Summary of responses to the geo-location consultation

Overall

Sixteen responses were received (one of which was confidential). The responses to the consultation were predominantly supportive. Most supported our proposals and many made constructive suggestions for how they might be improved. There was a high degree of consensus across most of the questions that we asked. Of those who expressed concern, one respondee felt that the white spaces might be used by mobile operators in conjunction with licenses in the digital dividend spectrum and that this should be studied before cognitive access was taken any further. Another said that Ofcom was not taking interference concerns seriously enough and wanted a wide range of reassurances and increases in protection.

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?:

There was widespread agreement that we should only suggest the high level parameters and also that standardisation of parameters was needed, although most respondees did not recommend any particular body where parameters could be standardised. One respondee urged that we remained involved in this area.

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

Respondees generally argued for flexibility with any arrangement of closed and open databases being allowed to co-exist. Some suggested that there must be at least one open database to ensure that all devices could operate but that multiple open databases should be encouraged. Others noticed that closed databases could cause consumer concern, particularly if shut down. A few reminded us that we would need to police all the databases to ensure correct content.

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

Respondees agreed with our proposals. A few argued for flexibility in adding further parameters or defining inputs such as the geographical area of interest in more detail. Some felt that further work was needed on the accuracy of location-based systems (which is already underway as a research topic within Ofcom) and some that height information would also be needed.

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

Many respondees agreed that the database was the correct location. A few commented that translation in the device should also be allowed although some expected this only to happen in the longer term as devices became more capable.

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?:

All respondees agreed with our suggestions here. One noted that in the case of master-slave operation the radius of validity of the returned information might be needed, however, the device should be able to specify this itself. One respondee asked that they be involved in setting parameters.

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

Respondees generally thought that two-hourly updating was the right balance but some pointed out that if time validity is provided then a general update frequency is not needed. One respondee requested further work be done to understand how frequently channels were needed at shorter notice than this. Another commented that two-hour updating might result in over-booking of channels just in case one was needed at short notice.

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

All respondees agreed that this was a sensible suggestion.

Question 8: What role could push technology play?:

Most respondees thought that there was a role for push technology as many expected master devices to be permanently connected to the Internet or to have cellular connectivity. However, most respondees agreed that it should not be assumed but should be an option alongside the time validity. One noted that an acknowledgement for any pushed data would be needed while another felt it should be compulsory to enable rapid updating of PMSE usage.

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

Only a few respondees addressed this question. They thought that the signal levels proposed may need adjustment as future DTT modes are introduced or to take into account interference to loft mounted antennas and portable reception.

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

Only a few respondees addressed this question. Some argued that the -77dBm level was too conservative and need not be used everywhere but that -67dBm could be used for indoor applications. A few commented that the 20dB building loss was too high and some suggested 7dB be used instead. One was much more critical, suggesting a large downward revision of signal levels allowed and that large numbers of multiple devices be taken into account.

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

All respondees agreed this was practical. One noted that if the computations proved complex then simplifications could be made so long as they were conservative.

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?:

Respondees thought it was acceptable for third parties to host the database as long as appropriate commercial arrangements were well defined including the need to be neutral in dealing with all types of devices. Some thought database providers should be licensed so their correct operation could be ensured. Many thought that the best way to overcome any concerns was to seek multiple providers. A few noted the need for Ofcom to carefully regulate all parties.

Question 13: How can any costs best be met?:

Most respondees recognised that there were costs associated with the database provision and that they might need to be met in some way. However, views were divided as to the best way to achieve this. Some suggested that funding models would emerge over time and did not need consideration yet, whereas others accepted funding might be needed in the shorter term and some felt this should be provided by the regulator (or other public body). Some suggested costs must fall with those who caused them, some ruled out some funding models which were recommended by others.

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?:

Respondees felt that the costs to the licence holders should not be materially different from those they bear today and indeed that automated methods of registering devices might actually reduce these costs. Some felt that any PMSE band manager could readily provide this information and one provided proposals for how changes to TV planning could be handled.

Our initial conclusions

- Our approach of setting out the key parameters we would expect to see transferred to and from the database is appropriate. We should now let industry and standards bodies determine the detailed protocols.
- We should be flexible with regards to the number and form of databases. At this stage we do not anticipate holding a competition to select the "winning" database; rather organisations might apply at any time to become database operators. However, each database will need to be registered and there must be a mechanism to verify its correctness.
- An implication of this is that there will need to be an agreed process whereby all database owners can download the parameters of licensed operation from single databases likely owned by the PMSE band manager and the broadcasters (Arqiva).
- At present we should require translation within the database, not the device. Licence holders find this preferable and there is little call for device translation. However, we might review this decision in the future.
- Providing a time-validity stamp to the data is a better solution than setting a minimum update time. The default might be two hours initially.
- Database providers can use push technology as well if they wish but it is not something we need to incorporate into any regulations at this point.
- Further discussion is needed with licence holders and other stakeholders to set the parameter values used in the propagation modelling.
- There does not appear to be any reason to prevent third parties hosting any databases as long as they are appropriately regulated.
- There is little consensus on what any costs might be and where they should fall. However, it is not clear that this issue needs to be addressed immediately and might best be revisited as the market structure becomes clearer.