ManSat Limited

Additional comments:

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?:

Our concern is for the identification of bands allocated / assigned to satellite services or systems, namely:

1518 - 1559, 1626.5 - 1660.5 and 1668 - 1675 MHz
2025 - 2110 and 2200 - 2290 MHz
3400 - 4200 MHz
4500 - 4800 MHz
5850 - 6425 MHz
13.75 - 14 GHz
18.1 - 18.4 GHz
18.1 - 18.6 GHz
27 - 29.5 GHz
38 - 39.5 GHz

As you are aware studies carried out in ITU-R for some frequency bands allocated to the Fixed Satellite Service have shown that sharing been IMT systems and satellite systems is not possible. The large separation distances (geographical exclusivity) required to avoid mutual interference between two systems are not possible to achieve in practice. Your description of the future IMT systems demonstrates that they are no different to those currently deployed in other frequency bands. IMT systems deployment will be global and, as their current deployment, will require exclusive access to frequency bands.

You will also be aware that satellite systems are deployed, and many new systems are planned, in the above mentioned frequency bands to offer services (perhaps with the exception of 38 - 39.5 GHz band where experimental systems are being considered) throughout the world and for ubiquitous applications. These systems offer vital communications to people in all parts of the world. The satellite industry has a huge sunk investment with these systems and associated infrastructure and activities, and return on this investment expected over many decades of continuing service provision.

Given the incompatibility between satellite systems and IMT, identification of any satellite bands under whatever the conditions will have detrimental impact on the satellite sector and harm the investment made by the industry.

We urge Ofcom not to identify any of the bands mentioned above for IMT.

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