

## ARRANGEMENT V

### **SHARING ARRANGEMENT BETWEEN THE DEPARTMENT OF INDUSTRY OF CANADA AND THE FEDERAL COMMUNICATIONS COMMISSION AND THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION OF THE UNITED STATES OF AMERICA CONCERNING THE USE OF THE FREQUENCY BANDS 71 - 76 GHz, 81 - 86 GHz, 92 - 94 GHz AND 94.1 - 95 GHz BY THE FIXED SERVICE ALONG THE CANADA-UNITED STATES BORDER**

The Department of Industry of Canada (Industry Canada) (Canadian Agency), on the one side, and the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA) of the United States of America (U.S. Agencies), on the other side,

Have agreed to the following:

#### **1. *Scope***

- 1.1. This Arrangement is done pursuant to the *Agreement concerning the coordination and use of radio frequencies above thirty megacycles per second*, with annex, done at Ottawa October 24, 1962, as amended, and governs the sharing and coordination of frequency spectrum for the establishment and operation of terrestrial fixed radio service systems operating in the bands 71-76 GHz, 81-86 GHz, 92-94 GHz and 94.1-95 GHz along the Canada-United States border.
- 1.2. This Arrangement is subject to review at any time at the request of Industry Canada, the FCC, NTIA, the U.S. Department of State or the Department of Foreign Affairs, Trade and Development of Canada.

#### **2. *Coordination Zone***

- 2.1. The coordination zone is the area adjacent to the Canada-United States border as follows:
  - 2.1.1. For a station, the antenna of which looks within the 200° sector toward the Canada-United States border, that area in each country within 27 km of the border; and
  - 2.1.2. For a station, the antenna of which looks within the 160° sector away from the Canada-United States border, that area in each country within 2 km of the border.

#### **3. *General Sharing Arrangement***

- 3.1. Within the coordination zone, the U.S. and Canadian Agencies shall require their respective licensees to coordinate with stations on the other side of the border.<sup>1</sup> A station is considered to be in the coordination zone if:
- a) It is within 27 km of the Canada-United States border and the antenna looks within the 200° sector towards the border.
  - b) It is within 2 km of the Canada-United States border and the antenna looks within the 160° sector away from the border.
- 3.2. Within the coordination zone, the following applies:
- 3.2.1 The U.S. Agencies and the Canadian Agency shall share the 71-76 GHz, 81-86 GHz, 92-94 GHz and 94.1-95 GHz bands on an equal basis along the border and, to the maximum extent possible, the U.S. and Canadian Agencies shall have full use of these bands within their respective countries.
- 3.2.2 The U.S. Agencies and the Canadian Agency shall only authorize frequency assignments up to a maximum equivalent isotropic radiated power (EIRP) of +55 dBW. Additionally, the maximum EIRP will be reduced for systems that use antennas with reduced gains, as per each Agency's standards. These EIRP limits may be exceeded on a case-by-case basis with the agreement of the relevant U.S. Agency and the Canadian Agency.
- 3.2.3 The U.S. Agencies and the Canadian Agency agree that the authorizations that they provide to their respective licensees shall be subject to the condition that licensees are expected to take full advantage of advanced routing and interference mitigation techniques such as antenna directivity, polarization, frequency selection, shielding, site selection and/or power control to facilitate the implementation, operation and compatibility between systems.
- 3.2.4 The U.S. Agencies and the Canadian Agency shall require their respective licensees to consider the technical parameters of registered fixed stations<sup>2</sup> within the associated coordination zone; and, where the potential for interference exists, to develop sharing agreements with registered fixed service licensees on the other side of the border when establishing systems in the coordination zone. In cases where there is no licensee within the coordination zone on the other side of the

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<sup>1</sup> For purposes of this Arrangement, the term "license" shall include the assignment of a radio frequency by NTIA to a Federal agency and the term "licensee" shall include any Federal agency with a frequency assignment in the 71-76 GHz, 81-86 GHz, 92-94 GHz and 94.1-95 GHz bands.

<sup>2</sup> Pursuant to applicable domestic law, licensees, authorized to deploy within the given geographical area, enter the technical parameters of their prospective stations into either a third party database, as required in the United States, or a governmental online database, as required in Canada. A station for which such information is submitted effectively "registers" the station and would be considered "registered fixed station" as that term is used in Section 3.2.4.

border, a sharing agreement is not required.

- 3.2.5 A station that requires coordination shall not be placed into operation until an agreement has been reached between the relevant licensees or until the relevant U.S. Agency and the Canadian Agency have agreed on sharing terms.
- 3.2.6 If a license authorized for operation in the frequency bands 71-76 GHz, 81-86 GHz, 92-94 GHz and 94.1-95 GHz is transferred, assigned or reissued, the U.S. Agencies and the Canadian Agency shall require any existing agreement that formed the basis of coordination in the border area to continue to apply with respect to the new licensee unless a new agreement is reached.
- 3.2.7 The U.S. Agencies and the Canadian Agency shall require their respective licensees to use the services of established third party database managers or governmental online databases, which are listed in Annex A of this Arrangement, to assist in the identification of registered systems for the purposes of coordination or in the selection of available frequencies.
- 3.2.8 The NTIA agrees to provide location and technical information of stations authorized by the NTIA, within the coordination zone, including but not limited to, the parameters in Annex B to this Arrangement. The NTIA agrees to be responsible for ensuring the accuracy of this data and updating it as required.
- 3.2.9 The U.S. Agencies and the Canadian Agency shall require their respective licensees that register new fixed radio service stations or make modifications to fixed radio stations in the coordination zone to have the capability to modify their stations to mitigate interference in the event of harmful interference to previously registered stations on the other side of the border.
- 3.2.10 In the event that an Agency of one country is notified by an Agency of the other country that a new or modified registered fixed station is causing interference to a previously registered station on the other side of the border, the Agency responsible for the new or modified station shall require its licensee to take steps to mitigate the interference, such as, but not limited to, changing frequency, reorienting the antenna, changing polarization or reducing EIRP without undue delay.

#### **4 Information Exchange**

- 4.1 When necessary, the U.S. Agencies and the Canadian Agency shall provide information to their respective licensees to facilitate the coordination requirements of this Arrangement.

## **Annex A**

### **Databases containing information about registered stations:**

Government:

<http://freqcoord.ntia.doc.gov/>

Spectrum Management and Telecommunications: <http://www.ic.gc.ca/spectrum>

Spectrum Direct: <http://sd.ic.gc.ca/>

Non-Government:

<http://www.gigabitlink.com/>

<http://www.mmRadioForms.com/>

<http://www.micronetcommunications.com/LinkRegistration/>

## **Annex B**

### **List of parameters for coordination:**

Licensee information (Corporate name/Mailing address/Contact name/Phone/Email address);

Location of transmitter and receiver (State);

Geographical coordinates of transmitting antenna and receive sites;

Ground elevation and antenna height above ground (m);

Equivalent Isotropic Radiated Power (EIRP) (dBW)

Center frequency (MHz);

Bandwidth and emission designation(s);

Polarization;

Antenna pattern / tabulation of the pattern;

Azimuth of the maximum antenna gain (deg);

Maximum antenna gain (dBi);

Transmitter power (dBW)

### **Note:**

1. The licensee could provide more parameters, if needed, for the coordination process.