



The VON Coalition  
The VON Coalition Europe

ECS Determination Review  
Community and National Interests Section  
Australian Communications and Media Authority  
PO Box 13112 Law Courts  
Melbourne VIC 8010

The VON Coalition<sup>1</sup> and the VON Coalition Europe<sup>2</sup> welcome the opportunity to jointly share their views on the ACMA consultation paper on “Calling the Emergency Call Service – Review of Arrangements” (IFC 07/2008) and proposals regarding access to emergency services for VoIP users.

The VON Coalitions agree with the importance of ensuring that consumers can make Triple Zero and 112 calls in Australia using traditional phone services, and services that truly represent a Substitute Telephone Service (STS). Because of the many forms of VoIP, VoIP providers around the world have gone to extraordinary lengths to advance emergency solutions and proactively educate consumers about the type of capabilities they offer, whether it is a substitute telephone service, and possible limitations in an emergency. As a result, important progress is being made both in terms of consumer awareness and technological progress.

In addition, the Coalitions are also generally supportive of ACMA chairman Chris Chapman’s call for greater consumer awareness around VoIP services and their emergency access capabilities. VoIP represents a broad and growing class of technologies. As voice gets integrated into a variety of new types of applications and services, it’s important for consumers to understand that computer games, software, blogs, avatars, instant messenger and video communication software, web sites, and other Internet services – whether they include voice that touches the PSTN or not – cannot provide 000 access in an emergency and should not be substituted for a traditional telephone service. Neither industry nor ACMA should create any new expectations that these non-traditional communication tools are a replacement for a traditional phone service and can be relied upon for emergency access.

Indeed VoIP technologies are connecting the PSTN to the Internet enabling voice to be incorporated into a myriad of different web sites that allow people to communicate in entirely new ways. For example they are connecting friends together on MySpace<sup>3</sup> and Facebook<sup>4</sup>, giving voice to blogs<sup>5</sup>, transforming

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<sup>1</sup> The Voice on the Net or VON Coalition consists of leading VoIP companies, on the cutting edge of developing and delivering voice innovations over Internet. The coalition, which includes AT&T, BT Americas, CallSmart, Cisco, CommPartners, Covad, EarthLink, Google, iBasis, i3 Voice and Data, Intel, Microsoft, New Global Telecom, PointOne, Pulver.com, Skype, T-Mobile USA, USA Datanet, 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>

<sup>2</sup> The Voice on the Net (VON) Coalition Europe was launched in December 2007 by six leading Internet communications and technology companies – iBasis, Intel, Google, Microsoft, Rebtel, Skype and Voxbone – to create an authoritative voice for the Internet-enabled communications industry in Europe.

<sup>3</sup> See MySpace, Skype announce partnership to enable Single button links for calls between members, Associated Press, October 17, 2007, at <http://www.msnbc.msn.com/id/21341042/>

video games<sup>6</sup>, integrating voice and video into instant messaging platforms<sup>7</sup>, enabling people with disabilities to access a host of new accessibility tools not previously possible<sup>8</sup>, allowing one telephone number to reach all of your phones,<sup>9</sup> enabling new privacy communication tools,<sup>10</sup> ushering in a new era of voice recognition based information retrieval tools,<sup>11</sup> and integrating click to dial functionality into mapping and other web sites.<sup>12</sup> In no way should ACMA create a new expectation that instead of picking up a telephone to call for help, that a consumer should boot up a laptop, connect to the Internet, launch a piece of software or web browser, type in a url, and check to see if the web site's PSTN connected service enables emergency access. Indeed, creating such an expectation can delay needed help in an emergency and thwart the important progress that has been made on 000 consumer education.

For these reasons, the VON Coalitions are especially concerned about proposals that would reverse course from ACMA's existing and positive framework to create a new expectation that because some websites, video games, software, blogs have the ability to communicate with the PSTN, that all websites, blogs, instant messaging software, social networking sites, and maps can reach 000 emergency service in an emergency -- creating a profound new level of confusion and potentially putting lives at risk.

Specifically, the coalitions are concerned that applying Emergency Call Service (ECS) obligations to any type 2 VoIP-out services are premature and could harm public safety, stifle innovations critical to people with disabilities, stall competition, and limit access to innovative and evolving communication options where there is no expectation of placing a 000 call. Application of ECS obligations to Type-2 services would impose significant regulatory burdens on a broad range of VoIP offerings that are not substitutes for traditional PSTN-based services. Such an abrupt reversal of ACMA's existing VoIP 000 access policy

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<sup>4</sup> Facebook now includes more than a dozen different VoIP applications enabling voice communication – each very different and all offered for free. Lotum's "Free conference calls" offers an innovative conference calling capability to connect all your friends at once, Grandcentral a one click way for a friend to call all your phones at once (home, cell and work) to reach you anywhere, Babytel offers a Java eggphone to connect your friends both online and offline from Facebook, PartyLine, offers a way to create groups for one click voice access, TringMe offers a way to leave voicemail and a way to use your computer's microphone to connect to the PSTN, and Rebtel's Let's Talk enables you to get "smart numbers" for your friends to communicate locally around the globe.

<sup>5</sup> MyVox's VoiceBlog tool allows you to add a "VoiceBlog" to any web site or your iGoogle page. See: <http://www.google.com/ig/adde?moduleurl=api.myvox.com/demo/igoogle/voiceblog.xml> In addition by calling Jott at(866) JOTT-123/(866) 568-8123, you can convert your voice into emails, text messages, twitter message or blog posts on blogger. <http://jott.com/default.aspx>

<sup>6</sup> Vivox has integrated voice into video games like SecondLife between avatars and also enables users to go to a virtual phone booth to make a call to the PSTN. See: <http://www.vivox.com/>

<sup>7</sup> Voice enabled instant messenger services are transforming the idea of communications by integrating voice, video, text, and PSTN access to enable breakthrough advances in accessibility. For example voice enable IM software is offered by Skype, Yahoo!, MSN and Google.

<sup>8</sup> The National Federation of the Blind uses a PSTN connected VoIP service that allows people who cant read print access to a newline using a VoIP phone service to enable voice access to over 150 newspapers and magazines. Likewise, Bundled voices allows usres to create audible books. <http://bundledvoices.com/> Earthlink provides a voice activated e-mail by phone service.

<sup>9</sup> GrandCentral provides one telephone number to connect to all of your other phones.

<sup>10</sup> Match.com, Craigsnumber and others allow web users to connect by telephone without giving out their personal telephone numbers.

<sup>11</sup> TellMe, Goog411, Jott, ReQall, and others provide ways to use voice recognition as a tool for accessing or delivering information to the Internet.

<sup>12</sup> See several examples at: [http://www.von.org/usr\\_files/Gee%20Whiz%20--%20one-way%20services.pdf](http://www.von.org/usr_files/Gee%20Whiz%20--%20one-way%20services.pdf)

has the potential for vast unintended consequences that could put Australia at a strategic and competitive disadvantage at a crucial phase in the introduction of advanced broadband services.

We do not endeavor to answer every question raised in the consultation. However we have focused our comments on three key areas in the consultation: 1) the benefits to public safety and consumers from keeping Type 2 and other non-substitute communications service out of the ECS framework, 2) efforts to accelerate the availability of autolocation technologies and capabilities, and 3) the broad breakthrough public safety advantages that can be achieved when Australia's emergency call centers utilize IP based networks and VoIP within the call center to enable new features and functionality never before possible in emergency response.

**Consultation questions:**

### **4.1.1 THE NOMADIC NATURE AND RELIABILITY OF LOCATION INFORMATION**

**Q1: What measures can VoIP providers take to improve the identification of the calling number and the caller's location?**

While new technologies and options are being developed, current technology allows the ECS operators to be prompted by the AAF and/or the SMSA to seek confirmation of the location information from the caller. This interim solution can prove beneficial in the short run, while ACMA implements longer term solutions. However because nomadic services are global services, we believe ACMA should be moving toward international standards for IP based emergency call centers (as discussed peripherally in page 24 of the consultation) 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 Sydney goes on vacation overseas and dials 000, help can be sent. Likewise when a business traveler visits Melbourne and must make an emergency 999 or 911 call, help too can be dispatched. These global standards help make global nomadic location solutions possible.

**Q2: How should emergency services adapt to the increasingly nomadic nature of VoIP services? What measures should service providers implement? What measures should the ECP adopt?**

While transitioning to global standards, s147(2)(a) gives ACMA discretion to determine that it might be 'unreasonable' for a particular service provider supplying an STS to provide access to the ECS. While Australia's Disaster Information Network does a great job of making available a variety of consumer education guide's, factsheets, and brochures about Triple Zero through <http://www.triplezero.gov.au>, none of the educational brochures, or consumer awareness campaigns appear focused at providing consumers with information about VoIP services. To the extent that ACMA is concerned about consumer awareness, in addition to provider educational awareness efforts, the government should include VoIP in all of its own ongoing educational and consumer campaigns.

**Q4: Should the AAF be set to 'true' for all VoIP services, to avoid calls being misdirected to incorrect ESOs and states?**

The AAF is currently set to 'true' for Type 4 two-way VoIP services. However, as explained below, we believe that requiring a Type 2 VoIP service to provide ECS access would harm both public safety and innovation.

**Q5: What technical solutions exist for determining the caller location information in Australia, with particular reference to emergency calls from:**  
**(a) mobile services;**  
**(b) satellite services; or**  
**(c) VoIP services**  
**and are there commercial incentives that might facilitate such solutions?**

For type 4 nomadic services, there is no technology available today that can automatically and accurately determine the caller's location. In some countries, providers utilize a customer's "registered address" for location purposes. As consumers do with mobile phones when making an emergency call, they should be prepared to provide the operator with their exact physical location

However for purposes of automatically determining a caller's location, experience in other countries, such as the U.S., suggests that it has taken wireless carriers more than 10 years to develop and deploy technologies for locating users, and their job is still far from complete. In a recent U.S. emergency access proceeding before the FCC, the broad consensus was that no technologies exist to provide automatic location capabilities for type 4 VoIP services, and it will take a significant period of time to develop such technologies.<sup>13</sup>

For these reasons, at this time we believe it is premature to require caller location information for VoIP services. Providing such location information for a VoIP service is more difficult than for a PSTN service, since the location is not linked to the underlying physical network. Other governments, including UK's Ofcom in its recent 999 consultation, have reached a similar conclusion that VoIP auto-location is not technically feasible.<sup>14</sup>

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<sup>13</sup> "It is not currently technologically feasible for IVSPs [Internet Voice Service Providers] to automatically locate their subscribers." See Comments of Vonage America, Inc., FCC VoIP Auto-location NPRM (see note 21 above), August 20, 2007 (available at <http://www.harriswiltshire.com/harriswiltshire/backoffice/upload/documents/Strandberg08202007.pdf>). Numerous telecommunications network operators, equipment manufacturers and VoIP service providers also commented in the VoIP Auto-location NPRM on the current lack of technologies available to provide location information for VoIP calls (see, for example, the comments of AT&T America, Inc. and Sprint Nextel Corporation).

<sup>14</sup> In Ofcom's recent review of emergency access obligations for VoIP providers, it concluded (paragraph 4.148) that "Regarding caller location information, we do not propose an auto-location requirement at this time because that isn't technically feasible, as required by GC 4. We will keep what "technically feasible" means under review." See <http://ofcom.org.uk/consult/condocs/voip/voipstatement/voipstatement.pdf>

Nonetheless, the industry is working collaboratively around the globe to help accelerate the development of location solutions. Indeed, the VON Coalition's member companies are at the forefront of innovative technological solutions. They are working actively with standards bodies including ECRIT, IETF, in partnership with NENA, and in their own labs. Nonetheless, it is unreasonable and unnecessary to replicate the existing emergency arrangements of fixed network operators, which were designed specifically for legacy networks. Such a requirement would undermine the important progress that is currently taking place and potentially stall future solutions.

Instead, 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:<sup>15</sup>

*“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.”*

The VON Coalition has been at the forefront of these efforts to advance these Next Generation Emergency Service Networks, through its landmark partnership with the National Emergency Number Association (which first outlined the NG911 framework)<sup>16</sup>, 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.

We would like to encourage ACMA to help chart a path to a next generation Emergency Access network that can better prepare consumers for the next emergency and enable a host of new life-saving technologies. By harnessing the power of VoIP technology to transform the emergency service call

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<sup>15</sup> OECD Convergence and Next Generation Networks Ministerial Background report (DSTI/ICCP/CISP(2007)2/FINAL, June 2008, page 40. At <http://www.oecd.org/dataoecd/25/11/40761101.pdf>

<sup>16</sup> See for example release highlighting significant progress in VON-NENA partnership to accelerate emergency solution for VoIP. [http://www.von.org/usr\\_files/911%20release%2012-1-04.pdf](http://www.von.org/usr_files/911%20release%2012-1-04.pdf)

centers themselves, ACMA can help unleash a host of breakthrough emergency advances never before possible. Other countries have begun advancing greater use of IP technologies in public safety networks.<sup>17</sup> Australia could likewise benefit from transitioning to survivable communications systems

For example, a next generation emergency communication network can literally help provide public safety with a better picture of what is going on. As was highlighted by dramatic photos from the London bombings<sup>18</sup> and the Virginia Tech shootings<sup>19</sup>, cell phone pictures from emergency scenes can be sent to friends, websites, blogs, facebook, and news organizations -- but generally not to emergency call centers. More and more cell phones in Australia are now including cameras with the phone – a potential life-saving instrument. For example, after the recent South Asia tsunami, Australian Geoffrey Huntley was able to post photos from the scene of the emergency to [Waveofdestruction.org](http://Waveofdestruction.org) to help in emergency response. Upgrading the Emergency communications network to an IP enabled emergency network can help enable these pictures to be sent directly to the emergency communications call center, giving 000 calltakers a better picture of what's happening at the scene.

### **An IP Enabled next generation emergency network can also enable new kinds of life-saving capabilities tomorrow:**

By putting VoIP at the heart of the Emergency Communication System, 000 calltakers can take advantage of VoIP's ability to converge voice with data and video. It means 000 calls might one day include:

- **Automatic language preferences.** By pre-selecting a user's language preference, an emergency call could be automatically routed to a call taker that speaks the caller's native language. For the estimated 1 million Australians who cannot speak English<sup>20</sup>, such automatic routing can potentially save time and save lives.

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<sup>17</sup> In the US, for example, policymakers are embarking on effort to move the entire 911 emergency network to a VoIP-based network in order to achieve breakthrough advantages in emergency communications. See, for example, <http://www.its.dot.gov/ng911/> and <http://www.vonplus.org/benefits/Benefits%20webpage/Emergency%20Communications.pdf>, while the Department of Homeland Security is harnessing the unique capabilities of VoIP to foster interoperable and survivable communications. The Department of Homeland Security Roundtable on VoIP found that IP-based systems have several critical disaster-recovery applications, including: radio system connections (*i.e.*, connect communications centre to a mountain top transmitter); radio system to radio system interface (*i.e.*, connecting two or more radio systems via a VoIP link); dispatch interface (*i.e.*, using VoIP to enable dispatchers to communicate with each other); bridging systems (*i.e.*, using VoIP to connect radio systems that do not support direct interconnection); system and subscriber unit interfaces (*i.e.*, communications from radio system to radios, PDAs, wireless laptops, or direct communications among such devices, in the event of infrastructure failure). See Department of Homeland Security, Office for Interoperability and Compatibility, Roundtable on Public Safety Interoperability and Voice Over Internet Protocol (2007) (*available at* <http://www.safecomprogram.gov/NR/rdonlyres/F5097180-FD4C-463A-8050-F24489853ED7/0/2ndRoundtableonPublicSafetyInteroperabilityandVoIPmeetingreport.pdf>). Businesses are also transitioning to VoIP in order to provide continuity of communication in a disaster.

<sup>18</sup> "Camera Phones Lend Immediacy to Images of Disaster," By Yuki Noguchi, Washington Post Staff Writer, Friday, July 8, 2005

<sup>19</sup> Lessons From Virginia Tech: A Disaster Alert System That Works, by Ryan Singel, Wired, 4-18-07, Next generation emergency systems are aiming to bring better information and decision-making to disaster scenes. New York City's planned 9-1-1 system would allow callers to send in cell-phone pictures and videos. [http://www.wired.com/culture/education/news/2007/04/vtech\\_disaster\\_alerts](http://www.wired.com/culture/education/news/2007/04/vtech_disaster_alerts)

<sup>20</sup> See <http://www.justlanded.com/english/Australia/Tools/Just-Landed-Guide/Language/Language>

- **Information on a caller's medical status.** If consumers choose to pre-enter vital medical information (e.g., whether an Alzheimer patient lives at the registered location; the heart medicine a subscriber uses), call takers and emergency responders could access critical information that could make the difference between life and death.
- **Maps and other location specific information.** Call takers could access floor plans of commercial buildings or notes about hazardous on-site chemicals – data that could prove critical to emergency responders.
- **For people with disabilities.** Because VoIP protocols can integrate voice, data and video using the same protocols, they can deliver life-saving advances to the disability community as well. For example, with an IP-enabled emergency network, the deaf could use sign language to communicate with emergency call takers over a VoIP-enabled video connection or text message call takers for help.

Because of these amazing new possibilities, there is now a growing consensus around the world on the shortcomings of the present emergency communication systems and the need for a new, more capable IP based system. Broad efforts are now underway to modernize the emergency calling networks using IP based communication technology – as the OECD correctly describes. When deployed, these IP based systems are helping reduce call response time<sup>21</sup>, save money, enable new location capabilities, and help countries become better prepared for disaster scenarios.

**Q8: What options are available in the short-term to address these concerns?**

We would like to encourage ACMA 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.”*<sup>22</sup>

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 type 4 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.

As a result, the advent of VoIP is ushering in a new era of more disaster-proof communications systems. 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.

<sup>21</sup> In Washington, D.C. in the U.S. if you make an emergency call it is answered with VoIP. The system has enabled calls to be answered within five seconds, with most calls answered in less than one second (compared to a national average of about 10 seconds. The solution can also track incoming call trends and patterns.

<sup>22</sup> OECD Convergence and Next Generation Networks Ministerial Background report (DSTI/ICCP/CISP(2007)2/FINAL, June 2008, page 40. At <http://www.oecd.org/dataoecd/25/11/40761101.pdf>

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.

Nomadic Type 4 services have played well-documented roles in emergency situations. VoIP played a critical role in enabling emergency communication during and after the Katrina disaster in the U.S.<sup>23</sup> 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. Likewise, in an assessment issued following the September 11th attacks, 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.<sup>24</sup> When an earthquake devastated southern Peru in 2007, in some cases only Type 4 services were able to reach the outside world when cell phone and other networks failed.<sup>25</sup> VoIP is also used to link together people and networks for global emergency response networks like the SkyWarn Hurricane response network.<sup>26</sup>

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

#### 4.1.4 INFORMATION TO CUSTOMERS ABOUT VOIP SERVICES

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<sup>23</sup> For example, VoIP played a critical role in enabling emergency communication during the Katrina disaster. 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](http://www.von.org/usr_files/Katrina%20-%20WSJ%20-%20Cut%20off%20Mayors%20office%20uses%20VoIP%209-9-05.pdf)).

<sup>24</sup> 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.").

<sup>25</sup> 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/>

<sup>26</sup> See <http://www.voipwx.net/>



**Q15: Is the obligation that VSPs provide clear, unambiguous customer information about VoIP access to the emergency call service sufficient? If so, what should be the nature and the extent of that obligation?**

We generally agree with statements from ACMA chairman Chris Chapman that there needs to be greater consumer awareness around VoIP services and their emergency access capabilities. We also believe there is a lot of great progress being made. For example, the Communications Alliance has released guides for both consumers and VoIP providers outlining what consumers should know about emergency access as it relates to their service and what VoIP providers should do.<sup>27</sup> The Consumer Alliance booklet *“What you should tell your customers about their Internet telephony/VoIP service”* includes advice on the availability of emergency services and location information. We agree with ACMA (page 31) that if the Consumer Alliance handbook is “used by VoIP providers, this would go some way to meeting the customer disclosure requirements about the characteristics of VoIP services, including access to emergency call services.” Type 4 and Type 2 services have made consumer education a paramount priority.

#### **4.1.6 TYPE 2 VOIP OUT SERVICES**

**Q17: Should Type 2 VoIP Out services be required to provide access to the ECS? If so:**  
**(a) are there any technical issues impeding the requirement that Type 2 VoIP Out services provide access to the ECS? If so, what solutions exist and how can they be implemented?;**  
**(b) how should these obligations best be expressed in the ECS Determination; and**  
**(c) are there any other strategies (regulatory or non-regulatory) for responding to concerns about such services (e.g. provision of information to end-users) that should be considered as alternatives to mandating such ECS access?**

We agree with ACMA’s existing approach whereby Type 2 VoIP outbound services are not required to provide access to the emergency call service and do not constitute Substitute Telephone Service.

It’s important for consumers to understand that computer games, software, blogs, avatars, instant messenger and video communication software, web sites, and other Internet services – whether they include voice that touches the PSTN or not – cannot provide 000 access in an emergency and should not be relied upon in an emergency as a substitute for a traditional telephone service. ACMA should not create any new expectations that these non-traditional communication tools are a replacement for a traditional phone service and can be relied upon for emergency access.

We are particularly concerned about any proposal to reverse ACMA’s current regime to mandate 000 access for so-called ‘type 2’ or ‘VoIP Out’ services, which will impose significant regulatory burdens on a

<sup>27</sup> [http://www.commsalliance.com.au/\\_data/page/13230/VoiceOverIP\\_Customer\\_Info\\_280806.pdf](http://www.commsalliance.com.au/_data/page/13230/VoiceOverIP_Customer_Info_280806.pdf) and [http://www.commsalliance.com.au/\\_data/page/13230/VoiceOverIP\\_Emergency\\_Services.pdf](http://www.commsalliance.com.au/_data/page/13230/VoiceOverIP_Emergency_Services.pdf) The [Access to Emergency Services for users of VoIP and Internet Telephony Fact Sheet](#) spells out a set of procedures for VoIP providers that if followed will assist emergency services locate the source of an incoming VoIP call.

broad range of VoIP offerings that are not substitutes for traditional PSTN-based services and create new consumer confusion in the process. Such a proposal is premature, could harm public safety, stifle innovation, stall competition, and limit access to innovative and evolving communication options where there is no expectation of placing a 000 call. Such an abrupt reversal of ACMA's existing VoIP 000 access policy has the potential for vast unintended consequences that could put Australian consumers and businesses at a strategic and competitive disadvantage at a crucial phase in the introduction of advanced broadband services.

### ***Type 2 VoIP services are not substitute telephone services***

ACMA suggests (in section 3.3) that "the users of VoIP services that allow calls to traditional fixed-line or mobile phone services expect to be able to call the ECS on Triple Zero." The consultation paper also suggests (in paragraph 4.1.6) that "Type 2 VoIP Out services ... are becoming more similar to PSTN services, increasing the risk of confusion." While this is true that type 4 VoIP services which are often marketed as replacements for fixed line service and may be similar to PSTN services in some respects, this is definitely not true of type 2 services. Indeed by ACMA's definition, type 2 services only make outbound calls to the PSTN, and cannot receive incoming calls from the PSTN and thus cannot substitute for traditional phone services. Such services are hardly likely to be an STS service if other fixed line or mobile services cannot call you. We have found no evidence that supports a conclusion that Australians are replacing their home phones with services that cannot receive calls.

There are a number of key reasons why type 2 services are not viewed by users as substitutes for wireline services:

- **Marketing and Customer Perception:** Type 2 VoIP services are not intended or typically marketed (nor generally viewed by the public) as a substitute for wireline service. Moreover, users generally do not terminate their fixed line and wireless telephone service when they sign-up for and use free VoIP services.
- **They look different:** Type 2 services are often free services, often PC-based using a software interface, microphone, and the PC's speakers.
- **They work differently:** Users expect lower call quality and lack of reliability -- *e.g.*, if the underlying broadband connection or power goes out – from such free VoIP services.

With due respect, ACMA is fundamentally incorrect in suggesting (in paragraph 4.1.6) that "Type 2 VoIP Out services ... are becoming more similar to PSTN services, increasing the risk of confusion." We would like to take this opportunity to describe a few of the vast array of innovative and beneficial type 2 services now becoming available to consumers – and which could be adversely impacted by new regulatory obligations. These often free type 2 communications tools, while not a telephone replacement service, are transforming the way people are communicating nonetheless – specifically because they do things that STS services cannot, do not, and will not. These services are innovative, but are not substitute or create an expectation of reaching triple zero. They are:

- **Providing a 24/7 lifeline for new mothers by clicking on a web site<sup>28</sup>** -- yet consumers are not confused about whether a baby food web site can reach 000.

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<sup>28</sup> The Gerber baby food web site, for example, includes an innovative help line for new mothers. If a new mother has an urgent question at 3a.m. about feeding their new born or warming a bottle, they can today click on the web site using a click-to-dial one-way VoIP service that immediately connects the parent to an infant care specialist

- **Delivering a powerful new tool for people with disabilities to communicate**<sup>29</sup> -- yet consumers are not confused about whether a text based desktop software widget can reach 000.
- **Giving voice to online games**<sup>30</sup> -- yet consumers are not confused about whether their video games can reach 000. (In fact, connecting children's video games to 000 may deluge the emergency response system with unknowing prank calls from young children anytime aliens visit the planet, or someone is evaporated by a laser ray gun in a game – further taxing the emergency network and delaying a potentially life-saving real emergency call.)
- **Converging voice and TV in new ways**<sup>31</sup> -- yet consumers are not confused about whether their TV remote control can reach 000.
- **Adding voice to social networks and blogs**<sup>32</sup> -- yet consumers are not confused about whether their online blog can reach 000 in an emergency.
- **Allowing a classified ad seller to connect by phone with potential buyers without giving out their personal phone numbers and protecting their privacy**<sup>33</sup> -- yet consumers don't have an expectation that their online classified ad can reach 000.

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24/7. It is one of many new and exciting click-to-dial services. (See <https://www.gerber.com/contactus> ). Yet consumers do not have an expectation that a web site can reach 000.

<sup>29</sup> Call Notify is a powerful new tool for people with disabilities. This VoIP-based software desktop widget allows a person with a speaking or hearing disability to type text and have it delivered as a computerized voice message to someone's telephone. The application is a one-way VoIP service that uses a text-to-speech synthesizer to generate a voice message and call the designated number. (See: [http://wiki.cdyne.com/index.php/Phone\\_Notify](http://wiki.cdyne.com/index.php/Phone_Notify) ). Yet consumers do not have an expectation that a desktop software widget can reach 000.

<sup>30</sup> VoIP is now giving voice to a variety of online and console games. For example, one technology popular in the online world, Second Life, allows virtual avatars to place a call to real world telephones. Such a technology enables real world people to address virtual gatherings, and encourages greater collaboration and conversation. VoIP technology by Vivox integrates gameplay, social interaction, instant messaging, and voice to millions of gaming subscribers. (See: <http://www.vivox.com/> ). Yet consumers do not have an expectation that their video games can reach 000.

<sup>31</sup> TVCallME is converging voice and TV in new ways. Zodiac's TVLocalSearch integrates TV with VoIP and allows a user to click on the TVCallME button on their remote to speak to the local business. Zodiac's TVCallME service calls the viewer first and then the business, instantly connecting them through VoIP technology. (see: <http://zodiac.tv/> ) Yet consumers do not have an expectation that their TV remote control could reach 000.

<sup>32</sup> Jaxtr is one of several services that is bringing voice to social networks and blogs. Jaxtr offers a free service that lets users link their phones with their online network to hear from callers worldwide while keeping their existing phone numbers private. (See: [www.jaxtr.com](http://www.jaxtr.com)). Yet consumers do not have an expectation that they can reach 000 from an online blog.

<sup>33</sup> New VoIP services also allow users to connect by phone without giving out their personal phone numbers – for example when selling something in an online classified service. A variety of innovative services now allow users to talk without sharing their real telephone number. Craigsnumber, for example, provides consumers with a way to sell services online using a temporary, auto-expiring phone number that can forward to the number of their choice in order to protect privacy and user anonymity. The service provides users with a free temporary phone number that will forward to a number of their choice for an hour, a day, a week or a month before expiring. (See <http://craigsnumber.com> ). Yet consumers do not have an expectation that their classified ad can reach 000.

- **Integrating voice into web pages, online directories, and online maps**<sup>34</sup> -- yet consumers do not expect to use an online map to reach 000.
- **Integrating voice into instant messaging and presence technology**<sup>35</sup> – yet consumers do not have expectations that a software IM application can reach 000.
- **Bringing anonymous voice calling to Internet dating services**<sup>36</sup> – yet consumers are not confused about whether they can turn to their online dating service to reach 000.
- **Giving voice to online avatars, animals, and cartoons**<sup>37</sup> – yet consumers do not expect to use an animated talking kangaroo or koala bear on a web site to reach 000.
- **Allowing websites to have voicemail**<sup>38</sup> which can in turn leave a voicemail in a PSTN service -- yet consumers do not have an expectation that by leaving a voicemail, they could reach 000.
- **Enabling wake up calls and reminders at some future time and date**<sup>39</sup> – yet consumers would not expect to be able to schedule a 000 emergency call at some point in the future or to use text for the message.

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<sup>34</sup> Innovative new services allow voice to be integrated directly into web sites. Some of the most exciting applications including online mapping and yellow page services that allow web surfers to find and communicate with local businesses. (See [www.live.com](http://www.live.com) ) Yet consumers do not expect to go to an online map to reach 000.

<sup>35</sup> Today instant messaging applications and services are integrating voice video and data to transform the way people communicate and create a whole new dimension to the idea of “conversation.” Exciting technologies from Google, Microsoft, Skype, Yahoo! and others are keeping far-flung families connected, and integrating text, voice, video, data, and even hardware in ways previously not possible. They are enabling kids to learn the piano or a foreign language from experts around the globe, a mother to watch over their children remotely at day care, and people to converse with others around the globe – helping bridge cultures and communities around the globe. Most provide chat rooms, free video conferencing, some allow software ad-ins that allow collaborative game playing, creation of avatars, real-time translation from one language to another, white boards, collaboration meeting tools, software lie-detectors to detect stress levels, sound effect generators, integration with web browsers for click-to-call services, and the ability to share files online. Yet consumers do not have expectations that a software download can reach 000.

<sup>36</sup> New services now allow users to take their online community to your phone. Jangl, for example, allows people to communicate, without exchanging telephone numbers. Jangle has teamed with online dating site Match.com to provide user anonymity called matchTalk. The computer-based VoIP technology allows each person to talk to each other without fear of giving away their real phone number. (See <http://www.jangl.com/> ) Yet consumers do not have an expectation of using their dating service for reaching 000.

<sup>37</sup> There are a variety of type 2 VoIP services used to record a voice for an online avatar. Voki, for example, enables users to express themselves on the web in their own voice using a talking character. You can customize your Voki to look like you or take on the identity of lots of other types of characters... animals, monsters, anime etc. Your Voki can speak with your own voice which is added using either a microphone, it can make an IP to PSTN call to your phone, you can make a PSTN to IP call to record your voice, or even use a text to speech converter to create the voice. Yet consumers do not expect that a talking koala bear or kangaroo is a substitute telephone service or could be used to reach 000. <http://www.voki.com/>

<sup>38</sup> Consumers can now use Type 2 VoIP services to add voicemail for websites. TringMe, for example, enables a web user to use their microphone to leave a voice mail message on a web site. After leaving a voice mail message, the web site dials a PSTN number for someone associated with the web site and delivers the message as a recording. <http://www.tringme.com/> Yet consumers do not have an expectation that by leaving a voicemail, they could reach 000.

- **Linking documents and e-mail with the PSTN<sup>40</sup>** – yet consumers do not have an expectation that by clicking on their e-mail they can reach 000.

Even this very document allows readers to click on a link and connect to the PSTN using a type 2 VoIP service as we have provided in this footnote<sup>41</sup>. Yet we do not believe that consumers have an expectation that this ACMA filing is a Substitute Telephone Service or should be able to access 000 by clicking on a link in a footnote.

Although ACMA suggests (in section 3.2) that “Type 2 and Type 4 VoIP services would be capable of accessing the ECS numbers when appropriately configured.” This is not true in all cases. For example, if you visit the VON Coalition’s compilation of live examples of 15 different innovative and beneficial Type 2 services at: <http://www.vonplus.org/IP-TO-PSTN.htm>, it becomes apparent that none of them are Substitute Telephone Services, or would enable a live two-way voice conversation if they could technically reach an emergency call center – even though these VoIP enabled services have VoIP-out capability.

These innovative and often free web and software based services are transforming the way we communicate. Type 2 VoIP services and applications are integrating voice into a wide variety of different applications and services – from voice blogs, to instant messaging, and video games. There are now more than 2 dozen VoIP applications in Facebook alone – most of which connect to the PSTN in one way or another. These are not Substitute Telephone Services, but represent a whole new frontier in communications. VoIP is allowing people to communicate in entirely new ways – connecting friends together on MySpace, giving voice to blogs, transforming video games, enabling political satire, integrating voice and video into instant messaging, enabling people with disabilities to access a host of new accessibility tools not previously possible, allowing one telephone number to reach all your phones, enabling new privacy communication tools, ushering in a new era of voice recognition based information retrieval tools, and integrating click to dial functionality into mapping and other web sites.

There is a very real chance that premature application of emergency services obligations to Type 2 VoIP services could harm public safety, stifle innovation, stall competition, and limit access to innovative and evolving communication options where there is no expectation of placing a 000 call. Such an abrupt reversal of ACMA’s existing VoIP 000 access policy has the potential for vast unintended consequences that could put Australian consumers and businesses at a strategic and competitive disadvantage at a crucial phase in the introduction of advanced broadband services.

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<sup>39</sup> Consumers can use Type 2 VoIP services to send a voice telegram or wake up call. For example, phoneBugger or Mindgram are a telegram reminder service that allows you to send a voice message to telephone number at a scheduled time. Type in the text of what you want it to say and use it to remind yourself or others of an important appointment, deliver a special message, or simply to make your own phone ring at a specific time. There are many ways to use this service. Just imagine the possibilities! <http://www.mindgram.com/> or <http://www.phonebugger.com/> But a consumer would not expect to be able to schedule a 000 emergency call at some point in the future.

<sup>40</sup> New VoIP services allow phone connectivity to be embedded into an HTML hyperlink in any email, web page, word document, or any other document which accepts an HTML hyperlink. (See [www.click4me.net](http://www.click4me.net), [www.estara.com](http://www.estara.com) ) Yet consumers do not have an expectation that by clicking on their e-mail they can reach 000.

<sup>41</sup> Click here to call the VON Coalition via a VoIP connection that connects to the PSTN, or paste this url into your browser: <http://phone-me-now.com/7032372357> then type in your phone number and you will be connected to the VON Coalition’s executive director.

In the same way that early PCs mimicked typewriters in looks, so too have some early type 4 VoIP services initially replicated many features of traditional fixed line services in order to gain consumer acceptance. However, as VoIP matures, services are becoming even more distinct from PSTN services rather than similar. VoIP services are often harnessing the power and potential of the Internet to do things never before possible with fixed line services. They are becoming increasingly dissimilar to the PSTN. The number and types of VoIP services available to people are exploding. Of the major trends in VoIP overall, all of them involve VoIP services becoming increasingly different rather than resembling PSTN services.<sup>42</sup> And if type 4 VoIP services represent an increasingly diverse garden of various types of features and services, type 2 services represent a tropical rainforest full of diverse and varied species (as discussed below). Thus, consumers do not necessarily confuse these new VoIP features with traditional STS-like services.

The ECS Determination made under subsection 147(1) of the TCPSS Act does not cover CSPs that only offer services which are unlikely to be used for emergency calls, such as long-distance or international services. We believe that Type 2 services similarly are unlikely to be used for emergency calls, and rather than being a substitute telephone services, may likewise in many cases be used instead only for long distance and international calling.

#### **Experience from around the globe.**

In general, countries that have imposed emergency obligations on type 4 VoIP services, have also decided not to apply emergency access obligations on type 2 services -- for example in Canada, the United States, and elsewhere. However, the data contained in data A1 of the consultation suggesting some countries have applied obligations to Type 2 services) is based on a survey by Ofcom of emergency access obligations for type 2 services that is inaccurate, misleading, and incomplete. It should not be relied upon for decision-making purposes. The Coalitions have pointed out these shortcomings directly to Ofcom. It is misleading because Ofcom has taken its own self-created service category and then asked foreign NRAs to interpret their own regulations to see how/where it fits in. As such, it is an artificial exercise. In addition, we understand that, contrary to what has been included in the chart, the German regulator, for example, has not yet decided between the option to impose emergency call obligations to any type of VoIP providers on one side, or to impose such obligations only on those VoIP providers who offer a substitute for traditional telephony services. In any event, the results of Ofcom's poll show a mixed picture at best and in fact show only limited support for the imposition of emergency calling obligations on type 2 VoIP services.

We believe OECD has painted a more accurate picture. OECD argues that<sup>43</sup>, "*[t]aking into account technical difficulties, regulators are often allowing providers a more or less extended timeframe to implement provisions, and limit among the scope of the legislation to those services/applications which are most likely to engender confusion in users (mostly services that are viewed as a replacement for PSTN services).*"

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<sup>42</sup> See, for example, analyst Rich Tehrani's list of top VoIP trends – all of which make VoIP even more substantially different than traditional phones, and none of which supports Ofcom's conclusion that "VoIP services and technology are becoming increasingly similar to PSTN services, increasing the risk of confusion," see <http://blog.tmcnet.com/blog/rich-tehrani/itexpo/top-voip-investmenttrends.html>.

<sup>43</sup> OECD Convergence and Next Generation Networks Ministerial Background report (DSTI/ICCP/CISP(2007)2/FINAL, June 2008, page 39. At <http://www.oecd.org/dataoecd/25/11/40761101.pdf>

Not every form of the innovative Type 2 VoIP services that we have described here are yet available to Australian consumers and businesses. Applying new and burdensome regulatory obligations to these often global services won't speed their deployment and adoption in Australia. To the contrary, it could further delay their availability and the benefits that they can deliver. For example, in the U.S. where the FCC has left Type 2 VoIP services as unregulated, new and innovative services are bringing almost explosive new opportunity. In fact, VoIP in the U.S. is now projected to be the number one job creator of any industry in the country.<sup>44</sup>

Therefore for Australians to realize similar opportunity, the VON Coalition strongly encourages ACMA to maintain its current regime whereby it has not applied ECS obligations on Type 2 services or determined them to be substitute telephone services.

## 4.2 The 'unreasonableness' test

**Q18: What criteria should be adopted to determine whether particular CSPs supplying standard telephone services should have to provide access to the ECS? What should be used as the basis for assessing 'unreasonableness' in making such a decision?**

While we do not outline the scope of what "unreasonable" means here, we believe that ACMA should at a minimum conclude that requiring Type-2 services to provide ECS meets the unreasonableness test. If, for example, a teenager wants to make a talking Kangaroo, or Koala to e-mail to friends, they can use a VoIP enabled service that allows calls to the PSTN or from the PSTN in order to record the avatars voice.<sup>45</sup> However, even though this VoIP enable service allows calls to the PSTN and from the PSTN, it does not enable a real-time, two-way voice communication with a human, nor is a talking Kangaroo avatar in an e-mail or on a website likely to be confused with a traditional phone.

Nor so we believe it to be reasonable to require video enabled instant messenger software or any other software that is downloadable globally and available globally over the Internet (whether or not it connects to the PSTN) to have to meet specific Australia mandates. In fact as other government regulators have found, it is likely that a provider would have no way of knowing that a particular piece of software, service or web site is being accessed over an Internet connection in Australia – and thus whether a user dialing 000 is located in Australia, China, or the UK. In other countries, regulators have found that VoIP services have "no means of directly or indirectly identifying the geographic location of a ... subscriber."<sup>46</sup> This is true among other reasons because "customers may use the service anywhere in

<sup>44</sup> See study at <http://www.ibisworld.com/pressrelease/pressrelease.aspx?prid=116>.

<sup>45</sup> Voki, for example, enables users to express themselves on the web in their own voice using a talking character. You can customize your Voki to look like you or take on the identity of lots of other types of characters... animals, monsters, anime etc. Your Voki can speak with your own voice which is added using either a microphone, it can make an IP to PSTN call to your phone, you can make a PSTN to IP call to record your voice, or even use a text to speech converter to create the voice. Yet consumers do not expect that a talking koala bear or kangaroo is a substitute telephone service or could be used to reach 000. <http://www.voki.com/>

<sup>46</sup> Federal Communication Commission in the United States, in Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, WC Docket No. 03-211, FCC 04-267 (released November 12, 2004) ("Vonage Order") at 23. See [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-267A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-267A1.pdf)

the world where they can find a broadband connection.” Thus, regulators have concluded that “the significant costs and operational complexities associated with modifying or procuring systems to track, record and process geographic location information as a necessary aspect of the service would substantially reduce the benefits of using the Internet to provide the service, and potentially inhibit its deployment and continued availability to consumers.”<sup>47</sup>

Thus we believe ACMA should conclude that nomadic software and services made available over the global Internet (whether they connect to the PSTN in any direction or not) would meet the “unreasonableness” test and should not be required to develop a capability that may simply be technologically unachievable at this point in time.

### 4.3 Managing the volume of non-genuine calls

- Q19: Have CNR ‘55’ calls or RVAs proven effective strategies to reduce the volume of non-emergency calls to the ECS?**
- Q20: Can they be improved further and, if so, how?**
- Q21: Have these strategies caused any unintended consequences?**
- Q22: What alternatives are available?**

There are vast unintended and unanticipated consequences that could come from applying rules to Type 2 services. Fraudulent calls could increase if ECS obligations are applied to Type 2 services like video games and other non replacement type 2 services.

For example, more and more video game consoles and PC games are integrating VoIP into their games.<sup>48</sup> Some include speech recognition, while others allow users to communicate by voice with each other regardless of where they may be located. While many of these game communications systems are often Type 1 IP to IP VoIP conversations, a growing number of services provide Type 2 PSTN connectivity.<sup>49</sup> This PSTN connectivity for example allows a child in Melbourne to talk during a game with a counterpart in Sidney – even if the child in Sidney doesn’t have a high speed Internet connection. A majority of experienced gamers count "Integrated Voice Support" as a key component of the game.<sup>50</sup>

However, incorporating 000 access into a child’s game -- where the children often believe everything in the game is a game -- could create problematic unintended consequences. In 2006-07 around 1.9

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<sup>47</sup> Vonage Order at 23

<sup>48</sup> See “Playing games with VoIP,” by David Becker and Ben Charney Feb 5, 2004 [http://news.cnet.com/Playing-games-with-VoIP/2100-7352\\_3-5154140.html](http://news.cnet.com/Playing-games-with-VoIP/2100-7352_3-5154140.html)

<sup>49</sup> See for example Vivox which specializes in adding VoIP to online games and enables “Second Life” users to call any phone in the world from inside a virtual world. [http://www.vivox.com/pressreleases\\_detail.php?id=17](http://www.vivox.com/pressreleases_detail.php?id=17) In this virtual world, an online avatar can walk up to a phone booth to make calls globally. But in a virtual world, it is impossible to know where the user is located in the real world and whether an emergency call should be routed to China, the UK, or India.

<sup>50</sup> In a survey, 66 percent of users would prefer voice applications to be integrated within the game, versus finding external solutions using separate online services. See [http://findarticles.com/p/articles/mi\\_m0EIN/is\\_2006\\_March\\_20/ai\\_n16109770](http://findarticles.com/p/articles/mi_m0EIN/is_2006_March_20/ai_n16109770)



million SIM-less calls were made from cell phones to 000.<sup>51</sup> These SIM-less nuisance calls imposed a significant burden on the efficiency of Triple Zero, putting this vital community service at risk. As a result, ACMA prevented 000 calls from mobile phones without a valid SIM card.

Now consider that 79% of Australian households have a device for playing computer and video games.<sup>52</sup> Every day, many of the roughly 5 million Australians under the age of 14 use these games to zap aliens, evaporate foes, and watch as online friends are blown up – sometimes tens if not hundreds of times a day. As more and more of these games incorporate VoIP (Type 1, 2 and 3), these games could become havens for nuisance triple zero calls if providers were required to incorporate 000 functionality as suggested in this consultation. Imagine if each game user made only one call for help a year after an online gaming friend was evaporated, blown-up, or disintegrated in a game – it could create more than twice as many nuisance 000 calls as were created by SIM-less cell phones. Then imagine that only Australia required these Type 2 VoIP services to provide 000 access and the global Internet game provider is unable to determine where in the world the online user is located and thus -- out of concern for safety – provides the 000 access to every game user in the world that it distributes and that could reasonably be playing the game or making an in-game emergency call from Australia. Under this scenario, the chances for nuisance calls escalates without any increase in public safety.

For these reasons, the VON Coalitions believe the best way to prevent non-genuine 000 calls is to prevent non-genuine substitute services (including Type 2 service) from having to implement 000 access.

**Q23: What other measures, besides blocking calls without a USIN, might be implemented to reduce the incidence of non-genuine calls to the ECS?**

**Q24: What specific protection measures should be implemented to manage the increased likelihood of hoax/malicious calls through VoIP and other NGNs to the ECS? Should specific measures be implemented for CSPs and/or for ECPs?**

Blocking of calls should never be accepted or tolerated. As described, it may be impossible for nomadic VoIP service providers to know if a user is even in Australia. However, there are scenarios in which a nomadic Type 4 VoIP provider from another country may need to transfer a 000 call. For example, consider a Canadian nomadic VoIP user who takes their Canadian nomadic VoIP service with them on vacation to Brisbane. If they are unfortunate enough to have an emergency in Brisbane and dial 000, the Canadian call center may verbally be told that the caller is in Brisbane and attempt to transfer the call from out of country to a triple zero operator. This is precisely the kind of scenario that the I3 standard discussed previously attempts to deal with. If the call is blocked, the needed emergency help will be blocked too.

In 2007, twenty-seven miners were rescued less than five hours after a landslide trapped them deep below ground in a gold mine west of Melbourne because one of the trapped men was able call 000 using his personal cell phone from about a kilometer underground. When traditional communications options

<sup>51</sup>

<http://www.three.com.au/cs/ContentServer?pagename=Three/Page/BusinessVideoCallingTemplate&c=page&cid=1207033953221>

<sup>52</sup> According to Interactive Australia 2007 : facts about the Australian computer and video game industry  
[http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1098&context=hss\\_pubs](http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1098&context=hss_pubs)

fail in an emergency, having a plethora of communication options can only help. We can't imagine how nomadic services may be routed, but they may need help nonetheless.

The best way to limit non-genuine calls is to draw a bright line between Type 4 services that may be a substitute, and type 2 services that are not.

#### **4.4 National boundary issues and routing through offshore gateways**

**Q25: What options exist to enable reliable and consistent access to genuine calls that originate from inside Australia but are relayed through international gateways? Which option is preferred and how should it best be implemented?**

**Q26: What alternatives or technical solutions exist, and which is preferred?**

The best solution, as described above, is to accelerate Australia's migration to an IP enabled emergency network using ECRIT's i3 standard to enable a host of important advances including the ability to integrate emergency calls seamlessly around the globe.

**Q50: Should the obligations in sections 17–18A of the Determination be reflected differently; in particular, on whether there are instances where calls to an ECP:**  
**(a) originate overseas and must be blocked by an Australian gateway;**  
**(b) originate in Australia and must be allowed through by an offshore gateway and subsequent carriers;**  
**(c) cannot be carried for technical reasons; or**  
**(d) should not be carried for reasons of network security or ECS integrity?**

**Q51: What impediments (technical or practical) are there to Type 4 two-way VoIP providers in meeting their current obligations under the Determination?**

**Q52: What impediments exist and what possible obligations should be placed on Type 2 VoIP Out providers giving access to the ECS?**

**Q53: Should the Determination seek to address any deficiencies related to the national boundary issues? If so, what are these and how should they be achieved?**

Under no circumstances should a carrier block or be allowed to block an emergency VoIP call or any other VoIP communications. It may be impossible for a carrier to know, even if the call comes from an offshore gateway, whether it indeed may be someone physically nearby.

**###**