1. The VON Coalition Europe\(^1\) and the VON Coalition\(^2\) (hereafter referred to jointly as “VON”) welcome the opportunity to jointly share their views on the CRTC Telecom Notice of Consultation (CRTC 2009-194) on Nomadic VoIP E9-1-1 services (the “Consultation”).

2. VON understands the CRTC wishes contributions relating to the following questions:

   I. What are the location determination platform (LDP) costs?

   II. Who should pay for the various costs of implementing nomadic VoIP E9-1-1 service?

   III. Should small ASPs be exempt from implementing an LDP?

   IV. Are there alternative solutions that would improve on the current nomadic VoIP 9-1-1 service?

3. As a Coalition, VON does not endeavor to answer every question raised in the consultation and we have focused our comments on questions II, III and IV.

4. Before answering these questions, a couple of important considerations should be taken into account by the CRTC. Around the globe, Internet voice communications are transforming the way consumers and businesses communicate. With the right legal and regulatory framework, VoIP-led innovation has immense potential to extend the power of Internet communications to new corners. VON supports the CRTC’s goal of continuing to improve emergency service and ensuring that first responders receive the critical information they need. Indeed, the evolution of interconnected VoIP services has already brought significant public safety benefits.\(^3\) With continued progress, consumers throughout Canada will be able to use VoIP to do things never thought possible, businesses may increase efficiency and productivity and transform the way they operate, and broadband enabled communications can help economies become engines for

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\(^1\) The Voice on the Net (VON) Coalition Europe was launched in December 2007 by seven leading Internet communications and technology companies, on the cutting edge – iBasis, Intel, Google, Microsoft, Rebtel, Skype and Voxbone – to create an authoritative voice for the Internet-enabled communications industry. The VON Coalition Europe notably focuses on educating and informing policymakers in the European Union and beyond in order to promote responsible government policies that enable innovation and the many benefits that Internet voice innovations can deliver. http://www.voneurope.eu

\(^2\) The Voice on the Net or VON Coalition is US based and consists of leading VoIP companies, on the cutting edge of developing and delivering voice innovations over Internet. The coalition, which includes AT&T, Cisco, Covad, Google, iBasis, Intel, Microsoft, New Global Telecom, PointOne, Skype, T-Mobile and Yahoo! works to advance regulatory policies that enable Americans to take advantage of the full promise and potential of VoIP. The Coalition believes that with the right public policies, Internet based voice advances can make talking more affordable, businesses more productive, jobs more plentiful, the Internet more valuable, and consumers more safe and secure. http://www.von.org

\(^3\)
innovation and spur the creation of higher-paying information-age jobs. In contrast to traditional telephone service, Internet-based voice communications often are an application just like e-mail, streaming audio, streaming video, and web browsing. The benefits of Internet voice communication include cost savings for consumers, reduced operational costs for providers, advanced features unavailable with traditional circuit switched telephony, increased competition, increased infrastructure investment, accelerated broadband deployment, lower cost communications for rural and government users, increased access for persons with disabilities, and increased worker productivity. Today's VoIP services are not simply a means to having a conversation; they are portals to a world of information that enriches the communications experience and adds new dimensions to the idea of ‘conversation.’

Consultation Questions:

Question II: Who should pay for the various costs of implementing nomadic VoIP E9-1-1 service?

5. In a report made by WIK Consult for the European Commission in 2008, the following statement was made: “Access to emergency services can be extremely difficult for VoIP-based service providers to the extent that their customers can move (i.e., are nomadic). If the customer’s location cannot be reliably determined through automated means, it is impossible to complete an emergency call to the proper emergency response unit, and it is also impossible to reliably report the user’s whereabouts. Technical solutions are improving over time, but gaps are likely to remain for a long time to come.”

6. In looking at funding models for nomadic VOIP E9-1-1, the CRTC should balance the perceived need to enable such access with the substantial benefits VoIP solutions and innovations bring to all Canadian citizens.

7. In the context of emergency services, we would notably like to encourage the CRTC to keep in mind the important public safety benefits that come from nomadic VoIP services. As OECD recommends, when regulators consider emergency requirements for VoIP, they “should always consider current technical constraints, and while measures should aim to guarantee the safety of users, they should not constitute an unfair burden for providers, and stifle the evolution and development of VoIP.”

8. In fact, one of the key benefits of certain types of nomadic VoIP services is the ability to use the services over any network from any location utilizing features never before possible. For certain services, this allows users to plug their VoIP phone or terminal adapter into any available broadband connection in the world or to download a softphone when a hardphone is unavailable.

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9. As a result, the advent of VoIP is ushering in a new era of more disaster-proof communications systems. In other terms, VoIP and other IP-based communications services increasingly serve as the foundation of “survivable” networks that provide reliable and efficient connectivity in emergency situations even when key infrastructure has been disabled or destroyed.

10. In fact, because VoIP operates over decentralized IP networks with redundant paths between any two points, VoIP service often mitigates the dire consequences that can otherwise result from single points of failure. VoIP communications have proven their resilience repeatedly in emergency situations. A well-documented illustration is the critical role VoIP played in enabling emergency communication during and after the Katrina disaster in the U.S.\(^6\) Similarly, in Europe, after the terrible bombings in London on 7th July 2005, many citizens found that the only means of communicating with friends and relatives was via VoIP, as mobile networks were overwhelmed by the number of calls being made. Not surprisingly, in an assessment issued following the September 11th attacks in the U.S., the National Academies concluded that the Internet had been far more reliable than other communications networks and that network operators turned to VoIP for communications when traditional networks failed.\(^7\) And, in South America, when an earthquake devastated southern Peru in 2007, in some cases only certain VoIP services were able to reach the outside world when cell phone and other networks failed.\(^8\) It is also worth noting that VoIP is used to link together people and networks for global emergency response networks like the SkyWarn Hurricane response network in the U.S.\(^9\)

11. Thus, when evaluating VoIP and emergency response, we encourage the CRTC to not only think about traditional 911 access but also the public safety opportunities that VoIP creates. And, in deciding how to regulate, we urge the CRTC to heed the OECD’s advice in treading lightly so as to not inadvertently stifle new innovations that may have important emergency advantages.

\(^6\) The unique mobility and decentralized aspects of VoIP were utilized by FEMA, the Red Cross, the army, hospitals, emergency responders, for telethon call centers, and utility workers restoring service. Even in the eye of the storm, after the category 5 hurricane disabled completely the New Orleans city government’s telephone network and all other communications systems, the New Orleans Mayor was able to utilize a nomadic Type 4 VoIP phone to call to the President of the United States and to coordinate the efforts of state and local authorities. The Mayor’s staff was able to deploy interconnected VoIP “virtually” by downloading software to several laptops and establishing several VoIP accounts. For five critical days following the storm, this interconnected VoIP connection provided the Mayor’s only reliable outside contact. See Christopher Rhoads, Cut Off: At Center of Crisis, City Officials Faced Struggle to Keep in Touch, WALL STREET JOURNAL (Sept. 9, 2005). Available at http://www.von.org/usr_files/Katrina%20-%20WSJ%20-%20Cut%20off%20Mayors%20office%20uses%20VoIP%209-9-05.pdf

\(^7\) See National Academies, Computer Science and Telecommunications Board, The Internet Under Crisis Conditions: Learning from September 11 (2003) (“As a whole, the attacks affected Internet services very little compared with other telecommunications systems. Telephone service was disrupted in parts of lower Manhattan, and cell-phone service suffered more widespread congestion problems. Nearly one-third of Americans had trouble placing a phone call on the day of the attacks. The Internet, however, experienced only a small loss of overall connectivity and data loss, the report says. With phone service impaired, some individuals used instant messages on their wireless handheld devices and cellular phones to communicate instead. Websites were created to distribute lists of missing persons and other information to help people try to locate loved ones.”).

\(^8\) CNN reported that when cell phone and other telephone networks failed, that the only communication tool available immediately after the earthquake was a Vonage VoIP service that was imported from Miami. http://media.vmsnews.com/MonitoringReports/081607/776530/T001138604/

\(^9\) See http://www.voipwx.net/
12. To the extent any cost recovery fee is necessary for building the LDP platform, this fee should be borne by all interconnected VoIP end user customers – not just nomadic VoIP users – similar to how E-911 fees are paid today by wireline and wireless end users. Otherwise, the contribution formula would unduly discriminate against nomadic VoIP providers who do not own the infrastructure and would result in a competitive pricing difference vs. fixed interconnected VoIP providers who would not charge this fee.

13. With regard to the question presented, the CRTC should keep in mind that all the costs of a location-based platform for emergency calling are ultimately borne by consumers. Given the significant affordability and emergency calling benefits discussed above, the CRTC should be slow to impose costs on VoIP consumers greater than those currently recovered to support i2 infrastructure in Canada. The promise of next-generation emergency calling infrastructure is that these architectures avoid the legacy costs of antiquated PSAP and incumbent selective routers in favor of network elements that harness the declining costs characteristics of Internet infrastructure. Carriers deploying the underlying infrastructure should be permitted to recover the costs of new infrastructure only to the extent that that recovery is based on forward-looking costs and excludes legacy costs. Should the CRTC decide that carriers are permitted to pass through the costs of this emergency calling infrastructure to consumers, they must be required to do so explicitly on consumer line-items that reflect a reasonable allocation of these forward looking costs.

**Question III: Should small ASPs be exempt from implementing an LDP?**

14. Before answering this question, it is worth noting the consequences that burdensome regulation imposed on nomadic VoIP have had in the United States on the market and its players.

15. In the U.S., despite the promise that nomadic Interconnected VoIP was once held as the competitive voice alternative for consumers and a critical new public safety tool for enabling communication redundancy, diversity, and remote access in an emergency, there are today fewer nomadic competitive alternatives than ever before.

16. As a consequence, in the U.S., fixed Interconnected VoIP services have thrived but nomadic Interconnected VoIP services that require access to more than one PSAP have not. Four years ago when the FCC first adopted its VoIP 911 order, nomadic Interconnected VoIP was the biggest and fastest growing segment of the Interconnected VoIP market. Unfortunately, regulatory intervention, lack of access to the 911 network, and other events conspired to take choices away from consumers.

17. While there were projections in 2004 for the U.S. that VoIP would account for 40% of all voice traffic by 2007, today, nomadic VoIP accounts for only about 0.6% of all voice subscribers – and growth is quickly approaching zero. In fact, Tele geography describes nomadic VoIP growth as “anemic” and “disheartening”, but says it is too early “to write an obituary” for network
independent VoIP. In every other country in the world, these services are growing rapidly and unabated – giving consumers and emergency personnel new choices never before possible.

18. After seeing what has happened to the nomadic VoIP market in the United States, OECD now recommends that when regulators consider emergency requirements for VoIP, they “should always consider current technical constraints, and while measures should aim to guarantee the safety of users, they should not constitute an unfair burden for providers, and stifle the evolution and development of VoIP.”

19. In light of this experience, the CRTC should refrain from imposing disproportionate regulatory obligations on all players, and especially on the smaller ones. Certainly thresholds in terms of size should be taken into consideration as imposing burdensome regulation indifferently to all players runs the risk of creating a barrier to entry or a clear route for exit for small innovative players. In the end, if the CRTC adopts rules to fully recover the costs of the LDP through the underlying access providers, there will be no continuing need to recover costs from ASPs of any size. Because the underlying informational asymmetries presented by this proceeding and due to the fact that access providers are producing costs studies in response to this inquiry, the costs of next-generation emergency calling should be recovered through the access providers relationship with their customers, as discussed above. In this way, the CRTC will avoid double-cost recovery and establish a regime that recovers costs in a rational manner consistent with accepted standards of cost-causation and competition policy.

20. Moreover, if VoIP providers are required to offer 911 capabilities but the relevant ASP is not required to implement LDP, then there should be a similar waiver for the VoIP provider in that service area. Moreover, if LDP implementation is publicly funded, even through a collection mechanism from the ASPs, then it seems reasonable that small ASPs should not be exempt.

Question IV: Are there alternative solutions that would improve on the current nomadic VoIP 9-1-1 service?

21. Because nomadic services are global services, VON believes the CRTC should be moving toward international standards for IP-based emergency call centers by implementing the NENA (National Emergency Number Association) i3 and associated ECRIT i3 architecture from the IETF (Internet Engineering Task Force). By moving towards these global solutions, one day when a family from Toronto goes on vacation overseas and dials 911, appropriate help can be sent. Likewise, when a business traveler visits Vancouver and must make an emergency 999 or 112 call, help can be dispatched. These global standards help make global nomadic location solutions possible.

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22. VON therefore strongly believes that the solution lies in working to advance globally recognized solutions that will one day enable breakthrough new advances in public safety communications. As OECD points out:\(^{12}\) “Dealing with nomadic VoIP services in the context of emergency services is clearly more difficult in particular in obtaining caller location information. In the United States, the Department of Transportation launched the Next Generation 911 initiative to address the challenges posed by new technologies to circuits switched emergency systems. NG911 services should allow multimedia emergency calls (including, for example, emergency e-mail, instant messaging or SMS), to address the problem of nomadic and mobile IP features, and ensure a secure environment for emergency calls. The Internet Engineering Task Force (IETF) Working Group on Emergency Context Resolution with Internet Technologies (ECRIT) is elaborating a new standard to allow direct routing from VoIP devices to the emergency call centre, using a globally compatible and consistent system. The standard should show how the availability of location data and call routing information would enable communication between a user and a relevant emergency response centre. With technological evolution, access to emergency services over IP in the future may become even more efficient in comparison to the current system, as it would be global in its scope, and could be easily accessible from anywhere on any kind of network or device. In the future, with appropriate architecture development and technical standards, it seems that the public safety community will be able to take advantage of modern technology to increase the flexibility and functionality in existing emergency systems, at the same time maintaining and improving existing performance levels.”

23. The VON Coalition has been at the forefront of these efforts to advance these Next Generation Emergency Service Networks in the U.S., through its landmark partnership with the National Emergency Number Association (which first outlined the NG911 framework), through its work with the Department of Transportation effort described by OECD above, and through its member company participation in the IETF work described above.

24. We thank you in advance for taking consideration of these views. Feel free to contact Caroline De Cock, Executive Director VON Europe, by phone (+ 32 (0)474 840515) or email (cdc@voneurope.eu) or Glenn S. Richards, Executive Director VON US, by phone (+1 301.518.1994) or email (glenn.richards@pillsburylaw.com) should you need further information.

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