# Release of the 59-64 GHz Band

## A consultation on a licence exempt approach for Fixed Wireless Systems in the 60GHz band

ITS UNITED KINGDOM, the UK association for the promotion of Intelligent Transport Systems (ITS), is a not-for-profit public/private sector association financed by members' subscriptions, and provides a forum for all organisations concerned with ITS. We work to bring the benefits that ITS can offer in terms of economic efficiency, transport safety and environmental benefits to the United Kingdom - and at the same time expand the ITS market.

The membership, over 160 UK organisations, comprises Government Departments, Local Authorities, Police Forces, consultants, manufacturing and service companies, and academic and research institutions.

Members of ITS UK who have contributed to these comments are involved in standards work in ISO TC204 WG 16. It is likely that some members have a strong commercial interest in this use of parts of this spectrum for ITS. They may respond directly to you. In our response we shall consider the general issues relating to the potential use of parts of this spectrum for ITS. Our concerns are that the full benefits of ITS should be available to drivers and transport users within the UK, and for society generally. We are also keen that UK companies are well positioned to offer services in other countries as well as in the UK.

### Summary of ITS UK's concerns:

An allocation of spectrum from 63 GHz to 64 GHz was reserved for ITS use in ECC Decision (09)01 (March 2009) which refers to ECC report 113. Currently there are no ITS services operating in this band. However, we believe that there will be a significant growth of ITS services in the next few years and would cite the EU Action Plan for ITS, with associated draft Directive which will require fitment of an open ITS platform, initially to trucks, but in due course, to all vehicles.

We note that spectrum has recently been allocated at 5.9 GHz to support safety affecting services. The allocation at 63 GHz is needed to provide additional capacity, but also to provide diversity / redundancy. Failure of a car-to-car communication system that is used to coordinate control of vehicles could have dire consequences. Use of two communications systems for truly safety critical applications would create a significant improvement in availability and robustness.

We support the principles of licence free operation in adjacent spectrum, which will help drive up demand for systems capable of operating at ~ 60 GHz. This will create the market forces to drive down costs and ensure that affordable systems become available more rapidly. Systems at these frequencies will be characterised by high development costs, but relatively low production costs.

However, we believe that the spectrum from 63 GHz to 64 GHz should be protected for ITS use.

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### Questions & Answers

***Question-1a:*** *Do you agree…*

a. *With the proposal shown in figure 1 to combine the existing 57 – 59 GHz band with the new 59 – 64 GHz band for Fixed Wireless Systems? – see also question 3*

**Answer-1a:** We support making the 57 to 59 GHz band available as this will open up the market for 60GHz Fixed Wireless. This expanding market will drive down the cost of transceiver components to the benefit of ITS users as well as others.

However we have severe concerns about the use of the spectrum from 59 to 64 GHz, which we understand was allocated for internal use in ECC Report 113. We want to avoid interference with the expected new ITS applications that will operate in the spectrum 63 to 64 GHz.

***Question-1b:*** *Do you agree…*

b. *that the CEPT channel plan given in ECC/REC/(09)01 should not be mandated with the exception of two 100 MHz guard bands at the band ends to protect adjacent users? and that a flexible band structure is appropriate for facilitating access to the 57 – 64 GHz band?*

**Answer-1b:** We support full flexibility in 57 to 63GHz spectrum. However, we believe that some licensing will be required to protect the IS use of the spectrum from 63 to 64 GHz, as outlined by ECC Decision (09)/01 (March 2009, which refers to ECC Report 113) where harmful interference to ITS from FWS has been shown to be a distinct possibility.

We strongly recommend that Ofcom maintain coordination with the other European spectrum regulators in protected the spectrum for ITS use.

***Question 2:*** *Do you agree that a maximum EIRP limit of 55dBm together with a maximum transmitter output power limit of 10dBm are the minimum technical conditions required to allow flexible use of this band by FWS while maintaining adequate protection of other services?*

**Answer-2: NO** – We understand that European work has included a recommendation of a minimum antenna gain of 30dBi in ECC REC(09)01 and Report 113.

Therefore in line with European decisions, we request that a minimum antenna gain of 30dBi is specified for FWS, at least in the 63-64GHz sub-band as per Annex-1 of ECC/REC(09)01. We need to minimise the probability of harmful interference from overlapping coverage (along with guidance on FWS mounting height and beam elevation angle to minimise aiming at highways)

***Question 3:*** *Do you agree with a licence exempt approach for the 60 GHz band?*

**Answer-3: NOT IN 63 to 64 GHz spectrum**

We request that there should not be any use by Fixed Wireless Systems in the 63 to 64 GHz Spectrum. ECC Report 113 warns that there is a likelihood of harmful interference and that Light Licensing or other forms of coordination have to be considered as part of the regulatory package if it is co-frequency with ITS.

We have no strong opinion about spectrum outside the 63 to 64 GHz range, except to encourage steps that will help grow the market for 60GHz systems that will assist in the creation of low-cost technology for ITS.

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