



Canadian Association of Broadcasters  
Association canadienne des radiodiffuseurs

17 April 2009

*Via Email: wireless@ic.gc.ca*

Ms. Pamela Miller  
Acting Director General  
Telecommunications Policy Branch  
Industry Canada  
300 Slater St  
Ottawa, ON K1A 0C8

Dear Ms. Miller:

**Re: Canada Gazette Notice DGTP-003-08 - *Consultation on the Possible Use of the Extended-Ku Spectrum Bands for Direct-to-Home (DTH) Satellite Broadcasting Services.***

#### General Comments

1. The Canadian Association of Broadcasters (CAB) - the national voice of Canada's private broadcasters, representing the vast majority of Canadian programming services, including private television and radio stations, networks and specialty, pay and pay-per-view television services - is pleased to submit the following comments in response to the above-noted Canada Gazette Notice.
2. The CAB, on behalf of its Television, Pay & Specialty members, wishes to support the proposal by Telesat Canada that the 10.95-11.2 GHz and 11.45-11.7 GHz portions of the 10.7-11.7 GHz band be designated for priority use by the Fixed Satellite Service (FSS).
3. After careful consideration, we are of the view that making use of Extended Ku-Band spectrum is the only technically-viable service expansion alternative that can be employed by Telesat Canada, in the near term, to provide DTH licensee Shaw Direct with sufficient capacity to provide future satellite-delivered services of vital importance to Canada's TV broadcasters.
4. In recent decisions and comments concerning the future of Canadian television, the CRTC expressed concern that viewers who subscribe to services offered by cable and DTH companies will increasingly tune to foreign programs in the absence of acceptable Canadian alternatives<sup>1</sup>. Broadcasters also believe that it is in the best interest of viewers if the programming provided by local TV stations is carried by DTH throughout their local markets. To achieve these goals, the CAB's television members are working on a variety of initiatives to ensure that, post-2011, a large majority of Canadian TV viewers will be able to access domestic television services via a

<sup>1</sup> Ref: Broadcasting Public Notice CRTC 2007-53; "*Determinations regarding certain aspects of the regulatory framework for over-the-air television*"; at para 51.

range of delivery mechanisms. These plans foresee heavy reliance on program delivery via cable systems and DTH satellites.

5. The lack of near-term satellite capacity suitable for such expansion was a major consideration in the 2006-2007 round of satellite licensing, conducted by the Department<sup>2</sup>. Once all the bands, orbit positions and satellites licensed in this round are operational, it appears likely that capacity issues can be resolved. But this is a long term proposition and the two competing DTH services will benefit from this expansion on different time schedules.
6. Bell TV is well on its way to achieving this goal, since the capacity it can provide, via Telesat Canada's satellites operating in the Broadcast Satellite Service (BSS) Ku-band from 12.2-12.7 GHz, will be greatly expanded. This option is not available to Shaw Direct due to its current system architecture, which is based on the use of Fixed Service Satellites (FSS) Ku-Band operating in the 11.7-12.2 GHz band.
7. New 17 GHz BSS satellites will eventually be deployed and should be capable of delivering the television services that broadcasters want to make available to Canadians. But satellites using this band are still years away, due to regulatory and technological requirements. In the Ka bands above the 17 GHz BSS sector, antenna beam configurations for the new generation of satellites may not be optimized for DTH. While a considerable amount of C-Band satellite capacity exists, this is not suited for reception by DTH subscribers via their own terminals because of the large antennas that would be required.
8. The fact that Extended Ku-band spectrum would be required for DTH purposes within the next few years has been known for some time. During the 2006-2007 public comment phase associated with Notice DGRB-001-06, broadcasters made clear to the Department that, in the short term, Shaw Direct's FSS DTH subscribers can only be provided with a sufficient number of new and improved television services if additional DTH spectrum is made available in this band.
9. This was expressed in the CAB's 15 December 2006 submission to Industry Canada, where we stated: "*...it is the CAB's view that the Department should place paramount consideration on the ability of the chosen licensee to maximize opportunities for the expansion of Shaw Direct/Cancom and Bell ExpressVu satellite services in the 17 GHz BSS and Extended Ku bands, within their existing DTH orbital neighbourhoods.*"<sup>3</sup> (emphasis added). An even more explicit comment in this regard was made by the Canadian Satellite Users Association (CSUA), which stated, "*It is the opinion of CSUA that extended Ku spectrum will be the key new spectrum used for broadcast applications and priority must be given to enabling the use of the spectrum for this application.*"<sup>4</sup>

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<sup>2</sup> Ref: Canada Gazette Notice DGRB-001-06, July 2006

<sup>3</sup> See: [http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgrb-001-06-comments-canadian-association-of-broadcasters.pdf/\\$FILE/dgrb-001-06-comments-canadian-association-of-broadcasters.pdf](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgrb-001-06-comments-canadian-association-of-broadcasters.pdf/$FILE/dgrb-001-06-comments-canadian-association-of-broadcasters.pdf)

<sup>4</sup> Ref: [http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgrb-001-06-comments-canadian-satellite-users-association.pdf/\\$FILE/dgrb-001-06-comments-canadian-satellite-users-association.pdf](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgrb-001-06-comments-canadian-satellite-users-association.pdf/$FILE/dgrb-001-06-comments-canadian-satellite-users-association.pdf)

## Responses to Specific Questions

10. Gazette Notice DGTP-003-08 states: “...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.”. The Department goes on to ask, “.. should the designation be as requested ... 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?”

**CAB’s response:** The CAB believes that the 10.7-11.7 GHz band should be segmented by designating the 10.95-11.2 GHz and 11.45-11.7 GHz portions for priority use by the FSS, to support the expansion of DTH and broadcast signal delivery services by Telesat Canada, especially those provided to Shaw Direct. We consider that the continued operation of Fixed Services (FS) microwave systems in these bands would be incompatible with DTH operations, since subscriber terminal locations for the DTH service are uncertain and co-ordination would therefore be impractical. We would propose that the FSS and the FS should remain as the designated co-primary users in the remaining portions of the 10.7-11.7 GHz band. There is no reason to change the status-quo, since the FS has *de-facto* exclusive use of the shared co-primary spectrum in this band in any event.

11. The Department also asks: “If these designations are made .... 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?”

**CAB’s response:** We recommend that a revised Industry Canada spectrum utilization policy for the 10.7-11.7 GHz band should be established on a permanent basis, following a three year transition period, and that it should not specify a time limit within which the new DTH services must be implemented. The timing of the actual roll-out of DTH services will be affected by certain policy and regulatory decisions of the CRTC that may not be made until TV licence renewal applications are dealt with through public hearings now re-scheduled to 2010; consequently, it is not possible at present to identify a suitable “specified period of time”.

12. The Department seeks comments “...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?”

**CAB’s response:** We recommend that FS systems utilizing the 10.95-11.2 GHz and 11.45-11.7 GHz bands should terminate operations within 3 years of the new policy being released. Until that time, any uncoordinated FSS services in these bands would be on a no-protection basis with respect to FS transmitters licensed prior to the current moratorium.

13. The Department enquires “... 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?”

**CAB's response:** Lacking information on the specific technical requirements of the FS systems licensed in the subject band, the CAB cannot comment on the practicability of using other bands. However, given that three years would be provided to vacate the bands in question, the CAB believes that incumbent FS services should have sufficient time to migrate affected systems to alternative bands.

14. In its Notice, Industry Canada asks about "... *co-ordination requirements with fixed systems in the U.S. and co-ordination with other FSS systems.*"

**CAB's response:** The principal technical issue is whether US terrestrial FS services might cause interference to Canadian DTH subscribers who are trying to receive Extended Ku band signals. The CAB believes that there would be few, if any, US FS transmitters that would be aiming their signals across the border into Canada from locations that are sufficiently close to the border to create interference at DTH subscribers' terminals. Interference would only occur where such a transmitter is located more or less on the southerly azimuth at which a DTH antenna might be pointed in order to receive a reliable satellite signal. Moreover, the fact that the bore-sights of DTH antennas are elevated vertically would mitigate interference from distant US FS transmitting antennas, which would almost certainly be below the radio horizon as seen from most residential roof-tops.

15. The Department also asks; "*Should consideration be given to authorizing the use of the extended-Ku bands to provide DTH services on a non-standard basis (i.e. receive-only earth stations shall not claim protection from harmful interference from any current and future authorized fixed service stations)?*"

**CAB's response:** The CAB considers that it would not be practical to authorize the use of the Extended-Ku band for DTH services on a non-standard basis. Unlike the situation with US FS transmitters, domestic FS systems may well be situated in close geographic proximity to DTH terminals. The distribution of DTH receivers varies widely from one region to the next and also varies over time. While the location of potentially-interfering domestic FS transmitters might be known, expecting DTH licensees or their subscribers to perform interference mitigation at individual receivers is unrealistic. In fact, the burden of resolving DTH viewers' complaints about FS interference would likely fall on the Department itself.

16. Finally, the Department's Notice states, "*Comments are sought on how the near-term DTH capacity requirements can be met.*"

**CAB's response:** As detailed previously in this submission, the CAB is of the view that the expressed intent of the CRTC, the federal government and the broadcasters to expand and improve Canadian programming services will be compromised in the short term unless both DTH licensees, Bell TV and Shaw Direct, are in a position to carry these new signals into all their subscribers' homes. Subscribers of Shaw Direct will need to be provided with the same range of services as will be offered by Bell TV. Achieving service parity for Shaw Direct customers requires the availability of extended Ku band spectrum (10.95-11.2 GHz and 11.45-11.7 GHz) for FSS DTH services in the short term. We further recommend that the licensing of new FSS services in the Extended Ku Band should be conditional upon these facilities being used predominantly for the transmission of content supplied by Canadian programming undertakings.

## **Concluding Remarks**

17. To conclude, the CAB submits that public policy imperatives concerning the expansion and improvement of Canadian television services outweigh the economic costs associated with FS services vacating the subject spectrum, considering that such changes would be made over three years' time and that alternative bands for FS services are currently available. We therefore urge Industry Canada to approve the Telesat Canada re-allocation proposal for the Extended Ku-band as quickly as possible.

Sincerely yours,

*Original Signed By:*

Pierre-Louis Smith  
Vice-President, Policy and Chief Regulatory Officer

c.c. Mr. Dan Goldberg, Telesat Canada  
Mr. Jim Shaw, Shaw Direct

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