



September 08, 2010

Senior Director, Spectrum Management Operations,
Industry Canada,
300 Slater Street, Ottawa, Ontario, K1A 0C8

By email: spectrum.operations@ic.gc.ca

RE: Canada Gazette, Part I, Gazette Notice DGSO-001-10 dated June 12, 2010 and entitled “Decisions on the Transition to Broadband Radio Service (BRS) in the Band 2500-2690 MHz and Consultation on Changes Related to the Band Plan”

Ericsson Canada is pleased to submit its comments to Industry Canada’s Gazette Notice DGSO-001-10 “Decisions on the Transition to Broadband Radio Service (BRS) in the Band 2500-2690 MHz and Consultation on Changes Related to the Band Plan” (“Consultation Paper”).

Ericsson is a world-leading provider of telecommunications equipment and related services to mobile and fixed network operators globally. As one of the top Canadian R&D investors, with more than 2700 employees in locations across Canada such as Ottawa, Montreal, Toronto and Vancouver, Ericsson Canada serves Canadian customers by providing professional services, broadband and multimedia solutions, in addition to mobile and fixed network infrastructure. Ericsson Canada also fulfills worldwide mandates in the research, development, testing and support of wireless networks and advanced end-user multimedia services.

Ericsson Canada commends Industry Canada on its proposal to harmonize the 2500-2690 MHz band with the international band plan. Ericsson Canada actively participated in the preparation of the response by the Radio Advisory Board of Canada (RABC) to this Consultation Paper and Ericsson Canada strongly endorses the RABC position on key aspects such as:

- 1) Harmonizing with the international band plan – this is the only band plan option that should be considered; and
- 2) Not permitting TDD systems in the FDD portion of the band

In this submission, additional details and emphasis will be provided on a number of questions outlined in the Consultation Paper.

We trust that you will find these comments to be of value and as always, we are ready to work with Industry Canada on this consultation, and others that may be held in the future on this very important frequency band.

Sincerely,
Viet Nguyen
Director, Regulatory and Government Relations

1.1 Section 8.0 Frequency Band Plan

Ericsson Canada strongly believes that only the option identified in section 8.2 “Harmonize with the international band plan” should be considered for the band plan in Canada.

1.2 Section 8.1 Option 1 – Harmonize with the US Band plan

Ericsson Canada supports the RABC response that this option would eliminate any chance of harmonization in the international arena.

1.3 Section 8.2 Option 2 – Harmonize with the international band plan

Ericsson Canada supports the RABC response that the use of this band plan be aligned with the international Arrangement C1 from [Recommendation ITU-R M.1036-3](#) and Arrangement 6 from [CITEL Recommendation PCC.II/REC.8\(IV-04\)](#). This option is aligned with 3GPP E-UTRA Band 7 (for FDD) and Band 38 (for TDD) (see Table 5.5-1 in either [TS 36.101](#) or [TS 36.104](#)).

Q1: Should operation of the TDD systems be permitted in the FDD portion of the band plan and, if so, under what conditions?

Ericsson Canada supports the RABC response that deployment of TDD in the FDD portion of the band will require the use of additional guard bands, which would result in spectrum inefficiency. We strongly believe that operation of the TDD systems should not be permitted in the FDD portion of the band.

Q2: Should the guard band blocks 2570-2575 MHz and 2615-2620 MHz be held in reserve by Industry Canada or should they form part of the unpaired block (TDD)?

Ericsson Canada believes that to effectively make use of the available spectrum, the guard band portions of the band plan should be assigned to TDD licencees. In addition, if a TDD licencee decides to use the guard band for other purposes, it is incumbent upon that licencee to ensure that such operation does not interfere with FDD operations in the FDD portion of the band.

Q3. If the guard bands are to be held in reserve, should they be considered for future use by licence-exempt wireless systems?

Ericsson Canada concurs with the RABC's view that licence-exempt wireless systems should not be allowed in the guard bands portion of the band due to potential interference to neighbouring FDD and TDD operations.

Comments on Details Not Addressed Above

Ericsson Canada believes that the 2500-2690 MHz band represents a unique opportunity for Canada for two main reasons.

- Unlike previous spectrum bands, this band is available globally for mobile applications. By having a globally harmonized band for mobile broadband applications, Canadian companies and consumers will be able to take advantage of the global ecosystem and the accompanying economies of scale. There have been several licencing processes in European countries that resulted in licence blocks that are harmonized with the International band plan such as Sweden, Norway, Germany, and the Netherlands. A number of South American countries have also announced they will also adopt the International band plan (Brazil having already adopted the international band plan¹)
- The telecommunications industry is presented with a large, contiguous block of spectrum that is not seen in other bands and thereby opening the possibility of having very wide, licence blocks. Only with wide licence blocks will Canadian companies be able to fully exploit newer mobile broadband technology and enable deployments of high speed mobile network (speeds in excess of 100 Mbps, going up to 1 Gbps according to the International Telecommunication Union (ITU) recommendation²). Consequently, we believe that it would be optimal to have BRS block sizes of 20+20 MHz (FDD) or 20 MHz (TDD).

¹ Table 1, page 10 of Resolution 544

<http://www.anatel.gov.br/Portal/exibirPortalRedireciona.do?caminhoRel=Empresas&codigoDocumento=248181>

² Recommendation ITU-R M.1645 "Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000"

9.0 Mapping of Incumbents into Option 2 Band Plan

Ericsson Canada believes that the following principles should be followed by Industry Canada in mapping of incumbents into Option 2 band plan.

- 1) Ensure harmonization with the international band plan for all licence blocks
- 2) Licence blocks and guard bands should be a multiple of 5 MHz to permit the use of modern technologies
- 3) Maximize the amount of paired FDD spectrum; and
- 4) Minimize the amount of spectrum used for guard bands when possible

Among other things, the above points imply that TDD systems should not be permitted in the FDD portion of the band to minimize the number of guard bands. In addition, when it is not possible to have suitable arrangements between TDD licences, the most effective use of the TDD band is to have as few TDD licence blocks as possible since guard bands would be required between unsynchronized TDD licences to avoid interference. Further more, to follow the 5 MHz granularity, Industry Canada should give some consideration to aligning the central 2596 MHz boundary with 2595 MHz if it is required to split the TDD blocks at the mid point of TDD portion of the band.