

15 September 2006

Higher power limits for licence exempt devices: Understanding the Scope for a Power Increase at 2.4 and 5 GHz

THUS plc is pleased to respond to Ofcom's consultation on proposed higher power limits at 2.4 and 5 GHz dated 12 July 2006. Our answers to Ofcom's questions are as follows:

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

As far as Thus can comment, all of the possible victims of interference appear to have been identified

2) *Have the costs and benefits been correctly captured? In particular, are the costs of interference to WLANs appropriately assessed?*

It seems clear to Thus that to make an estimate of costs or benefits resulting from the proposed change is extremely difficult. The level of equipment deployment at present is difficult to estimate, as is the likely deployment of future units. The assumptions made in the consultation document seem reasonable but we believe that the accuracy of such figures could be questionable.

3) *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?*

Thus believe that the suggestion to make devices 'location aware' is wholly unworkable. If manufacturers are expected to produce a device specific to the UK market then the price of units will be high and the choice of vendor will be limited for both for the operator and consumer alike. This could result in a situation where British operators and users are disadvantaged over those in other parts of the world. A registration scheme, similar to that which is currently operated for 5.8 GHz, is the method preferred by Thus. Such a system should allow users to select a given location in the UK and view all registered transceivers located within a pre-defined radius (20 km for instance). In addition to the information already stored on the 5.8 GHz register, antenna detail (sector or point to point) should also be held, along with Azimuth detail. Access to this level of detail would then allow a prospective user of the band to make an assessment of the likelihood of interference (either to himself or others). A simple on-line tool (by Ofcom or others) for a basic assessment would be helpful.

4) *Should we move from specifying radiated power to specifying conducted power?*

Yes, Thus believes that a move towards a system similar to that which is employed by the FCC would be the best option i.e. with conducted power being reduced in increments as antenna gain increases. This approach will give a good balance between expected benefits and controlling risks.

5) 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?

Thus believe that at 2.4 GHz the regulations should remain unchanged. The financial benefits of a power increase in this band are negligible. If higher EIRP at 2.4 GHz had been suggested before the widespread deployment of low power units then Thus would have been in agreement. However, If the power increase is approved now then a large number of devices and/ or networks could be rendered useless. Note that this is different to the case at 5.8 GHz where far fewer devices are deployed and a register is already held of all transceiver locations. Any suggestion to restrict the use of high power 2.4 GHz equipment to rural areas only is impractical because of the difficulties in policing such a system.

6) 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?

THUS makes significant use of the 5.8GHz band, particularly for providing broadband access in rural areas such as Cumbria and the Highlands and Islands of Scotland. We agree with the findings of Ofcom's analysis, that there would be substantial economic benefits from increasing the power level, and support the proposal to increase the power to 4W EIRP in accordance with ECC Recommendation. In the case of point to multipoint distribution in particular, the increase in EIRP would allow greater throughput to be offered to subscribers a long way from existing base stations – well beyond the reach of even the most advanced ADSL services.

We would also encourage Ofcom to continue discussions with MoD with a view to increasing the permitted power levels above 4W. The MoD must make resource available to carry out the work necessary to assess the likely impact on its systems.

We would be happy for Ofcom to open the database for public access to facilitate coordination. We see this as an important factor in ensuring the continued trouble free operation of our existing 5.8 GHz networks. I.e. if new users of the band can identify existing systems where mutual interference could occur then the new users will (hopefully) consider this in their network design. This would be far more useful than the current registration scheme, which offers no feedback (to users) regarding density of transceivers relative to the location of a new installation.

In addition to the above, Thus would like to comment regarding the analysis of the business case for increased power in either of the bands under consideration. In many rural locations, significant capital investment is made available from the public purse (e.g. Project Access in Cumbria) to enable broadband services (and wireless broadband in particular) to be established. Therefore it is not always the case that the business case must stack up on the merits of subscriber income

alone. We are not sure if this has been taken into account sufficiently in the consultation document. If not, then the perceived benefits of higher power to rural communities may have been underestimated.

We would be happy to discuss any of the issues raised above in more detail. Please contact me or Julian Stafford, our Radio and Fibre Planning Manager.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Richard Sweet', is written over a light grey rectangular background.

Richard Sweet
Director of Government Affairs