OFCOM Consultation on

Digital Dividend : Geolocation for Cognitive Access

RESPONSE FROM DIGITAL UK Ltd

Introduction

Digital UK is the organisation formed by broadcasters at the behest of Government to oversee television Digital Switchover (DSO) in the UK. Its primary responsibilities are to co-ordinate the re-engineering of the terrestrial transmitter network and to communicate with viewers about the DSO process, but it also takes a long-term view as some current processes and facilities used to support switchover will continue to exist after the completion of Digital Switchover, albeit managed by the Broadcasters.

Digital UK welcomes the recognition by Ofcom that licence-exempt cognitive devices should only be permitted access to interleaved spectrum providing that they would not cause harmful interference to licensed uses, including DTT.

This response to the Consultation is designed to reflect that requirement and, therefore, only addresses those questions where we believe that there is the potential to impact on DTT coverage and hence the possibility of affecting either the DSO process or consumers' subsequent enjoyment of services delivered via the DTT platform.

Information provided to the database

Introduction

Question 1: Should we suggest only high level parameters, leaving further work to industry, or should we seek to set out full details of parameters to be exchanged?

Digital UK supports the proposal that Ofcom only suggests high level parameters to be exchanged, leaving the further work to industry, subject always to Ofcom reserving the right to intervene and set full details of the parameters to be exchanged if the industry proposals do not fully meet the need to protect licensed users of the spectrum.

Number of databases and general approach

Question 2: Should both closed and open approaches be allowed? Should there be any additional requirements on the providers of closed databases?

Digital UK supports the idea of both open and closed databases. However, we note that the dynamics of the marketplace are such that the operator of a closed database may not choose to, or be able to, support a closed database for the entire lifetime of the devices that rely on it. We therefore believe that the operator of a closed database should be required to include a mechanism for permanently redirecting the supported Cognitive devices to obtain location information from an alternative database in the event that support for the closed database is withdrawn.

Options

Question 3: What information should be provided to the database? Are our assumptions about fields and default values appropriate?

Digital UK agrees that information about device location and type should be returned to the database.

Digital UK's preference would be for devices to return their location to within 100m because this corresponds to the positional accuracy of DTT coverage predictions. However, Digital UK acknowledges that such accuracy may not be possible in every circumstance, in which case returning additional information about the positional accuracy and speed of movement would also be appropriate.

Information returned to the device

Transmitter location or frequency availability?

Question 4: Should the translation from transmitter location to frequency availability be performed in the database or in the device?

Digital UK believes that the most beneficial solution for both cognitive device users and licensed users of the spectrum would be for the database to perform the necessary frequency availability computations. This solution offers the greatest

flexibility and avoids the performance of early-generation devices limiting future development of cognitive services.

Form of the information?

Question 5: Have we outlined an appropriate information set for the database to provide to the device? Can industry be expected to develop the detailed protocols?

The information dataset proposed appears reasonable. Digital UK is not in a position to comment on whether industry has the capability to develop the detailed protocols.

Database update frequency and reconsultation

Implications for update frequency?

Question 6: Is a two-hourly update frequency an appropriate balance between the needs of licence holders and of cognitive device users?

Changes to the DTT platform are planned well in advance of implementation. A daily frequency update would therefore adequately capture any changes to the broadcast transmitter network. Digital UK recognises that the needs of the PMSE community are more dynamic, and hence we agree that a two-hourly update frequency would appear to be appropriate.

Question 7: Is there benefit to devices receiving a time validity along with any database request and to act accordingly?

Digital UK agrees that the addition of a time-validity feature would increase flexibility and therefore be beneficial.

Question 8: What role could push technology play?

Since this does not directly impact on the use and development of the DTT platform, Digital UK does not express a view.

Populating the database

DTT

Question 9. Do you have any comments on the suggested approach to implementing the database for DTT?

Digital UK notes that the planning parameters used for television have been derived over many years based on a known fixed network. Erosion of these margins by cognitive devices will impact on terrestrial coverage and therefore we believe that cognitive devices should only be permitted to erode the margins by a small amount. We welcome Ofcom's recognition of this as an issue.

We believe that the appropriate level of margin erosion should be determined after further modelling and discussion with the affected broadcasters. Digital UK therefore does not offer a view on the suitability of the figures set out in the consultation.

Digital UK agrees that the database will be able to model appropriate transmission powers for cognitive devices based on the ultimately agreed margins and the DTT predictions provided by Arqiva.

PMSE

Question 10. Do you have any comments on the suggested approach to implementing the database for PMSE?

Since this does not impact on DSO, Digital UK does not express a view.

Practicalities of modelling

Question 11. Do you believe it is practical to implement such a database?

Digital UK's experience of operating the DTT on-line Postcode database, acknowledging that this uses static pre-calculated coverage data, confirms that it is possible to extract and present complex coverage information in real-time. Adding a real-time calculation function would not be trivial, but Digital UK agrees that the majority of the necessary data can be pre-calculated and stored, and only the latest changes would need to be calculated.

Digital UK therefore believes that, although difficult, nevertheless it would be feasible to implement the database.

Database maintenance

Database ownership

Question 12. Is it appropriate for third parties to host the database? If so should there be any constraints? If not, who should host the database instead?

Since this does not impact on DSO, Digital UK does not express a view.

Question 13. How can any costs best be met?

Since this does not impact on DSO, Digital UK does not express a view.

Provision of information to the database

Question 14. What are the difficulties and expected costs to licence holders in providing the necessary information to the database? Could this information be provided in any other way?

DTT transmitter information could be provided in two ways to the database:

1) Ofcom issues licenses to the Multiplex Operators for the use of the spectrum. Ofcom could therefore notify the database owner of any changes to DTT licences as part of the licensing process.

2) It would be possible for the Broadcasters to collaborate, possibly through an industry forum such as DMOL, to create a web service containing details of

the transmitter network configuration, which could be accessed as required by one or more geolocation databases. This service would be similar to that currently used to provide DTT channel information on the Digital Television Group website, and which is also used to populate the channel lists on the various on-line DTT coverage checkers. Digital UK does not offer a view on the willingness of the Broadcasters to support such a service, nor the likely set-up and operating costs.

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