By Ralph A. Haller

Canadian Border License Coordination Needs Improvement

Anyone near the Canadian border who has applied for an LMR license has likely become painfully familiar with the Canadian coordination process. This is especially true for licensing below 470 MHz. Under an agreement between Canada and the United States that dates back to 1962, the Above 30 MHz Agreement, Canada has the right to review every application along the border and approve or deny the application based on the potential for interference. The agreement contains no technical standards, so Canada is free to act on each application as it sees fit. The same is true for the United States in its review of Canadian applications along the border.

The border area is defined by an imaginary line that begins at Aberdeen, Wash., and proceeds eastward to Searsport, Maine. Along the way, the line is defined by latitude and longitude coordinates. Generally, the line includes land within about 62 miles from the border, but in places, extends to more than 124 miles from the border. Maine is particularly impacted by Line A, because the line is more than 186 miles from the border in some locations, placing about 80 percent of Maine within the border area. Vermont and New York are also heavily impacted with about 50 percent of each state within the area defined by Line A.

Complicating the issue is the difference in licensing philosophies between the two countries. In the United States, the FCC rules assume and require that frequencies below 470 MHz will be shared between multiple users. Public-safety coordinators try to provide some degree of exclusivity for licensees, but the FCC rules do not. In Canada, each licensee is assumed to have an exclusive license that will allow operation free of ever hearing another station. From the U.S. standpoint, a new Canadian station may be considered just another user on the channel. From the Canadian perspective, as I understand it, a new U.S. station can't encroach on the protected service area of a Canadian incumbent.

Additionally, the band plans are different between the two countries. A public-safety channel in the United States may be a business/industrial channel in Canada, and vice versa. This has led to difficult issues regarding designated public-safety interoperability channels in the United States. You would assume that FCC-designated VHF and UHF interoperability channels could be licensed anywhere in the United States. But the channels aren't so designated in Canada, leading to objections for new interoperability stations.

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The frequencies in question are more specifically covered by Arrangement A to the Above 30 MHz Agreement. The arrangement specifies that both countries have the right to review applications for potential interference. If a resolution can't be reached on the potential for interference from a new station, the arrangement provides for on-air testing to be conducted. The arrangement also provides that neither administration is bound by the views of the other, but the administrations should cooperate to the "fullest extent practicable." The arrangement gives no guidance on technical parameters to be used for the interference evaluations.

Most Canadian objections indicate that a proposed station should not exceed a power density level of -146 dBW or -148 dBW, depending on the band. These levels essentially constitute the noise floor. To refute an objection, the procedure is to prepare a Longley-Rice propagation study to show levels below those desired by Canada at the incumbent station's location. But Canada doesn't use Longley-Rice, so a U.S. study may be rejected. In addition, the parameters for a Longley-Rice study are not defined. Studies often have a low to medium probability of being accepted by Canada.

When an objection is received from Canada, it references only a station location and file number, not a call sign. The file number can't be used as a search field for the online Canadian database. This makes it difficult to determine the station referenced in the objection. The best method is to perform a point-radius search by frequency, using the coordinates of the station in the objection notice. If the Canadian station can be determined, downloading the data requires the ability to parse a data stream to obtain the needed information about the station. In a number of cases, the objection may be for a sensitive station that isn't in the database. This makes it impossible to prepare any type of study to show adequate protection.

Initial applications to Canada have about a 100 percent probability of being denied. Even if interference studies are supplied with the initial application for a new facility, those studies aren't provided to Canada unless the FCC is specifically notified of the study. The Universal Licensing System (ULS) is programmed to send an application that requires Canadian clearance to Canada without sending any attachments such as an interference study. One can expect that Canada will not even see a study until the application is returned after the first Canadian objection.

As a final note, Canada often objects to minor changes to stations that have been on the air for years. For example, a station desiring to convert from wideband analog FM to Project 25 (P25) without changing location, power or anything else has a good chance of receiving an objection. It's a reasonable assumption that if a station has operated for decades without any interference issues, a change of emissions is unlikely to cause interference, especially if the bandwidth is reduced.

Several things can be done to help streamline the process. The following lists the major changes that could be helpful:

1. Agreement on a common propagation model;
2. Agreement on band plans, especially for interoperability channels;
3. Easier access to the Canadian database for better pre-coordination;
4. The provision of interference studies to Canada with the initial application; and
5. Greater Canadian acceptance of only emission changes for U.S. incumbent stations.

There are regular meetings between the FCC and Industry Canada. I hope these mitigation issues are under consideration. Various groups of licensees are also meeting in an attempt to find common ground for coordination of new stations.

The purpose of this article isn't to find fault with either the FCC or Industry Canada. Both agencies are working to protect the interests of their licensees. But the current procedures are slow and ultimately result in too many denials of needed channels in the border areas. Better procedures are needed, and those procedures must be spelled out in the Above 30 MHz Agreement. ■

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