



Telecom Decision CRTC 2006-61

Ottawa, 21 September 2006

Access to the Quality of Service Enhancement Service of Shaw Cablesystems G.P. (Shaw) and PacketCable functionality of Rogers Communications Inc., Shaw, and Vidéotron ltée

Reference: 8622-C122-200512716

*In this Decision, the Commission **denies** Cybersurf Corp.'s application for access to the Quality of Service Enhancement Service of Shaw Cablesystems G.P. (Shaw) and PacketCable functionality of Rogers Communications Inc., Shaw, and Vidéotron ltée. The Commission does not consider that traffic using the high-speed Internet service/third-party Internet access (HSIS/TPIA) network is being given unequal treatment or that parties using the HSIS/TPIA network are unable to provide their customers with an equivalent range of services.*

Application

1. The Commission received an application dated 4 November 2005, filed by Cybersurf Corp. (Cybersurf), pursuant to Part VII of the *CRTC Telecommunications Rules of Procedure*.
2. Cybersurf requested that 1) Shaw Cablesystems G.P. (Shaw) be required to resell to Cybersurf its Quality of Service Enhancement (QSE); and 2) Rogers Communications Inc. (RCI), Shaw, and Vidéotron ltée (Vidéotron) be required to provide Cybersurf with access to their PacketCable functionality.

Process

3. On 5 December 2005, the Commission received comments in response to Cybersurf's application from the Canadian Cable Telecommunications Association (CCTA);¹ Primus Telecommunications Canada Inc. (Primus); the Quebec Coalition of Internet Service Providers (QCISP); Quebecor Media Inc. (QMI), on behalf of its wholly-owned subsidiary Vidéotron; Shaw; TELUS Communications Inc., now known as TELUS Communications Company (TCC); and Vonage Canada Corp. (Vonage). On 15 December 2005, the Commission received additional comments from RCI and Shaw.
4. In a letter dated 21 December 2005, Cybersurf's request that Shaw be required to disclose on the public record the description of the elements that formed part of its QSE that it filed in confidence in its 5 December 2005 comments was denied.
5. On 13 January 2006, the Commission received Cybersurf's reply to the above-noted comments.

¹ The Commission notes that the CCTA ceased to operate in February 2006.

6. In a letter dated 31 January 2006, in response to several new issues raised by Cybersurf in its 13 January 2006 reply comments, parties were provided an opportunity to file supplementary comments, and Cybersurf was provided an opportunity to file a supplementary reply.
7. On 15 February 2006, the Commission received supplementary comments from the CCTA, RCI, Shaw, and QMI. On 27 February 2006, the Commission received a supplementary reply from Cybersurf.

Issues

8. The issues considered in this Decision are discussed below in the following sections:
 - A. Whether in those cases where Cybersurf resells Shaw's high-speed Internet service (HSIS), Shaw should be mandated to resell its QSE to Cybersurf; and
 - B. Whether Shaw's, RCI's and Vidéotron's PacketCable functionality should be made available to third-party Internet access (TPIA) subscribers like Cybersurf.
- A. Whether in those cases where Cybersurf resells Shaw's HSIS, Shaw should be mandated to resell its QSE to Cybersurf**

Positions of parties

Cybersurf

9. Cybersurf submitted that it was seeking access to Shaw's QSE only where TPIA was not available and it was reselling Shaw's HSIS.
10. Cybersurf noted that Shaw offered its HSIS customers a QSE for \$10 per month that Shaw claimed would improve the quality of Internet telephony services offered by third-party voice over Internet Protocol (VoIP) service providers. Cybersurf submitted that Shaw does not offer the QSE to resellers of Shaw's HSIS such as Cybersurf.
11. Cybersurf was of the view that by deploying the QSE for the benefit of its own retail HSIS customers while denying access to Cybersurf and others reselling Shaw's HSIS, Shaw was conferring an undue preference onto itself and unduly discriminating against Cybersurf, contrary to subsection 27(2) of the *Telecommunications Act* (the Act).
12. Cybersurf submitted that it suspected that Shaw was providing the QSE by using features made available to it through PacketCable and/or using deep-packet inspection software purchased from Ellacoya Networks (Ellacoya) to give preference to some data packets over others.
13. Cybersurf submitted that by not being able to offer Shaw's QSE to its own HSIS customers, it would not be able to compete with Shaw because it would be unable to offer its customers the range of services that would be enabled by Shaw's QSE. Cybersurf argued that, for example,

it would not be able to provide its customers with open access to third-party applications, deployment of next generation Internet Protocol (IP)-enabled applications, service bundling, or the flexibility to create its own services.

14. Cybersurf submitted that the Commission should require Shaw to provide its QSE for resale under the same terms and conditions and using the same rating formula that the Commission found appropriate when Shaw provides resold HSIS to Cybersurf.

Shaw

15. Shaw provided to the Commission in confidence a description of the elements included in its QSE. Shaw submitted on the public record that contrary to Cybersurf's submission, PacketCable functionality was not deployed on its HSIS/TPIA platform. Shaw further submitted that as of the time of this proceeding, it had not deployed Ellacoya's deep-packet inspection software in its network.
16. Shaw submitted that not having access to the QSE does not prevent Cybersurf from offering the same range of services as those provided by Shaw.

Other parties

17. The CCTA and QMI submitted that in *Regulatory framework for voice communication services using Internet Protocol*, Telecom Decision CRTC 2005-28, 12 May 2005, as amended by Telecom Decision CRTC 2005-28-1, 30 June 2005 (Decision 2005-28), the Commission rejected requests for unbundling capabilities such as Shaw's QSE. QMI submitted that, as such, Cybersurf's request for Shaw's QSE was a review and vary of Decision 2005-28.
18. The CCTA also submitted that there could be no discrimination because the cable companies' HSIS and that of TPIA customers like Cybersurf were essentially the same service. The CCTA noted that both HSIS and TPIA make use of the same Data Over Cable Service Interface Specification platform and the same physical channel on the cable plant. Further, the traffic generated by all parties gets the same priority, namely best-efforts.
19. TCC considered that Shaw's QSE was similar to the services, applications, and other differentiating factors that the Commission had always kept outside the scope of mandated resale and access.
20. Vonage submitted that Shaw's offering of the QSE to its HSIS customers was a way of attempting to discourage customers from subscribing to the services of competitors who do not own their own networks and therefore could not provide managed voice services. Vonage submitted that it was not clear that Shaw's QSE corrected any alleged deficiencies in VoIP services provided over the Internet. Vonage indicated that its customers were questioning as to whether Shaw's QSE was of any value or whether it was simply a penalty for connecting to an independent VoIP service provider.

Commission's analysis and determinations

21. With regard to whether this part of Cybersurf's application involves a review and vary of Decision 2005-28, the Commission notes that in that Decision it considered that VoIP service providers should be encouraged to develop their own quality of service (Q of S) improvements and capabilities, which could best be provided through facilities-based competition or through a service provider subscribing to TPIA or an unbundled loop. The Commission considers that the situation in this proceeding is different than that contemplated in Decision 2005-28 in that Cybersurf is requesting access to Shaw's QSE only where it does not have access to TPIA and is reselling Shaw's HSIS. The Commission is therefore of the view that Cybersurf's request does not involve a review and vary of Decision 2005-28.
22. The Commission notes that the provision of retail Internet service was largely forborne in several Commission orders based on the existence of a rivalrous, innovative, and sufficiently competitive market to protect the interests of users. The Commission is therefore of the view that it should not intervene unless necessary.
23. The Commission notes that Shaw indicated that its QSE was not being provided via PacketCable or by using deep-packet inspection software provided by Ellacoya. No evidence to the contrary was provided by any other party. The Commission also notes the CCTA's submission that all traffic on the HSIS network was given equal treatment.
24. The Commission finds that based on the evidence provided in this proceeding, no traffic is given priority over other traffic, and in particular, there is no evidence that Shaw's QSE gives its traffic preference over Cybersurf's or any other competitor's traffic on the HSIS network. The Commission therefore cannot find that Shaw is conferring onto itself an undue preference by offering its HSIS customers the QSE while not offering the same to Cybersurf for resale to its end-customers.
25. Accordingly, the Commission **denies** Cybersurf's request that Shaw be required to resell its QSE.

B. Whether Shaw's, RCI's and Vidéotron's PacketCable functionality should be made available to TPIA subscribers like Cybersurf

Positions of parties

Cybersurf

26. Cybersurf submitted that a cable carrier that deployed PacketCable functionality for the purposes of delivering services to its retail customers, while denying access to that functionality to competitors that purchase the cable carrier's TPIA service, conferred an undue preference in its own favour while unduly discriminating against its competitors, contrary to subsection 27(2) of the Act.

27. Cybersurf submitted that because of the shared nature of cable facilities, PacketCable was necessary to broaden the scope and reliability of services that can be offered over HSIS/TPIA connections. Cybersurf argued that without access to PacketCable it was not possible to guarantee a Q of S level between its customer and the point of interconnection between itself and the cable company providing it with TPIA.
28. Cybersurf submitted, at the same time, that in order to take advantage of PacketCable functionality it must not be relegated to sharing a channel on cable plant with other services such as retail HSIS. Otherwise, Cybersurf would receive an inferior Q of S and be more limited in the range of PacketCable-enabled services that it could offer to its end-users relative to the cable carriers.

QMI, RCI, and Shaw (collectively, the cable companies), and the CCTA

29. The CCTA was of the view that the Commission's policy basis for mandating TPIA was to promote competition in the provision of HSIS. The CCTA noted that in this regard, the Commission directed the cable carriers to ensure that third-party Internet service providers (ISPs) received a level of service that was no less favourable than that provided by the cable carriers to their own end-customers of retail Internet service. The CCTA and Shaw submitted that ISPs that were cable TPIA customers were not prevented from offering any service that a cable company might offer using its HSIS, including voice service and next-generation services such as unified messaging, interactive gaming, and video conferencing. The CCTA considered that, based on the above, there could be no discrimination. The CCTA submitted that the cable companies' retail HSIS and that of TPIA customers like Cybersurf were essentially the same service and the traffic generated by all parties received the same priority.
30. The cable companies submitted that the HSIS/TPIA and digital telephony networks were discrete networks, with entirely separate equipment, that were not interconnected in any way. The CCTA, Shaw, and QMI submitted that PacketCable was used exclusively on the digital telephony network and was not implemented in any form on its HSIS/TPIA network.
31. Shaw submitted that even if it were possible to implement the version of PacketCable it currently employed to provide digital phone service on its HSIS network, something that to Shaw's knowledge has never been done by any network provider, it doubted that this would provide Cybersurf with the ability to prioritize Internet traffic since the Internet was an open, best-efforts network. The CCTA and Shaw submitted, in addition, that deploying PacketCable on the HSIS/TPIA network could allow Cybersurf to prioritize packets and reserve bandwidth to the detriment of users sharing the same cable company HSIS/TPIA network.
32. The CCTA and Shaw submitted that while future versions of PacketCable may support prioritization of Internet traffic, this functionality does not exist today and no products have been tested or rolled out for that purpose. Shaw was of the view that there could be no demonstration of undue or unjust preference in respect of services that had not yet been conceived or implemented. Shaw and QMI were of the view that a blanket extension of future technologies to third-party ISPs that Cybersurf sought in its application would paralyze the incentive and ability of cable companies to upgrade their networks and to roll out innovative new services to Canadian consumers.

33. The CCTA and Shaw also considered that the Commission recently addressed the issues raised by the Cybersurf application in Decision 2005-28 when it rejected calls to unbundle broadband access Q of S functionality offered by an underlying Internet access provider. Shaw added that the Commission considered that all VoIP service providers should be encouraged to develop their own Q of S improvements and capabilities. As such, the CCTA was of the view that granting Cybersurf's application would reverse the conclusion of the above-noted Decision without evidence to support such a significant change. QMI was of the view that Cybersurf's application amounted to a review and vary of the Commission's policy pronouncements in Decision 2005-28, yet Cybersurf had made no attempt to satisfy the Commission's review and vary criteria.
34. The CCTA submitted, moreover, that PacketCable was an unbundled component of local telephony or competitive local exchange carrier (CLEC) technology replicating functionality found on telephone company Class 5 switches. QMI and Shaw submitted that Cybersurf was seeking unbundling of the cable companies' CLEC network, contrary to the Commission's determination in *Local competition*, Telecom Decision CRTC 97-8, 1 May 1997, that CLEC local exchange facilities need not be unbundled at that time. Shaw added that the Commission had never required CLECs to unbundle and provide tariffs for switching or signalling functions or for other elements of CLEC local networks.
35. The CCTA noted Cybersurf's claim that it was not seeking unbundling of the cable carriers' local voice facilities but was instead seeking to arrive at the same objective that could be achieved through unbundling of incumbent local exchange carrier (ILEC) networks. The CCTA considered that Cybersurf wanted to carve out a dedicated stream on the cable network that would be equivalent to an unbundled loop in the ILEC world. The CCTA submitted that Cybersurf had not demonstrated why cable networks should be unbundled on the same basis as ILEC networks.
36. RCI supported the CCTA's filing.

Other parties

37. Primus submitted that on the principle of providing greater choice and service alternatives to customers, the Commission should allow Cybersurf's application.
38. QCISP supported Cybersurf's application but requested that the scope of the Cybersurf request be extended to include Cogeco Cable Canada Inc.
39. TCC was of the view that PacketCable was an enhancement to TPIA that was outside the scope of the service that the Commission required cable companies to make available to independent ISPs. TCC submitted that PacketCable functionality within cable carrier networks had no effect on what applications could be provided over the Internet and by whom. TCC argued that there was nothing about PacketCable technology and functionality that would prevent independent ISPs from offering next-generation IP-based services over the cable carrier networks.

40. TCC submitted that the Commission, in coming to its determination in Decision 2005-28 that broadband access providers should not have to unbundle their Q of S capabilities offered to their own customers, understood that granting access to competitors to innovations developed by broadband service providers to differentiate their HSIS from others would reduce the incentive of competitors to innovate to the same end. TCC was of the view that Cybersurf had not provided any public policy reasons that would justify a departure from the Commission's view that the best way to encourage innovation, competition, and consumer choice in Internet services and applications for enhanced Q of S and features was for service providers to develop these for themselves.

Cybersurf's reply

41. Cybersurf submitted that it was not requesting unbundling of the portion of the cable carriers' networks used in the provision of telephony services. Rather, Cybersurf sought an extension to TPIA to allow access to PacketCable functionality and any required session management functionality, in order to enable Cybersurf to offer next-generation IP services supported by PacketCable, whether or not the cable carriers chose to provide such services to their own retail customers.
42. Cybersurf argued that access to PacketCable was exactly what was meant in Decision 2005-28 when the Commission stated that it wanted VoIP service providers to develop their own Q of S improvements and capabilities. Cybersurf submitted that PacketCable within the context of TPIA was the means by which it could develop its own Q of S improvements and capabilities. According to Cybersurf, TPIA without PacketCable does not allow VoIP service providers this capability, particularly with respect to the shared facility portion of the cable network between the cable company head-end and the end-user terminal equipment.
43. Cybersurf submitted that just because the cable companies chose to implement their IP-based telephony services on dedicated channels not associated with TPIA does not mean that those carriers should not be required to provide the minimum functionality required by other competitors to provide Q of S-enabled services through TPIA. Cybersurf was of the view that access to cable carrier PacketCable Q of S functionality that competitors cannot provide to themselves, i.e., between the cable company head-end and the end-user terminal equipment, was critical to the fostering of innovation in next-generation VoIP services and other IP-enabled services.
44. Cybersurf argued that by allowing ISPs to use the enhanced TPIA service, i.e., PacketCable, to provide high-quality voice services, the Commission would enable those service providers to establish a customer base, which in turn would make it viable for them to invest in related equipment, consistent with the Commission's objectives in paragraph 427 of Decision 2005-28. Cybersurf also argued that conversely, if its request was not granted, the evolution of facilities-based competition would be delayed and the Commission's statement in Decision 2005-28 that ISPs could offer their own form of managed VoIP service through TPIA would not come to pass.

45. Cybersurf submitted that cable carriers ultimately controlled the throughput speeds and bandwidth allocations on their networks. Cybersurf therefore argued that granting it access to PacketCable functionality so as to enable it to control the Q of S enabled through PacketCable on its TPIA connection would not cause degradation of any kind on the cable network.

Commission's analysis and determinations

46. The Commission notes that Decision 2005-28 dealt with concerns surrounding the provision of VoIP services. The Commission considers that in this case, Cybersurf is not challenging the determinations made in Decision 2005-28 with regard to the provision of VoIP services, but rather is seeking an enhancement to the TPIA service, something that is not directly addressed in that Decision. The Commission is therefore of the view that this part of Cybersurf's application does not involve a review and vary of Decision 2005-28.
47. The Commission notes that Cybersurf has claimed unjust discrimination contrary to subsection 27(2) of the Act in that it alleged that the cable companies have provided themselves with the capability via PacketCable to control the Q of S between themselves and their customers while not making the capability available to Cybersurf.
48. The Commission's analysis of an allegation concerning a contravention of subsection 27(2) of the Act is conducted in two phases. The Commission first determines whether the conduct in question is discriminatory or preferential, and where it so determines, it then decides whether the discrimination is unjust or the preference is undue or unreasonable.
49. The Commission notes that cable companies' HSIS and competitors' TPIA are provided over the same shared cable network. As noted above, the record of this proceeding does not indicate that PacketCable is deployed on the HSIS/TPIA network of the cable companies; that traffic on the HSIS/TPIA network is treated unequally; or that TPIA competitors are unable to provide the same range of services that the cable companies can over their HSIS.
50. At the same time, the Commission notes that the cable companies' digital telephony service is provided on a managed network, separate from the HSIS/TPIA network, on which they have deployed PacketCable in order to control Q of S.
51. The Commission considers that the ability of cable companies to control the Q of S between their customers and themselves via PacketCable confers an advantage upon the cable companies in circumstances where they do not make PacketCable available to enable competitors such as Cybersurf to have equivalent control over the Q of S.
52. The Commission notes the CCTA's and Shaw's comments that deploying PacketCable on the HSIS/TPIA network could allow parties the ability to reserve bandwidth on the shared HSIS/TPIA network. The Commission also notes, as did Cybersurf, that the cable companies could control the amount of bandwidth available to each TPIA competitor, allowing each TPIA competitor to assign its portion of bandwidth between its end-users. In the Commission's view, however, this could lead to disputes over bandwidth allocation and result in some traffic getting preference over other traffic. The Commission considers that requiring the cable companies to deploy PacketCable on the HSIS/TPIA network without a fuller review of the implications of

bandwidth allocation, of the criteria that might apply and how disputes might be resolved, would be premature. The Commission concludes that the cable companies should not be required to deploy the current version of PacketCable on the HSIS/TPIA network at this time.

53. The Commission notes that the only other way Cybersurf could be given access to PacketCable would be by giving Cybersurf access to a dedicated channel on the shared cable plant that is separate from the channel used to provide HSIS/TPIA, similar to what the cable companies do for themselves in order to provide their VoIP solutions.
54. The Commission notes, in this regard, that the cable companies rely to a greater extent on shared facilities than do the telephone companies, in order to provide services to their end-customers. Cable companies use these shared facilities to provide broadcasting services such as analogue, digital, and high-definition television, pay-per-view and video on demand services, as well as HSIS/TPIA, telephony and others. The Commission notes that carriage of many of the broadcasting services is mandated pursuant to the *Broadcasting Distribution Regulations*. The Commission considers that requiring cable companies to provide competitors access to these shared facilities in order for competitors to have dedicated facilities to their customers could quickly consume any remaining bandwidth on the existing cable plant and may negatively impact the cable companies' ability to provide services to customers.
55. In light of the foregoing, the Commission cannot conclude that the advantage cable companies confer upon themselves by using PacketCable and not making it available to Cybersurf is undue, or that the cable companies are unjustly discriminating against Cybersurf. Accordingly, the Commission **denies** Cybersurf's request that RCI, Shaw, and Vidéotron be required to provide Cybersurf with access to PacketCable functionality.

Secretary General

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