

The IEEE 802.18, the Radio Regulatory Technical Advisory Group (RR-TAG), appreciates the opportunity to respond to this document by Ofcom. In this response we are offering the views of the RR-TAG which we hope will add to the body of knowledge being considered on this subject. The RR-TAG looks forward to working with Ofcom on future consultations.

### **Questions from the Document with RR-TAG answers.**

*Q1: Have all the possible victims of interference been correctly identified and quantified as far as possible?*

The analysis seems very thorough. Could the effect on indoor business WLAN users have been overstated? Has the effect of into building attenuation been adequately factored in? Also, since most of the outdoor WBA and indoor WLAN systems will likely be based on IEEE 802.11b/g™ technology, is the “mitigation” Ofcom refers to properly factored in? i.e. the real effect is limited to some reduction in the capacity of both systems, where those systems overlap.

We would further recommend ongoing dialogue with the MoD to, in the future, expand the allowable number of channels for higher power operation, thereby growing the potential for multiple simultaneous networks operating at these power levels

*Q2: Have the costs and benefits been correctly captured? In particular are the costs of interference to WLAN appropriately assessed?*

On the cost side...

Will employees using WLAN systems really shift from 2.4GHz to 5.2GHz due to some capacity degradation?

On the benefit side...

In North America, there is significant experience with the deployment of higher power license exempt systems. Wireless Internet Service Providers (WISPs) use high power systems to successfully deliver WBA to rural and other underserved areas. Municipal Wi-Fi networks all use high power to maximize streetscape coverage, even in urban areas.

Hence, WBA is not the only potential benefit of allowing higher power at 2.4GHz. For example, improved coverage and performance of mobile services at 2.4GHz would offer significant commercial benefit. That benefit would be available to existing users of indoor WLAN systems and devices. While it is true that fixed broadband connectivity is available in most urban areas, these mobile services act as a useful complement to those fixed services.

But even for WBA, allowing the use of globally available, license exempt CPE devices (e.g. based on 802.11b/g technology) will have a highly positive impact on the cost effectiveness of those solutions, facilitating their ready adoption in rural and other environments.

*Q3: Are there any other mechanisms that could be used to restrict device operation to appropriate areas? Of the schemes set out which should be preferred*

A full license exemption scheme is preferred since it allows:

- Lowest cost of equipment
- Does not require equipment for the UK to deviate from that being produced on a global basis
- Does not require cumbersome and difficult to enforce databases, even with which conflict resolution may be slow

*Q4: Should we move from specifying radiated power to specifying conducted power?*

The scheme used in the U.S., reducing conducted output for increase antenna gain over 1W, has been successful. A large amount of equipment is now produced compliant with those requirements.

In a conducted regime, how would Ofcom regulate allowable antenna gain?

*Q5: For 2.4GHz which of these options do you favour? Are there other viable options that should be considered? Or should regulations be left unchanged ?*

Recommend Option one – maximize benefits (high power throughout the UK). Ofcom's study indicates that the greatest benefits are incurred in Urban areas. If, as stated above, most of the products at 2.4GHz are based on 802.11b/g, which will likely be the case, the risks with this option are minimized

*Q6: For 5GHz should Ofcom increase the power to 4W EIRP at 5.8GHz in accordance with ECC Recommendation and as set out in the draft IR2007? Should Ofcom open the database for public access to facilitate coordination?*

The RR-TAG supports increasing the EIRP at 5.8 GHz. We have no response on the database question.