

INDUSTRY CANADA NOTICE NO. DGTP-008-4

**REVISIONS TO THE SPECTRUM UTILIZATION POLICIES IN THE 3-30 GHZ
FREQUENCY RANGE AND FURTHER CONSULTATION**

COMMENTS OF TERAGO NETWORKS INC.

Introduction

1. The Comments are submitted by Terago Networks Inc. (“Terago”) in response to Industry Canada’s invitation in Notice No. DGTP-008-04 *Revisions to the Spectrum Utilization Policies in the 3-30 GHz Frequency Range and Further Consultation* (Canada Gazette, Part I, October 1, 2004).

2. Terago is a leading wireless broadband data communications provider to businesses and other organizations. Owning and managing its own network, Terago uses state-of-the-art broadband technologies to provide cost-effective, high performance Internet access, data services, web hosting and e-mail solutions. Terago has operations in British Columbia, Alberta, Manitoba, and Ontario. It will shortly be adding Quebec to this list of operating territories. Terago’s corporate headquarters are based in Toronto, with additional operations based in Calgary. Further information is available at the company’s website: www.terago.ca.

3. Terago holds 70 spectrum licences issued by Industry Canada in the 24 and 38 GHz bands. Terago is one of the very few licensees in these bands that has actually put the frequencies into operational use, as required by Industry Canada when blocks in these bands were first auctioned in late 1999. Terago also uses unlicensed spectrum in the 2.4 and 5 GHz bands.

4. Terago is pleased to submit its comments in this proceeding. Terago is a significant user of radio spectrum in its business. Indeed, Terago depends on the continued availability of reasonable cost radio spectrum as fundamental component of its business plan.

5. A key theme of our comments is that Industry Canada should make available radio spectrum to operators, such as Terago, that will actually put the spectrum to work in providing services to customers. As such, Terago applauds Industry Canada’s initiatives to open up new ranges for operators that actually want to use the spectrum. There is little sense in reserving

spectrum for applications that are no longer relevant, or where operators have shown little interest, and where alternate applications can be developed.

6. By the same token, Industry Canada should be wary of allowing Canada's large incumbent telecommunications operators to warehouse spectrum that they have little interest in using. Canada's telecommunications industry is highly concentrated, being dominated by a handful of well-known, large and prosperous telephone and cable incumbents and their various affiliates. Indeed, the industry has become even more concentrated in recent years, with the demise of many start-ups and the purchase by the incumbents of some of their most aggressive competitors. Allowing these incumbents to stockpile spectrum can only impede the remaining competitors from developing their business operations. In this way, consumers are deprived of increased choice in the supply of services at competitive prices.

7. In the following paragraphs, we comment on issues that are raised in Consultation Document prepared by the Spectrum Management and Telecommunications Policy branch of Industry Canada. We focus our comments on those issues of greatest concern to Terago. The fact that we have not commented on an issue should not be construed as an endorsement of any particular position or outcome.

Ka Band, Specifically 17.8-18.3 GHz and 19.3-19.7 GHz

8. Terago notes that Industry Canada has decided to open up the 17.8-18.3 and 19.3-19.7 bands to limited fixed satellite service use, in addition to use for fixed services. This liberalization is subject to the qualification that fixed services are accorded priority over fixed satellite services.¹ In doing so, Industry Canada acknowledged the RABC's strongly expressed position that these bands be reserved for fixed services.²

9. Terago urges Industry Canada to be cautious in authorizing fixed satellite service in the 17.8-18.3 and 19.3-19.7 bands. Terago currently operates equipment in the 17.8-18.3 and 19.3-19.7 bands, and plans to deploy additional such equipment in the future. These bands are very important to Terago's expansion plans. From the RABC's comments, others share our view as to the importance of these bands for fixed services in priority to fixed satellite services.

¹ Consultation Document, section 5.2.2, p. 27 and revised footnote C16D (p. 31)

² Consultation Document, section 5.2.2, p. 26.

Accordingly, Industry Canada should strive to reserve these bands for fixed service to the greatest extent possible. Where it is necessary to authorize satellite services, Industry Canada should limit the number and location of earth stations so that the least possible restrictions are imposed on fixed services in these bands.

Licence Exempt Applications Below 10 GHz: 5470-5725 MHz Band

10. Terago supports the initiative to open up the 5470-5725 MHz band for unlicensed WAN applications. The additional unlicensed spectrum will be useful for Terago and other wireless service providers in serving their customers.

11. Industry Canada has already undertaken a consultation concerning the 5470-5725 MHz band, following changes at WRC-03.³ Many participants in the consultation, such as the WiFi Alliance, pointed to opportunities to implement unlicensed LAN systems in this band.

12. We note Industry Canada's decision to defer dealing with the 5470-5725 MHz band in light of the FCC's proceeding on ultra-wide technology (UWB) applications in this band. While Terago generally understands the desirability of harmonization with the FCC, we note that the FCC pronouncement was issued in February 2002, almost 3 years ago. Notwithstanding this substantial period of time for FCC consideration, there is no indication when Industry Canada will be in a position to render a decision on the application of the 5470-5725 band.

13. Terago urges Industry Canada to address the outstanding issues concerning the 5470-5725 MHz band as quickly as possible. Industry Canada does not explain why additional deliberation is needed at this point. Failure to address the issues at stake concerning this band creates uncertainty for users, and thwarts the proper development of this band.

Licence Exempt Applications Below 10 GHz: 3650-3700 MHz Band

14. Terago supports designating the 3650-3700 MHz band for unlicensed applications. We are pleased to learn that the FCC discussions are leaning towards designating this band for unlicensed applications in the USA. It makes sense for Industry Canada to move in a similar direction – and as quickly as possible.

³ Notice No. DGTP-005-04, *Consultation on Allocation Changes and Revisions to Spectrum Utilization Policy and Technical Rules in the 5 GHz Band*

15. Terago does not believe that many operators are presently using this band for licensed FWA applications, and accordingly transitioning these operators should not be difficult. There is no need to grandfather existing licensees. Rather, the licensed use should be subject to brief sunset provisions.

Licence Exempt Applications at 21.2-23.0 GHz

16. Terago encourages Industry Canada to open up the 21.2-23.0 GHz band for licence exempt applications as soon as possible. As in the case of other unlicensed bands, greater flexibility for unlicensed applications means more opportunities for carriers to develop and offer innovative and low cost services to consumers.

17. Terago supports a band designation that accords the greatest flexibility for operators. Accordingly, we recommend designation of this band for point-to-multipoint applications, as this would include point-to-point applications as well.

18. As a mechanism to address cross-border interference, Terago considers that there is merit in Industry Canada's proposal to only authorize entities that are capable of becoming radiocommunication carriers. In this way, Industry Canada can exercise any necessary control over operators that employ this band. As a practical matter, most users are likely to be radiocommunication carriers, and thus this restriction should not be burdensome.

Review of Broadband Spectrum Cap Applicable to the Bands 24, 28 and 38 GHz⁴

19. Terago urges Industry Canada not to rescind the spectrum cap for the bands 24, 28 and 38 GHz. Instead, the spectrum cap should be amended to encourage competition, and prevent spectrum warehousing.

20. The spectrum cap was established in 1999. Its purpose was to enable a number of new operators to develop local broadband infrastructure. Industry Canada recognized the danger of spectrum warehousing, especially by the ILECs that operated vast amounts of local infrastructure and which would clearly benefit from measures that impede the ability of new entrants to compete in the ILECs' home territories.

⁴ Consultation Document, section 6.9, p. 54

21. As noted earlier, very few licensees have put the licensed spectrum to work. Indeed, Industry Canada acknowledges in the Consultation Document that “the roll-out of wireless broadband facilities using these spectrum resources has been minimal”.⁵ Terago is an exception to this rule as it has used the licensed spectrum for the intended purposes. Terago offers a competitive alternative to the ILECs local infrastructure.

22. Lifting the spectrum cap will not achieve Industry Canada’s goal of promoting competition. Rather, it will give the ILECs and the cable companies the opportunity to shut the door on new local services operators by depriving them of a valuable input, namely licensed spectrum. These incumbents clearly have the resources and incentive to buy up all the available spectrum in the 24 and 38 GHz bands, and can afford to pay a super-competitive price if it reduces the likelihood of competitive entry.

23. Rather than rescind the spectrum cap, Industry Canada should amend it to specifically include cable companies and their affiliates, in addition to ILECs and their affiliates, in their home operating territories. The cable companies and their affiliates own and operate large amounts of local infrastructure, and have the same incentive as the ILECs to undermine competitors by withholding spectrum that can be used for competitive purposes.

24. If Industry Canada wishes to rescind the spectrum cap, it could do so for operators other than ILECs and cable companies, and their respective affiliates. These other operators simply do not raise the same competition concerns as the ILECS and the cable companies.

25. As a last point on the spectrum cap issue, we note that one of the reasons given by Industry Canada for lifting the spectrum cap is that there is “ample” spectrum available for local distribution.⁶ A careful examination suggests that this is not the case. At the present time, most companies are warehousing their spectrum in the 24 and 38 GHz bands, and thus this spectrum is not practically available for use as intended by Industry Canada. As for spectrum in the 2.3, 2.5 and 3.5 GHz bands, the ILECs and cable companies, and their wireless affiliates, control a large amount of the available spectrum. Thus, it can be seen that new operators have little opportunity to secure the spectrum they need.

⁵ Consultation Document, section 6.9, p. 55

⁶ Consultation Document, section 6.9, p. 55

To Conclude

26. Terago welcomes this opportunity to provide its comments in this proceeding. Spectrum resources are a vital component of the businesses of operators such as Terago, and they promise to become an even more important component in the future. As such, we urge Industry Canada to continue to open up new spectrum bands for interested operators, and to be mindful of the need to promote competition to the incumbent ILECs and cable companies and their affiliates.

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