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Submission to ACMA

**USE OF GEOGRAPHIC NUMBERS –
NUMBERING DISCUSSION PAPER**

27th February 2009

Suzanne Howard
Acting Manager
Telecommunications Licensing,
Numbering and Subcables Section
Australian Communications and Media Authority
PO Box 13112
Laws Courts Melbourne VIC 8010

Dear Suzanne

Re: USE OF GEOGRAPHIC NUMBERS – NUMBERING DISCUSSION PAPER

Thank you for writing to us on 22 December 2008 and for seeking our views on the "Numbering Discussion Paper". We applaud ACMA in seeking comments from the industry and are pleased to provide the following submission.

Symbio Networks is leading provider of wholesale Voice over IP (VoIP) services and platforms in Australia, New Zealand and Asia and therefore has a strong interest in this matter.

This submission provides comments in reference to the respective sections of the Discussion Paper.

2. Background: ACMA's Responsibilities

Numbering Policy for geographic and LICS numbers

The Discussion Paper indicates that following the October 2004 review, a staged approach consisting "*of a short term strategy to fine tune arrangements within the existing policy and regulatory framework to accommodate VoIP. Longer term issues would be addressed in a more comprehensive review of arrangements for VoIP and NFN more broadly. These changes, considered in this Discussion Paper, are consistent with this approach.*"

Having examined the Discussion Paper, we form the view that instead of fine tuning arrangements within the existing policy and regulatory framework to accommodate VoIP, the changes proposed in the paper are in fact an attempt to **change VoIP to fit into the existing policy and regulatory framework** in terms of location information in geographical numbers in the Numbering Plan.

We believe that the Numbering Plan is less relevant in today's VoIP network than in PSTN because of the following reasons:

i) PSTN & the Numbering Plan

It is often stated that policy settings and regulatory frameworks are technology neutral. While this may be true in some instances, the setting of policy and regulation are inevitably based on, and derived from, the knowledge and understanding of the industry and technology **current at that time** because no policy settings can be formulated in vacuum

The formulation of the Numbering Plan started in the 60's and its premise is based on zonings in Australia to provide local and long distance, STD (subscriber trunk

dialing) calls. The Plan was based on the PSTN architecture deployed at that time with local and trunk exchanges analyzing and routing each call to different hierarchy of the network based on the analysis of the digits dialed.

The Numbering Plan with geographical numbering is thus a sensible approach to managing number resources in Australia, and is in tandem with the switching and routing hierarchical nature of the PSTN. Consequently, the business model of PSTN is to charge calls based on time and distance traversed.

ii) VoIP & Location Independence

VoIP network is based on packet switched technology in which calls are 'sliced' into packets with routing information embedded and are then routed across the network based on the IP addresses assigned in accordance with the rules of the World Wide Web (WWW). The call routing is independent of geographical numbering and a VoIP call can therefore be made and received at anywhere in the world so long as there is access to broadband Internet.

iii) Charging and numbering

In PSTN, the charging of a call is determined by, among other factors, the numbering with location information because of the hierarchical architecture of the network. In VoIP/NGN, the charging of a call and its numbering is decoupled, ie independent of location and distance. For example, leading VoIP providers, like MyNetFone, offer 10 cents untimed calls to any landline phone in Australia, doing away with the aged old concept of zonings and of local and trunk calls based on geographical numbering.

In other words, the regulatory requirement of the Numbering Plan to provide untimed local call can be met with VoIP without having it to conform to geographical numbering. With VoIP, charging and numbering is now completely decoupled and independent of one another.

iii) Policy Settings and Regulatory Framework

Based on the reasons outlined above, this review of VoIP in relation geographic numbering with location information is therefore fundamentally flawed. With VoIP and NGN/IP developments in lightning speed, ACMA should examine and update the policy settings and regulatory framework including the Numbering Plan to make it more relevant in today's and tomorrow's telecommunications world, rather than undertaking a review to benchmark a new technology like VoIP against standards of the by-gone years.

With telecommunications carriers around the world, including carriers in Australia, who have completed, or are in the midst of, replacing the 150 year old PSTN with New Generation Networks (NGN) which are totally IP based with vastly different network philosophy and design, it is now more urgent than ever before for government bodies including ACMA to adopt a forward looking posture and bring the present policies and regulation into the 21st century IP world.

LICS

The LICS numbers are supposed to *"provide the CSP's with the means to offer location independent services in a manner which is compliant with the Numbering Plan."*

The reasons that these numbers have not been used to-date are due to the high costs and long lead time required, in addition to the technical complexity involved, to arrange interconnecting and terminating agreements with incumbent carriers. ACMA and ACCC should recognize that the interconnecting testing and network conditioning of new numbers are barriers to entry for most CSP's unless the government mandates the undertakings.

VoIP Non Compliance

This submission has demonstrated that it is not that VoIP is non-compliant. Rather, it is the policy settings and the regulatory framework including the Numbering Plan that requires updating to bring it into the new world of IP.

3. Clarifying the numbering rules

3.1 VoIP-Out service

Since VoIP-Out Service is for making outgoing calls only and is not dependent on any numbering for routing and charging. The Discussion Paper proposes a unique number issued permanently by ACMA.

If this suggestion is thought through properly, the assignment of a unique number to VoIP Out services makes little difference in terms of ECS, CLI, CND, IPND and LES. It is not appropriate here to detail the working of these regulatory obligations in relation to VoIP services in general and to VoIP Out service in particular.

We therefore argue that the assignment of a unique number by ACMA for VoIP-Out service is not necessary and merely creates another layer of bureaucracy in the Authority.

3.2 Issuing geographical numbers

This submission has outlined the fundamental flaw in advocating the adherence of VoIP service to the Numbering Plan with geographical number and location information as the Plan is less relevant to NGN/VoIP network and services.

This section of the Discussion Paper argues incorrectly that the conformance of the rules with location information contained in numbering *"support the provision of untimed local call, support LNP for VoIP customers and support services with location dependent routing"*. The fact is that the support of untimed local call and LNP **does not rely on, and is independent of**, numbering with location information at all. It is not clear in the Paper the type of support services with location dependent routing that ACMA has in mind.

Based on the information provided in this Submission, that ACMA *"is considering amending the Numbering Plan to ensure all geographical numbers are issued consistently with the locations to which numbers are allocated"* seems completely

ignorant to the fundamental differences between PSTN and NGN/VoIP, and is akin to arbitrarily grafting modern telecommunications developments to an out-dated Plan.

Further, it is not clear at this stage how ACMA intends to deal with numbering with location information when the current transformation of the PSTN to NGN in Australia by the incumbent carrier is completed with an all IP soft-switched based, flat network architecture. All voice calls will then traverse part legacy PSTN and part NGN, essentially making it a VoIP call in some way.

Under this scenario, the interesting questions are then:

- When is a call VoIP ? When is a call PSTN?
- How do you deal with numbering with location information and other issues when a call is part VoIP and part PSTN?

We therefore hold a strong view that it is impractical and unnecessary for ACMA to amend *"the Numbering Plan to ensure all geographic numbers are issued consistently with the locations to which numbers are allocated."*

3.3 Moving numbers between carriage service providers

While the Discussion Paper outlines reasonably the present situation in relation to number movement between service providers, however, the Paper fails to make a reasonable case as to why, and for what reasons, service providers need to advise ACMA when they move numbers. The closest to an explanation given is as follows: *"The changes being considered are intended to increase regulatory certainty regarding the responsibilities each CSP in the chain has with regard to ensuring the final issue and use of the number complies with the rules in the Numbering Plan."* It is not immediately obvious in this section what the rules are in the Numbering Plan that require compliance.

We argue that the onus should be on the individual carriage service provider with numbers to fulfill the regulatory obligations in relation to ECS, LES, IPND, CLI, CND and LNP. Where and how they get the numbers from is less relevant to their willingness and ability to fulfill the obligations.

4. Options to facilitate compliance

We hopefully have argued convincingly in this submission that the changes to the Numbering Plan as proposed in the Discussion Paper are not required. There is therefore no need to consider any options for implementation.

Conclusion

It is generally agreed that policy settings and regulatory framework must evolve to meet the requirements of tomorrow, encourage innovations and entrepreneurship, facilitate open and fair competition, and educate consumers and businesses to take advantages of new technological developments.

The telecommunications industry around the world is transforming to a broadband, IP centric network. VoIP will be just another application in a plethora of new IP services which will, over time, change consumers and enterprises on how they go about conducting their daily life and businesses. It would therefore be a backward step if a new and innovative service like VoIP is required to arbitrarily fit into an outdated plan.

Symbio Networks would be pleased to respond to any questions concerning this submission and to provide any further information that would be helpful to ACMA. Please feel free to contact Alastair Slattery on 02 8008 2594 or me on 02 8008 8008

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Andy Fung', written in a cursive style.

Andy Fung
Director,
Symbio Networks Pty Ltd