20 November 2009

Mr. Robert A. Morin
Secretary General
Canadian Radio-television and
Telecommunications Commission
Ottawa, ON   K1A 0N2

Dear Mr. Morin:

Subject: Reply Comments of MTS Allstream to TNC 2009-194 concerning Nomadic VoIP E9-1-1 service

1. In accordance with procedures outlined by the Commission, MTS Allstream Inc. (MTS Allstream) herein provides reply comments in response to Telecom Notice of Consultation 2009-194 – Call for comments - Nomadic VoIP E9-1-1 service (TNC 2009-194).

2. The Commission has pursued the advancement of public safety through implementation of 9-1-1 and E9-1-1 services for VoIP users since the release of Public Notice 2004-2\(^1\) (PN 2004-2) in early 2004. The resulting proceeding engaged dozens of companies and organizations and produced over three hundred submissions. The record of PN 2004-2 includes reference to no fewer than eleven related decisions so far, many of which also have extensive regulatory records.

3. The Commission has endorsed a proposed architecture for a potential E9-1-1 service for users of nomadic VoIP services based on the NENA i2 standard, adapted for use in Canada (known as the Canadian i2 standard, or herein as Ci2). The two key components of Ci2 would be:

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\(^1\) Telecom Public Notice CRTC 2004-2, Regulatory framework for voice communications services using Internet Protocol, 7 April 2004
a. A Location Information Server (LIS), which would be a database containing
customer location information, operated by the ILEC in each territory, and
b. A Location Determination Platform (LDP), which would populate the LIS by
identifying a nomadic VoIP 911 caller’s location by linking the caller’s Internet
Protocol (IP) address with the civic address of the high-speed Internet access
used to obtain VoIP service.

4. In TNC 2009-194, the Commission sought information to enable a better assessment of
the economic viability and administrative feasibility of Ci2, as well as comments on other
possible approaches. To these ends, the Commission solicited input on four matters:

a. What are the LDP costs?
b. Who should pay for the various costs of implementing nomadic VoIP E9-1-1
service?
c. Should small ASPs be exempt from implementing an LDP?
d. Are there alternative solutions that would improve on the current nomadic VoIP
9-1-1 service?

5. As discussed in detail below, MTS Allstream submits that Ci2 is neither economically
viable nor administratively feasible, and should be set aside. Further, while some less
costly alternative solutions have been proposed, total industry costs for those
alternatives remain very high in respect of the number of nomadic VoIP users, while
providing more imperfect solutions than Ci2.

New Data Sheds Light on Users of Nomadic VoIP

6. Until very recently, there was no reliable data or even reasonable understanding of users
of nomadic VoIP services. Demand estimates in the hundreds of thousands of
subscribers and forecasts of greater than 20% annual growth were built on a
combination of best case conjecture and outdated marketing designs. In their most
recent submission of evidence however, Cogeco Cable Inc., Rogers Communications
Inc., Shaw Communications Inc., and Quebecor Media Inc., on behalf of its affiliate Videotron Ltd. (collectively, the Cable Carriers) introduced a commissioned research study to shed light on the actual state of the nomadic VoIP market in Canada (the LYA study).

7. The LYA study determined that “access-independent VoIP subscribers, based on the results of this survey, tend to make very little use of the nomadic capabilities of their service when they travel. Access-independent VoIP service is by and large used for fixed home phone service.”² The LYA study estimates a current base of only 10,000 subscribers who use the VoIP service on a nomadic basis. It’s reasonable to assume that only a fraction of these subscribers are actually nomadic at any time. The LYA study also estimates that the number of subscribers has remained relatively unchanged since 2004. Clearly the actual use of nomadic VoIP services has fallen far short of the predictions of prevalence and growth as submitted by Bell Canada (Bell) and Telus Communications Company (Telus) in their initial economic evaluations of the cost impacts associated with implementing Ci2.³

8. The LYA study also makes key points regarding end-user preferences in selecting either wireless service or access-independent VoIP service. LYA notes that “access-independent VoIP services have been used primarily and close to solely, to avoid or decrease long distance charges”⁴, and cites the growth in wireless services as a contributing factor to the lack of growth for access-independent VoIP services.⁵ As wireless services continue to be enhanced, such as with the current implementation of Phase II E9-1-1 capabilities and as expanding competition continues to push wireless prices lower, the price-value relationship will change for end-users, and it’s reasonable to expect demand for access-independent VoIP services to decline.

Ci2 Remains Economically Unviable

² LYA report, page 30
³ In their respective 28 March 2008 economic evaluation submissions of Ci2, Telus and Bell assumed an existing base of 200,000 Nomadic and Fixed/Non-native subscribers in Canada. Telus went on to assume a forecasted a growth projection that would have expanded the base of subscribers to 500,000 after a 6 year period.
⁴ LYA report, page 8
⁵ ibid
9. In TNC 2009-194, the Commission noted that estimated industry costs to implement LDP functionality totaled in excess of $250M, and represented about 90% of the total cost of implementation.\(^6\)

10. In response to the Commission’s request for refined costing analysis, the following estimated LDP costs were submitted by parties in August:

<table>
<thead>
<tr>
<th>Company</th>
<th>PWAC for LDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell Canada and Bell Aliant</td>
<td>Filed in confidence</td>
</tr>
<tr>
<td>Bell Aliant</td>
<td>Filed in confidence</td>
</tr>
<tr>
<td>Telus</td>
<td>Filed in confidence</td>
</tr>
<tr>
<td>SaskTel</td>
<td>$2.4M</td>
</tr>
<tr>
<td>MTS Allstream</td>
<td>$9.8M</td>
</tr>
<tr>
<td>Rogers</td>
<td>$18.2M</td>
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<tr>
<td>Cogeco</td>
<td>$9.2M</td>
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<tr>
<td>Shaw</td>
<td>$10.9M</td>
</tr>
<tr>
<td>Quebecor</td>
<td>$6.2M</td>
</tr>
<tr>
<td>CCSA</td>
<td>$25.0M</td>
</tr>
<tr>
<td>Total PWAC for LPD for companies not filing in confidence</td>
<td>$81.7M</td>
</tr>
</tbody>
</table>

11. It is reasonable to extrapolate that total cost to implement C2 across all ILECs, ASPs and VoIP service providers’, including LDP, LIR and other components remains in the order of $200M. This proposed investment, for an estimated 10,000 users of nomadic VoIP services, works out to a one-time cost of roughly $20,000 per user, or an ongoing cost of more than $300 per user per month over a period of seven years. There is no reasonable way to rationalize such an investment when superior services which already offer E9-1-1 capability are widely accessible in the market.

\(^6\) TNC 2009-194, paragraph 11
**Ci2 Remains Administratively Unfeasible**

12. MTS Allstream has noted that Ci2 would not work for 70% of broadband connections within regions of Manitoba currently served using Motorola DSLAMs. The requirement to perform five layers of data matching between various company databases would not yield reliable location information, and the costs and administrative efforts to rebuild the support systems to standardize and re-codify the data are prohibitive. While Ci2 may have more promise with other technologies, Ci2 remains a unique architecture which has never been implemented anywhere in the world.

13. MTS Allstream also notes that Ci2 leaves many other service gaps. For example, Ci2 is not expected to provide accurate caller location where nomadic VoIP service is used for corporate virtual private networks, where private VoIP PBXs serve users at multiple locations, or where users roam through a neighbourhood or campus served by a wireless broadband router.

**Other Matters**

14. Upon concluding that Ci2 is neither economically viable nor administratively feasible, the questions about recovery of costs and exemptions for small ASPs become moot.

15. In considering other proposals made during the course of this proceeding, such as IP Tracker and Real-time Query, MTS Allstream agrees that they would likely be much less expensive to implement than Ci2, though perhaps somewhat less. Nevertheless, MTS Allstream anticipates that the combined industry cost to implement would not be commensurate with the number of nomadic users of VoIP services.

16. MTS Allstream submits that it may be appropriate, and more reasonable, to revisit the questions of economic viability and administrative feasibility should there be material demand for nomadic VoIP services after the implementation of the NENA i3 architecture that is expected to replace the existing i2 standard.
Conclusion

17. The Commission and industry stakeholders have pursued the availability of 9-1-1 and E9-1-1 services for users of VoIP services for more than five years. Based on new research commissioned by the Cable Carriers, we now understand that Ci2 represents at best a possible solution for some 10,000 nomadic users of VoIP services today (and likely even fewer users in the future), for a cost in the hundreds of millions of dollars.

18. Further, Ci2 cannot address a number of gaps among these nomadic users, including those making calls from 70% of broadband connections in Manitoba. MTS Allstream simply cannot produce reliable location data through the multiple layers of data matching, and it would be prohibitively expensive to rebuild the various support systems. In addition, Ci2 will not provide location data for other users of nomadic VoIP services, such as those using corporate VPNs, and can therefore not be considered a comprehensive solution.

19. For all of these reasons, MTS Allstream submits that Ci2 is neither economically viable nor administratively feasible to provide E9-1-1 services for nomadic users of VoIP services.

Yours truly,

for Teresa Griffin-Muir
Vice President, Regulatory Affairs

c.c: Allen Trafford, MTS Allstream, 613-688-8794
Parties to TNC 2009-194

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