O3b Networks Limited

Additional comments:

O3b Limited ("O3b") respectfully submits this letter in response to the Consultation, and is grateful for the continued opportunity to work with Ofcom on the United Kingdom's spectrum needs. In just a few short months, O3b (a Jersey entity) is planning to launch a global, medium-Earth orbit ("MEO"), non-geostationary satellite system that will provide broadband worldwide in the Ka band, and specifically in two of the bands involved in this Consultation (the 18.1-18.5 GHz and the 27-29.5 GHz bands).

Spectrum for mobile broadband deployment may be one of the most exciting and controversial issues to be addressed at the WRC-15. The ability to access information from any point on the globe is fast becoming seen as a basic human right. It is imperative that broadband systems around the world are coordinated in their spectrum use, to further enable the ability to be mobile.

Nonetheless, opening up additional spectrum for IMT should not be done at the expense of other services that are an integral part of the global broadband infrastructure. It has been recognized globally that satellites are indeed one of the key components of the global broadband network, and many countries, including the UK, have come to rely on satellites to provide ubiquitous broadband access to its citizens. Additionally, satellites are often the enablers for other broadband access technologies.

Considering the leading role of the UK whereby other administration may follow the UK's position, we urge the UK to adopt a position that is cognizant of the "big broadband picture" that takes into account all stakeholders and all technologies.

As O3b is not a party in interest in matters raised under other questions, we limit our response to Question 8, below.

O3b thanks Ofcom for the opportunity to provide input via this Consultation that will help shape the UK's positions at the next World Radio Conference. As a member of the European Satellite Operators Association (ESOA), O3b also supports the comments filed separately by that organization.

Question 1: How much do you expect UK mobile data demand to change in the period 2015-2030? Please provide evidence for the trend and, where possible, please indicate how demand might vary across the device categories listed in paragraph 4.7. How should we account for factors (including pricing) that would constrain demand?:

No response

Question 2: What evidence do you think is relevant to assessing the extent of consumer benefits associated with meeting the increase in demand for mobile data?:

No response

Question 3: What proportion of mobile data traffic do you expect to be carried over (a) Wi-Fi and similar systems in licence-exempt spectrum and (b) mobile networks in licensed spectrum? How do you expect this to change over the period 2015-2030 and how do you expect total data demand for Wi-Fi and similar systems in licence-exempt spectrum to change over the same period? How might this vary by location, environment etc.?:

No response

Question 4: What factors will act to change the spectral efficiency of mobile technologies in the future? What spectral efficiency values are appropriate for consideration in our study for the period 2015-2030?:

No response

Question 5: What service bit rate values are appropriate for consideration in our study for the period 2015-2030? What evidence do you have of changing needs for service bit rates?:

No response

Question 6: What proportion of traffic do you consider should be assumed to be carried on each cell types for the period 2015-2030? How will this vary with service environment i.e. between home, office, public areas, rural, suburban and urban? What evidence do you have of the factors affecting the uptake of small cells in licensed spectrum in the future?:

No response

Question 7: Given the current mix of services on cellular networks what is the ratio of downlink to uplink capacity currently dimensioned for and how would you expect this to change over time by 2015, 2020, 2025 and 2030? How do you expect the ratio of downlink to uplink demand to vary for the service categories given in Table A5.4 of Annex 5, and what factors might affect this? How does this ratio of downlink to uplink capacity change (if at all) with network radio access technology and offload to licence-exempt systems?:

No response

Question 8: What are your views about the pros and cons of the frequency ranges in Table A6.1 in Annex 6 for mobile broadband and for existing applications using this spectrum? Do you have views on other bands that are not in Table A6.1?:

Table A6.1 shows frequency bands under discussion in ITU-R in the context of WRC-15 agenda item 1.1, including the 18.1-18.5 GHz and 27-29.5 GHz bands. O3b's system will use

both bands (Ka band) for its broadband Fixed Satellite Service (FSS) system, which (among other things) can be to provide backhaul for cellular mobile operators, and can also be used for some mobile applications, such as for the maritime cruise ship industry.

Prior studies about sharing between IMT and the fixed satellite service in others frequency bands have shown serious difficulties in coexistence between these two services. As such, we are quite concerned about the prospects of identifying Ka band for mobile broadband without conducting thorough compatibility analyses. Thus, O3b believes that these bands should not be considered for IMT mobile broadband spectrum.

Question 9: Are there any other bands that are not in Table A6.1 for which you think we should be considering their pros and cons for mobile broadband and for existing applications using this spectrum? :

No response

Question 10: What are your views on bands which should be a priority for consideration for mobile broadband?:

No response