BY EPASS

August 7, 2009

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

Dear Secretary General,

Subject: TNC CRTC 2009-194-1 – Call for Comments – Nomadic VoIP E911 service

INTRODUCTION

1. Pursuant to the schedule for this matter set out in the Commission’s Public Notice dated 15 April 2009 and modified on 4 May 2009, Execulink Telecom Inc. (Execulink) hereby submits its submission with respect to the Nomadic VoIP E911 services.

2. Execulink is a small telecommunication service provider operating primarily in south-western Ontario. Execulink offers local telephone (both as a SILEC and a CLEC), cable TV, long distance and Internet access services. Our roots as a Small Incumbent Local Exchange Carrier are over 100 years old.

3. Execulink Telecom owns and operates its own facilities including twisted copper telephone cables, co-axial TV cables, fiber optics cables, wireless equipment and radios, telephone switching equipment, cable TV distribution equipment and Internet routers and servers. Execulink also uses essential
services and wholesale facilities from other telecommunication providers to deliver services in areas where it is uneconomical or impossible to use our own facilities.

4. Execulink utilizes the following distribution facility types to provide high-speed Internet access;
   a) Execulink’s DSL facilities (both central office and local loop).
   b) co-located DSL central office equipment together with wholesale local loops
   c) wholesale DSL (Bell’s GAS product)
   d) Execulink’s cable TV facilities
   e) Execulink’s fixed wireless facilities
   f) Execulink’s fibre optic circuits and
   g) leased fibre optic circuits

5. In the revised schedule of TNC 2009-194 the Commission invited further submissions on 7 August 2009 on the following specific issues;
   i) What are the LDP costs?
   ii) Are there alternative solutions that would improve on the current nomadic VoIP 9-1-1 service?

6. Execulink is pleased to provide comments on these specific issues as well as identify some additional issues that Execulink submits should be addressed.

**LDP COSTS**

7. Execulink is not required to provide the information laid out in Appendix 1, however Execulink is providing some information about LDP costs and implementation that may be assistance to the Commission.

8. LDP (location determination platform) has been defined as the capability, to be implemented by the ASPs in their networks, that enables the association of IP addresses with the civic address of the broadband connection. This information is then updated in the ILEC-hosted LIS (location information server) database.

9. Execulink found the information provided as part of the Telecom Notice of Consultation regarding who will be responsible for the LIS confusing and
contradictory. Paragraph 6 of the TNC says it is the responsibility of the ASP whereas Appendix 2 says it is an ILEC network element.

10. For customers on ASPs networks, the ILEC do not know either the civic address of the customer nor the IP that has been assigned. It does not make sense that an ILEC who does not know; the IP address, does not know the civic address, is not the VoIP provider could be responsible for LDP. Execulink is inclined to believe the reference of a the LDP as a ILEC element is an error. Clarification is requested.

11. In paragraph 4 above, Execulink listed seven different distribution facility types to provide high-speed Internet access. Modifications and reconfigurations to each of these delivery methods will have to be made to support LDP.

12. Development of LDP will be costly in time and money. Three main components are contributing to the costs; reconfigurations of the seven delivery methods previously referred to, upgrades to the AAA (Authentication, Authorization and Accounting) systems and changes in architecture and hardware for increased availability that are needed in providing E911 services.

13. LDP is based upon the matching of IPs with the location address. For this system to be reliable requires knowing the IP address with certainty. Radius, which Execulink and many other ASPs use for authentication and authorization, is a UDP based system which means the knowledge of the assigned IP address is ‘best efforts’ and not reliable enough for E911. Subsequently Execulink’s authentication system will have to be replaced at a cost significant expense and time.

14. Execulink obtains some access on a wholesale bases from other ASPs and also sells delivery to other ASPs on a wholesale bases. In these cases one ASP knows the IP and the other knows the civic address. The one common element that both parties know is the session ID. Subsequently there is one additional network interconnection element required for exchanging IP and civic address information between ASPs.

15. Even though Execulink has not completed a costing study of the implementation and on going costs associated with LDP we have been able to estimate the implementation will cost hundreds of thousands of dollars and will probably take two years to complete.
16. The TNC also asked for views on sharing the costs of introducing LDP between ASPs. If this question is referring to the potential of sharing LDP systems, the answer is practically none. LDP is integrally tied to the ASPs access and control system which is fundamental requirement of each ASP and not sharable.

17. With regard to sharing the costs between providers. The question posed in Appendix 1 is “among ASPs”. Execulink believes this is the wrong question and by posing it predetermines the answer.

18. The costs to implement VoIP E911 should be the responsibility of the VoIP providers and not the ASPs. All ASP costs to implement and maintain the VoIP E911 system should be the responsibility of the VoIP provides. Thus the appropriate question should be how the costs should be shared between VoIP providers.

19. Execulink recommends the costs to implement VoIP E911 should be shared between VoIP providers based upon their respective number of VoIP users.

20. There will be significant costs to set up the proposed VoIP E911 system. It should not be the responsibility of the ASPs to finance those costs. It should be the responsibility of the VoIP providers. Subsequently the VoIP providers should reimburse the ASPs for the setup costs as the monies are being spent.

ARE THERE ALTERNATE SOLUTIONS?

21. The fundamentally responsibility for nomadic VoIP E911 should be the responsibility of nomadic VoIP providers and not the ASPs.

22. One alternate solution would be assigning static IPs for all VoIP users. This would greatly simplify the process, significantly decrease the costs and accelerate the implementation date. The VoIP providers would be responsible to restrict VoIP usage to accesses with static IPs and build a data base that matches the static IPs with the address of their customers. The ASPs would be responsible to provide static IPs to customers who requested them at reasonable rates.

23. Hopefully there may be other alternatives put forward that rightfully places the responsibility for nomadic VoIP E911 on the VoIP provider which should be considered.
24. Execulink urges to Commission to strongly consider Execulink’s and any other proposal that places the responsibility for VoIP E911 on the VoIP providers.

OTHER ISSUES

25. In preparation for this submission Execulink has considered a number of scenarios and identified a number of nomadic VoIP access methods where the proposed nomadic VoIP E911 may not function properly.

26. The nomadic VoIP access methods where the proposed nomadic VoIP E911 may not function properly that Execulink has identified are;

- Connections using a VPN (this is extremely commonly used by employees to connect to their office from their home, hotel room or even a branch office).
- Private VoIP PBXs serving multiple locations.
- Roaming within a neighbourhood or campus and connecting through a local wireless router.

27. Execulink urges the Commission to address these potential shortcomings before implementation.

28. The proposal places the responsibility for delivery on the ASP that own the distribution facilities however the ASP who owns the distribution facilities may not ‘know’ what the IP address is. At the same time, the provider who knows the IP address may not ‘know’ the service address. Whatever solution that is finally establishes needs to address the transfer of information between providers in a real time while protecting privacy.

SUMMARY

29. To summarize;

- The costs to implement VoIP E911 should be the responsibility of the VoIP providers and not the ASPs.
- It should responsibility of the VoIP providers and not the ASPs to finance the implementation costs of VoIP E911.
- Execulink has identified several access methods (VPN for instance) where the proposed nomadic VoIP E911 may not properly function. Solutions for these needs to be found before implementation should commence.
Execulink urges to Commission to strongly consider any proposal that places the responsibility for VoIP E911 on the VoIP providers.

30. To conclude Execulink would like to thank the Commission for the opportunity to provide this input.

Respectfully submitted,

Keith Stevens

cc. Interested Parties to TNC 2009-194

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