BAE SYSTEMS

BAE Systems is the UK's largest manufacturing employer and the UK's biggest employer of professional engineers, with 18,000 engineers

Wireless spectrum is a key and growing foundation for many of our products, platforms and technologies. We recognise that wireless spectrum is in demand for Mobile Broadband. Indeed, we have supported spectrum efficiency studies and radar remediation work that support this.

However Spectrum demand and identification for WRC-15 AI-1.1 should be based on solid evidence and not optimistic forecasting. That evidence should include the market failure of mobile TV and saturation in the mobile handset market. It should also be balanced against the demands and consequences for other sectors.

Any identification of further spectrum for mobile broadband use should also be in the context of the costs of migration/release and also the other categories the UK and other EU states are obligated to consider under the EU Radio Spectrum Policy Programme.

We confine our comments to particular bands of interest and welcome further engagement

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 WRC-15 agenda item 1.1: spectrum for mobile broadband*

1400 - 1427 MHz
We support ongoing passive use in line with its designation in the ITU Radio Regulations and footnote RR 5.340. Consequently we do not support Mobile Broadband in this band

1427 – 1452 MHz
We are opposed to Mobile Broadband in this band. We currently use this range for airborne telemetry to support high value UK Aerospace developments and exports

1452 – 1492 MHz
Since it was auctioned for a mere £8.3m in May 2008[1] this valuable harmonised spectrum has remained idle. This harmonised band is widely available across Europe and therefore we support Mobile Broadband this band.

2200 - 2290 MHz
We are opposed to Mobile Broadband in this band. It is a key resource for some systems including airborne telemetry that are being migrated from 2300-2400 MHz. Therefore any designation for mobile use has the potential to undermine the careful and complex planning associated with Public Sector Spectrum Release at 2.3 GHz.

[1] Ofcom awards spectrum licence: http://media.ofcom.org.uk/2008/05/16/ofcom-awards-spectrum-licence-to-qualcomm-uk-spectrum-ltd/

2700 - 2900 MHz
We do not consider this frequency range to be a short term option for WRC-15 compared to other alternative bands, including some harmonised allocations that continue to lie empty (such as 1452-1492 MHz)

We recognise the importance of access to spectrum for UK growth and have contributed in the past to spectral efficiency studies and continue to execute remediation work on our products to facilitate for example, the use of the 2.6 GHz band.

We would welcome further investigation into spectrally efficient and agile technologies for use in the longer term. However we do not support the re-allocation of this band at this time.

The assumption that this range is used purely for land-based aeronautical radar, and that other radars are at 2.9-3.1GHz, is not a safe one. Reducing the bandwidth available for radiolocation would negatively impact quality of current radar services, for land, air and maritime domains.

The cost of remediation or band migration would also have to be very carefully assessed before considering this band releasable for uses other than radiolocation.

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?*

Spectrum Demand Studies associated with AI-1.1 should fully consider the impact of demand reduction that future developments in Wi-Fi offload/roaming at 2.4, 5 and 60GHz (WiGig). BAE Systems is a leading developer of ad-hoc networking and 60 GHz applications and sees considerable potential from such developments, when coupled (or indeed converged) with increasing rollout of fibre broadband infrastructure.

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

Bands allocated and harmonised for mobile use that continue to lie idle or could be more efficiently used, including:-

- 1452-1492 MHz
- The empty 2GHz ‘unpaired’ mobile bands - 1900-1920 and 2010-2025 MHz
- Full rollout and exploitation of the newly auctioned bands at 800MHz and 2.6GHz
- Re-farming of existing GSM/3G bands with more spectrally efficient technologies
- Release of 700MHz for LTE & PPDR