

Intellect response to:

**Ofcom's call for information on
"Developing a framework for the
long term future of UHF spectrum
bands IV and V"**

About Intellect

Intellect is the trade association for the UK technology industry. In 2007, the industries Intellect represents accounted for 8% of UK GDP, £92bn of Gross Added Value and employed 1.2m people.

Intellect provides a collective voice for its members and drives connections with government and business to create a commercial environment in which they can thrive. Intellect represents over 750 companies ranging from SMEs to multinationals. As the hub for this community, Intellect is able to draw upon a wealth of experience and expertise to ensure that its members are best placed to tackle challenges now and in the future.

Our members' products and services enable hundreds of millions of phone calls and emails every day, allow the 60 million people in the UK to watch television and listen to the radio, power London's world leading financial services industry, save thousands of lives through accurate blood matching and screening technology, have made possible the Oyster system, which Londoners use to make 28 million journeys every week, and are pushing Formula One drivers closer to their World Championship goal.

In the past 12 months 14,500 people have visited Intellect's offices to participate in over 550 meetings and 3,900 delegates have attended the external conferences and events we organise.

Response

Introduction

Intellect welcomes Ofcom's call for input and its members are keen to play an active role in the detailed evaluation of this matter, which is the principle recommendation of this response. We believe that significant stakeholder engagement and analysis is required to ensure that adequate time and effort is committed to the generation of an output that meets the UK's long term requirements and enables proactive engagement in Europe via the Radio Spectrum Policy Programme. In addition, Intellect sees this as a significant 'moment in time' in terms of the long term development of a number of new ideas and approaches to spectrum management that embrace new technologies and evolving consumer and market demands. These include:

the Digital Terrestrial Television (DTT) platform, as the Digital Switchover process is approaching completion and as such the timing is apposite to be considering the issues raised by Ofcom. Early certainty and stability in Ofcom's plans for the spectrum range in question will encourage investments to be made by industry to the benefit of UK consumers.

the development of increased spectrum utility through the introduction of cognitive devices and the possibilities to bring TV white space spectrum into use for new applications.

the further development of the Digital Dividend spectrum for new applications as experience and markets grow based on the current digital dividend release.

UK terrestrial TV platform

The UK Government and Ofcom have played a significant role alongside the Broadcasters, Consumer Electronics Industry and Transmission provider in creating the circumstances that have allowed Digital Terrestrial Television to become the success that it is today. Over the years there has been significant investment in new content, new services and network expansion to support and develop consumer demand is making DTT the most significant platform for Television consumption in the UK market with continued growth in viewing hours further endorsing the attractiveness of the content offered. Furthermore, DTT remains core to the principles of public service broadcasting being the only UK platform (post DSO) providing universal access to a wide range of content free at the point of consumption.

To date platform developments have largely been associated with the roll-out of digital services in combination with the expansion of content choice through network technology enhancements. These events have allowed the platform to evolve and expand to service consumer demand as multi-channel television has been embraced by the consumer. However, as the digital switchover process approaches its conclusion the platform's ability to service future consumer trends and changes in demand, such as the anticipated widespread adoption of High Definition services becomes very difficult, exacerbated by the limited degree of flexibility afforded the platform by the regulatory regime and also uncertainty regarding the availability of more spectrum. Hence, Intellect believes that Ofcom should carefully consider the role of the 600MHz spectrum in the future growth of the platform. For example, to both encourage the take-up of innovative DTT services that are attractive to

consumers and to create sufficient flexibility for the future, the 600MHz spectrum could be made available to broadcasters whilst seeking to ensure that any new multiplexes utilise modern, spectrally efficient technologies such as DVB-T2/MPEG4 (as used by Freeview-HD).

Over time the provision of additional services in this manner would drive market penetration of more spectrally efficient equipment into the consumer market, and thus ease the path should some additional UHF spectrum be eventually designated for release. Without a strong driver, older equipment would remain in use for longer lifetimes and be tied to the original DVB-T/MPEG2 standard.

International developments

Ofcom's call for input is perhaps predicated on questions regarding potential future demands for the 700MHz spectrum band for mobile broadband services. At present this spectrum is co-ordinated and deployed Europe-wide for High Power DTT. There is an ongoing dialogue within the European Parliament in conjunction with the Radio Spectrum Policy Programme, on the need for further spectrum to deliver future demand for mobile broadband services as an element of the European Digital Agenda, as well as future emergency services. Intellect suggests that if Ofcom supports a future ITU World Radiocommunication Conference (WRC) Agenda Item on Mobile Broadband, including IMT spectrum requirements, it should address a wide range of frequencies including those below and above 1GHz and not focus on specific bands. These discussions should take into account the future of terrestrial broadcasting and its requirements to provide future services such as HD and 3D plus co-existence with mobile services.

Intellect would also highlight the interest, in the use of the bands under consideration by Ofcom in this call for input, for TV White Spaces (TVWS) systems, both in the UK as well as in other parts of the world. The accommodation of such technologies should lead to a significant improvement in the efficiency of use of the TV band in the longer term. Intellect has provided inputs previously in support of TVWS applications and Ofcom's approach of developing a suitable database system with geolocation.

Way Forward

The 600MHz spectrum will soon be cleared for re-assignment. Intellect supports Ofcom's current plans, as elaborated in the recently published annual plan, to award this spectrum by auction as soon as possible after the 800MHz auction. Intellect also supports Ofcom's efforts to introduce TVWS systems in the band in a manner that ensures that other services are fully protected and that future licensed applications can develop successfully in the band.

Intellect recognises that discussions and studies are underway regarding the effectiveness of mitigation measures across the guard band between the 800 MHz band and DTT Channel 60. This is an important and non trivial issue that needs to be settled to the satisfaction of the relevant interest groups. Intellect welcomes Ofcom's recent consultation, "Coexistence of new services in the 800 MHz band with digital terrestrial television". We urge Ofcom to bring these considerations to a satisfactory conclusion as a matter of priority in order to give early clarity and certainty to all parties planning their systems.

Intellect does see merit at this time for Ofcom and Industry to work together to determine how licensing arrangements can accommodate future flexibility for UHF bands IV and V use to stimulate innovation in existing and new applications. This should include, at the same time, ensuring that the UK has sufficient flexibility in spectrum rights to accommodate any future demands for Europe wide harmonisation and deployment of additional IMT based services in 700MHz, or other bands should consumer demand warrant it.

Whilst not delaying the planned 800MHz and 2.6GHz awards, Government and Ofcom should lead, in close discussion with industry, the development of a long term roadmap for the future use of the band IV and Band V spectrum. A key precursor for this is a national dialogue to tackle the following key questions:

- i. what is the likely medium to long term evolution of the DTT platform and mobile broadband applications in the UK ? And as a result,
- ii. what additional spectrum is needed to accommodate future DTT platform developments ?
- iii. taking into consideration the availability of spectrum above 1 GHz, what additional spectrum , below 1 GHz, is required (if any) for future mobile broadband applications, following the release of the 800 MHz spectrum ?
- iv. What should the UK's international engagement strategy be to deliver these requirements ?

Intellect stands ready to work in partnership with Government in facilitating this dialogue.