Response from ITS United Kingdom

Statement on improving spectrum access for consumers in the 5 GHz band

With reference to this consultation, please find below a response on behalf of ITS (UK).

The Intelligent Transport Society for the United Kingdom, known as ITS (UK), is a 'not for profit' organisation of 150 organisations in the transport field who are working to promote the use of Intelligent Transport Systems (ITS). These are combinations of sensors, communications and mobile Information Technology designed to assist all modes of transport. ITS (UK) is fortunate in having membership from across the UK and beyond, drawn from the public and private sectors and from academia. ITS (UK) is funded entirely from member subscriptions and can therefore independently represent the interests of the whole membership spectrum in this rapidly developing field.

A complete list of our Members is also attached to this email, as is a copy of your cover sheet.

We have a Road User Charging Interest Group of about 200 professionals, including the leading UK experts on RUC.

The changes you propose can reasonably be expected to have serious impacts on existing road charging and tolling schemes across the UK that use Dedicated Short Range Communications (DRSC), usually referred to as 'tag and beacon' equipment.

Your proposed changes will affect the following road charging sites in the UK: Humber Bridge, Tyne Tunnels, Mersey Tunnels, M6Toll, Mersey Gateway, Tamar Bridge, Severn Crossing and Dartford Crossing.

These sites use DSRC in the 5.8Ghz band for communication between tags and beacons in order to charge drivers accurately and in order to lift barriers where these are in use. For Dartford and Severn Crossings alone there are approximately 400,000 active tags in circulation.

This band is reserved for road tolling throughout Europe. For the two lower channels 5795 to 5805 MHz it is mandatory as per a European Commission decision (2013/752/EU). For the two upper channels 5805 to 5815 MHz and for countries outside the EU there is a recommendation including all channels 5795 to 5815 MHz (ECC ERC recommendation 70-3). Most European countries including the UK have implemented all four channels.

The consequences of your proposed changes are a risk of jamming the tag to beacon communications which will lead to failed or repeated transactions, causing loss of revenue and time lost by toll operators and citizens in resolving disputes. Communications failures will also be problematic at plazas using physical barriers.

If it becomes permissible to transmit WiFi in vehicles 200 mW (23 dBm) EIRP in the same frequencies as road tolling applications, many transactions will be lost, not only in the vehicle transmitting WiFi but also in surrounding vehicles. Tests show that this is the inevitable consequence since the output power is far too high.

Many existing UK toll operators, most of whom are Members of ITS (UK), have contributed to the ASECAP briefing note *Radio Local Area Networks and Road Charging* which I attach and strongly commend to you.

ITS (UK) recommends that Ofcom work with the UK's toll and road charge operators in a collaborative and open way in order to carry out meaningful trials of these proposals and work on technical solutions which mitigate the risk of financial loss to operators and serious inconvenience to drivers. We through our Road User Charging Interest Group would be very pleased to support such a collaboration.

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