6 November 2009

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

Subject: Call for comments – Nomadic VoIP E9-1-1 service – Telecom Notice of Consultation CRTC 2009-194

1. Pursuant to the procedures established by the Commission in Call for comments – Nomadic VoIP E9-1-1 service – Telecom Notice of Consultation CRTC 2009-194, 15 April 2009 (“TNC 09-194”), as modified by the Commission’s letter, dated 12 May 2009, and Telecom Notice of Consultation CRTC 2009-194-1, dated 4 June 2009, the Canadian Independent Telephone Company Joint Task Force (“JTF”) hereby submits its comments on the matters within the scope of this proceeding as well as the specific issues raised by Appendix 2 and 3 of TNC 09-194.

Introduction

2. The JTF represents the thirty two Small Incumbent Local Exchange Carriers (“SILECs) identified in the Attachment to this submission. These SILECs operate throughout rural Canada and together serve over 150,000 local access lines. Each of these SILECs own distribution facilities used to provide high-speed Internet access which, according to proposed functional architecture for nomadic VoIP E9-1-1 service, qualifies them as Access Service Providers (“ASPs”). In addition, many SILECs also operate as CLECs offering high-speed Internet access in exchanges other than their SILEC operating territory doing so through their own facilities, reselling Bell Canada’s Gateway Access Service (“GAS”), High Speed Access service (“HSA”) and/or the cable companies’ Third Party Internet
Access service (“TPIA”). SILECs also employ fixed wireless services to provide high-speed Internet access.

3. According to the proposed architecture, ASPs would be required to build a location determination platform (“LDP”) which identifies a nomadic VoIP 9-1-1 caller’s location by linking the caller’s IP address with the civic address of the high-speed Internet access used to obtain VoIP service. In addition, ASPs would be required to maintain a database of its customers’ location information (i.e. a location information server or “LIS”) which they would constantly update with the location information generated by the LDP and provide this information to the correct PSAP when a 9-1-1 call is made. The JTF notes that an alternative approach to the LIS has been put forward by the ILECs and that a number of alternate solutions for the provision of nomadic VoIP E9-1-1 service have also been proposed, primarily by the large cable companies.

4. The proposals under consideration in this proceeding are not comprehensive solutions to the problem, nor are they the only alternatives available. The JTF respectfully submits that other options for the provision of 9-1-1 to nomadic VoIP users, including the status quo, should be considered by the Commission. The onus should be on the VoIP providers to provide solutions to an issue they created rather than requiring incumbent service providers to resolve this issue for them. The provision of E9-1-1 to nomadic VoIP users needs to be considered not only from the vantage point of the technological solution but from other vantage points such as cost and liability.

5. To summarize its position, and as indirectly referred to by the Commission itself in paragraph 16 of TNC 09-194, the JTF submits that the ILECs’ proposal for

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1 At paragraphs 10&11 of TNC 09-194 the Commission has highlighted the fact that the ILECs believe that a centralized LIS hosted by the ILEC would be the most cost-efficient approach and that the ASPs that had participated in the process leading up to the issuance of TNC 09-194 supported this approach.
nomadic VoIP E9-1-1 is neither economically viable nor administratively feasible and furthermore, none of the alternate solutions proposed by the large cable companies is an adequate alternative. These proposals should be abandoned in favour of the current method of routing 9-1-1 calls made by nomadic VoIP users. The current VoIP 9-1-1 regime does provide users with Basic 9-1-1 service, appropriately places the liability on the VoIP service providers and imposes the responsibility on the end-customer to notify the service provider if the customer changes location either permanently or temporarily.

6. Should the Commission proceed with the ILECs’ proposal or a variation of it, nomadic VoIP service providers and their customers should be responsible for paying for the costs of implementing nomadic VoIP E9-1-1 service both at start up and on a recurring basis. The costs for this service should not be borne by ASPs – large or small - or by their customers.

7. Finally, the JTF submits that there should be no exemption for small ASPs. If service providers elect to take the exemption, it would have the effect of creating geographic pockets throughout the country - mostly rural - where E9-1-1 would not be available. As a result, it is not clear as to how nomadic VoIP users would know whether or not they had entered a “No E9-1-1” zone and, as a result, how they would come to understand that they should expect a different level of service from that available in an adjacent area. Moreover, neither the Commission nor the telecommunications industry should, by virtue of permitting such exemptions, signal that life and security in rural Canada is less precious than that in urban Canada.

Neither economically viable nor administratively feasible

8. The Commission should reject the ILECs’ proposal because for SILECs and other companies, it is operationally unworkable in many respects and places a
disproportionate ongoing administrative and financial burden on the ASPs, many of whom are not service providers in the nomadic VoIP market to begin with. In paragraph 15 of TNC 09-194, the Commission provides the following information regarding the ASP industry in Canada:

The Commission estimates that there are 230 ASPs in Canada, all of which would have to implement LDP for the nomadic VoIP E9-1-1 service to be available with every broadband connection. Based on available information, the Commission estimates that the nine largest ASPs have over 90 percent of the subscribers, and the remaining 221 ASPs have the remaining 10 percent. (emphasis added)

9. In paragraph 14 of TNC 09-194, the Commission refers to members of another association of small service providers - the Canadian Cable Systems Alliance (“CCSA”) - and states:

... the majority of its 80 members have fewer than 2,000 cable subscribers each...

10. Generally speaking, JTF members are in a similar predicament to the members of the CCSA as described by the CCSA in its submissions in this proceeding. As part of that large group of 221 ASPs that between them split just 10 percent of the Canadian market, each JTF member is amongst the smallest of the incumbent service providers in the country, dwarfed by the ILECs and large cable companies, and with significantly smaller customer bases from which to recoup any costs associated with this proposal or similar proposals. The Economic Evaluation filed by CCSA on 7 August 2009 assumes that if 50 of its members implemented the LDP service alone (excluding the LIS) the total costs would exceed $24.5 Million\(^2\) or approximately $500,000 per company. While the JTF is unable to extrapolate these results to its own membership base, it is safe to say that, as a rough order

of magnitude, the expenses that would be incurred by JTF member companies would be similar to CCSA members.

11. In addition to the helpful information provided by the CCSA, the JTF provides the following additional arguments as to why the proposal should not be adopted by the Commission. First, as mentioned above, the proposal would place a disproportionate provisioning, financial, operational and administrative burden on SILECs. These companies are currently not equipped to shoulder such a burden especially in light of the very limited obligations placed on nomadic VoIP service providers by the ILECs’ proposal.

12. As far as the JTF is aware, there is currently no commercially available hardware or software solution that would enable service providers to link a caller’s IP address with the civic address of the high-speed Internet access and create an LDP. As a result, small ASPs are faced with the hurdle of having to develop this capability internally - a substantial commitment in terms of time and money. This is problematic for the SILECs since they are telecommunications service providers (“TSPs”) and not technology developers. As TSPs they have no experience in developing the software or manufacturing the hardware components of solutions such as those necessary under the ILECs’ proposal. It is not realistic to expect that SILECs could build, maintain and support the LDP in a manner that supports an important life line service such as 9-1-1.

13. It is important for the Commission to realize that any technical solution to this problem would not be a marketable product nor will SILECs be able to collaborate on a single solution that could then be shared operationally amongst them. Any solution will be unique on a company-by-company basis due to the fact that ASPs, acting as ISPs, offer and configure high-speed Internet access services at their own discretion with respect to dynamic versus static assignment
of IPs, the number of IPs included with service and operation of the service based upon those assignments. This fact was confirmed by CCSA in its Economic Evaluation:

Assuming 50 companies implemented the LDP service, the Total Cost Impacts (PWAC) would exceed $24.5 million. The per-company costs could not be shared among CCSA Member Companies because each company operates independent network, provisioning and related back-office systems. (emphasis added).\(^3\)

14. There are also other technical issues that argue against the adoption of the ILECs’ proposal. In order for the LDP to function as intended and to ensure that 9-1-1 calls are handled appropriately in all cases, the accuracy and completeness of the ASP’s network records will have to be exact. This is currently not always the case. Indeed, ASPs’ networks will have to be audited in advance to provide a base for the establishment and ongoing maintenance of accurate records. This audit, especially for small service providers, will be an enormously expensive and time consuming process.

15. There will also be a significant, on-going level of effort and expense for small service providers as they implement systems and processes to ensure that dynamically assigned IP addresses are linked correctly to access equipment-determined port assignments, and in those instances where customer premises equipment is moved, added or changed, ensuring that these events are correctly reflected in their records. These processes may be well-established in the traditional wireline industry where the pace at which certain variables change is slower; however, the same cannot be said of the nomadic VoIP scenario.

\(^3\) Ibid.
16. Many SILECs use Bell Canada’s wholesale Gateway Access Service (“GAS”) to provide high-speed Internet access services in those areas where they do not have their own access facilities. Where SILECs use GAS and HSA, the operational issues will multiply due to the communication processes that will have to be established between the SILEC and Bell Canada. Bell Canada will continue to provide the physical circuits over which the wholesale service is provided. For their part SILECs will continue to dynamically assign the IP addresses. The required degree of co-ordination between the two parties will be unprecedented and, based on the SILECs’ experience to date, likely unattainable given the requirement by Bell Canada for wholesale ISP customers to communicate utilizing generic e-mail boxes such as ISPChat as the first and preferred ongoing point-of-contact into Bell as opposed to directly contacting Bell’s wholesale provisioning and operations departments. To date, it has been the SILECs experience that Bell Canada is also reticent to share the information that will be required.

17. Furthermore, ISPs that use the cable companies’ TPIA services to offer retail high-speed Internet access are required to follow the provisioning stipulations of the TPIA service provider. In certain cases the ISP is required to provide the TPIA serviced provider with a pool of IP addresses that are then assigned dynamically by the TPIA service provider. This will require additional communication between service providers and may impede the flow of information to the PSAP.

18. The JTF notes that several of the cable companies have come forward with alternate solutions that they maintain should be adopted by the Commission instead of the ILECs’ proposal. However, after further analysis the JTF has concluded that while Rogers’ preferred “IP Tracker” alternative proposal, as an example, may work on cable networks, it does not hold the same promise for SILEC networks. For example, Rogers states:
As described above, a customer is provisioned through a dynamically assigned IP Address that can change. However, these dynamically assigned addresses are drawn from a small fixed pool of addresses. A fixed specific range of IP addresses is assigned to a specific local CMTS (Cable Modem Terminating System)/DSLAM that serves a defined geographical area.4

19. Rogers’ provisioning practices differ from the provisioning practices of many of the SILECs. SILECs do not necessarily limit the assignment of IP addresses in the same manner. For example, most of the companies that use Bell Canada’s GAS and HSA products will have an IP address pool for their entire coverage area – potentially all of Ontario and Quebec. An IP address may be assigned one minute to a customer in Toronto and the next minute it could be assigned to a customer in rural Quebec. As a result, Rogers’ “material change” criteria could potentially trigger a call to the VoIP service provider’s call centre every time a call is placed which would place a heavy load on these call centres.

20. The record of the proceeding also identifies instances where the ILECs’ proposal will not function properly. For example, customers using VPNs (e.g. telecommuters) will be unable to benefit from the service. Similarly, business end-users deploying hosted IP key systems will not receive E9-1-1 service. The JTF also notes that in other cases the association of a port assignment on a DSLAM to an IP address will not work. For example, in the case of multi-dwelling units where the in-building wire is connected to a fibre-fed DSLAM at the building, many accesses are connected to that device and the ability to map a particular circuit ends at the DSLAM. The ASP will be unable to differentiate between the multiple accesses to determine the correct origination point (i.e. the correct unit in the MDU) of the 9-1-1 call. The above examples are not an

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4 See Rogers’ submission, dated 7 August 2009, Attachment 2, paragraph 7.
exhaustive list of exceptions. The JTF submits that any new solution contemplated by the Commission should be able to deal with all of the exceptions in order to offer a comprehensive solution for the Canadian public.

21. Finally, implementation of the ILECs’ proposal will also have unintended and unforeseen consequences for key aspects of an ASP’s business. Some SILEC insurance policies specifically address VoIP services and, notably, may be the only specific technology referenced. Given the relatively limited experience of the telecommunications industry not only with the technology and processes necessary to provide reliable VoIP E9-1-1 service but also with the nature of failures and related magnitude of risk arising from systemic or even occasional failures of tracking and reporting, there is legitimate concern about the reaction to mandated VoIP E9-1-1 by those companies insuring ASPs. It is currently unclear as to how that uncertainty will manifest itself in terms of increased premiums, increased deductibles and, potentially but realistically, unwillingness by insurers to underwrite such risks at all.

22. It is VoIP providers that should be responsible for the risk associated with 9-1-1 service. If the ILECs’ proposed solution is implemented and claims associated with 9-1-1 service are filed, it is possible that insurance carriers may opt not to insure SILECs for this type of risk. This would leave the SILEC, acting in its role as an ASP, bereft of this type of coverage and impose additional risk based on the service offerings of another TSP.

Appendix 2 to TNC 09-194

23. Appendix 2 seeks parties’ comments on the question of who should pay for the various costs of implementing nomadic VoIP E9-1-1 service. In Appendix 2, the Commission identifies the high-level components of the ILECs’ proposal and then, for those parties supporting an LDP cost recovery scenario other than that
whereby ASPs are each responsible for their own LDP costs, it requests comments on cost recovery mechanisms.

24. At the outset, the JTF submits that the entire cost of implementing a 9-1-1 solution for calls from nomadic VoIP users should be the responsibility of the VoIP service providers both for initial implementation costs and on a recurring basis. This is consistent with the Commission’s approach to 9-1-1 funding in the wireless industry. In *Implementation of wireless Phase II E9-1-1 service* – Telecom Regulatory Policy 2009-40, 2 February 2009, the Commission determined as follows:

   The CWTA argued that when a public service such as wireless E9-1-1 is to be provided, it is appropriate to question whether the costs of providing the service should be borne by the general public or by the body of telecommunications subscribers. The CWTA took the position that it should be the former. More specifically, it argued that the costs of implementing wireless Phase II E9-1-1 service should be recoverable from the recent advanced wireless services spectrum auction proceeds.

   ... the Commission is not persuaded that it would be appropriate to alter the current cost recovery regime. Accordingly, as is the case for all other wireless network and service costs, the Commission determines that WSPs are responsible for their own costs associated with implementing wireless Phase II E9-1-1 service.\(^5\)

25. In the same way, the JTF submits that the same principle should be applied to the nomadic VoIP service providers. Nomadic VoIP service providers and their customers should be responsible for the costs associated with providing this important public service.

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\(^5\) Paragraphs 23 and 30.
26. However, if the Commission determines that an industry-wide cost recovery approach is appropriate, the JTF submits that a clearing house process should be established to assess individual ASP’s costs and allocate the funds collected based on submitted costs. An independent agency will be required to facilitate this and the JTF recommends that the Commission should take on this role.

Appendix 3 to TNC 09-194

27. As discussed in this introduction to this submission, the JTF submits that there should be no exemption for small service providers. If service providers elect to take the exemption, it would have the effect of creating geographic pockets throughout the country - mostly rural - where E9-1-1 would not be available. As a result, it is not clear as to how nomadic VoIP users would know whether or not they had entered a “No E9-1-1” zone and how they would come to understand that they should expect a different level of service from that available in an adjacent area. Moreover, neither the Commission nor the telecommunications industry should, by virtue of permitting such exemptions, signal that life in rural Canada is less precious than life in urban Canada.

28. Any solution adopted by the Commission in this proceeding should be available in all regions of the country without exception.

Conclusion

29. The JTF submits that the ILECs’ proposal for nomadic VoIP E9-1-1 is neither economically viable nor administratively feasible and should be abandoned in favour of the current method of routing 9-1-1 calls made by nomadic VoIP users. Furthermore, none of the alternate solutions proposed by the large cable companies is adequate. The current VoIP 9-1-1 regime does provide users with Basic 9-1-1 service, properly places the liability on the VoIP service providers and
imposes the responsibility on the end-customer to notify the service provider if the customer changes location either permanently or temporarily.

30. Should the Commission proceed with the ILECs’ proposal or a variation of it, nomadic VoIP service providers and their customers should be responsible for paying for the costs of implementing nomadic VoIP E9-1-1 service both at start up and on a recurring basis. The costs for this service should not be borne by ASPs or their customers.

31. Finally, the JTF submits that there should be no exemption for small ASPs. Neither the Commission nor the telecommunications industry should signal that life in rural Canada is less precious than life in urban Canada.

Signed (on behalf of the companies represented by the Canadian Independent Telephone Company Joint Task Force),

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c.c. TNC 2009-194 Interested Parties
Attachment

**Ontario Telecommunications Association**
- Amtelem Limited Partnership
- Brooke Telecom Co-operative Limited
- Bruce Telecom (also a member of CAPTS)
- Cochrane Telecom Services
- Execulink Telecom Inc.
- Gosfield North Communications Co-operative Limited
- Hay Communications Co-operative Limited
- Huron Telecommunications Co-operative Limited
- The Lansdowne Rural Telephone Company Limited
- Mornington Communications Co-operative Limited
- Nexicom Telecommunications Inc.
- Nexicom Telephones Inc.
- North Frontenac Telephone Corporation Limited
- North Renfrew Telephone Company Limited
- Ontera (also a member of CAPTS)
- People’s Tel Limited Partnership
- Quadro Communications Co-operative Inc.
- Roxborough Telephone Company Limited
- Tuckersmith Communications Co-operative Limited
- Westport Telephone Company Limited
- Wightman Telecom Limited

**Association des companies de téléphone du Québec**
- CoopTel
- La Cie de Téléphone de Courcelles inc.
- Téléphone Guèvremont inc.
- La Compagnie de Téléphone de Lambton inc.
- Téléphone Milot inc.
- Le Téléphone de St-Éphrem inc.
- La Compagnie de Téléphone de St-Victor
- Sogetel inc.
- La Compagnie de Téléphone Upton inc.

**Canadian Alliance of Publicly-owned Telecommunications Systems (non-OTA members)**
- CityWest
- Dryden Municipal Telephone System
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