

ERICSSON RESPONSE TO THE OFCOM "AWARD OF AVAILABLE SPECTRUM 2500-2690MHZ, 2010-2025MHZ" CONSULTATION OF 1ST AUGUST 2007

1. Introduction

Ericsson welcomes the opportunity to respond to this consultation. Ericsson supports and welcomes the release of additional spectrum which can further support valuable broadband wireless access services and the ever increasing broadband traffic in the current mobile networks.

Ericsson has previously explained why we feel that the Ofcom policy of spectrum liberalisation is misguided, in not being optimal from either the consumer or the industry viewpoint. The industry is performing exceptionally well under current regulatory practice and, as is recognised by Ofcom, current mobile networks are creating significant value to consumers, enriching their lives both in cities and in remote regions of the UK. Under the current practices, service providers now are reaching out to include people in the broadband and internet communities at an affordable cost. The current regulatory situation represents a winning concept and should not be experimented with when addressing these bands that are of such profound importance for the future of information and communication services in the UK.

Ericsson believes that departure from the CEPT band plan is likely to lead to the UK being disadvantaged in terms of harmonised European-wide services and the resulting benefits of economies of scale and affordability in infrastructure and terminal devices.

Ericsson considers that a move away from the current proven approach to interference control based on reference to international standards and agreements supported by carefully analysed interference scenarios, towards the unproven concept of derived spectrum masks, would be misguided. Control of interference and successful coexistence of different technologies and services is best achieved by reference to standards produced by the appropriate internationally recognised standards bodies and also by references to Recommendations and Decisions of CEPT/ECC and ITU. This approach ensures that spectrum use is harmonized on both sides of geographic boundaries, and that different systems are standardised and carefully assessed against each other from the point of view of coexistence in the same geographical area.

2. Answers to Specific Questions

Question 1: Do stakeholders agree with Ofcom's assessment of the blocking effect and of its implications for spectrum packaging?

Ericsson does not agree with Ofcom's assessment of the blocking effect. Part of the assessment is based on modeling uniform distributions of handsets, a situation which is very far removed from any real life scenario where users often are clustered due to the geography and the built-up environments, e.g. in building and streets. The part of the assessment that does model the implications for terminal device receiver blocking concludes that there are significant service affecting problems device separations below about eight metres. However, in converting this finding into average rejection rates, the modeling takes no account of the fact that mobile devices move about and that calls are of certain duration. Ericsson believes that in real life situations, assuming any significant level of take-up of TDD services, the probability of an FDD device being less than eight metres from a blocking TDD device at some point during a call, is significantly higher than Ofcom's assessment. In addition, Ericsson considers that the techniques proposed by Ofcom to mitigate the effects of blocking, including the use of alternative methods of service provision by UMTS operators in the event of blocking, are neither commercially nor technically viable.

Also, Ericsson believes that the Ofcom assessment does not take any account of the increased quality of service demands of real time data services such as streamed video. Given the near certainty that various forms of video will be an increasing component of future services, Ericsson believes Ofcom's assessment of the blocking effect is significantly flawed.

In addition the Ofcom assessment does not take into account the issue of the level to which users may be aware of blocking. For originating calls it will be clear that there is a problem and users may be able to attempt to move out of range of the blocking device, however for terminating calls, the user may not be aware that calls are failing.

Ericsson also notes that for the studies on interference from radar and from other uses, some real measurements have been used to back up the modeling, in contrast, the blocking studies use entirely theoretical computer modeling and are not verified by any real measurements.

Question 2: Do stakeholders agree with Ofcom's analysis of interference conditions that are relevant to the use of generic lots?

Ericsson does not agree with Ofcom's analysis of interference conditions that are relevant to the use of generic lots for the following reasons:

- Ofcom's analysis concludes that there will be significant adjacent channel interference between TDD and FDD systems that will necessitate mitigation actions, and even then concludes that the use of TDD in the restricted channel adjacent to an FDD uplink will still cause ACI problems in some scenarios.
- The analysis also concludes that MoD radars may have an impact which needs to be considered.

- As explained in the answer to question one, Ericsson believes that the probability of FDD terminals being blocked by TDD devices has been underestimated by not considering the dynamics of service use and also by being primarily focused on voice whereas the 2.6GHz spectrum band is most likely to be secured by bidders focusing on services that have more stringent requirements on the air interface.

Taken altogether, it must be concluded that there is a considerable degree of uncertainty over the value of paired lots that end up being adjacent to unpaired lots compared to the value of paired lots that do not suffer from these uncertainties.

Question 3: Do stakeholders agree with Ofcom's updated proposals for technical conditions or have views on the possibility of; extending the out-of-block masks out to an offset of ± 20 MHz from assigned blocks; placing additional restrictions on the use of restricted blocks between the FDD uplink and TDD; or a reduction in mobile station in-band power to 18dBm/MHz EIRP?

As we said in our response to the previous 2.6 GHz consultation, Ericsson considers that a move away from the current proven approach to interference control based on reference to international standards and agreements, towards the unproven concept of either derived spectrum masks, would be misguided. Control of interference and successful coexistence of different technologies and services is best achieved by reference to standards produced by the appropriate internationally recognised standards bodies and also by references to Recommendations and Decisions of CEPT/ECC and ITU. This approach ensures that spectrum use is harmonized on both sides of geographic boundaries, and that different systems are standardised and carefully assessed against each other from a coexistence point of view.

However, having said this, Ericsson has the following views on Ofcom's updated proposals:

- Extending the out-of-block masks out to an offset of ± 20 MHz from assigned blocks: Ericsson notes that there are current ECC studies on frequency constraints in this band, and urges Ofcom to consider the outcome of these studies which are expected within the next few months.
- Placing additional restrictions on the use of restricted blocks between the FDD uplink and TDD: Ericsson agrees with this proposal but further argues that guard bands are necessary between FDD and TDD blocks.
- A reduction in mobile station in-band power to 18dBm/MHz EIRP: Ericsson believes the in-band power limits should be specified in a way that ensures technology neutrality for systems with flexible bandwidth. An appropriate limit would be 24dBm/MHz. Alternatively, a higher limit could be specified in 5MHz, making the limit neutral for all systems with bandwidths up to 5MHz.

Question 4: Do stakeholders agree with the proposed changes to the auction design set out in the December 2006 consultation?

No comment.