IEEE P802.18
Radio Regulatory Technical Advisory Group

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| Ofcom Enabling opportunities for innovation – Comments draft |
| Date: 21 March 2019 |
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Abstract

Drafting comments

Drafting comments to Ofcom’s consultation on enabling opportunities for innovation, inputs from RR\_TAG meetings and calls.

Purpose: This document is for developing comments for the Ofcomm consultation:

Enabling opportunities for innovation, Shared access to spectrum supporting mobile technology

Found in:

<https://mentor.ieee.org/802.18/dcn/19/18-19-0034-00-0000-ofcom-enabling-opportunities-for-innovation-2-4ghz.pdf>

Once comments are edited and further along will copy into question 19 of the reply form:

**Question 19:** (Section 8) Do you have any other comments on our proposal?

For Question 3: (Section 3) Do you have any other comments on our authorisation proposal for the three shared access bands? We may answer to see answers to question 19.

Form found in:

<https://mentor.ieee.org/802.18/dcn/19/18-19-0035-00-0000-ofcom-enabling-opportunities-consultation-form-2-4ghz.rtf>

The points below are from discussions in RR-TAG meetings. It was suggested feedback to Ofcom sooner is more important than to go deep with the points.

**1) We are on an adjacent channel and we question analysis in Annex 6.**

**2) e.g. need to consider .11ax is coming**

We request that Ofcom should put its plan to open 2390-2400 MHz to mobile use on hold, pending further study. A primary reason is the previous interference risk assessment described in Annex 6 of the consultation was conducted using Wi-Fi technology that does not include the next generation standard that is currently being developed in IEEE 802, IEEE P802.11ax. In fact there are pre-standard products already in the field.

IEEE P802.11ax is the next generation to the IEEE 802.11 standard going beyond what IEEE 802.11n standard and equipment that was used in the analysis. What IEEE P802.11ax has that goes beyond the previous standards, improvements and use of Multi-user MIMO antenna technology, more efficient in air time, will have increased range and enhanced user experience. Conclusions about the impact of adjacent operations have not included what affects might occur to IEEE P802.11ax being adjacent to the proposed 2390-2400 MHZ band, and what those effects might be.

In addition to that, IEEE 802.11 operating on Channel 1 directly adjacent to the 2390-2400 MHz proposed band will be affected by anything above -62 dBm per 20 MHz. As mentioned in section 5 of the consultation, the technical proposal, that if a 24 dBm base station operating in the 2390-2400 MHz band, there is likely to be notable degradation of IEEE 802.11 operations on Channel 1 for up to 3 meters away, which is more than the 1 meter away per the consultation. With IEEE 802.11 equipment being installed and used in so many varied places, it is a real possibility that a base station proposed in the consultation could be near an IEEE 802.11 device, especially in any indoor application.

**3~~) The receive performance that Ofcom pushed for is going to be a problem.~~**

~~With the new RE-D directive and receiver requirements not yet fully implemented in the harmonized standards for Europe, they should not be considered at this time since they are still being developed. Though more importantly, there are already millions of installations already installed not under these future requirements.~~

**5) Need to consider economic value of bottom of 2.4 GHz band / channel 1.**

[Text needs to be worked on]

**4) Should speak to Zigbee and 802.15.4g.**

**6) BT is there also.**

Beyond the focus above on IEEE 802.11 standards, there is also IEEE 802.15.4g and Zigbee in the adjacent band that are not even mentioned in the consultation. They should be considered and analysed before action is taken. For example, following the National Infrastructure rollout plan, in excess of 100 million devices will be operating on ZigBee technology across the entire UK territory in urban and rural areas beyond 2020, including smart meters, gateways and consumer access devices. Along with that, even though Bluetooth is mentioned as a user of the 2400 MHz band, no real analysis was done and if the Bluetooth community has any feedback on this proposal.

**7) Why tie this 10MHz to the other bands? / Conclusion**

Considering concerns brought out above, why is this 10 MHz from 2390 to 2400 MHz part of this proposal? Opening up this 10 MHz should at minimum be put on hold pending further analysis on effects to the operations above 2400 MHz or be removed from the proposal totally.