



Telecom Decision CRTC 2007-125

Ottawa, 7 December 2007

CRTC Interconnection Steering Committee – Non-consensus report on a functional architecture for the implementation of nomadic VoIP E9-1-1 service in Canada

Reference: 8621-C12-01/00, 8663-C12-200402892, 8663-B2-200316101 and
8663-C12-200717738

In this Decision, the Commission is of the view that, in principle, the proposed functional architecture for the implementation of voice over Internet Protocol (VoIP) enhanced 9-1-1 (E9-1-1) service in Canada, proposed by Bell Aliant Regional Communications, Limited Partnership, Bell Canada, Saskatchewan Telecommunications, and TELUS Communications Company (the Companies), meets the requirements set out in Telecom Decision 2006-60. The Commission considers that, with an economic evaluation, it would be better able to determine the economic viability of the Companies' proposal.

The Commission therefore directs the Companies to file an economic evaluation for their proposal. The Commission also directs Cogeco Cable Inc., MTS Allstream Inc., Rogers Cable Inc., Shaw Communications Inc., and Videotron Ltd. to file an economic evaluation of the costs they would incur if they were required to build and manage a Location Information Server for their own high-speed Internet customers, based on the Companies' proposed functional architecture. The Commission hereby initiates a proceeding to consider the implementation costs of the VoIP E9-1-1 service in Canada and how such costs will be recovered.

Background

1. In Telecom Decision 2006-60, the Commission approved the recommendation of the CRTC Interconnection Steering Committee (CISC) Emergency Services Working Group (ESWG) to adopt the National Emergency Number Association (NENA) i2 standard, adjusted as necessary for implementation in Canada, as the solution for the delivery of nomadic voice over Internet Protocol (VoIP) enhanced 9-1-1 (E9-1-1) service.
2. The Commission requested the ESWG to file a report, within six months of the date of Telecom Decision 2006-60, on a functional architecture for the implementation of the VoIP E9-1-1 service in Canada. The Commission also considered that the ESWG's report should specify the roles and responsibilities of all emergency services industry participants, particularly those who will supply the new operating elements.
3. The Commission also determined that, if necessary, it would provide guidance to the industry on how and when the issue of cost recovery will be dealt with upon the disposition of the ESWG's architecture report.

The Report

4. On 1 June 2007 the Commission received ESWG Non-Consensus Report ESRE044, *Report on a Functional Architecture for the Implementation of VoIP E9-1-1 Service in Canada*, dated 30 May 2007 (the Report). The Report is available on the Commission's website at www.crtc.gc.ca under "CISC" and "CISC Site Map."
5. In the Report, the ESWG noted that Bell Aliant Regional Communications, Limited Partnership, Bell Canada, Saskatchewan Telecommunications, and TELUS Communications Company (collectively, the Companies) submitted Contribution ESCO0283, in which they proposed a functional architecture for VoIP E9-1-1 service, based on the NENA i2 standard and adjusted for implementation in Canada (Canadian i2 solution).
6. The Report indicated that the Ontario 9-1-1 Advisory Board supported the Companies' proposed Canadian i2 solution that, in its view, had recognized the unique nature of the Canadian 9-1-1 infrastructure.
7. The Report also indicated that after extensive discussions, members of the ESWG had been unable to come to a consensus on the Companies' proposed Canadian i2 solution.
8. The main non-consensus views raised were that the Companies' proposal
 - did not provide cost estimates and, as a result, there were concerns that the costs would be significant;
 - contained technical limitations and several deviations from the solution approved in Telecom Decision 2006-60; and
 - raised concerns regarding product availability and the implementation timeframe.
9. Consequently, the ESWG requested the Commission to provide further direction and guidance in order for the industry to proceed with the development of an effective VoIP E9-1-1 solution in Canada.
10. In the Report, the Companies submitted that their proposal had been the subject of extensive and detailed development and that it provided a feasible architecture for a ubiquitous national VoIP E9-1-1 service, as mandated by the Commission in Telecom Decision 2006-60.
11. The Companies submitted that since the cost of the proposal had not been assessed, claims that costs would be exorbitant were baseless. The Companies also submitted that once the Commission approved the proposed architecture, implementation details could be determined and tariffs filed. The Companies further submitted that the associated cost studies would be filed in accordance with applicable rating and costing rules.
12. The Companies argued that all deviations from the NENA i2 standard were required to accommodate the differences between Canada and the United States in relation to, among other things, the 9-1-1 networks, the regulatory framework, the municipal and provincial responsibilities, and the public service answering point structure.

13. Regarding the implementation timeframe and product availability, the Companies submitted that they had successfully engaged several multinational vendors to address vendor issues and to identify support for the implementation of their proposed Canadian i2 solution. The Companies emphasized that they would have no interest in deploying and implementing a solution that vendors would not support.

Commission's analysis and determinations

14. The Commission considers that, as telecommunications networks in Canada evolve into all-IP networks, the implementation of a solution that will enable the provision of IP-based next generation E9-1-1 service to not only serve nomadic VoIP subscribers but all E9-1-1 users is necessary.
15. The Commission notes that NENA considers that the adoption of the i2 standard is the first major step toward the design of a robust IP-based next generation E9-1-1 service that can be adapted for present and future needs in order to support VoIP E9-1-1 and all types of 9-1-1 calling devices.¹
16. In light of the above and the public safety issues related to the limitations of 9-1-1/E9-1-1 service provided with local VoIP services, the Commission considers it necessary to give the industry direction and guidance on the proposed Canadian i2 solution in order to proceed with the development of an effective VoIP E9-1-1 service in Canada.
17. The Commission notes that, in Telecom Decision 2006-60, it set out the requirements to be met in any proposal for a functional architecture for the implementation of VoIP E9-1-1 service in Canada. The Commission is of the view that, in principle, the Companies' proposed Canadian i2 solution meets those requirements.
18. The Commission acknowledges the ESG's determined efforts in trying to reach a consensus on the proposed Canadian i2 solution. The Commission considers that, based on the issues raised in the Report and the discussions in the ESG, the overriding issue that led to non-consensus was the unknown implementation costs of the Companies' proposed Canadian i2 solution and uncertainty over cost recovery. The Commission considers that the issues of implementation costs and cost recovery are currently an impediment to the resolution of any technical disagreements or any of the other non-consensus issues raised in the Report.
19. The Commission notes that the purpose of the CISC working groups is to resolve technical issues affecting the industry. The Commission is of the view that CISC is not the appropriate forum to have discussions on cost-related issues. The Commission therefore considers it necessary to first undertake an economic evaluation of the Companies' proposed Canadian i2 solution, outside the CISC process.
20. The Commission considers that, with an economic evaluation, the Commission would be better able to determine the economic viability of the Companies' proposed Canadian i2 solution. If the proposal is determined to be economically viable, the Commission considers that the industry members in the ESG would then be better able to resolve any outstanding issues and pursue the implementation of the Companies' proposed Canadian i2 solution.

¹ http://www.nena.org/Press_Room/releasesnew/I2%20Approval%20Release.pdf

21. In light of the above, the Commission hereby initiates a proceeding to consider the implementation costs of the Canadian i2 solution and how such costs will be recovered.
22. The Commission directs the Companies to file an economic evaluation of the proposed Canadian i2 solution, including a summary of Phase II cost impacts, for the following scenarios:
 - i) the Companies build and manage a Location Information Server (LIS) as part of their own 9-1-1 network(s), on behalf of all high-speed Internet access service providers (ASPs), and
 - ii) the ASPs build and manage their respective LIS for their high-speed Internet customers.
23. The economic evaluation for each of the above scenarios should also include
 - i) the rates the Companies plan to charge nomadic VoIP service providers for access to the service;
 - ii) the estimates of the demand for the service and the per subscriber costs and rate for each rate element, based on recovering the costs from (a) nomadic VoIP customers only and (b) from all 9-1-1 subscribers; and
 - iii) detailed proposals as to how ASPs and Internet service providers would recover their costs under the scenario at paragraph 22(ii).
24. The Commission also directs Cogeco Cable Inc., MTS Allstream Inc., Rogers Cable Inc., Shaw Communications Inc., and Videotron Ltd. (collectively, the large ASPs) to file an economic evaluation of the capital and expense costs to build and manage a LIS for their respective high-speed Internet customers. The economic evaluation should be based on the Companies' proposed Canadian i2 solution, include a summary of Phase II cost impacts, and provide detailed proposals on how the implementation costs and the costs of providing the service would be recovered.

Process

25. The large ASPs, the Companies, and all members of the ESWG are made parties to this proceeding.
26. Other persons interested in participating in this proceeding must notify the Commission of their intention to do so by filling out the online form, or by writing to the Secretary General, CRTC, Ottawa, Ontario, K1A 0N2, or by fax at: 819-994-0218 by **1 February 2008** (the registration date). Parties are to provide their email address, where available. If parties do not have access to the Internet, they are to indicate in their notice whether they wish to receive disk versions of hard-copy filings.

27. The Commission will post on its website, as soon as possible after the registration date, a complete list of interested parties and their mailing addresses (including their email addresses, if available), identifying those parties who wish to receive disk versions.
28. The Companies and large ASPs are to file the requested information with the Commission, serving a copy on all parties, by **29 February 2008**.
29. The Commission and all parties may address interrogatories that strictly focus on the economic evaluations to the Companies and the large ASPs by **14 March 2008**.
30. Responses to interrogatories are to be filed with the Commission and served on all parties by **1 April 2008**.
31. Parties may file with the Commission, serving a copy on the relevant party or parties, requests for further responses to their interrogatories, specifying in each case why a further response is both relevant and necessary, and requests for public disclosure of information for which confidentiality has been claimed setting out in each case the reasons for disclosure, by **8 April 2008**.
32. The Companies and ASPs may file with the Commission, serving a copy on the party or parties making the request, written responses to requests for further responses to interrogatories and for public disclosure by **15 April 2008**.
33. The Commission will issue its determinations with respect to requests for further information and public disclosure as soon as possible. All parties may file with the Commission, serving a copy on all other parties, any information pursuant to those determinations by **29 April 2008**.
34. All parties may file comments that strictly focus on the economic evaluations with the Commission, serving a copy on all parties, by **13 May 2008**.
35. All parties may file reply comments with the Commission, serving a copy on all parties, by **27 May 2008**.
36. Where a document is to be filed or served by a specific date, the document must be actually received, not merely sent, by that date.

Secretary General

Related document

- *CRTC Interconnection Steering Committee – Consensus report on E9-1-1 services provided to nomadic and fixed/non-native VoIP subscribers*, Telecom Decision CRTC 2006-60, 21 September 2006

This document is available in alternative format upon request, and may also be examined in PDF format or in HTML at the following Internet site: <http://www.crtc.gc.ca>