

DEPARTMENT OF STATE

WASHINGTON

June 20, 2005

Excellency:

I have the honor to refer to your Note No. UNEC0083 dated June 15, 2005, with its attached Arrangement, proposing an amendment to the Exchange of Notes between the Government of the United States of America and the Government of Canada concerning the coordination and use of radio frequencies above thirty megacycles per second, done in Ottawa, October 24, 1962, as amended.

I have the further honor to inform you that the proposed amendment set forth in your Note and its attached Arrangement are acceptable to the Government of the United States of America and to concur with the proposal that your Note with its attached Arrangement and this reply shall constitute an

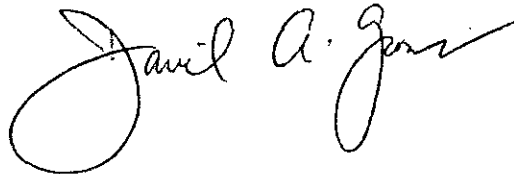
His Excellency
Frank McKenna,
Ambassador of Canada.

DIPLOMATIC NOTE

Agreement between the Government of the United States of America and the Government of Canada, which shall enter into force on the date of this Note.

Accept, Excellency, the renewed assurances of my highest consideration.

For the Secretary of State:

A handwritten signature in cursive script, appearing to read "David A. Jones". The signature is written in black ink and is positioned below the typed name "David A. Jones".

Canadian Embassy



Ambassade du Canada

Washington, D.C., June 15, 2005

Note No. UNEC0083

Excellency,

I have the honour to refer to discussions which have taken place between representatives of the Government of Canada and the Government of the United States of America, relating to a proposed Amendment to the Exchange of Notes between the Government of Canada and the Government of the United States of America concerning the coordination and use of radio frequencies above thirty megacycles per second, done in Ottawa, October 24, 1962, as amended previously by Exchanges of Notes dated June 16 and 24, 1965, February 26 and April 7, 1982, and November 2, 1993 and January 4, 1994, (hereinafter "the 1962 Agreement").

The proposed Amendment to the 1962 Agreement provides for a new Technical Annex (attached herewith and referred to as "the Arrangement") regarding sharing of the portion of the radiofrequency spectrum between 764-776 MHz and 794-806 MHz near the border¹.

¹ These portions of the radiofrequency spectrum are presently covered by an Exchange of Notes between the Government of Canada and the Government of the United States of America constituting an Agreement concerning the Use of Frequency Bands for Television Broadcasting and the Associated Arrangement (with Annexes), done at Washington, November 3, 1993 and January 5, 1994.

3703-1

Accordingly, I have the honour to request the concurrence of the Government of the United States of America to the attached Arrangement and propose that it be annexed to the 1962 Agreement as "Arrangement G" and that the Index to the Technical Annex of the 1962 Agreement (hereinafter "the Index") be modified by adding, after Item 35, new items that would read as follows:

<u>Item</u>	<u>Frequency Bands Mc/s</u>	<u>Authorized Coordination Agencies or Channels</u>		<u>Coordinating Arrangements and Remarks</u>
		<u>U.S.</u>	<u>Canada</u>	
35 bis	764-776	FCC	IC	Arrangement G
35 ter	794-806	FCC	IC	Arrangement G

As a consequence of the addition of these two items to the Index, I have the honour to propose that the current Item "35 bis," in the Index, be modified to read Item "35 quar."

I have the further honour to propose that, if the foregoing is acceptable to the Government of the United States of America, this Note, including the attached Arrangement, which is equally authentic in English and French, and Your Excellency's Note in reply, shall constitute an Agreement between our two Governments which shall enter into force on the date of Your Excellency's Note in reply.

Please accept, Excellency, the renewed assurances of my highest consideration.

Frank M. Brown

Ambassador of Canada

Her Excellency Condoleezza Rice
Secretary of State of the United States of America



**SHARING ARRANGEMENT BETWEEN THE DEPARTMENT OF INDUSTRY OF CANADA AND THE
FEDERAL COMMUNICATIONS COMMISSION OF THE UNITED STATES OF AMERICA CONCERNING
THE USE OF THE FREQUENCY BANDS 764 TO 776 MHz AND 794 TO 806 MHz BY THE LAND
MOBILE SERVICE ALONG THE CANADA-UNITED STATES BORDER**

1. Scope

- 1.1. This Arrangement between the Department of Industry of Canada (Industry Canada), and the Federal Communications Commission (FCC), of the United States of America (U.S.), herein referred to as the Agencies, covers the sharing and coordination of frequency spectrum for the establishment and operation of land mobile radio services operating in the bands 764-776 MHz and 794-806 MHz along the United States-Canada border.
- 1.2. In their assignments to the land mobile service in the bands 764-776 MHz and 794-806 MHz along the United States-Canada border, the Agencies shall not claim protection from television (TV) stations that were established in accordance with the conditions stated in the Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-806 MHz Bands for Digital Television Broadcasting Service Along the Common Border. Further, assignments for use of any frequency in the bands 764-776 MHz and 794-806 MHz by the land mobile service along the United States - Canada border must meet the requirements listed in paragraph 4.4.
- 1.3. This Arrangement is subject to review at any time at the request of either Administration.

2. Sharing and Protection Zones

There are three Sharing Zones:

2.1. Sharing Zone I

This Sharing Zone is the area adjacent to the United States-Canada border East of longitude 121° 30' W. and extending a distance of 100 km within either country.

In the Great Lakes area there are significant land areas that are within 100 km of the international border between the United States and Canada, but further than 100 km from any land mass of the other country. These areas contain several significant population centers that would benefit from additional spectrum if the lake shores were considered for purposes of sharing. With this in mind, the following cities shall be considered as falling outside of Sharing Zone I: in the United States, Akron, Ohio; Youngstown, Ohio; Syracuse, New York; and in Canada, Kitchener-Waterloo, Ontario; Peterborough, Ontario. These cities are defined in Annex B, Table B4 as an area with the given centre coordinates and encompassing a circle of 30 km radius.

2.2. **Sharing Zone II**

This Sharing Zone is the area adjacent to the United States-Canada border between 121° 30' and 127° W. longitude and extending a distance of 140 km within either country.

2.3. **Sharing Zone III**

This Sharing Zone is the area adjacent to the Alaska-British Columbia/Yukon Territory border and extending a distance of 100 km within either country.

2.4. **Protection Zones**

The Protection Zones are the areas adjacent to Sharing Zones I and III and extending from 100 km to 140 km away from the United States-Canada border within both countries. There is no Protection Zone associated with Sharing Zone II.

3. **General Sharing Arrangement**

3.1. **Paired Channeling Arrangements**

Within the Sharing Zones and Protection Zones, the Agencies will use the spectrum on the basis of a paired frequency channeling plan with base station transmitters in the frequency band 764-776 MHz and mobile station transmitters in the frequency band 794-806 MHz. A mobile station may also transmit on any frequency assigned to its associated base station. Base station to base station transmissions may occur in either frequency band 764-776 MHz or 794-806 MHz.¹

The channels referred to in this Arrangement are defined in Annex A.

3.2. **Distribution/Allotment of Frequencies**

The frequency bands covered by this Arrangement are to be shared along the border, as indicated below.

3.2.1. **Canada**

In the Sharing Zones within Canada, except as specified in paragraph 5, Canada has unrestricted geographic use of the channels in the frequency bands 764.000 to 776.000 MHz and 794.000 to 806.000 MHz as listed in Annex A, Tables 1a and 1b.

¹ For purposes of this arrangement, base to base transmissions include fixed (repeater) and fixed (control) operations.

3.2.2. United States

In the Sharing Zones within the United States, except as specified in paragraph 5, the United States has unrestricted geographic use of the channels in the frequency bands 764.000 to 776.000 MHz and 794.000 to 806.000 MHz as listed in Annex A, Tables 2a and 2b.

3.2.3. Shared Channels

(a) Interoperability Channels

The following paired channels are to be available as public safety interoperability channels.² These channels are available for each Agency's use in all areas. Usage of these channels in the sharing zones may be locally coordinated in accordance with the interoperability requirements of the Canadian and U.S. licencees.

Narrowband Base/Mobile Channels			
(base/mobile)	To	(base/mobile)	Designation
23 / 983	To	24 / 984	I/O (Interoperability)
39 / 999	To	40 / 1000	I/O Calling
63 / 1023	To	64 / 1024	I/O
79 / 1039	To	80 / 1040	I/O
103 / 1063	To	104 / 1064	I/O
119 / 1079	To	120 / 1080	I/O
143 / 1103	To	144 / 1104	I/O
159 / 1119	To	160 / 1120	I/O
183 / 1143	To	184 / 1144	I/O
199 / 1159	To	200 / 1160	I/O
223 / 1183	To	224 / 1184	I/O
239 / 1199	To	240 / 1200	I/O
263 / 1223	To	264 / 1224	I/O
279 / 1239	To	280 / 1240	I/O Low Speed Data
303 / 1263	To	304 / 1264	I/O
319 / 1279	To	320 / 1280	I/O
641 / 1601	To	642 / 1602	I/O
657 / 1617	To	658 / 1618	I/O
681 / 1641	To	682 / 1642	I/O Calling
697 / 1657	To	698 / 1658	I/O
721 / 1681	To	722 / 1682	I/O
737 / 1697	To	738 / 1698	I/O
761 / 1721	To	762 / 1722	I/O

² Interoperability channels are to be used only for coordination of tactical communications between different public safety agencies or among the same public safety agency, or for other similar emergency communications.

Narrowband Base/Mobile Channels			
(base/mobile)	To	(base/mobile)	Designation
777 / 1737	To	778 / 1738	I/O
801 / 1761	To	802 / 1762	I/O
817 / 1777	To	818 / 1778	I/O
841 / 1801	To	842 / 1802	I/O
857 / 1817	To	858 / 1818	I/O
881 / 1841	To	882 / 1842	I/O
897 / 1857	To	898 / 1858	I/O
921 / 1881	To	922 / 1882	I/O Low Speed Data
937 / 1897	To	938 / 1898	I/O

Wideband Base/Mobile Channels			
(base/mobile)	To	(base/mobile)	Designation
28 / 148	To	30 / 150	I/O
37 / 157	To	39 / 159	I/O
46 / 166	To	48 / 168	I/O
73 / 193	To	75 / 195	I/O
82 / 202	To	84 / 204	I/O
91 / 211	To	93 / 213	I/O

(b) Low Power Channels

The following channels shall be available as narrowband low power channels: 1 to 12, 949 to 960, 961 to 972, 1909 to 1920. These channels will be available for mobile operations only. No fixed station will be allowed on these channels. These channels shall be available for each Agency's use on an unprotected basis. Operation on these low power channels is limited to a maximum ERP of 2 watts.

3.2.4. Protection Zones

In the Protection Zones, each Agency has unrestricted geographic use of the all the channels in the frequency bands 764.000 to 776.000 MHz and 794.000 to 806.000 MHz subject to the technical limits described in paragraph 4.3. In the event that harmful interference to base stations is experienced, both Agencies shall take appropriate action to eliminate such interference.

3.3. Use of the 764 to 776 MHz and 794 to 806 MHz bands Outside the Sharing and Protection Zones

Beyond 140 km from the border, the Agencies have unrestricted use of these bands. Nonetheless, the assignments by each Agency for use of any frequencies in the bands 764-776 MHz and 794-806 MHz by the land mobile service beyond 140 km from the border must continue to meet the requirements of paragraph 4.4. In the event that harmful interference to land mobile stations is experienced, both Agencies shall take appropriate action to eliminate such interference.

4. Technical Limits

- 4.1. Within Sharing Zones I and III, the Agencies may use their allotted portions of spectrum subject to the Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limits of Annex B, Table B1.
- 4.2. Within Sharing Zones II, the Agencies may use their allotted portions of spectrum subject to the Effective Radiated Power (ERP) and Antenna Height Above Mean Sea Level (AMSL) limits of Annex B, Table B2.
- 4.3. Each Agency has full use of the 764-776 MHz and 794-806 MHz bands within the Protection Zone in its respective country subject to the condition that base stations not exceed the maximum Effective Radiated Power (ERP) and effective Antenna Height (EAH) limits given in Annex B, Table B1.
- 4.4. In making assignments for use of any frequency in the bands 764-776 MHz and 794-806 MHz by the land mobile service, each Agency shall protect the other Agency's TV stations – within the other Agency's territory – according to the following Desired to Undesired (D/U) signal ratios:
 - (a) The minimum D/U ratio is 40 dB for co-channel analog TV stations and 0 dB for adjacent channel analog TV stations. The minimum D/U ratio must be satisfied within the analog TV stations 64 dB μ V/m contour and is based on interference at 50% of locations no more than 10% of the time.
 - (b) The minimum D/U ratio is 17 dB for co-channel DTV stations and -23 dB for adjacent channel DTV stations. The minimum D/U ratio must be satisfied within the DTV stations 41 dB μ V/m contour and is based on interference at 50% of locations no more than 10% of the time.

5. Special Sharing Arrangements

In recognition of particular demographic circumstances, the Agencies agree on the unequal division of spectrum between Canada and the United States in the following two sectors of Sharing Zone I:

5.1. **Sector 1**

Sector 1 is defined to be the portion of Sharing Zone I in the United States and Canada bounded on the West by 85° W. longitude and on the East in Canada by 81° W. longitude and in the United States by 80° 30' W. longitude.

In this Sector, Canada will have unrestricted geographic use of the frequencies listed in Annex A, Tables 3a and 3b. The United States will have unrestricted geographic use of the frequencies listed in Annex A, Tables 4a and 4b.

5.2. **Sector 2**

Sector 2 is defined to be the portion of Sharing Zone I in the United States and Canada bounded on the West in Canada by 81° W. and in the United States by 80° 30' W. longitude, and on the East by 71° W. longitude.

In this Sector, Canada will have unrestricted geographic use of the frequencies listed in Annex A, Tables 5a and 5b. The United States will have unrestricted geographic use of the frequencies listed in Annex A, Tables 6a and 6b. Within an area of 30 km radius from the centre city coordinates of London, Ontario, 42° 59' N. 81° 14' W., Canada shall have unrestricted geographic use of the frequencies listed in Annex A, Tables 5a and 5b on an uncoordinated basis.

- 5.3. In Sector 1 and 2, assignable frequencies must be chosen to ensure there is no harmful interference to assignments beyond the band edges. Agencies may use their allotted portions of spectrum subject to the Effective Radiated Power (ERP) and Effective Antenna Height (EAH) limits of Annex B, Table B1.

6. ***Coordination Necessitated by the Special Sharing Arrangements***

- 6.1. As a result of the division of spectrum described in paragraphs 5.1 and 5.2, portions of the bands allotted to both countries under this Arrangement overlap. Therefore, proposed frequency assignments in the overlapping portions in those bands, as described in paragraphs 6.2 and 6.3 below, will be coordinated between the two Agencies in accordance with the procedures specified in Arrangement A annexed to the *Agreement Concerning the Coordination and Use of Radio Frequencies Above Thirty Megacycles per Second*, with Annex, as amended 24 June 1965.
- 6.2. Coordination is required for assignments on the frequencies listed Annex A, Tables 7a and 7b in the following areas (see Annex C, Figure 1):
- a) the geographical area in Canada enclosed by the United States Canada border, the meridian 71° W.; and the line beginning at the intersection of 72° W. and the United States Canada border, thence running North along meridian 72° W. to the intersection of 45° 45' N., thence running East along 45° 45' N. to the meridian 71° W., and

- b) the geographical area in the United States enclosed by the United States Canada border, the meridian 71° W.; and the line beginning at the intersection of $44^{\circ} 25'$ N., 71° W., thence running by great circle arc to the intersection of 45° N., 70° W., thence North along meridian 70° W. to the intersection of $45^{\circ} 45'$ N., thence running West along $45^{\circ} 45'$ N. to the intersection of the United States Canada border.

6.3. Coordination is required for assignments on the frequencies listed Annex A, Tables 8a and 8b in the following areas (see Annex C, Figure 2):

- a) the geographical area in Canada enclosed by the meridian of 81° W. longitude, the arc of a circle of 100 km radius centered at $41^{\circ} 58'$ N. latitude and $80^{\circ} 30'$ W. longitude at the southern shore of Lake Erie and drawn clockwise from the northerly intersection with 81° W. longitude to intersect the United States-Canada border East of $80^{\circ} 30'$ W., and the United States-Canada border; and
- b) the geographical area in the United States enclosed by the meridian of 81° W. longitude, the arc of a circle of 100 km radius centered at $42^{\circ} 39' 30''$ N. latitude and 81° W. longitude at the northern shore of Lake Erie and drawn clockwise from the southerly intersection with $80^{\circ} 30'$ W. longitude to intersect the United States-Canada border West of 81° W., and the United States-Canada border.

7. *Use of Frequencies Allotted to One Administration by the Other Administration*

7.1 Frequencies allotted for primary, unrestricted use of one Agency may be assigned by the other Agency for use within the sharing zones in its country under the following conditions:

- (a) In Sharing Zones I and III, the maximum power flux density (pfd) at or beyond the border of the primary user's country does not exceed -121 dBW/m²/kHz.
- (b) In Sharing Zone II, the maximum power flux density (pfd) at or beyond the border of the primary user's country does not exceed -124 dBW/m²/kHz.
- (c) In making the determination (calculation) of pfd, good engineering practice and generally accepted terrain-sensitive propagation models with time and location variabilities of 10%, and at least standard 3 arc-second digitized terrain data shall be used. All data and calculations used in determining compliance with this Arrangement shall be disclosed upon request by either Agency.
- (d) Stations under this provision shall be considered as secondary and shall neither be granted protection against harmful interference from stations that have primary use of their authorized frequency, nor shall they cause harmful interference to stations having primary use of their authorized frequency, regardless whether they meet the pfd values specified in 7(a) and 7(b) above.

- (e) Mobile stations exceeding 5 watts transmitter power output (TPO) shall not be operated in frequencies allotted for primary, unrestricted use of the other Agency within 30 km of the common border.
- (f) The documentation issued by each Agency authorizing such stations to use these frequencies will include a clause stating that such authorization is subject to the following conditions:
 - (1) in the event that the actual signals at or beyond the border are found to exceed the values specified 7(a) and 7(b) above, the signal level shall be reduced accordingly;
 - (2) in the event that the actual signals are found to cause harmful interference to any stations that have primary use of their authorized frequency, regardless of signal strength, the licensee shall take immediate action to eliminate such interference. The Agency granting the authorization for secondary use is responsible for ensuring that remedial action is taken, up to and including revocation of the authorization.

7.2 In the event that a Canadian and U.S. licensee agree that the technical conditions stated in paragraph 7.1 (a), (b), (e) for proposed station(s) within the sharing zones must be exceeded in certain exceptional circumstances for more efficient operation of the land mobile services authorized under this Arrangement, either Agency may initiate special coordination concerning those proposed variation(s) in technical conditions with the other administration through an exchange of correspondence. Such variation(s) may be implemented only through approval of both Agencies.

8. *Exchange of Assignment Information*

The Agencies shall exchange information indicating their assigned frequencies within 140 km of the Canada-United States border at a minimum, every three months. As far as practical, proposed or planned assignments should be included at a minimum of once per year. Each Agency shall supply the information called for in Appendix 3 to Arrangement A of the *Agreement Concerning the Coordination and Use of Radio Frequencies Above Thirty Megacycles per Second*, with Annex, as amended.

- (a) Licensee identifier
- (b) Class of station
- (c) Number of stations - Base and Mobile
- (d) Frequency
- (e) Location and coordinates
- (f) Locality or area of reception
- (g) Class of emission and necessary bandwidth
- (h) Power (mean) delivered to the antenna
- (i) Antenna gain (dB) and azimuth, when available
- (j) Antenna elevation above mean sea level (M.S.L.)