



25 May 2007

Director General
Telecommunications Policy Branch
Industry Canada
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Ottawa, Ontario
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**Nortel Response to
Canada Gazette, Part I, February 24, 2007,
Notice No. DGTP-002-07
“Consultation on a Framework to Auction Spectrum in the 2 GHz Range
including Advanced Wireless Services”**

Dear Mr. St-Aubin:

Nortel supports and is pleased to respond to the Gazette Notice DGTP-002-07 on the *“Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services (AWS).”*

First, as way of background and introduction to Nortel, for 112 years, Nortel has led the telecommunications industry in Canada and has played a key role in developing products, systems, and solutions that have changed the nature of modern communications and have helped put Canada on the map as world leaders in telecommunications. Of note, Nortel has led the industry’s transformation from analog to digital, from copper to fiber, from wired to wireless and from circuit-switched to packet-based networks.

Of particular interest for this Consultation, Nortel is a global leader in providing fixed and mobile wireless telecommunications solutions, particularly WLAN, wireless backhaul and base stations for cellular, PCS, and third-generation mobile equipment using IS-95, CDMA2000 (1x, 1xEV-DO, 1xEV-DV) and GSM. Nortel is also actively developing new fourth generation technologies (WiMAX, LTE and UMB) for the 2 GHz range and related bands.

Nortel believes that the bands in the 2 GHz range, being considered in this Consultation, will not only make spectrum available for existing and emerging mobile and fixed technologies, but will also allow for an expansion of current advanced services and will facilitate a new suite of high-capacity services. The dominant trend today of hyperconnectivity will drive the wireless revolution even faster.

This view is consistent with the one we expressed in our submission to the Telecom Policy Review Panel on August 15, 2005, in which we noted that radio spectrum is a scarce resource and of significant economic value to a country. We commented at that time that wireless had, with minimal regulatory intervention, already become the new access reality in more than 100 countries worldwide. We also emphasized – and would like to re-emphasize today – the critical importance of making spectrum readily and quickly available to accommodate the fast-paced introduction of next-generation wireless technologies, services and applications.

We believe that the Consultation on spectrum in the 2 GHz range proposes excellent technical resolutions for many aspects of the AWS bands (and we have addressed these in the Appendix to this letter). However exact harmonization is required with the United States (U.S.) for the blocks within the 1710-1755 / 2110-2155 MHz bands. Harmonization will be crucial for both ensuring the rapid availability of equipment and simplifying cross-border interference concerns. It will also eliminate the need for further dialog and action in multiple standards bodies who, without harmonization, would need to define new band classes and have them implemented in handsets and base stations. Base station use in the 2110-2155 MHz band is well suited for facilitating international roaming.

In addition to the AWS band, Nortel also notes that in the U.S, the 700 MHz band and the 2500-2690 MHz band have both already either been opened or are in the process of being opened for expansion of similar mobile and fixed services. As such, we urge Industry Canada to move quickly on Consultations in those bands. We are encouraged that Industry Canada has identified these bands as candidate bands in IMT documentation at ITU-R and at CITEL. We would also like to highlight the following:

- Opening the 700 MHz band would be especially useful because the propagation properties are well suited for fixed and mobile broadband services. We also note that the U.S. is currently modifying its previous designation of bands for *wideband* Public Safety in favour of *broadband* Public Safety and this will complicate cross-border issues, if Canada does not also modify its current proposals for Public Safety in the 700 MHz band.
- In the 2500-2690 MHz band, we also urge Industry Canada to emphasize in a future Consultation that proposals have been made to remove footnote 5.416 from the Canadian Table of Frequency Allocations, and that the Broadcast Satellite Service (BSS) does not have an allocation for this band. This clarification is important because any BSS emissions would significantly impact the deployment of existing and proposed mobile and fixed services, as indicated in Nortel's previous response to DGTP-004-04 ([http://strategis.ic.gc.ca/epic/site/smt-gst.nsf/vwapj/nortel-004-04.pdf/\\$FILE/nortel-004-04.pdf](http://strategis.ic.gc.ca/epic/site/smt-gst.nsf/vwapj/nortel-004-04.pdf/$FILE/nortel-004-04.pdf)).

In the appendix attached, we have noted our preference for alignment with the U.S. and have provided additional comments. For ease of cross reference, we are reusing the sub-section headings from the Consultation paper.

Regarding specifics of the AWS Consultation, Nortel, as always, is ready to work together with the Department and other Canadian industries to help develop detailed technical regulations for

AWS bands that are suited to the Canadian conditions. We hope that these comments will assist the Department in the development of its continuing policy of supporting communications services for Canadians.

Yours sincerely,

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Appendix

Nortel Technical Comments on DGTP-002-07

Part I Allocation

Nortel participated in the development of the RABC response on this Consultation and, in general, supports the technical comments contained within Part I of the RABC response.

1.1 Discussion of Changes to Canadian Table

Nortel welcomes the proposed changes to the 1710-1755 / 2110-2155 MHz bands for support of AWS. This includes the raising of Mobile status to Primary and the incorporation of footnote 5.384A for IMT-2000.

This band is harmonized with use of AWS in the U.S. and the upper band is harmonized with part of a similar base station transmit band in ETSI countries. This common usage of base station frequencies increases the opportunity for international roaming, i.e., for simpler so-called “world-phone” operation.

Nortel supports the addition of footnote C37 with regard to reservation of 1755-1780 / 2155-2180 MHz bands for a future consultation and possible future AWS policy. We note that this increases the commonality of the base transmit band with current CEPT frequency allocations, and note as well that other countries globally are in line with the frequency arrangements in Draft Revision of Recommendation ITU-R M.1036-2 (<http://www.itu.int/md/R03-SG08-C-0116/en>).

Nortel supports incorporation of international footnotes 5.384A, 5.388 and 5.388A regarding IMT-2000 (updated, if required, after WRC-07).

Nortel supports the expansion of the current PCS band to include the 1910-1915 / 1990-1995 MHz blocks.

2. Spectrum Utilization

2.1 Bands 1710-1755 / 2110-2155 MHz

Nortel supports the alignment of this 45+45 MHz band. This band is harmonized with use of AWS in the U.S. and the upper band is harmonized with part of a similar base station transmit band in other countries. This common usage of base station transmit frequencies increases the opportunity for so-called “world-phone” operation.

2.2 Bands 1910-1920 / 1990-2000 MHz

Nortel supports the designation of the 1910-1920 / 1990-2000 MHz bands for licensed PCS and the initial release of 1910-1915 / 1990-1995 blocks. We also support keeping 1915-1920 / 1995-2000 MHz in reserve until technical issues have been addressed.

2.3 Bands 2020-2025 MHz and 2155-2180 MHz

We acknowledge that the bands 1755-1780 / 2155-2180 MHz will be the subject of a future consultation and could facilitate global roaming.

3. Treatment of Incumbent Licenses

Nortel believe that the proposed displacement of incumbent users is reasonable.

Part II Further Consultation on the Auction

4. Technical Considerations

4.1.1 The Bands 1710-1755 / 2110-2155 MHz

Nortel supports a band plan based on block sizes in multiples of 5+5 MHz with 400 MHz separation. However, Nortel believes that significant advantage to Canada will occur if the block edges are exactly harmonized with the current blocks in the U.S. This synergy will facilitate equipment availability at lower cost and rapid equipment deployment. Thus, we would support the definition of six paired sub-blocks aligned with the allocations in the U.S., rather than the current proposed five paired blocks.

Without such synergy, the various standards bodies would have to define new band-classes of operation and would also have to identify unusable frequencies for operation as they fall on or near block edges, which would be different in the U.S. These new band-classes would then need to be implemented in handsets and base stations. In addition, lack of block edge synergy will complicate the identification and planning for cross-border interference mitigation because an operator may have to coordinate with two co-frequency operations in the U.S.

4.1.3 The Bands 1910-1915 / 1990-1995 MHz

Nortel supports this extension to the PCS band. We agree that current PCS standards should be extended to cover this new band.