

Response to Consultation Question from Brian Copsey:

Question 4.1: Do you agree with our proposal to conduct a market led award through an auction process for licensed use of the 2.3 and 3.4 GHz bands? If not, please provide evidence to counter this proposal.

No

The conditions laid out in the consultation are inadequate to safe guard users of the 2400 and 2483.5 MHz band, these consist of very very large numbers of domestic and commercial uses who will be impacted. Insufficient consideration has been given to the impact on the disabled and users of medical devices.

Whilst welcoming the 10Mhz guard band, reduced power should be implemented in the top 3 channels plus implementation of the reduction in out of band emissions at these frequencies of 15-20 dB as identified in: ***Liaison Statement to ETSI TC ERM on Unwanted emission of mobile terminals in the SRD band 863-870 MHz dated 14 march 2014 and the Input contribution from the administrations of Germany, France, United Kingdom and Sweden to ETSI MSG, ETSI ERM and JWG DD of May 2014.***

Identification of the network software implementations which increase interference should be identified and restrictions placed in the licence conditions

A more spectrum efficient use of this band would be to extend the SRD band which houses more devices than any other

Question 6.3: Do you agree with our assessment of the available options for mitigation of interference to home networks?

No

In the case of ALD equipment used for TV-hearing aid link the link budgets are much smaller, therefore LTE equipment “passing bye” or in adjacent premises are liable to cause interference

Question 6.6: Do you agree with our conclusion that the impact to Wi-Fi is not of a significant nature and therefore no regulatory intervention is necessary? If not, can you provide evidence?

No

In the case of the various forms of ALD this has not yet been tested and any interference into an ALD is “significant” and frightening

Question 7.1: Do you agree that we do not need to perform technical analysis on the applications in the middle of the band as set out in paragraph 7.7?

No

See answer to Question 6.6

Question 7.2: Do you agree with our technical analysis in relation to Bluetooth devices operating in the 2.4 GHz band, and that no additional restrictions are required in order to protect these applications?

No

See answer to Question 6.6

No consideration has been given to medical devices which are in many cases have no or restricted adaptive ability or ALD which often use custom chipsets.

Question 7.5: Do you agree with our technical analysis in relation to radio microphones devices operating in the 2.4 GHz band and that no additional restrictions are required in order to protect these applications?

No

These can also be part of an ALD system and have not yet been tested. Many other radio microphones (non 2.4 base frequencies) use a data link in the 2.4 band to provide battery information and control of receiver and transmitter.

Question 7.6: Do you agree with our technical analysis in relation to short range devices operating in the 2.4 GHz band and that no additional restrictions are required in order to protect these applications?

No

Devices working with ALD or medical systems have not yet been tested; test should replicate the real LTE equipment especially the out of band energy and use multiple handsets.

Question 7.9: Do you agree with our technical analysis in relation to hearing aids and assisted listening devices operating in the 2.4 GHz band and that no additional restrictions are required in order to protect these applications?

No

Further testing and restrictions detailed in question 4.1 are required, also extensive testing for this vulnerable community to provide evidence before any additional restrictions are rejected. Restrictions should be put in place for say 24 months in order to carry out testing with real equipment using multiple handsets NOT the signal generators currently used. ALD equipment often uses custom chipsets which vary from equipment to equipment. Testing

should also include the case where R-Lan are in also in use. If as suggested by other testing the lower channels will be unusable the ability of a low power ALD to frequency hop will be compromised.

The use of this band by cochlear implant equipment must be prioritised as any interference would be devastating to their life style and health

The mitigation method is unworkable and totally impractical; consider a school with multiple ALD systems plus R-Lan, if interference occurs are you expecting teachers to stop teaching and go out and find a mobile phone? (if they know what has caused the interference)

Question 13.8: Do you agree with our proposed maximum in band power limit for user terminals in the 2.3 GHz band?

No

These should be lower in the top three channels and the restrictions identified in Question 4.1 implemented in any licence conditions. Testing of ALD and cochlear implants should guide the technical conditions for the band.