

Fasken Martineau DuMoulin LLP
Barristers and Solicitors
Patent and Trade-mark Agents

www.fasken.com

Suite 1300
55 Metcalfe Street
Ottawa, ON, Canada K1P 6L5

613 236 3882 Telephone
613 230 6423 Facsimile



Stephen B. Acker
sacker@fasken.com
Direct 613 236 3882

VIA EMAIL to: spectrum.operations@ic.gc.ca

June 12, 2009

Manager
Operational Policies
Radiocommunications and Broadcasting Regulatory Branch
Industry Canada
300 Slater Street
Ottawa, ON K1A 0C8

Dear Sir:

**Re: Canada Gazette, Part 1, April 9, 2009
Gazette Notice DGRB-008-9
Consultation on New Spectrum Licensing Approach and Fee for
Narrowband Multipoint Communications Systems (N-MCS)**

Introduction

We are regulatory counsel to Itron Inc. (“Itron”) in Canada. The following comments are submitted in response to the above-referenced Gazette Notice (the “Consultation”) on behalf of Itron.

Based in the U.S., but with operations in a number of countries including Canada, Itron is a leading technology provider to the global energy and water industries. Itron provides a wide range of services, including intelligent metering, data collection and utility software solutions, all of which are designed to optimize the delivery and use of energy and water. Its suite of products comprise electricity, gas, water and heat meters, data collection and communications systems, including automated meter reading (“AMR”) and advanced metering infrastructure (“AMI”). Itron also provides management and consulting services related to its metering and network products and energy and water conservation.

Itron provides its products and services to over 8,000 utilities worldwide including many in Canada. Itron has long been present in the Canadian energy and water delivery industries, and has been prominent in the development of Industry Canada’s 1.4

GHz spectrum policy which is designed, among other applications, to permit the deployment of licensed AMR and AMI networks. Currently, Itron is supplying the Consortium Genieau in Montreal with its 1.4 GHz Water SaveSource technology to permit advanced metering and monitoring of the city's water supply. This is the first large-scale 1.4 GHz deployment in Canada.

As indicated above, Itron has been involved since the late 1990s in the development of Industry Canada's 1.4 GHz policy, and in helping to frame the related regulatory documents: SRSP 301.4, RSS-142, CPC-2-1-22, and DGRB-003-01. The latter sets out the specialized fee schedule for wireless telemetry or AMR systems using the 1 MHz channels available at that time, under the version of SRSP-301.4 then in effect.

Because of Itron's particular interest in the 1.4 GHz band, these comments will be limited to the application of the proposed new fee to that band. We will not comment on other bands, or the proposal to convert site licensing for N-MCS links to a standardized regime of spectrum licensing.

Comparing the Current and Proposed New Fee Schedules for 1.4 GHz Spectrum Licences

The proposed new fee schedule in the Consultation is meant to cover all future N-MCS frequency bands. The N-MCS bands are not specifically identified in the Consultation (apart from the 1.4 GHz band), but they have been divided into three categories for the purpose of the new fee: below 1 GHz; from 1 to 5 GHz; and above 5 GHz. The Consultation appears to assume that all these bands would be truly "narrowband" meaning that licensed channels would be no wider than 25 kHz, or possibly multiples of 25 kHz. The various sample fee calculations in Appendix B all involve bandwidths of 12 kHz or less. Table 4 at the end of section 5.3 of the Consultation sets out a paradigm fee for a bandwidth of 6.4 KHz, rounded up to 7 kHz.

In contrast, the current version of SRSP-301.4 divides the current available bandwidth of 1429.5 – 1430.5 MHz (another 1.5 MHz to 1432 MHz will, we understand, be made available at a later date) into 4 blocks of 250 kHz. The upper sub-band of 1493.5 – 1496.5 is divided into three blocks of 1 MHz. While perhaps not wide enough to merit the description "broadband", these channels are hardly narrowband, which normally denotes bandwidths in the 10s or less of kHz. Section 3 of the Consultation refers to the "narrow channel bandwidths used by N-MCS networks (usually 25 kHz or less)..." (emphasis added).

Appendix B of the Consultation presents some sample fees using the proposed new fee schedule, and employing 2006 census data for the city of Burnaby, BC as an example. In Example 4, the total occupied bandwidth subject to the fee is 12 kHz. Assuming frequencies used at 220 MHz (i.e. below 1 GHz) the annual fee arrived at is \$2,433.59 rounded up to \$2,434. This appears to be a reasonable fee to serve a city of some 200,000 persons.

For AMR systems using 1.4 GHz spectrum, however, the fees involved would be considerably higher. Using Burnaby, B.C. as the sample market, a water or electric utility installing an AMR network would need 250 kHz at a minimum which is, as indicated above, the standard channel size under SRSP-301.4. For 250 kHz, the new proposed formula would yield an annual fee of \$10,140 (250 kHz divided by 5.0 kHz bandwidth times .001 times the population of 202,799 = \$10,139.95, rounded up to \$10,140).

These sums should be contrasted with the current fee schedule for 1.4 GHz AMR contained in DGRB-003-01. Burnaby, B.C. covers an urban area of just under 100 km². It can therefore be covered by 4 grid cells of 25 km². Applying Schedule 1 of DGRB-003-01, since each grid cell would likely have a household density of 2,501 or above, the annual licence fee would be 4 times \$480 or \$1920. This fee would apply for any bandwidth below 1 MHz; hence the current fee would be the same whether a utility could manage with 250 kHz or 500 kHz. For 250 kHz, the proposed new fee would be approximately five times the current fee; for 500 kHz, the proposed new fee would be ten times the current fee.

These large disparities are made even greater when one looks at a large urban centre like Montreal, where a 1.4 GHz AMR system for the water utility is currently being installed. The island of Montreal has an area of 365.13 km². If we round this up to 400 km², the island can be covered by 16 grid cells of 25 km² each. Under the current fee schedule, the annual licence fee for an AMR network using 450 kHz of spectrum covering the island of Montreal would be 16 times \$450 or \$7,680. Using the proposed new fee schedule, an AMR system using 450 kHz would yield an annual licence fee of \$145,863 (450 divided by 5 = 90 times .001 times 1,620,693 = \$145,862.37 rounded up to \$145,863). This is almost 20 times as much as the current fee! If the system were expanded geographically, as is likely over time to cover greater Montreal, the disparity in fees would become even greater. Added to this is the annual nature of spectrum licence fees. A fixed AMR system has a life expectancy of 20 years. Over this period the amount payable in fees, if calculated under the proposed new fee schedule, would be enormous.

Conclusion

Clearly, the attempt to find a one size fits all formula does not work for so-called N-MCS systems at 1.4 GHz which are, in reality, not narrowband at all as that term is defined in the Consultation.

The Department should be aware that water and energy utilities are highly regulated, and that any increases in rates charged to consumers are tightly controlled by the regulator in question. Typically, metering costs are not allowed to be passed through to consumers and, therefore, utilities must absorb those costs; hence, their interest in keeping such costs as low as possible. Licence fees are, of course, part of those costs and annual licence fees in the range of \$140,000 (or 20 times as high as the current fee) would be a huge disincentive for utilities to upgrade their measuring and billing systems. It would also be a disincentive for utilities to use 1.4 GHz technology which is particularly well-suited for AMR applications. As the Department is aware, AMR applications are designed to help bring into existence smart grid and smart meter systems that, over time, will result in considerable savings in electricity and water. This in turn contributes to a cleaner and more sustainable environment which benefits everyone. Introducing an onerous licence fee on systems that make such advances possible is both short-sighted and bad public policy.

The current fee schedule in DGRB-003-01 which benefited from RABC review and comments, took into account population density as a feature of the fee. The higher the density, the higher the fee. Density moreover was based on households, not raw population. This reflected the fact that utilities serve households and that the greater the density of households, the cheaper and more efficiently they can be served. The current fee schedule therefore provides a reasonable and measured economic return to Industry Canada for this particular spectrum, keeping in mind its use by utilities for energy and water conservation purposes which are very much in the public interest.

Accordingly, Itron strongly recommends that the 1.4 GHz band continue to be subject to the fee schedule in DGRB-003-01, or an updated version of that fee schedule, and that the 1.4 GHz band not be included in N-MCS bands to be governed by the new proposed fee schedule set out in the Consultation.

We would be pleased to answer any questions the Department may have on the above comments.

Yours sincerely,



Stephen B. Acker

cc: Jay Holcomb, Itron, Inc.
Marc Dupuis, Industry Canada
Doug Sward, Industry Canada
Gilles Rathier, Industry Canada