



Canadian Satellite and Space Industry Forum
Forum de l'industrie spatiale et satellitaire canadienne

File No.: CSSIF07-002

May 25, 2007

Mr. Leonard St. Aubin
Director General
Telecommunications Policy Branch
Industry Canada
300 Slater Street
Ottawa Ontario K1A 0C8

Subject: **Canada Gazette No. DGTP-002-07: Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services**

Dear Mr. St. Aubin,

Introduction

The Canadian Satellite and Space Industry Forum (CSSIF) is an association of Canadian satellite operators and producers of satellite systems and components. Its mandate is to participate in the development of spectrum policy and regulations in areas of interest to the Canadian satellite community. The CSSIF interest in DGTP-002-07 is to ensure that Canadian satellite networks can continue to operate in spectrum allocated to satellite services in the 2 GHz frequency range, in an environment in which 2 GHz spectrum is being made available to Advanced Wireless Services (AWS).

The CSSIF commends the Department for the release of Canada Gazette Notice DGTP-002-07 (the Consultation). The CSSIF supports the Department's goal of making spectrum available to those interested in providing AWS services, in such a way that Canadian providers of mobile-satellite services in the 1.6 GHz to 2.2 GHz frequency range are not subjected to excessive levels of aggregate interference. CSSIF members participated in RABC discussions on this aspect of DGTP-002-07, and agree in general with the comments of the RABC on this matter. Through this submission to the Department in response to the Consultation, CSSIF would like to provide more detailed information on the issues raised in both Part I and Part II of the Consultation.

CSSIF Concerns

Canadian mobile-satellite systems operate or soon will operate in geostationary orbits in the 1626.5-1660.5 MHz band in the Earth-to-space direction, in the 2000-2020 MHz band in the Earth-to-space direction, and in the 2180-2200 MHz band in the space-to-Earth direction. Of the matters discussed in the Consultation, CSSIF members are interested, in general, in the adjacent-band or closely-separated band sharing of radio spectrum between AWS systems and mobile-satellite systems. More specifically, CSSIF members are concerned about:

1. The possible future sharing between AWS or other terrestrial mobile systems in the band immediately above 1670 MHz and geostationary mobile-satellite systems immediately below 1660.5 MHz. This possible use of spectrum above 1670 MHz is discussed in Section 1.1.7 and Section 2.4 of Part I of the Consultation.

2. The possible use of the band 1990-1995 MHz by PCS systems, as described in Sections 2.2 and 3.3 of Part I of the Consultation. The matter of concern is the sharing of spectrum between these new systems and geostationary mobile-satellite systems in the band 2000-2020 MHz.
3. The possible future use of the band, or part of the band, 1995-2000 MHz by PCS or AWS systems, as described in Sections 2.2 of Part I of the Consultation. The matter of concern is the sharing of spectrum between these new systems and geostationary mobile-satellite systems in the band 2000-2020 MHz.
4. The possible future use of the band, or part of the band, 2020-2025 MHz by PCS or AWS systems, as described in Sections 2.3 of Part I of the Consultation. The matter of concern is the sharing of spectrum between these new systems and geostationary mobile-satellite systems in the band 2000-2020 MHz.
5. The possible use of the band 2110-2155 MHz by PCS and AWS systems, as described in Sections 2.1, 3.3, and C37 of Part I of the Consultation. The matter of concern is the sharing of spectrum between these new systems and geostationary mobile-satellite systems in the band 2180-2200 MHz.
6. The possible future use of the band or part of the band 2155-2180 MHz by PCS or AWS systems, as described in Sections 2.3 and Footnote C37 of Part I of the Consultation. The matter of concern is the sharing of spectrum between these new systems and geostationary mobile-satellite systems in the band 2180-2200 MHz.

In each of these six cases the concern is how the Department will ensure that the AWS or PCS systems in these new bands do not cause excessive levels of interference into mobile-satellite systems in adjacent or nearby bands.

In the bands immediately below 1660.5 MHz (Concern 1 above) and in the band 2000-2020 MHz (Concerns 2, 3, and 4 above) the mobile satellite allocation is primary in the Earth-to-space direction. For this reason, the concerns are:

1. the magnitude of the aggregate interference power due to all the mobile base station transmitters within the spot beam coverage areas that might potentially saturate or overload the receivers on board the mobile satellite space station, and
2. the magnitude of the out-of-band interference from the terrestrial transmitters that would fall within the pass band of the space-station receivers.

In the band 2180-2200 MHz (Concerns 5 and 6 above) the mobile satellite allocation is primary in the space-to-Earth direction. The interference in this case is a local one, coming from nearby transmitting terrestrial mobile stations into mobile-satellite service user terminals. Again, there are two related concerns:

1. the magnitude of single-entry out-of-band interference into the mobile-satellite service hand-held receivers, when the transmitter is at a minimum distance from the receiver, and
2. the aggregate interference into the mobile-satellite service user terminal receiver. The Department should ensure that this aggregate interference is below a specified threshold.

CSSIF Recommendation

CSSIF requests that the technical characteristics of AWS and/or PCS terrestrial-mobile systems in the bands 1990-1995 MHz and 2110-2155 MHz be agreed upon in discussions between the terrestrial-mobile community and the mobile-satellite community before mobile systems are implemented, and that similar discussions be undertaken related to possible future mobile systems in the bands or parts of the bands 1995-2000 MHz, 2020-2025 MHz and 2155-2180 MHz.

The CSSIF believes that the appropriate mechanism to determine the technical characteristics is through consideration of the relevant SRSP's and RSS's. This may require the issuing of a follow-on Gazette Notice. We understand that this process is already underway informally within the RABC. CSSIF will be participating in this process, or its formalization through the above-mentioned follow-on Gazette Notice, and will work towards its successful conclusion.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "John Forsey".

John Forsey
Chairman