Symbio's submission to the Australian Communications and Media Authority Review of the Telecommunications Numbering Plan

July 8 2024

Symbio welcomes the opportunity to make a submission to the Australian Communication and Media Authority's (ACMA) public inquiry into review of the Numbering Plan and other instruments.

Symbio is a communications provider which offers a complete solution for launching, scaling and managing communication services in the cloud. As part of the provision of these services, Symbio operates one of the largest IP Voice networks in Australia and is interconnected with all major mobile and fixed networks. Symbio continues to see market demand for voice services and this is an area we continue to actively invest in.

In this submission Symbio has not sought to address all of the questions currently being considered by the ACMA. Instead, we have concentrated on key topics which are essential inputs into Symbio's business and where Symbio can add insights from our experience both here and overseas.

Introduction:

Symbio strongly believes that the Numbering Plan should be a principles based document to support the public resource of numbers in the Australian telecommunications market. As communication has evolved and technology and innovation thrived, so too has how we can deliver from and to the numbers that connect us. The Numbering Plan balances this national resource and how we can ensure that Industry supplies services to end-users currently and going forward. There are many other instruments to protect consumers and business with regulatory certainty without having to accommodate for duplication of same protections within the Numbering Plan. A clear and future focused Numbering Plan review will facilitate communications for all.

RESPONSE TO QUESTIONS

NUMBERING PLAN

Principles-based approach

1. The Numbering Plan should be a principles based document. Detailed administrative and operational procedures are more appropriately included in other documents, particularly registered industry Codes. These documents can also be adapted more readily than regulatory instruments to changes in end user and operational needs. Adopting this approach will provide a Numbering Plan that is fit for purpose and endure for a significant time without the need for change.
2. Current industry Codes already cover much of the required detail including the recently updated Use of Numbers Code and LNP Code. Proposed revisions to the Inbound

Numbers Portability Code and the Mobile Numbers Portability Code will also cover detailed requirements.

Removal of Unused Numbering Types from the Numbering Plan

3. We are in agreement that unallocated or no longer used numbering types should be reviewed for deletion or re-purposing. Symbio does not require the following number types:
   - Premium rate and paging
   - Restricted access and premium
   - Paging
   - Data Network access
   - Community Service
   - Calling Card

4. No comments at this stage on re-purposing of numbers.
5. Removing number types from the Numbering Plan should have little cost impact. Re-purposing numbers requires network conditioning, charging and billing arrangements to be established and hence requires considerable lead time for planning purposes by CSP's.

Digital Mobile Numbers

6. Symbio supports a discrete number type for Digital Mobile Numbers as these have become a significant number type over recent years.
7. Rules that apply to this number type should recognise that the use of mobile numbers has changed over recent times, including the manner by which services have been delivered to mobile numbers, e.g. via Wi-Fi, via cloud based services and potentially via LEO satellite services. Mobile numbers are also attached to SMS services which gives them a unique property. To account for these types of changes, rules that are technology agnostic are required.

Internet of Things/Machine to Machine

8. We are new to this area and see it as a growth opportunity. We have no detailed data at present.
9. Current IoT services use the mobile number range and this is logical as most services use SIM cards. If a new range was established it should be capable of both voice and data as some IoT services require voice (e.g. lifts, emergency alarms). Number portability should also be considered.
10. We are agreeable to consider a new range if it makes identification of IoT services easier.
11. No comments at this time.
12. No Comments at this time.

Short Codes

13. Short Codes are mainly used in mobile networks and can have a useful role, e.g. for scam reporting and could be added to the Numbering Plan. It should be clarified if these short codes are intended for use with SMS messages.
14. There would seem to be benefits for the use of short codes as long as they are consistently used among operators.

Calls Over non-mobile networks

15. Symbio disagrees that mobile numbers should only be used to originate calls from mobile networks. We are of the view that increased flexibility in the use of mobile numbers should be incorporated into the numbering plan to enable services requested by end users, particularly business users.

    - Businesses are increasingly moving to cloud based phone systems, integrating these with customer relationship management systems and other third-party integrations in order to improve efficiency and deliver better customer experiences. Businesses are looking to present a single consistent phone number to customers that can be used for both voice and messaging interactions.
    - Cross platform overlay software in the form of Apple iMessage, WhatsApp Telegram, Signal and more have already established a norm where mobile number usage is not limited to traditional cellular networks.
    - While mobile networks utilise Mobile Origination Location Information (MoLI) to provide location data, calls originating from IP networks can similarly offer location information via SIP signalling using a Presence Information Data Format Location Object (PIDF-LO). This method is already implemented in the US for non-fixed devices to meet the Federal Communications Commission's (FCC) E911 requirements, ensuring location data is available for emergency services.

    Therefore, we believe Numbering plan definitions should be updated to better reflect the diverse technology and services that use mobile numbers today and to support further innovation.

16. Symbio believes that the Numbering Plan should be updated to include definitions that better support and reflect the current technology and support further innovation. Issues around scam should not be addressed in the Numbering Plan but handled via the Scam Reduction Code where there has been, and will continue to be, ongoing discussion of scam issues as scammers continually change their modus operandi.

17. The definition of digital mobile service in the Numbering Plan should be updated to allow flexibility in how a digital mobile service can be provided.
    We suggest that the definitions for digital mobile number and digital mobile service be changed to the following so that the innovative services referred to our response above can be provided:

    i. *digital mobile number* means a number specified in Schedule X of the Plan for use with a digital mobile service.
    ii. *digital mobile service* means a telecommunications service supplied using a digital mobile number.

VOIP, application based messaging and Cloud based services (or rather Location Independent services)

18. It is important to acknowledge that advancements in technology have significantly altered how telecommunications services are utilised. Location Independent Communications Services (LICS) are increasingly prevalent compared to traditional geographically based services. With the widespread adoption of VoIP and cloud-based services, the inclusion of these types of services would better align the numbering plan with the current technological landscape and usage patterns.

In 2007, a 0550 special service number range was added to the numbering plan to accommodate nomadic services. It was forwarding thinking to introduce this service type in response to new technology. However, for various reasons, this special service was not used and retired in 2022. Had there been more support for this number type, we could have avoided some of the concerns raised in this discussion papers. It represents a missed opportunity and underscores the need for collaborative efforts between regulators and carriers to foster environments conducive to innovation and consumer benefit.

19. As per 18 above.
20. No comments.

Standard Zone Units

21. No comments.
22. No comments.
23. No comments.

Traffic Origination from outside Australia

24. Symbio does not support the introduction of rules around the use of Australian Numbers to originate calls from outside Australia.
There are a growing number of business requirements that at times means that Australian numbers could originate outside Australia. One such factor is the growth in Business Process Outsourcing due to changing customer preferences, the adoption of cloud-based solutions, Australia's proximity to Asia, and a strong service sector. As businesses continue to look for ways to improve efficiency and reduce costs, the demand for outsourcing services is expected to increase in the coming years.
We believe that introducing rules around the use of Australian numbers from locations outside Australia would impede innovation and be complex and costly to implement.

25. In relation to scam, the handling of incoming international calls with Australian CLI is handled in the Scam Reduction Code and this should continue to be the case. As stated Symbio holds the Numbering Plan should be a principles based document. Symbio has long supported the introduction of an Australian adaptation of STIR/SHAKEN. The Australian adaptation can benefit of overseas learnings and along with proper KYC (Know Your Customer) process ensure suitability as a part of the implementation. Australian industry participants can enforce trust arrangements between service providers. This co-operation will assist in removing bad actors; the Scam Reduction Code, STIR/SHAKEN and other arrangements as part of the development of a suite of tools Industry utilise to proactively prevent scam.

26. Impacts on businesses as indicated above. Symbio supports the continued use of Australian numbers offshore, as prohibition would have significant impact businesses and consumers, examples are:
   - Australian businesses that source unified communications and contact centre software from international software companies located outside Australia
   - Australian businesses that outsource some of their business processes to offshore call centres.

- Australian businesses that support flexible working arrangements for employees including international remote work requests
- Australian Carriers and CSPs. Identifying where a geographic number originates from can be difficult for the CSP and the downstream CSP. Applying rules and policing traffic flow from locations outside of Australia would be a significant challenge and cost. The concept of an international gateway where all international calls connect to Australian CSP's is outdated in this modern era.

Allocation – availability of numbers

27. No comments on Appendix B.
28. No comments on withdrawal of numbers.
29. No comments on conservation strategies.

Allocation – rules

30. The Allocation Rules are generally satisfactory. However, there should be an additional rule to ensure that when numbers are allocated to a CSP, a service is able to be provided using these allocations. To ensure this occurs, we propose that once numbers are allocated to a CSP, all interconnected CSP's should be obliged to condition these numbers in their networks following receipt of a conditioning request. Calls can then proceed, a service can be offered to these allocated numbers and any to any connectivity is maintained. Terms of service provision would be commercially negotiated as is the case today.
31. If the registration of CSP's proceeds, allocations could be linked to registered CSP's. It is also valid for the ACMA to ask questions of the requesting CSP.
32. Yes, CSP's should seek information from other CSP's before sub-allocating them numbers. This occurs at present and is part of the Know Your Customer process and is also covered by the Use of Numbers Code.
33. No, the CSP that receives the original allocation from the ACMA should be responsible for managing these numbers, including with other CSP's or End Users that they sub-allocate or assign numbers to. The addition of CSP's with sub-allocations could well provide confusion in porting processes.
34. Yes, we support the proposal for CSP's to be registered before they can be allocated or assigned numbers.
35. Annual audits would be useful if there are cases where numbers are in short supply. An annual review of allocations, returns etc would be useful to provide a perspective on ongoing use of numbers e.g. have there been any new allocation of geographic numbers, any number types not being used, etc. We don't, however, see the need to include this in the Numbering Plan as audits could be initiated by the ACMA on an as required basis.
36. Depending how this is implemented, there would not appear to be major cost burdens.

Pooled Numbers

37. No comments on pooled numbers

EPIDS

38. We do not agree that the use of EPIDS should be covered in the Numbering Plan. These are provided by a separate organisation (Comms Alliance) and hence should not be brought into the Numbering Plan.
39. No comments at this time.

Special rules about smart Numbers (EROU)

40. No comments.

Number Portability

41. Detailed information on number portability is better covered in industry codes. The Numbering Plan just needs to indicate which numbers are portable and the broad requirements surrounding this.

42. No additional matters to be considered.

Multiple Services to a Number

43. Symbio support allowing the use of numbers by multiple carriage service providers (CSPs) which is a longstanding practise in Australia. It aligns with modern technological advancements and offers several significant benefits.

44. It should be emphasised that it is End Users, particularly business users, who are requesting this type of service. Such customers have the Rights of Use, ROU, granted under the Use of Numbers Code, and it is the end user who has rights of how numbers are used and not the carrier who acquires the number ranges for allocation to end users. CSP's are providing services to meet their needs.

45. This service provides additional reliability/redundancy for customers particularly in the light of recent network outages and the emphasis on telecommunications as an essential service.
Permitting multiple CSPs to provide services for the same number fosters a competitive market environment. This increased competition can lead to better service offerings, improved innovation, and lower costs for consumers. Enabling consumers to choose how their numbers are used promotes a marketplace that prioritises quality and affordability.

44. We also see a number of innovative new services in practice today that rely on the ability of a number to be used across multiple services.

The COVID-19 pandemic had a profound impact on how Australian businesses operate, leading to significant changes and adaptations across various sectors. There was a rapid acceleration in digital transformation as businesses sought to maintain operations during lockdowns and restrictions. This included the adoption of e-commerce platforms, digital payment systems, and online customer service channels. Businesses that were previously slow to embrace digital technology had to quickly adapt to survive. The adoption of new technologies and services resulted in groups of businesses whose needs could not be fully met by a single service provider
Some use cases are provided in confidence below, with examples of the benefits provided:

Use Case: Contact Centre Solution / Advanced Routing

In 2019, 24.5% of contact centre services used by Australian businesses and agencies were outsourced. The top industries were:
1. Communications, technology, and media
2. Financial institutes

3. Energy and utilities
4. Retail and wholesale
5. Government

Use Case: Cloud-Based Communications Systems
Businesses utilising cloud services, such as Unified Communications as a Service (UCaaS) providers, may require the same number to be used across multiple service providers. For instance, a business might want their primary and secondary providers to manage calls using the same number to maintain consistency and reliability. From a carrier's perspective, this may appear like scam activity, as it involves the same number originating from different CSPs across multiple calls. However, this practice is essential for businesses that rely on multiple service providers to ensure seamless communication and redundancy.

Use Case: Short-Term Campaigns and Infrastructure Outsourcing
Organisations, such as telcos, banks, energy and utilities, and government, often have peak periods where they engage outbound call centres. These call centres use UCaaS providers to make calls using the same service number as the client organisation, enhancing recognition and call success rates. This practice is crucial for maintaining customer trust and ensuring efficient communication during high-demand periods.

Use Case: Temporary Supplier Switching
In scenarios where a customer needs to switch suppliers quickly due to capacity constraints (e.g., a surge in call centre demand), the ability to use numbers across multiple providers ensures continuity. For instance, during a major system overhaul or PBX replacement, businesses can use temporary numbers while maintaining their original CLI for outgoing calls. This flexibility allows for smooth transitions and minimises disruption.

Use Case: Supplier Redundancy
With enterprise & government agencies having a greater emphasis on Disaster Recovery plans, and redundancy, we are seeing a greater number of customers implementing services with multiple carriers. Their expectation is that, as a ROU holder, they should be able to make outbound calls with the CLI that they are the ROU holder for, on any of their carrier services.

Allowing numbers to be used across multiple CSPs meets consumer demand for flexibility and service variety. This can lower costs and enhance service offerings, as customers can choose services that best suit their needs.

The Integrated Public Number Database (IPND)
The IPND has been raised as an issue by those opposing the multiple use of numbers by CSP's, or rather by ROU holders. The provision of information to the IPND is covered in the Telco Act - -see extract below
10 Carriage service providers must give information to Telstra Limited
(1) This clause applies if Telstra Limited is obliged by a condition of a carrier licence to provide and maintain an integrated public number database.

(2) If:
(a) a carriage service provider supplies a carriage service to an end-user; and
(b) the end-user has a public number;
the carriage service provider must give Telstra Limited such information as Telstra Limited reasonably requires in connection with Telstra Limited's fulfilment of that obligation.
(3) In this clause:
number *has the same meaning as in Division 2 of Part 22.*
public number *means a number specified for use in connection with the supply of carriage services to the public in Australia (within the meaning of subsection 456(2)).*

If a CSP provides a carriage service to an end-user, then the CSP must give Telstra (as IPND Manager) such information it reasonably requires for inclusion in the IPND. It is clear that the CSP who provides the public number to the end user (ROU holder) needs to provide end-user information to the IPND Manager. Hence, it could be argued that, given this has to be done by the CSP providing the public number, a second CSP does NOT have to provide any information to the IPND Manager as it already has the required information about the end user.

45. Of the three options presented in the review discussion paper, Symbio has the following views:

Option 1 proposes no change to the status quo, given that this is an already established practice this does not meet present and future requirements.

Option 3 proposes prohibiting the multiple service practice, this would position Australia outside of international standards and overly restricts without effectively targeting the underlying issue through appropriate regulatory measures. Prohibiting such practices could lead to unintended consequences such as disrupting legitimate traffic, stifling innovation, and undermining a competitive market. Moreover, it is unlikely to significantly impede scammers, who are quick to adapt to evade these controls. Meanwhile, legitimate users who rely on these practices would suffer the consequences.

Option 2 puts forward rules to manage the Multiple Service Practice. This could be compelling if these are done at a low cost to implement and focus on obligations on the CSP servicing the end user only.
Some of the rule examples listed do raise concerns:
- One necessitated a CSP disclose its commercial information to another to facilitate service. Granting a single industry player exclusive access and control to this data could unfairly enhance their competitive advantage, particularly if they already hold a substantial market position.
- Symbio is broadly supportive of a commercially protected and standardised allowlist process.
- Paying a fee for use of a number; the CSP that owns the number does not incur additional costs due to multiple service use; in fact, they continue to offer chargeable primary services to their customers.

- Symbio would be supportive of appropriate and consistent Know Your Customer processes for the CSP servicing the end user.

Notwithstanding the challenges, the option of introducing rules to manage the multiple service practice is most viable as it acknowledges consumer demands and technological advancements whilst applying controls. The telecommunications landscape has significantly evolved with the advent of VoIP, cloud-based, and other location independent communication services. These technologies demand a more flexible approach to numbering plans. The status quo does not accommodate these advancements adequately, while prohibiting the multiple-service practice would stifle innovation and adaptability.

46. New rules should be cost efficient to implement and focus on the CSP servicing the end user. Some additional comments on the rules provided for consideration.
   - An industry whitelisting/allow list is feasible provided it is centralised, standardised and real-time (API access).
   - The suggestion that CSP B must pay a fee to CSP A adds additional overlay of cost and complexity into the industry. The hosting CSP is already compensated for costs by the customer via the hosting charge.
   - Robust authentication processes such as 2FA (and similar processes) could be introduced for CSPs providing services direct to an end user to confirm rights to use a number (and have access to that number). Some examples of such processes:
     o For geographic numbers, initiate a call to the number and use an automated system to request the end user to confirm their identity by pressing a specific key or code on their phone.
     o For mobile numbers, send a unique verification code via SMS or voice call to the number in question. Ask the end user to provide the code back as confirmation they have access to the number.

The overarching benefit is consumer confidence and choice. The second option provides industry with the best position to introduce targeted regulation to support multiple services to a number.
The cost would have Australia lagging behind in a now global and innovative communication services market.

47. Symbio is supportive of targeted and consistent regulations for numbers would recommend the following:
   In the scenario where there are no changes to service number types: an implementation period of 24 months is reasonable to develop (or acquire), test, and integrate systems and new capabilities to effectively comply with new rules.
   In the scenario where new service number types are introduced: there will be considerable impact to carrier and customer pricing and agreements, routing configurations, rating system updates, and billing.
   Once again, we point to the Scam Reduction Code as being the appropriate instrument for managing scam regulation.
48. Are there other solutions or measures that could be implemented to address the concerns raised to date?

Symbio, as previously stated, supports an Australian implementation of Stir/Shaken, this can help address the concerns raised which are mainly focused on scam prevention.

49. Symbio does not view the legitimate use of multiple service practice as a problem, multiple service practice is in line with global practice and part of an innovative and enhanced service delivery for end users.

PRE-SELECTION

Pre-Selection Determination

52. Symbio no longer provides pre-selected services and has no customer demand for such services

53. N/A

54. Other carriers may still have requirements for pre-selected services and if this is the case, the current Determination is considered satisfactory

55. If the Determination sunsets, there will still be a requirement for FOAS to support charging arrangements for inbound services 13/1300/1800, ie Special Services codes and numbers

56. No further comments

PORTABILITY SUPPLIERS

Portability Service Suppliers Determination

57. The Determination is fit for purpose

58. Yes, the ACMA should remake the Determination

59. No further factors to be considered

Symbio thanks the ACMA for this opportunity to provide its comments on the issues discussed in the Paper.

If you would like to discuss matters raised in this submission please do not hesitate to contact us.