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Public consultation on the Regulation on the Spectrum Auction and on technical conditions of the radio licence

To:

Finnish Communications Regulatory Authority

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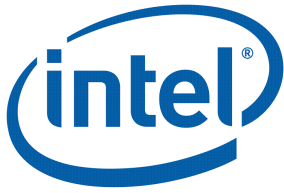
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Intel offers the following response to the announcement made by FICORA on the proposed regulation on the 2.6 GHz spectrum auction and the associated technical conditions of the radio licence. Intel welcomes the opportunity to provide views on the proposed regulation. Intel also notes and supports the proposed action to auction the spectrum, which is to be awarded nationwide on a service and technology-neutral basis. We do however have concerns with how the spectrum is to be packaged and offered during the award process.



Technology Neutrality

Intel notes that the Finnish Communications Regulatory Authority (FOCORA) intends to offer the band (2.6 GHz) on a technology and service neutral basis and respecting the technical conditions provided in detail within the EC Decision 2008/477/EC.

The packaging of the spectrum and auction design does not reflect the flexible approach provided in the context of technical conditions in the EC Decision. Intel is disappointed to see that FICORA has decided to ignore flexibility and instead adopt a band plan arrangement that was designed for a specific technology, UMTS. Intel would urge FICORA to reconsider its decision and to offer the spectrum on a market based approach.

Noting Intel's position for a market based auction design to address the varying demand between FDD and TDD usage we offer in addition the following comments.

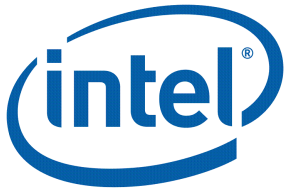
Whilst the spectrum award is intended to reflect a neutral position we note that the treatment of the blocks outlined and intended specifically for TDD technology suggests an imposed guard band at the cost to the TDD licensee. The issue of interference mitigation is a shared responsibility and therefore the so called restricted blocks should not be a condition, and therefore, a cost burden to one specific licensee. It is worth noting that in the context of the UMTS band plan outlined in ECC Decision (05)05 that spectral efficiency is maximised through the use of TDD in the centre gap. If no TDD were considered then there would be a 50 MHz guard band between the downlink and uplink of the paired blocks. Giving up the full value for two or three blocks of 5 MHz in order to maximise usage of the 2.6 GHz band is a small price to pay.

The EC Decision under "whereas 8" explains the usage of a guard band.

To achieve compatibility a separation of 5 MHz is needed between the edges of spectrum blocks used for unrestricted TDD (time division duplex) and FDD operation (frequency division duplex) or in the case of two unsynchronised networks operating in TDD mode. Such separation should be achieved by either leaving these 5MHz blocks unused as guard blocks; or through usage that complies with parameters of the restricted BEM when adjacent to an FDD (uplink) or between two TDD blocks; or through usage that complies with parameters of either restricted or unrestricted BEMs when adjacent to an FDD (downlink) block. Any usage of a 5 MHz guard block is subject to an increased risk of interference.

We understand but disagree with the proposal that a single TDD block is to be packaged for the auction as a contiguous block of 50 MHz. Our reasons for disagreeing with the proposal of a single licence block and the allocation of restricted blocks is provided in more detail.

The reserve price implies equal value of the spectrum regardless of whether it is an unrestricted or restricted block. The auction itself will of course address the value of the spectrum through the simultaneous multiple round auction but we suggest that the two restricted blocks (5 MHz) should be treated as such. We recommend that any necessary restricted blocks are offered separately as an integral part of the auction. This will enable the bidders (FDD or TDD) to choose whether they wish to bid and deploy in the restricted blocks respecting the power limits in line with the EC Decision. If no bids are received then the restricted blocks would remain unused and be considered as guard bands.



We also propose that the auction design is developed to establish the initial demand for paired or unpaired spectrum blocks. Once this is understood then the number of restricted blocks can be established should demand for unpaired spectrum exceed the initial 40 MHz of unrestricted blocks in the so called centre gap.

It is not known whether an annual spectrum usage fee will also apply to the auctioned spectrum and if a fee applies then Intel offers the following comments? Based on the current proposal, annual licence fees would lead to an imposition of the restricted blocks on the TDD licence and will only exacerbate the unequal treatment between FDD and TDD licensees. In any case Intel does not agree with annual fees for auctioned spectrum. Fees have the added liability of creating uncertainty and can be particularly burdensome if increased later. Intel believes that the development of a network should be the primary objective for both the operator and regulator to enable the successful deployment of mobile broadband services for the benefit of the Finnish citizen.

Usage Restrictions

Intel notes that under section 7 of the regulations the following statement is made and more details are provided in the FDD and TDD licence information documentation.

There are usage restrictions in spectrum blocks FFD1, FDD2, FDD5, FDD6, FDD9, FDD10, FDD13, FDD14 and in part of the TDD block. The usage restrictions are based on Statute No. 680/2007 of the Council of State on the utilisation plan of the frequency bands allocated to television and radio broadcasting as well as to telecommunications subject to licence. The said spectrum blocks are reserved for research, development and teaching purposes in certain limited geographical areas. The usage restrictions are defined in detail in the technical conditions of the radio licence.

Intel requests more information is released as to the extent of the restrictions. It is not clear for example what period of time these restrictions apply and nor is it clear whether the licensees under the auction process are deemed co-primary status with the incumbent user? In other words if the incumbent user is not making use of their licence within the geographical areas outlined then can the incoming 2.6 GHz licensees utilise their spectrum in that geographical area? Also do the technically least restrictive conditions as mandated by EC Decision 2008/477/EC also apply to both applications in this instance?