Kenyon Consulting

Additional comments:

I am an independent chartered engineer and BCS fellow with specific interests in secure wireless communications for the emergency services and other comms critical user groups. My background includes seven years working on the design and development of the TETRA based Airwave service. I am also active - with respect to security - in white space devices and identity assurance.

I am pleased to see the proposals for repurposing the 700MHz band, in line with international agreements, together with the move of DTT to the 600MHz band. Several years ago Ofcom recommended emergency services use of the 600MHz band which was being cleared only in the UK thus making an extreme sub-optimal market for manufacturers.

The move towards mobile broadband in 700MHz will assist in developing a worldwide market in devices which could include emergency service specific devices on a scale not previously seen. Coupled with 3GPP Release 12 developments which add emergency service specific modes (PTT etc) to LTE, the ground is being laid for secure users of commercial mobile broadband services.

Question 1: Have we correctly identified and characterised the potential costs set out above, and what other costs ? if any ? should be taken into account in our assessment?:

Question 2: What evidence, whether qualitative or quantitative, should we obtain and/or take into account in assessing each of these potential costs? Please identify any sources of specific evidence to which we should have regard.:

Question 3: Have we correctly identified and characterised the potential benefits set out above, and what other benefits ? if any ? should be taken into account in our assessment? :

Question 4: What evidence, whether qualitative or quantitative, should we obtain and/or take into account in assessing each of these potential benefits? Please identify any sources of specific evidence to which we should have regard. :

Question 5: In particular, what is your view of the likely future demand for additional sub 1 GHz spectrum for the provision of mobile data services, and what evidence supports this view?:

The trend for transfer of PBS from broadcast infrastructure to IP carrier is apparent as content providers multiply and broadcast infrastructure limits are seen.

It appears obvious that there will be further demand for mobile broadband spectrum in all topographies ranging from extreme rural to dense urban areas. Should Ofcom therefore be

proposing a more forward looking and far reaching strategy as to how to migrate away from wide area broadcast infrastructures to localised mobile broadband structures where users are more readily provided with the content of their choice. This would assist in putting the UK back in a world leading technology position.

Question 6: Should we place different weights on some costs and benefits than on others, for example depending on whether costs would be borne by consumers, DTT operators, or mobile operators? :

The more immediate benefits appear to be to the advantage of the mobile operators and to the detriment of the DTT operators with consumers benefit, if any, lying well into the future. Therefore much greater weight should be given to costs being borne by mobile operators as the DTT operators inevitable decline and exit their spectrum holdings.

Question 7: Do you have any other comments on the work we are currently undertaking on potential costs and benefits? :

Question 8: Have we correctly identified the costs and benefits that could vary depending on the timing of release, and the impact of those factors? Are there other costs and benefits which would vary depending on the timing of release of the 700 MHz band which we should take into account?:

Question 9: How quickly could the 700 MHz band be released? What would be the impact on DTT infrastructure costs of releasing at the earliest possible time compared to a later time? What would be the factors which affect these costs?:

Question 10: How, and to what extent, are the costs for existing (PMSE) and potential (WSD) interleaved users of the 700 MHz band likely to vary depending on the timing of release? What would be the factors which affect these costs?:

Question 11: Should we consider any other cost-related arguments / evidence in favour of an earlier or later release date?:

Question 12: What would be the impact on mobile broadband delivery and competition of releasing the 700 MHz band later rather than sooner? :

Question 13: Should we consider any other benefit-related arguments / evidence in favour of an earlier or later release date?:

Question 14: Is the range of potential dates for release likely to be wide enough to merit consideration of an incentive auction approach?:

Question 15: If so, what are the challenges to designing an effective incentive auction in this case, and how might these challenges be addressed? :

Question 16: If we followed an incentive auction approach, how should we take account of wider costs and benefits ? i.e. those not felt by participants in the auction?:

Question 17: Do you have any views at this stage as to the parameters of an incentive auction, such as the default date and payment mechanism?:

Question 18: Is there a version of the overlay auction approach which could be suitable for 700 MHz release?:

Question 19: What are the benefits and risks of conducting an overlay auction in this case?:

Question 20: Have we correctly identified and characterised the potential impact of 700 MHz release on consumers accessing DTT? What other impact ? if any ? should be taken into account in order to identify pre-emptive measures to reduce this impact?:

Question 21: Do you have any comments on the pre-emptive measures relevant to DTT identified above? Are there other pre-emptive measures we should be considering?:

Question 22: Have we identified the correct measures to support consumer adoption of DVB-T2?:

Question 23: What regard, if any, should we have to wider technical evolution of the DTT platform, such as HEVC? :

Question 24: Have we correctly identified and characterised the potential impact of 700 MHz release on PMSE users? What other impact ? if any ? should be taken into account in order to identify pre-emptive measures to mitigate this impact?:

Question 25: Do you have any comments on the pre-emptive measures identified above? Are there other pre-emptive measures we should be considering?:

Question 26: Do you have suggestions for how we can assess the impact on PMSE users and equipment if 700 MHz is no longer available for PMSE use?: