Neul Response to:
Ofcom Strategy Consultation on UHF bands IV and V

General

Neul's key focus is in developing and deploying systems that make use of white space spectrum access in the UHF bands. In particular, these can be used for machine-to-machine communications (M2M) and rural broadband connectivity.

Neul has no particular views on the need or suitability of the 700MHz band for cellular applications nor the need for spectrum for TV broadcasting. Therefore, our responses are restricted to those questions relevant to white space access.

In general, we believe that the value that can be derived from white space access is hugely underestimated. A nationwide M2M network in the UK might have upwards of 1 billion connected terminals and could generate economic value broadly equivalent to that delivered by the entire cellular industry. By enabling widespread sensors it could allow elderly people to live in their homes for longer, energy to be managed better and congestion avoided, thus helping to resolve some of the most pressing problems facing our society at present. It is quite plausible that white space access could generate greater economic value than the licensed access in the bands and also prove more valuable to society.

We also believe there may be opportunities for WSD access in the 700HMz band if auctioned for mobile access. In particular, if the 700MHz band were structured for FDD access with a central guard band then it would be possible and advantageous to enable WSD access to this guard band. Structuring the licenses to readily enable other forms of WSD access such as rural broadband provision in areas where the licence holders were not using the spectrum should also be provided.

Answers to questions

Q12: Other material factors affecting the development of white space devices

We are not aware of any other factors. We encourage Ofcom to press ahead as rapidly as possible to enable WSDs, thus delivering economic benefits, enabling innovation and allowing Ofcom to learn more about the future role of these devices prior to having to make final decisions about the future of the UHF band.

Q14: Public protection and similar

We note that white space access may provide a mechanism for the emergency services to access broadband, M2M and other communications mechanisms. For example, Neul is embarking on a trial with the Cabinet Office to determine the role that WSDs might play in future emergency service communications.

Q19: Short term uses for the 600MHz band

We agree that one of the key uses of this band is for WSD access on an unlicensed basis. Other variants might include light-licensing, restricted licensing or other approaches that provide greater certainty of access to the spectrum for particular applications.

Q20: Preferred mode of short term release of 600MHz spectrum

We strongly prefer option (a) – use of the band for WSD access. This could be delivered using database access in exactly the manner envisaged for the rest of the UHF TV band. If and when TV transmitters were moved into the 600MHz band then the database would be updated and the WSDs would automatically avoid the licensed use. This seems a pragmatic and valuable use of the spectrum in the interim period. Indeed, any spectrum that is vacant awaiting award or allocation decision could and should be treated in this manner.

There might be some merit in providing "licensed WSD access" to part of the band. For example, only certain WSDs might be allowed to access some of these channels, still using the geo-location WSD approach proposed more generally. This restricted access might be auctioned or otherwise require payment. Such access might be suitable for example for M2M systems delivering smart meter solutions. Such licenses could be awarded on a relatively short-term basis, on an annual basis or similar.