- The RSPG Opinion represents a useful framework for policy development and implementation.
- The state of market development in the UK, both for mobile services and for digital broadcast services, provides useful experience and some pointers to the future.
- There is growing evidence from trials and pilots of strong demand for Mobile TV services for which consumers are willing to pay up to £7-11 (€10-15) per month. This is driven by changes in consumer behaviour - consumption of information and entertainment whenever and wherever.
- Released UHF spectrum alone may be insufficient to satisfy the demands for further development of both Digital Terrestrial Television (DTT) and Mobile TV.
- Therefore, far from L-Band being restricted to DAB-based applications through the Maastricht arrangement, L-band should be urgently reviewed through multi-lateral discussion and, if necessary through RSC action, to allow for the possibility of access to L-Band spectrum as soon as possible for Mobile TV based on DVB-H or equivalent technologies, using aggregated channels in densely populated areas.
- All 3 frequency bands referred to in the RSPG Opinion (VHF Band III, UHF Bands IV/V & L-Band) should be considered as a resource pool. Spectrum is a scarce resource which demands efficient use and the introduction of new technological developments and efficient planning techniques in response to market demand should be considered as part of spectrum policy.
- Within DTG, there is support from some members for a proposal to make a minimum of 8MHz of UHF spectrum available in each Member State to allow the provision of Multimedia Services, however this should be balanced against the legitimate concerns of other members that support for exclusive 'reservation' or 'designation' of (any) spectrum for any specific application may be inefficient and deter innovation as well as distort markets.

Introduction

The DTG is an industry association for digital television in the UK. It is platform neutral and technology agnostic and its primary role is ensuring the availability of technology and standards in order to help in maximising the efficient use of available spectrum to deliver television products and services. While the DTG does not seek to lobby and hence would prefer others to summarise the state of the communications market, particularly in regard to mobile services, DTG considers the following in regard to the UK market for digital broadcast services might provide useful insight:

- In addition to its digital satellite and cable platforms which are among the most technologically advanced and successful in the world, the UK also has a world-leading DTT service offering with six national multiplexes in operation (offering a combination of public service and commercial content), Free-to-Air services enhanced with some Pay TV services, over 10 million receivers sold, a firm commitment from the UK government and industry to a Digital Switchover ('DSO') project concluding in 2012 with the cessation of all analogue TV services, a review in progress by the regulator (Ofcom) in regard to the release of 'digital dividend' spectrum and a technical trial of high definition services on DTT (as well as full launches of HDTV services on satellite and cable).
- Following a protracted gestation period since 1995, the UK has one of the world's most successful markets for DAB-based audio services with, currently, one national commercial multiplex, one national BBC multiplex, a number of local and regional multiplexes, a wide range of content and successful content-related brands, a wide range of affordable receivers on the market (over 3 million sold - many developed by, or with the assistance of, UK companies) – all now driven by an increasingly rapid growth in take up by consumers.
- The UK has provided a number of examples to show that the innovative use of new technologies that enable the efficient delivery of new services to consumers brings about new and expanding markets.

In addition, in regard to Mobile Multimedia Services, we would point to the following UK developments:

- A service based on DAB-IP technology has been successfully trialled and full commercial services are planned to launch this year. A considerable amount of work has been done to enhance the original DAB network for this purpose. This will use Band III spectrum.
- Following the successful launch of Multimedia services (including TV) delivered over cellular networks; UK players have either carried out or are planning, a series of tests and trials using Digital TV (DTV) broadcast technologies using both UHF and L-band frequencies.
- There is growing evidence from trials and pilots of strong demand for Mobile TV services for which consumers may be expected to pay up to £7 - 11 (€10-15) per month. This is driven by changes in consumer behaviour - consumption of information and entertainment whenever and wherever.

Furthermore, the UK regulator, Ofcom, is regarded as being amongst the most innovative in its approach to spectrum management, placing optimal use of radiofrequency spectrum at the core of its policy. Nevertheless the future direction for the development of Multimedia Services in the UK, utilising integrated digital broadcast bearers, is currently unclear, largely as a result of a perceived uncertainty over availability of spectrum. Spectrum policy decisions at a national and international level should consider how future applications may be accommodated in the spectrum resource pool referred to earlier.

UHF spectrum is considered to be an important candidate for several market developments including the following examples:

1. Expansion of the DTT Platform to include additional Standard Definition (SD) and new High Definition (HD) services delivered in real and non-real time to fixed and portable receivers (STBs & IDTVs), PVRs and PC/media centres for consumption on a range of consumer display devices including those with large (30-50") screens.
2. Mobile Multimedia Services – the delivery of services including multi-channel TV to handheld devices as part of an interactive platform. Mobile phone operators and others see video services as an opportunity to complement the services available over 3G spectrum to create incremental ARPU

by providing a range of inclusive or additional subscription-based broadcast TV, pay-per-view services and link-through shopping opportunities.

Given that there may be insufficient UHF spectrum, using current technology and planning assumptions, to allow for market-led development of both Digital Terrestrial Television (DTT) and Mobile TV markets, and to provide for a smooth and easy introduction of mobile broadcasting in Europe with limited constraints and obligations including changes to existing broadcasting licenses as necessary, DTG would like to see Europe ensure that both UHF and L-Band are clear candidates for Mobile TV to encourage the development of handsets and infrastructure supporting both bands.

Subject to our earlier comments, we support an urgent review to facilitate use of L-Band spectrum as soon as possible to allow for a technology neutral policy that will support access for Mobile TV based on DVB-H or equivalent technologies, using aggregated channels in densely populated areas particularly in member states like the UK, where access to UHF spectrum in key metropolitan areas will only be possible in a 2010-2012 timescale or even later. European administrations should be encouraged to work urgently to agree a more flexible approach to the award and use of L-Band spectrum, either modifying or replacing some or all provisions of the Maastricht arrangement.

Comments on Frequency Bands

Broadcast frequency bands of most relevance to the delivery of Mobile Multimedia Services by terrestrial transmission are VHF Band III & L-Band for DAB-based services and UHF Band IV/V [below Channel 55] and L-Band for DVB-H or equivalent standards. We would comment as follows in regards to these bands which are referred to in the RSPG Opinion:

UHF

Following the successful outcome of the Regional Radio Conference (RRC06), attention will turn to the aftermath of RRC06 and future work. European spectrum policy would best be developed not by looking at individual frequency bands or individual applications but should consider how all identified applications might be feasible across all available spectrum.

DTG agrees that there may be a need for action “to remove unnecessary constraints in current licenses for broadcasting, mobile and fixed services”. UHF spectrum is ideally suited for DTT and Mobile TV and Europe should aim to provide the necessary regulatory framework to allow for these possibilities on a European level both prior to and after the digital switch over. We would therefore urge that the proposals and timetable for award of released Band IV/V spectrum be harmonised and clarified as soon as possible at the same time as the policy for L-Band is reviewed (in such a way as to speed up and not delay member states wishing to move ahead in facilitating early launch of services) even if the bulk of released spectrum will not be available for use until after analogue switchover has been completed.

The development of DTV platforms allows broadcasters and multiplex operators to plan to deliver a wider range and a greater number of services. Individual platforms (satellite, cable, DTT, IPTV etc) offer different technical and commercial characteristics and are increasingly likely to complement each other in offering consumer choice, particularly where the cost of distribution is high and business case unclear. The introduction of HD broadcast services and other HD content sources such as DVD, along with falling prices for large screens, will increase awareness and drive consumer demand for equipment and services both Free to Air and Pay TV. Demand for SD capacity on the UK DTT platform currently outstrips supply and demand for HD would only make this situation worse so it will be of great importance to make sure spectrum is used efficiently. For HD reception the improved quality and new service options are offset by the additional cost for consumers of new receivers to replace existing STBs or to supplement IDTVs on a platform by

platform basis. Consumers will need to be able to easily identify screens and STBs capable of supporting future developments in order to be confident that their investment in new equipment will be rewarded by an acceptable longevity of use. New technology and coverage planning techniques will have to be considered and introduced where markets require and can support them. Policy should facilitate this.

Within DTG, there is support from some members for a proposal to make a minimum of 8MHz of UHF spectrum available in each Member State to allow the provision of Multimedia Services, however this should be balanced against the legitimate concerns of other members that support for exclusive 'reservation' or 'designation' of (any) spectrum for any specific application may be inefficient and deter innovation as well as distort markets.

L-Band

Prolonged association of L-Band with 'DAB' is creating uncertainty and may be delaying other developments, for example the deployment of DVB-H infrastructure in L-Band, with the possible result that this under-utilised but potentially valuable spectrum will lie fallow throughout Europe for an extended period.

DTG believes that, as far as possible, all 40MHz of L-Band spectrum could be made available across Europe soon for a range of applications, though certain issues in regard to the top 12.5MHz ('satellite') spectrum may involve additional regulatory and ITU consideration. The Maastricht arrangement, with area allotments in a dense tile pattern, was designed only for DAB services. DTG strongly supports finding more flexibility within the Maastricht Plan without delay through multi-lateral agreement. It will be necessary for proposals to consider the technical aspects of sharing in L-Band where T-DAB and DMB services operate in 1.7 MHz channels.

Europe has only recently begun to recognise the potential value of L-Band spectrum for DVB-H or equivalent technologies in densely populated areas – perhaps with UHF being used on a complementary basis for wide area coverage. This has forced some operators to adopt T-DMB technology in L-Band simply to get access to spectrum. Although the case for enabling L-Band for DVB-H or equivalent technologies is less urgent where UHF channels can be made available sooner, there may still be unsatisfied demand even if UHF services have commenced – e.g. for additional capacity in urban areas.

In the UK Ofcom has proposed more flexibility through multilateral discussion and decisions within RSC. The priority should be certainty of release date and an early release, co-ordinated with policy decisions across multiple bands to enable common services and products to be developed.

DTG supports European agreement on removing restrictions such that the use of both UHF and L-Band (aggregated channels in densely populated areas) will be possible for DVB-H or equivalent technologies.

There are two international issues:

(i) Agreement on use and protection of inter-channel guard-bands to allow aggregation across multiple 1.7MHz channels

(ii) Agreement to replace the Maastricht plan

We would suggest that the priority is to negotiate the possibility of aggregated channels and re-plan later if ever this is required.

DTG supports modifying the segmentation such that a number of contiguous segments may be aggregated, subject to market demand, to form one or more continuous blocks, for example of

5.1MHz. Each 1.7MHz block has a small guard band on each side. It will be necessary to obtain European agreement to transmit in these bands when aggregated blocks are in use. This prerequisite of agreeing the means of aggregation should be in place prior to spectrum release to minimise the risk.

In regard to the upper 12.5MHz, DTG does not wish to prejudice firm business plans made on the basis of agreed spectrum designation, nevertheless if there is no evidence of tangible demand for deployment of satellite DAB services based on the existing 'pan-European' allocation then the possible use of the upper 12.5MHz should be considered for terrestrial applications so that uncertainty can be removed. We would like to see Europe reduce this uncertainty as long as this does not delay the release of the lower 27.5MHz.

Conclusions

- DTG generally supports RSPG's starting position but would like to see further policy development
- Spectrum policy decisions should **not** be made solely by considering individual frequency bands – but by consideration of how future applications may be accommodated in all suitable bands.
- Frequency bands of most relevance to the delivery of Mobile Multimedia Services by terrestrial transmission are VHF Band III & L-Band for DAB-based services and UHF Band IV/V [below Channel 55] and L-Band for DVB-H or equivalent standards.
- UHF spectrum released by the process of analogue switch-off will also be in demand for the further development of DTT and other services, and in many member states will not be available for several years. Therefore, while UHF spectrum is important, it alone may not satisfy demand for the development of Mobile Multimedia Services.
- Within DTG, there is support from some members for a proposal to make a minimum of 8MHz of UHF spectrum available in each Member State to allow the provision of Multimedia Services, however this should be balanced against the legitimate concerns of other members that support for exclusive 'reservation' or 'designation' of (any) spectrum for any specific application may be inefficient and deter innovation as well as distort markets.
- L-Band should be freed from an exclusive link to DAB and should be considered for other applications including Mobile TV based on DVB-H or equivalent technologies. European administrations should work urgently to agree a more flexible approach to the award and use of L-Band spectrum, modifying or replacing the Maastricht arrangement to ensure that UHF and L-Band are enabled as candidates for Mobile Multimedia Services including TV and for the development of handsets and infrastructure supporting both bands.
- DTG would like to see Europe prioritise its work on L-band so that it can become a candidate for Mobile Multimedia services to assist countries where access to UHF spectrum in key metropolitan areas is delayed.
- DTG acknowledges that spectrum is a scarce resource which demands efficient use and that the introduction of new technological developments and efficient planning techniques in response to market demand should be considered as part of spectrum policy
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Note. The Digital TV Group is an independent body, representing over a hundred organisations in the digital TV sector. This consultation response has been confined only to these areas within the current scope of the Digital TV Group work.

While every effort has been made to ensure accuracy and to provide a consensus view when required, it should not be assumed that all member organisations of the Digital TV Group support every aspect of the submission. The views provided in this response are those of members who expressed an opinion and are not the collective view of the Digital TV Group Council.