November 6, 2009

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

Dear Mr. Morin:

Re:  Telecom Notice of Consultation CRTC 2009-194; Call for comments – Nomadic VoIP E9-1-1 service (TNC 2009-194)

Pursuant to Paragraph 30 and Appendix 2 of TNC 2009-194, Comwave Inc. hereby submits its comments in relation to the above-noted proceeding.

Sincerely,

Original signed by:

Yuval Barzakay  
President
1. Pursuant to Paragraph 30 and Appendix 2 of TNC 2009-194, Comwave Inc. (Comwave) hereby submits its comments in relation to the above-noted proceeding. While Comwave limits its comments in this submission to issues of cost recovery and alternative solutions, the company reserves the right to respond to the positions taken by others in the other matters before the Commission in this proceeding during the Reply phase.

Cost Recovery

2. Comwave believes that the costs for implementing the long term VoIP E9-1-1 solution should be spread across as wide a spectrum as possible. In the context of this proceeding, this means all 9-1-1 users including wireless.

3. Some, most notably the cable companies, have argued that the costs for implementing the solution should be borne by those that benefit directly from it, namely VoIP subscribers.

4. This is predicated on the misconception that the next generation E9-1-1 system, of which Ci2 will form the foundation, will be used solely for nomadic VoIP users. In fact, it is widely expected that the Next Generation 9-1-1 system (NG9-1-1) will become the de facto solution for all E9-1-1 in North America. As such, all 9-1-1 users will benefit directly from the solution that is developed and implemented as an outcome of this proceeding.

5. This is certainly the expectation of NENA that has billed its development of NG9-1-1 as anything but technology or service specific\(^1\). In fact, the main thrust behind NG9-1-1 is to create a solution that will manage 9-1-1 messages from all traffic and device types. At its basis, NG9-1-1 is a recognition that the basic building block of the communications network is moving from the telephone number to the IP address. The ability, therefore, to map an IP address to a location (e.g., civic address, long/lat coordinates, etc.) is fundamental to any NG9-1-1 solution.

6. To the extent that Ci2 will provide for the mapping of an IP address to a civic address to at least 90% of the Canadian HSI base (assuming at least the nine largest ASPs will be

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\(^1\) “What is NG9-1-1?”, [http://www.nena.org/sites/default/files/NG9-1-1%20Definition%20Final%201.1.pdf](http://www.nena.org/sites/default/files/NG9-1-1%20Definition%20Final%201.1.pdf)
involved), it can be surmised that its various elements, be they the LIS or LDP, will participate in the eventual evolution of the network to NG9-1-1. This alone is sufficient to substantiate recovering costs from all 9-1-1 users.

7. Aside from the basic policy arguments, there is another consideration that should be taken into account in deciding on the best cost recovery model. Whether the long term solutions studied in this proceeding (namely Ci2 and Rogers’ Real Time Query) are considered cost effective hinges in part on the method of cost recovery. According to the information filed in this proceeding by the ASPs and ESPs, it is self-evident that the monthly rate that would apply if costs were recovered from VoIP users alone is orders of magnitude higher than the rate that would apply if all Canadian 9-1-1 users are considered. In fact, in the latter case in many jurisdictions, the cost is mere pennies per month, an amount that can readily be recovered from users through a slight increase in the 9-1-1 rate, or absorbed outright by the service provider without it being overly burdened.

8. If VoIP users alone bear the cost of Ci2, it will place a disproportionate burden on VoIP service providers that most will be unable to absorb, forcing them to raise rates significantly to a point where they can no longer remain competitive. This clearly was not the result envisioned by the Commission when it mandated implementation of Ci2.

9. In Appendix 2 of TNC 2009-194, the Commission writes:

   Parties supporting an LDP cost recovery scenario other than that whereby ASPs are each responsible for their own LDP costs are to provide submissions addressing the following:

   a) how each ASP’s LDP costs would be assessed and verified;

   b) the basis upon which revenues would be collected;

   c) the basis upon which revenues would be distributed; and

   d) how and by whom the collection and distribution of revenues would be administered.

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2 TNC 2009-124 paragraph 15
10. While other parties to this proceeding have much more experience than Comwave does in these matters, it is our view that the methods used today for assessing the costs of the wireline 9-1-1 system as well as the method in which revenues are distributed to cover the costs borne by ILECs serving high cost areas can serve as models for similar processes in respect of Ci2.

11. Participating ASPs would use the same methods used by the ILECs for doing similar costing exercises to determine the costs of their LDPs as would each ESP to determine the cost of its LIS and the associated interconnection facilities and equipment. The total start-up and on-going costs would then be divided by the total number of E9-1-1 users in Canada to form the rate to be applied to all E9-1-1 working telephone numbers. This would be collected by the ILECs from the various service providers within their jurisdiction and placed in a central fund (or paid directly by the service providers into the fund) to be distributed to participating ASPs and ESPs in accordance with the costs previously determined.

12. Comwave has consistently held the view, along with the Commission, that a long term solution that maps an IP device to a geographic location needs to be implemented in Canada. The solution should be cost effective and in keeping with technical standards.

13. Ci2 meets these criteria. As noted above, assuming the right cost recovery model is chosen, Ci2 should cost only pennies per month per subscriber. Also, as noted, the solution is on the evolutionary path of standards being developed by NENA for NG9-1-1 since it provides the basic network elements required to link an HSI subscriber’s IP address to his/her civic address.

14. The other solutions proposed in TNC 2009-194, on the other hand, are flawed in comparison with Ci2.

15. IP Tracker, proposed by Rogers in its submission and endorsed by the other major cable companies, is simply an enhanced version of the status quo. The solution has two major flaws.
16. First, it cannot be ubiquitously applied. IP Tracker relies on the recognition of a “material change” in the IP address that represents an actual change in location. For the cable companies, a material change in address is noted if a device moves from one CMTS to another. In the case of Rogers, each CMTS covers 425 homes passed. The solution will not work if a customer moves within those 425 homes (either permanently or by porting his device temporarily to the neighbour’s house). While Rogers may be correct in its assertion that an intra-CMTS move would not be a common occurrence on its network (although we remain unconvinced), this assertion certainly cannot be made for all cable companies.

17. Cogeco reports its CMTS size ranges from 4,000 to 20,000 homes, with an average of 8,000. Videotron, for its part, reports an average CMTS size of 6,000 homes passed. In these cases, the probability of frequent intra-CMTS moves can longer be flipantly discounted as the IP Tracker solution begins to lose its luster.

18. DSL holds out even less hope for the IP Tracker solution. Execulink reports that it does not assign IPs to a defined geographic area. Both Bell and Telus report IP address pools that cover entire cities.

19. Thus, IP Tracker is far from universally applicable and therefore should not be considered a viable alternative even for the short term. We suggest that even if the solution could be applied to every ASP network, it has an additional flaw that would render it a waste of time and resources. IP Tracker is simply an enhanced version of the status quo. It still requires significant human intervention and where human intervention is required mistakes are much more likely. In addition, interrogatory responses provided by the Companies, Telus, Comwave and others express the belief of many parties to this proceeding that IP Tracker would be an irritant and annoyance to most customers and place VoIP service providers at an artificially created competitive disadvantage to other market players.

20. In summary, IP Tracker doesn’t work because it cannot be applied outside the networks of a minority of cable companies and even if it did, its disadvantages outweigh any slight benefit that it may provide.

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3 Cogeco(CRTC)28Aug09-3-1
4 QMI(CRTC)29Aug09-3-1
5 ASP-Execulink(CRTC)28Jul09-1
6 The Companies-ASPs(CRTC)28Aug09-1
7 TELUS_Access Svc P(CRTC)28Aug09-1
21. The other solution proposed by Rogers and some of the other cable companies is Real Time Query. Real Time Query is a long term solution that provides automated IP to civic address mapping and, as such, represents an evolutionary path to NG9-1-1. From these perspectives, Comwave is not averse in principle to the implementation of such a solution, especially if the claims of its proponents on the potential for a more cost effective solution are true.

22. Our concern is that it is only now in the proposal stage and choosing to go with RTQ could send the industry back to the drawing board for another drawn-out round of discussions with an uncertain conclusion. We believe time is of essence and it is therefore preferable to move forward with the solution that the Commission has already endorsed and which, as noted above, fulfills the criteria of being standards based and cost effective.

23. While Comwave supports the implementation of Ci2, alternatively our second choice would be to keep the existing Basic 9-1-1 service for Nomadic VoIP. The rationale due in part to; (1) the changing competitive and technological landscape in such a short period of time; (2). Nomadic VoIP policy was created at a time when growth expectations were predicted to be explosive yet they have not materialized; (3) the other two alternative solutions are not feasible as already discussed.

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