



Rogers Communications Inc.

333 Bloor Street East
Toronto, Ontario M4W 1G9
Tel. (416) 935-7211
Fax (416) 935-7719
rwi_gr@rci.rogers.com

Dawn Hunt
Vice-President
Regulatory

May 25, 2009

Mr. Leonard St-Aubin
Director General, Telecommunications Policy Branch
Industry Canada
16th Floor
300 Slater Street
Ottawa ON K1A 0C8

Sent via email: wireless@ic.gc.ca

Dear Mr. St-Aubin:

Re: Canada Gazette, Part I, January 10, 2009, Consultation Paper on Using a Portion of the Band 14.5-15.35 GHz for Tactical Common Data Link (TCDL) Systems – DGTP-004-08

Rogers Communications Inc. (Rogers) appreciates the opportunity to provide reply comments on the above-noted consultation.

The documents are being sent in Adobe Acrobat Professional Version 8.0.
Operating System: Microsoft Windows XP.

Yours very truly,

A handwritten signature in black ink, appearing to be "Dawn Hunt", written over a white background.

Dawn Hunt
DH/jt

Attach.

**Reply Comments of Rogers Communications Inc.
(Rogers)**

Canada Gazette Notice No. DGTP-004-08

Consultation Paper on Using a Portion of the Band 14.5-15.35 GHz
for Tactical Common Data Link (TCDL) Systems

Published in the Canada Gazette, Part I
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Introduction

1. The Department has issued a consultation paper titled **Consultation Paper on Using a Portion of the Band 14.5-15.35 GHz for Tactical Common Data Link (TCDL) Systems – DGTP-004-08** (“the Consultation Paper”). In the Consultation Paper, the Department proposed to make certain allocation and designation changes in the band 14.5-15.35 GHz (“the 15 GHz band”) in order to accommodate proposed TCDL systems. TCDL systems will be used by the Department of National Defence (DND) for aerial surveillance, specifically intelligence, surveillance and reconnaissance operations. The Department has proposed that two paired 160 MHz sub-bands will be allocated for TCDL systems which will have priority over incumbent fixed service systems. Among other things, the 15 GHz band is currently used for fixed service microwave backhaul systems that support cellular and Personal Communications Services (PCS) commercial mobile services.
2. Rogers Communications Inc. (“Rogers”) hereby files the following reply comments in response to the comments filed by other parties regarding the Consultation Paper.
3. As noted in its comments, Rogers relies heavily on the use of a variety of fixed service spectrum bands, including the 15 GHz band, for microwave backhaul systems that are used in the provision of advanced commercial mobile voice and data services. Rogers uses microwave backhaul for serving the vast majority of its radio base station sites. Rogers’ demand for fixed service spectrum will continue to grow along with the rapid growth of next generation broadband mobile data services.
4. By using standardized fixed service frequency bands, Rogers has access to leading edge backhaul technology developed for either the European or North American markets, which means that Rogers is able to benefit from

equipment availability and economies of scale. This in turn translates into services that are affordable and of high quality.

5. Rogers' wireless service is currently available to approximately 94.8% of the Canadian population. Its next generation wireless services using Universal Mobile Telephone System/High-Speed Packet Access ("UMTS/HSPA") technology are currently available to over 75.6% of the Canadian population. Rogers' advanced high-speed wireless data services include mobile access to the Internet, wireless e-mail, digital picture and video transmission, mobile video, music downloading, video calling and two-way short messaging service ("SMS").
6. A significant driver of broadband mobile data usage in Canada is the popularity and proliferation of smartphone consumer devices that support the use of broadband mobile data services and applications. Smartphones allow business and consumer users to increase their productivity by leveraging the benefits of broadband mobile services while they are on the move.
7. As the popularity of smartphone devices continues to grow, wireless service providers such as Rogers must expand their backhaul facilities to support mobile data services. Although the use of fibre-optic systems is an important option for providing additional backhaul capacity, the use of microwave transmission will continue to be the preferred option in many cases.
8. Cellular and PCS radio base stations are not necessarily located where fibre is available. Moreover, microwave is generally a less costly alternative compared to fibre outside urban areas. Microwave backhaul systems can often be deployed more quickly than fibre-optic systems and therefore they permit wireless service providers such as Rogers to swiftly add backhaul capacity that may be required to improve coverage or increase capacity. For

these reasons, Rogers and other wireless service providers will continue to heavily rely on microwave for their backhaul requirements.

9. It is also important for the Department to remember that each spectrum band has unique characteristics that address a different need. Lower frequency bands are less susceptible to path loss and allow for longer link distances. Higher frequency bands can only be used for much shorter link distances. Bands such as the 15 GHz band are used to support link distances that are in the middle of the two extremes.

10. As noted in its comments, Rogers is concerned with the Department's proposal to limit the extent to which the 15 GHz band may be used for fixed service microwave backhaul systems since this band is one of a few bands that are available to efficiently address mid-range link distances. This concern is compounded by the fact that, in a separate consultation paper, the Department has proposed to limit the extent to which the 11 GHz band may be used by the fixed service.¹ Like the 15 GHz band, the 11 GHz band is used to serve mid-range link distances.

11. If adopted, the Department's proposals will have the effect of creating a void in the microwave options that are available to wireless service providers for mid-range, medium and high capacity back-haul links. Further, the proposed displacement of fixed service microwave backhaul systems from the affected portions of the 15 GHz band will be costly. Rogers alone has over 300 microwave links in the affected sub-bands. Telus has over 400 links in these sub-bands. Added to the substantial capital cost of replacing 15 GHz microwave systems is the cost of engineering and installing new links

¹ Consultation Paper on the Possible Use of the Extended-Ku Spectrum Bands for Direct-to-Home (DTH) Satellite Broadcasting Services (DGTP-003-08), December 2008.

12. Restricting fixed service users to the remaining portion of the 15 GHz band will also result in the premature congestion of this spectrum. Hundreds of fixed service links are at risk of being displaced from part of the 11 GHz band. Some of these links will necessarily need to be accommodated in the 15 GHz band.
13. As outlined in greater detail below, fixed service providers in the 15 GHz band are very concerned that the Department is proposing to limit the fixed service in the 15 GHz band. These parties support the continued use by the fixed service of the affected sub-bands indefinitely. Displacement of these systems should only be required after a reasonable transition period and only if absolutely necessary to accommodate the proposed TCDL systems. TCDL proponents should be required to fully fund the displacement cost of the incumbent fixed service users if an earlier transition is required.

Detailed Reply Comments

14. Rogers and Telus each have hundreds of fixed service links in the 15 GHz sub-bands that are the subject of this consultation. It is not surprising therefore that these carriers are concerned with the Department's proposal to limit the use of part of the 15 GHz band and the 11 GHz band by fixed services. For example, Rogers notes that Telus shares Rogers' concern in this regard where it states that:

TELUS is concerned that the Department is limiting access to two of the most useful bands for back haul at a time of increasing demands on these systems and deteriorating economic conditions to enable carriers to fund their displacement and replacement.²

² Telus Comments, p. 2.

15. As noted above and in Rogers' comments, the unique characteristics of the 15 GHz band make it a useful alternative for mid-range backhaul link distances. The usefulness of this band in serving these applications has also been noted by Telus in its comments:

In some areas higher frequencies with their concomitant shorter hops work best while in other situations lower frequencies with their longer hops are required. One of the optimal bands for provision of mid range, medium and high capacity back haul systems is the 15 GHz band.³

16. In light of the unique characteristics of the 15 GHz band and given the substantial sunk cost of the microwave backhaul systems operating in this band, Rogers urged the Department to adopt a transition policy whereby incumbent fixed service systems will be afforded a minimum notification period of five years and would be permitted to continue to operate in the band on a no-protection basis for an additional five years after the initial notification. Rogers notes that Telus also supports this proposal in its comments.

17. For example, Telus states in part that the Department "should allow fixed systems to remain indefinitely and to displace only those that can be shown to interfere after the displacement time periods proposed by the Department i.e. 10 years after the issuance of TCDL licences as outlined in the Consultation Paper".⁴ Telus goes on to reiterate "that given our embedded capital infrastructure in this band, the heavy use of these systems by the Fixed Service and additionally the current and projected economic downturn, that the Fixed Service, including TELUS warrants the full Transition Period".⁵ The

³ Ibid, p. 2.

⁴ Ibid, p. 2.

⁵ Ibid, p. 2.

comments of the fixed service providers in the RABC's submission also supported the full, ten-year transition period proposed by the Department.⁶

18. Like Rogers, Telus also believes that a shorter displacement period should only be permitted if it is fully funded by TCDL proponents and only if it is acceptable to the affected incumbent fixed service users.⁷

19. With respect to the proposed fixed service channeling plan, Rogers supported the Department's proposal to allow channel sizes of 5 MHz, 10 MHz, 20 MHz and 40 MHz throughout the remaining fixed service spectrum. In its comments, the RABC proposed that the channeling plan should also include wider channels, such as 30 MHz and 50 MHz channels, for greater flexibility and spectrum efficiency.⁸ Telus also supported the RABC's proposal noting that it would provide for "greater spectrum and operational efficiency".⁹

20. Rogers notes that there is also general support for the Department to ensure that the band-pass filters that DND plans to implement in its TCDL systems will in fact be effective in eliminating interference into adjacent bands. For example, Telus states the following in this regard:

TELUS and all Fixed Service operators in this band are relying on the fact that DND plans to employ filters at the edges of the 2X160 MHz sub-bands and recommends that Industry Canada ensure that TCDL does not generate interference into adjacent bands.¹⁰

⁶ RABC Comments, p. 2.

⁷ Telus Comments, p. 3.

⁸ RABC Comments, p. 6.

⁹ Telus Comments, p. 3.

¹⁰ Ibid, p. 3.

Conclusion

21. As outlined above, Rogers relies heavily on the use of a variety of fixed service spectrum bands, including the 15 GHz band, for microwave backhaul systems that are used in the provision of advanced commercial mobile voice and data services. Rogers' demand for fixed service spectrum will continue to grow along with the rapid growth of next generation broadband mobile data services. Other fixed service providers in the 15 GHz band also require additional microwave backhaul capacity to support advanced new wireless data services.
22. Rogers and other fixed service providers such as Telus are concerned with the Department's proposal to displace fixed service microwave backhaul systems from the affected portion of the 15 GHz band at the same time that it is also proposing to limit the use of portions of the 11 GHz band by fixed service microwave backhaul systems. These bands are required for the provision of mid-range backhaul links and limiting the use of fixed services in these bands will create a void in the options available to fixed service users.
23. In the event that the Department will proceed with licensing TCDL systems in the 15 GHz band, Rogers respectfully urges the Department to permit the operation of incumbent fixed services in the affected sub-bands indefinitely, and to require the displacement of these systems only after a reasonable transition period reflecting the substantial sunk cost of these systems and only if displacement is absolutely necessary to accommodate the proposed TCDL systems. If TCDL proponents require an earlier displacement of fixed service systems, then they should be required to fully fund the displacement cost of the incumbent fixed service users. Rogers' positions regarding these issues have been echoed in the comments of other fixed service providers in the 15 GHz band.

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