



Re: Consultation Paper on the Possible Use of the Extended-Ku Spectrum Bands for Direct-to-Home (DTH) Satellite Broadcasting Services

The Canadian Broadcast Distribution Association (CBDA) is pleased to provide these comments in response to Industry Canada's *Consultation Paper on the Possible Use of the Extended-Ku Spectrum Bands for Direct-to-Home (DTH) Satellite Broadcasting Services*, DGTP-003-08, issued December 2008.

The CBDA, (formerly Canadian Satellite Users' Association), has been active in regulatory and policy forums for 20 years. The membership consists of a number of major broadcast users of satellite services in Canada, as well as some of the major distribution services. The Mission of CBDA is to foster interoperability of broadcasting services across multiple distribution platforms, facilitate the exchange of information on critical technical operational matters of interest to its members and provide education on topical issues. A key objective of CBDA is to foster the efficient deployment of satellite technology in Canada. CBDA also works to ensure that all legislation, regulation and public policy pertaining to broadcasting operations recognize the interest of its members.

The use of satellite services remains the primary distribution platform for Canadian broadcasters in delivering their program signals to various broadcast distribution undertakings and on to their viewers. The increase in the overall number of programming services and the industry's transition to high definition television (HDTV) has placed significant pressure on the supply of satellite capacity. CBDA believes it is critical that government promote policies to ensure that there is sufficient satellite capacity to meet the demand of the digital transition, HDTV conversion, and the launch of new services. Furthermore, recent broadcasting policy and technological developments, primarily those related to the CRTC's BDU Framework Decision and the rollout of HDTV video services, will substantially increase the need for satellite capacity.

The issue before us is the ability to use Extended Ku spectrum for DTH broadcast services, given that certain terrestrial FS services currently occupy that spectrum. Telesat has applied for this broadcast use in order to provide Star Choice with additional capacity. Furthermore, launching a new extended KU satellite into an existing orbital

slot provides Telesat the opportunity to incorporate redundancy for current satellites serving Star Choice.

Over the years in several submissions, the CSUA had established a series of principles that it considers are critical to any assessment of the public interest in applications for Canadian orbital slots. The CBDA supports the continued use of these principles as the basis for assessing applications. In summary these principles are:

- The GSO orbital positions obtained by Canada in the ITU satellite coordination and notification process should be treated as valuable Canadian resources;
- All satellite service providers seeking a Canadian license to use those orbital locations must meet the government's definition of a Canadian-controlled company;
- Interference with operations in Canadian orbital positions must not be permitted, within the terms of their coordination agreements with foreign satellite and terrestrial networks in the notification of the Canadian positions;
- The use of the Canadian orbital positions should enhance users' neighbourhoods as a way of promoting efficient distribution platforms;
- Orbital slots should be assigned and put into service in a such way that ensures sufficient capacity to meet Canadian broadcasters' needs over the long term;
- Canadian users must get first right of refusal on the available capacity at Canadian orbital slots, with capacity held for Canadian users up until launch of the satellite;
- With the above requirements in mind, CSUA supports a competitive satellite services market whenever possible.

CBDA's positions in this proceeding will be guided by the above noted principles. While Rogers Communications Inc and Bell ExpressVu agree with the CBDA principles noted above and the requirement for additional satellite capacity to meet Canadian broadcasters' needs, neither firm supports the remainder of this submission. Both firm's position on the use of the 11 GHz band is set out in that part of the RABC submission in this matter that opposes the use of DTH satellite broadcasting services in this frequency band.

CBDA notes that the possibility of using extended Ku-band for ubiquitous services such as DTH was introduced by Industry Canada at a meeting of the CSUA held in 2004. In the view of the CBDA this application was also expressly contemplated by Industry Canada in its Call for Applications. Generally use of the band for DTH was supported by Ciel, the Canadian Association of Broadcasters, the CBDA (then the Canadian Satellite Users Association) and numerous broadcasting undertakings.

CBDA notes that there is an urgency to the matter. CBDA understands that there is a minimum 30-36 month lead time required to design, procure and launch a new satellite with an Extended Ku payload. It is Shaw's position that this additional capacity is required in 3 years. Therefore, without immediate implementation of the policy changes required to permit ubiquitous DTH operation in the Extended Ku band, Star Choice will not gain access to the capacity it needs to meet the digital transition requirements noted above. It also important to note that this additional capacity has implications for a competitive Star Choice DTH service, for the affiliated Shaw Broadcast Services (SBS) SRDU services, and for SBS program uplink delivery services (which is currently the primary platform for broadcast signal delivery to terrestrial BDU's). A secondary but very important benefit associated with the use of the Extended Ku band by Star Choice is the ability to provide critical in-orbit sparing to the conventional Ku-band satellites operating at the existing orbital positions in the event of a catastrophic failure. The backup provided by the Extended Ku band satellite would provide continuity of services to the approximately 900,000 DTH subscribers of Star Choice and the significant number of cable systems and Canadian programming services that rely on the broadcast delivery services of SBS.

It is clearly in Canada's interest to have its orbital real estate occupied by satellite service providers that meet the Industry Canada definition of a Canadian operation. It is also in the public interest to have sufficient satellite capacity for the delivery of broadcast signals to Canadians. The public interest has also been well served by the competitive marketplace for DTH broadcast services and satellite delivery services generally. The use of the 111° orbital slot for the Extended Ku frequency builds on the Shaw broadcast neighbourhood, thereby maximizing delivery infrastructure efficiencies. For all these reasons, the use of the Extended Ku for DTH broadcast services by Shaw meets the CBDA principles.

CBDA and many of the members of our organization have also carefully considered other satellite spectrum options for Star Choice/SBS expansion. The key parameters in this consideration are the goal to build on an existing "neighbourhood" and support for small dish DTH operation. We note that all existing KU band, FSS and BSS, slots in the neighbourhood are fully allocated, with no potential to provide expansion to Star Choice. The other two options for consideration are RDBS, and Ka band at 109°. CBDA feels that RDBS may provide a good long term solution to DTH expansion, but due to international planning and coordination negotiations, we believe that implementation in this band is more than 5 years away and therefore will not meet the immediate requirements for HDTV transition, as discussed above. Due to the complexity of the technical and business issues, CBDA is not able to comment on the applicability of Ka Band at 109°.

We also understand that Star Choice has, and will continue, to implement modulation and compression advances to augment the capacity of its existing transponders, but have been assured by Star Choice that this alone will not be sufficient to satisfy the increased demand as discussed earlier.

Our responses to the specific questions posed in industry Canada's notice are set out below.

1. (a) The Department seeks comments as to whether the spectrum utilization policy of the Ku frequency band 10.7-11.7 GHz should be changed to accommodate the provisioning of DTH services and, if so, what the designated use for each of the sub-bands should be.

CBDA supports the submission of Star Choice, Shaw and Telesat that the 10.95-11.2 GHz and 11.45-11.7 GHz portions of the 10.7-11.7 GHz band should be designated for priority use by the Fixed Satellite Service (FSS) to support provisioning of Direct-to-Home (DTH) and broadcast signal delivery services (e.g.. SRDU, specialty and pay uplink and specialty and pay signal transport services.)

CBDA supports the submission of Star Choice, Shaw and Telesat that the FS should have priority over the FSS in the bands 10.7 – 10.95 GHz and 11.2 – 11.45 GHz. Use of the FSS in these bands would be limited to applications that pose minimal constraints on the deployment of the FS such as gateways that support feeder links to the MSS operating in accordance with footnote C16C.

(b) More specifically, should the designation be as requested in section 3.1 above, namely that the extended-Ku bands 10.95-11.2 GHz and 11.45-11.7 GHz be designated only to the fixed-satellite service, and the bands 10.7-10.95 GHz and 11.2-11.45 GHz continue to be designated to the fixed-satellite and fixed services under the current policy stipulations?

Yes, in accordance with the proposals set out in the response to question 1(a).

If these designations are made as described in 1(b) above:

2. Should they (a) be for a limited duration, and (b) be made conditional on the bringing into use the extended-Ku bands for DTH services within a specified period of time?

The revised Industry Canada spectrum utilization policy for the 10.7-11.7 GHz band should be established on a general and permanent basis.

3. Comments are sought as to the disposition of the current fixed service licensees in the extended-Ku bands. Should they be permitted to continue operating in these bands and, if so, under what conditions?

CBDA supports the submissions of Star Choice, Shaw and Telesat that the 10.95-11.2 GHz and 11.45-11.7 GHz bands should be designated for priority use by the Fixed Satellite Service (FSS). Three years after issuance of the Department's new spectrum policy to implement the foregoing approach, the operation of fixed service (FS) systems utilizing the bands 10.95-11.2 and 11.45-11.7 GHz should end. Until then, any uncoordinated FSS deployment in these bands would be on a no-protection basis with

respect to FS transmitters licensed prior to 2009 (i.e. before the moratorium). Previously co-ordinated FSS receivers should continue to be protected from FS interference. CBDA supports the submissions of Star Choice, Shaw and Telesat that the FS should have priority over the FSS in the bands 10.7 – 10.95 GHz and 11.2 – 11.45 GHz. Use of the FSS in these bands would be limited to applications that pose minimal constraints on the deployment of the FS such as gateways that support feeder links to the MSS operating in accordance with footnote C16C.

4. Comments are sought as to whether the future capacity requirements of the fixed service can be accommodated in other fixed service allocations at 6, 15, 18 GHz and the remaining portions of the 11 GHz Ku band. Are these bands suitable and is there sufficient spectrum to accommodate any potentially displaced fixed service systems from the extended-Ku bands?

A number of viable alternatives are available for FS users currently licensed in the Extended Ku-band. If Industry Canada decides to permit future use of the Extended Ku-band for DTH and broadcast signal delivery services, current FS users in the bands could migrate to these alternatives in an orderly fashion over a 3 year transition period before a new Extended Ku-band satellite would be launched.