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Pivotel Response to

Review of the Numbering Plan and other instruments
Discussion paper
June 2024

8th July 2024

Pivotel Response

Please see below for answers to the questions listed in the ACMA's discussion paper. Answers have only been provided where Pivotel has a view or in a position to comment.

Principles-based

1. Do you support a principles-based Numbering Plan where associated operational procedures and requirements are developed and managed by industry through codes and guidelines? Why or why not?
   1.1. Yes. In principle, Pivotel supports a principles-based Numbering Plan where associated operational procedures and requirements are developed and managed by industry through codes and guidelines allowing greater flexibility and appropriately managed by industry representatives with the relevant expertise.
   1.2. It should be noted that there is not a common view across industry on some aspects of the numbering plan and the use of numbers. The divergent views often appear between large incumbents with legacy businesses and challenger service providers delivering innovative service solutions.

2. What steps or changes to the current Numbering Plan or existing or new industry codes, would support the evolution towards a more simplified or principles-based document? Please provide details, including likely timeframes.
   2.1. In a modern IP based telecommunications world telephone numbers are primarily used for making and receiving voice calls with IP addressing used for data calls including IOT services. Certain dedicated IOT and satellite services use MAC/Serial number addressing for data calls. Use of public telephone numbers should be restricted to voice and messaging applications where calling phone number is required to establish the call or send the message. The Numbering Plan should continue to focus on the management of numbers for their use in voice and messaging services.
   2.2. The categorisation and use of telephone numbers, especially fixed (geographic) and mobile numbers should be tied to the communities' expectations and understanding of the use of numbers, rather than being technology based. Rules affecting the use of the numbers should ensure the numbers are used in a manner that is consistent with their common use, supporting service characteristics such as messaging and mobile number portability for mobile numbers. The rules of use should not be restrictive such that the number can only be used where the end user is a person or is mobile, or a fixed number only used at a physical address.
   2.3. Both fixed and mobile numbers should continue to be available for use with cloud and application-based services avoiding any need to create a new number series for such services.
   2.4. Porting of virtual fixed numbers used with cloud and application-based services should be managed using a simplifed porting process similar to mobile numbers to facilitate faster porting with less service disruption and increased competition in the supply of virtual numbers by CSPs to end users.
   2.5. Services that do not explicitly require a number to be allocated, such as IOT services, should not be required to have a number allocated, do not need to be included in the numbering plan or managed in the IPND.

Removal of unused number types from the Numbering Plan

3. Of the number types listed in Table 2, are there any you consider are redundant or becoming less relevant in the industry? What number types that have minimal allocations are being used?

   3.1. It would stand to reason that 'Number Types' with zero allocations could be made redundant and withdrawn including:

      3.1.1. Premium rate and paging

      3.1.2. Restricted access and premium

      3.1.3. Paging

      3.1.4. Calling Card

4. Could existing number types be repurposed for another use? If so which number types and for what purposes (for example, which services)?

   4.1. Yes. Pivotel supports the principle of repurposing of existing number types for different uses. For example, the number ranges associated with the above Number Types could be repurposed as well as any other redundant Number Types that are unutilised.

5. Are there any specific costs or impacts of removing specific number types and associated provisions from the Numbering Plan? If so, please provide details.

   5.1. No cost envisaged for unused number types. Network and end user costs would apply for the repurposing of number types already used but where the volumes are low and the number made available high (such as Incoming only international) the cost would be appear to be justified.

Digital mobile numbers

6. Should digital mobile numbers be listed as a discrete number type? Why or why not?

   6.1. Yes. It is appropriate to reconsider the classification of mobile numbers with their own 'Digital Mobile Number' classification as distinct from having them included as a special service number.

   6.2. The historical classification of mobile numbers as a 'special service' number is no longer appropriate given the number of mobile numbers in use and is now the dominant number for end users with fixed/geographic numbers in decline.

   6.3. Calling mobile numbers no longer attracts a premium and mobile numbers are used for a multitude of purposes including business-to-consumer messaging applications such as 2-factor authentication and appointment reminders as well as, business to business and consumer to business applications as cloud PBX services and personal assistant. As such it is timely to reconsider amending the Numbering Plan to reflect changes in mobile number use and application.

7. Are there specific rules that should apply to this number type? If so, please provide details and reasons.

   7.1. Yes, there is merit in defining some rules associated with the use of digital mobile numbers but the rules should not be overly restrictive such that they hinder innovative or competitive services. Digital mobile numbers carry certain characteristics that are unique to the digital mobile service, such as supporting SMS capabilities (geographic numbers do not), as well imply characteristics of the end user such as personal use and mobility (or no fixed location).

   7.2. Associating rules with the use of digital mobile numbers will ensure that the use of numbers maintains those characteristics and consumers do not get confused on their use. Rules affecting the use of the numbers should ensure the numbers are used in a

manner that is consistent with their common use supporting service characteristics such as messaging and mobile number portability.

7.3. The rules of use should **not be restrictive** such that the number can **only** be used where the end user is a person or is mobile. For example, a personal assistant service reached via a mobile number is often not used by a single individual but the intention of the service is to appear personal. A call to a mobile number may also be used as an intermediate number for routing a call to a mobile end user based on the location of the caller, or the time of day/week of the call. Rules for using digital mobile numbers should be technology agnostic provided the technology supports important features expected of the service such as SMS and number portability.

Internet of Things / machine-to-machine

8. What is the expected demand for mobile numbers for IoT purposes over the next decade?
    8.1. Pivotel expects the use of monitored IOT devices to grow exponentially. Modern IOT devices do not need a specific mobile number to function and so we expect future demand for public numbers associated with IOT to be low.
    8.2. Given the forecast usage and exponential requirement of IOT endpoints, the allocation of a mobile number would be an unsuitable use of mobile numbers, adding substantial costs and utilising existing number ranges unnecessarily. This issue extends to potential high bandwidth devices beyond pure IOT narrowband.

9. Do you support the introduction of different numbers for IoT and M2M communication? Why or why not?
    9.1. See above. Pivotel's view is that public numbers are not specifically required for future IOT or M2M 'On Net' use cases however ongoing support for legacy services utilising public telephone numbers should be maintained.
    9.2. If the ACMA and other industry participants believe numbers are required, then a separate number range with different characteristics and charging principles should be used as the value these devices generate will be substantially less than standard fixed and mobile numbers via handheld and other connected devices and require a different approach which can be explored through industry working groups under a principles-based approach.

10. Which of the 2 options do you support and why? If neither or another, please explain.
    10.1. Modern IOT devices can be accessed on-net via the unique IMEI, IMSI or serial number associated with the terminal with of-net access via a mapped to external IP address.

11. Is there an existing number range that would be suitable for this use, or should a new number range be introduced?
    11.1. For legacy IOT devices requiring a public telephone number a separate number range and management thereof, would be appropriate given the unique characteristics and primarily narrowband use cases of IOT solutions.
    11.2. No comment on specific number range to be introduced noting comment above that public telephone numbers may not be specifically required to support 'On Net' IOT use cases.

12. If numbers were to be introduced to support IoT and M2M communication, how would the operation of these numbers differ from existing numbers and what specific rules would be required?

   12.1. A distinct number range with discreet charging principles given the expected uptake and more limited commercial returns per device connected.

Short codes

13. Should short codes be introduced for use in the Numbering Plan? Why or why not?

   13.1. Pivotel believes there may be appropriate use cases for the use of short codes and should not necessarily be excluded from the numbering plan.

14. Are there any risks or benefits in introducing short codes, for example, on scam mitigation efforts?

   14.1. Any short code implementation would have to consider SCAM and appropriate mitigation processes and requirements would have to be adopted that are applicable to standard voice and SMS using fixed and mobile numbers.

Calls over non-mobile networks

15. Do you agree or disagree that mobile numbers should only be used to originate calls from mobile networks? Why or why not?

   15.1. Disagree. CSPs that have legitimately been issued with mobile numbers should be able to use those numbers to originate calls and SMS. Recent innovations and technologies have enabled use cases that require origination of calls / SMS from sources other than a mobile handset directly connected to a mobile network and the numbering plan should accommodate these in order to maintain an efficient and competitive marketplace.

   15.2. Australian mobile numbers allocated to an access provider under the Numbering Plan should allow market challengers and other emerging service providers (e.g. providers of cloud-based mobile numbering) to terminate calls / SMS onto other carrier networks where relevant commercial arrangements are in place or via interconnected carriers compliant with relevant regulations and legal requirements such as IPND, MNP etc.

   15.3. Cloud-based mobile numbering, which is gaining popularity internationally and in Australia, offers a range of innovative applications. It allows end-users to have different numbers for various purposes and enables businesses to provide integrated cloud-based communication solutions that enhance productivity, convenience, and security. As a result, cloud-based numbering can improve service-based competition for voice and SMS services, deliver greater benefits to consumers, and make telecommunications infrastructure use more efficient.

16. Are there specific rules or updates that should apply to mobile numbers, including to support changes in technology and in the use of mobile numbers? If so, please provide details and reasons.

   16.1. The Numbering Plan definitions should be revised to reflect current usage models and technologies while also encouraging innovative needs applications and use cases.

   16.2. When the Numbering Plan was developed, telecommunications numbers were required to route calls to a physical end-user device. Fixed ('geographic numbers')

numbers were allocated based on the requirement to route calls to a specific Telstra Exchange Service Area (ESA) location for far-end handover. The need for local numbers linked to ESAs is greatly diminished in a world where calls and messages are trunked via an IP network. Numbers no longer need to be associated with a physical end user device or geographic location although there are applications where the right-of-use owner of a number wants to convey a geographical presence.

16.3. Increasingly calls and messages are originated from and terminated to applications accessed via IP networks with the 'end user' reached by mapping the called number with an IP address, these numbers being so-called virtual numbers. The use of virtual numbers, both local and mobile numbers, has exploded in recent years with the rise of cloud-based applications such as PBX/Call Centre, Group Calling (eg. Microsoft Teams, Zoom) and Personal Assistant.

16.4. The decision to use a local or mobile number often comes down to the service characteristics, such as personal calling vs geographic presence, or service capability such as support for SMS, that the application end user wants to convey.

16.5. The specific use case of using virtual mobile numbers to receive SMS messages into applications running competitions, social voting or logging reports of crowd behaviour at sporting events have been supported by the national MNOs for many years and represent innovative use cases that should continue to be encouraged by the numbering plan.

16.6. Pivotel would like the Numbering Plan Review to consider new developments in IP routing and carriage and the virtual nature of a number associated with an application. Use of mobile numbers should not be restricted to a mobile terminal identified by the IMSI of the SIM card and should continue to encourage innovative use cases, in a technology agnostic manner, that reflects the broader community expectations and understanding of the use of the numbers.

17. Is the definition of digital mobile services in the Numbering Plan still fit for purpose? If it should be updated, how?

17.1. No. The definition of digital mobile service in the Numbering Plan is still valid however if left unchanged it may give rise to restrictions in the use of Digital Mobile Numbers that unnecessarily limits their use to solely being used in connection with a 'public mobile telecommunications service supplied by a network using digital modulation techniques'. The key characteristics of public mobile network, in relation to the use of numbers, is the support for both voice and messaging applications, support for full mobility including roaming, and the support of mobile number portability obligations.

17.2. The definition should be updated to ensure the continued use with use cases as described in the ACMA's discussion paper, including voice over wi-fi and VoIP calling, use with OTT and application based services, satellite services, application-based messaging and IoT and M2M services, provided the underlying technology also supports the key characteristics of a public mobile network as described above.

VoIP, application-based messaging and cloud-based services

18. What specific changes or updates to the Numbering Plan, including definitions, should be made to accommodate these services?

18.1. Customers calling and right-of-use owners originating calls from fixed and mobile numbers see value in the characteristics implied by the number range and a review of

the Numbering plan should seek to maintain that without becoming overly restrictive in their application and use cases.

18.2. Fixed numbers convey a sense of 'local' which is often valued by customers seeking trade services, as an example, and hence right-of-use owner may want to imply they have a local presence through the use of local numbers even when the call is answered half a world away. Likewise, right-of-use owners of mobile numbers may want to use such numbers to avoid being perceived as only local. These are valuable characteristics that should be supported in the use of fixed and mobile numbers with VoIP, application and cloud based services.

18.3. Consideration should be given to the removal of restrictions that in any way tie the use of a fixed number to a local exchange area, or restrict the use of mobile numbers to end user terminals directly connected to a public mobile network. Tying the use of mobile numbers to networks capable of supporting the key characteristics of mobile services will facilitate the broader use of mobile numbers and the adoption of city or region based numbering for 'fixed' services, similar to the ESA numbering, can facilitate their uptake with cloud based applications.

19. What types of numbering rules should be included in the Numbering Plan for these types of services?

19.1. Numbering rules should be consistent with the objectives set out at the response to Q18.

20. Should the definition of Local Service be changed? If so, how?

20.1. Refer to the Q18.

Standard Zone Units

21. Are Standard Zone Units still required? Why or why not?

21.1. With the move to SIP interconnect and flat rate charges for fixed interconnection the need for standard zone units no longer exists.

22. If it is possible, do you support the potential move to broader geographic zones and accompanying number ranges?

22.1. Yes. As discussed as Q18, there continues to be value in the implied presence provided by geographic numbers.

23. What costs or burdens could result from such a change?

23.1. We see minimal costs in creating a more flexible use of geographic numbers however we believe there is potential to reduce the complexity for porting fixed numbers between carriers where the use of the use of a number is no longer tied to a telephone exchange.

Traffic origination from outside of Australia

24. Should there be rules about the use of Australian numbers to originate calls from locations outside Australia? Why or why not?

24.1. Restricting calls or SMS from foreign locations will effectively limit competition and innovation and have implications for Australian connectivity with other countries which would be an extreme and retrograde step.

24.2.	There are a number of use cases such as enterprises that have their contact centres, support teams or marketing teams located outside of Australia who require an Australian number to communicate with their customers. The physical location of such teams, where the traffic is carried over IP connections, should not be reason to prevent their use of Australian numbers.

24.3.	Ensuring global connectivity was also supported by the ACCC who stated in their recent MTAS determination that "the ACCC noted that this issue was considered during the previous MTAS declaration inquiry in 2019 when the ACCC found that excluding internationally originated voice traffic in the service description would result in differential regulation, potentially higher wholesale charges, and a more complex regulatory regime with higher implementation, compliance and monitoring cost for industry.....The ACCC noted that circumstances had not changed since 2019. The ACCC's final position remains that international originating calls should not be excluded from the MTAS service description."[1]

25.	Noting stakeholders have cited scam calls originating offshore using Australian numbers as the reason for this suggestion, should any such rules be in the Numbering Plan or another instrument? Please explain your answer.

25.1.	Pivotel supports the adoption of a centralised register to validate and authenticate calls and SMS (see Q45). This register should equally apply to internationally originated inbound calls or SMS. It should also be noted that many SCAM calls originate from inside Australia using SIM boxes with unlimited calling to generate very high volumes of SCAM attempts at low cost.

25.2.	Pivotel supports a mandatory CSP register with tighter enforcement of SCAM mitigation by CSPs. CSPs must have a local presence before they can be registered. International originating calls should only be delivered by registered service providers allowing the terminating carrier to verify the call origin and facilitating improved trace back mechanisms and compliance.

26.	What would be the effect of such rules on businesses and consumers?

26.1.	Consumer protections will be improved by the implementation of a mandatory CSP register and rules enforcement. A sender ID register for calls and SMS will improve the validation and traceback of calls and SMS.

26.2.	Businesses with International operations would need to register their business with their registered service provider(s). CSPs will then only accept calls from offshore businesses registered with the CSP to use the Australian numbers.

Allocation – availability of numbers

27.	Are there any comments on the list of proposed numbers in Appendix B?

27.1.	No comment

28.	Should the ACMA withdraw unused numbers under section 94 of the Numbering Plan before releasing additional prefixes or numbers?

28.1.	No comment

29.	Are there any number conservation strategies the ACMA should consider in a remade Numbering Plan?

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[1] ACCC Public inquiry into the declaration of the domestic mobile terminating access service, Final report, June 2024, page 28

29.1.   No comment

Allocation – rules

30. Should there be stronger, or more prescriptive, rules for allocating numbers to C/CSPs in the Numbering Plan? Why or why not?
    30.1.   Pivotel does not support stronger, or more prescriptive, rules for allocating numbers to C/CSPs in the Numbering Plan other than restricting the issue of numbers to registered CSPs, as existing processes and rules are considered suitable and effective.
    30.2.   Number allocation and operational matters can be managed via an industry supported principles-based framework.

31. Should the ACMA seek additional information from CSPs during the application process for numbers? Would this strengthen the integrity of the numbering ecosystem?
    31.1.   The ACMA should validate the quantum of numbers required and ensure the CSP is registered in any validation / qualification register (see Q45).

32. Should CSPs be required to seek additional information from other CSPs before being able to sub-allocate/assign numbers to them? Why or why not?
    32.1.   Pivotel does not believe the assignment (or sub-allocation) of numbers to registered CSPs should be restricted and there should be no limit on the number of times a number can be assigned or that any assignment should be limited to Australian businesses provided all CSPs must be registered and the use of numbers is in accordance with an industry supported principles- based framework.

33. Should the ACMA consider enhancing its registers in the Numbering System to improve visibility of all current CSPs and the numbers they hold? Why or why not?
    33.1.   Sub-allocation of numbers by a CSP to another should be administered by the registered holder of the assigned numbers.

34. Do you support the ACMA revisiting its proposal for CSPs to be registered in the Numbering System before they can be assigned numbers?
    34.1.   Yes. Compliance with the use of numbers and SCAM mitigation will be improved by the mandatory registration of CSPs.

35. Do you support provisions requiring annual audits in the Numbering Plan? Why or why not?
    35.1.   Annual audits already occur and appear to be effective. We do not see any reason to change the current audit process.

36. What specific costs or burdens could arise due to these proposals? Please provide specific details.
    36.1.   Mandatory registration of CSPs should not impose new costs or burdens beyond those that apply without registration for CSPs that take their compliance obligations seriously.

Pooled numbers

37. Should any rules be introduced in the Numbering Plan for 'pooled' numbers? If so, why, and what should the rules be? If not, why?

37.1. No. The current use of pooled numbers is consistent with a principles based numbering plan where numbers are used in a manner consistent with community expectations and the character and capabilities associated with the number. The application of pooled numbers in relation to the management of the numbers within the IPND should be clarified – noting this is not strictly a matter for Numbering Plan.

Eligible Party Identification codes (EPIDS)

38. What are your views about using the Numbering Plan to enforce the use of EPIDs?
    38.1. No comment

39. What are the specific costs or burdens that may result from this suggestion?
    39.1. No comment

Special rules about smartnumbers - Enhanced Rights of Use

40. Do you support these initiatives? Why or why not?
    40.1. Pivotel has not seen any significant SCAM traffic associated with the use of smartnumbers so cannot comment as to whether cancelling an EROU on a smartnumber is a warranted approach. We believe SCAM is best managed through a mandatory CSP register, sender-id register and existing obligations on CSPs under the Scam Calls and Scam SMs Industry Code.

Number portability

41. Are the number portability provisions in the Numbering Plan still fit for purpose? Why or why not?
    41.1. In contrast to Mobile Number Portability, Fixed number portability is an issue that needs to be addressed as a priority. The existing fixed number porting process continues to be cumbersome and works to the competitive advantage of incumbents. The complexities of fixed number porting related to physical lines and telephone exchanges should not apply to virtual fixed numbers and end to end porting times should mirror those of mobile number ports.
    41.2. An efficient and timely process whereby porting numbers between all CSPs will facilitate increased uptake with cloud applications and improve the competitive marketplace for inbound <u>and</u> outbound calling.

42. Are there any additional number portability provisions the ACCC should consider including in the Numbering Plan? Please explain.
    42.1. Nil

Multiple services to a number

43. Do you support the use of numbers by multiple CSPs? Why or why not?
    43.1. Yes. Pivotel unequivocally supports the use of numbers by multiple CSPs as this enables a competitive marketplace whereby alternative providers are able to compete with incumbents for the provision of value-added services.
    43.2. Under the Comms Alliance Industry Code, C566:2023 Number Management – _Use of Numbers By Customers, the end user retains the Rights of Use (RoU), not the CSP

who holds the number. As such the end user has the right to dynamically choose who will provide certain elements of their service requirements, irrespective of the CSP that holds the number, subject to compliance with relevant industry codes and regulations. This allows number holder to negotiate call rates with multiple outbound calling providers while also improving service resiliency through the use of multiple CSPs.

44. Can you provide some evidence / data of the benefits or harms of this practice? Please provide details and indicate if this information is provided in confidence.
    44.1.   There is a current misconception amongst some incumbent carriers that they own the number and all associated rights of use and as a result have implemented blocking of calls (and threatened SMS) of any calls that utilise their allocated numbers.
    44.2.   Multiple use of CLI and 'overstamping' is used in this and other markets for a number of legitimate uses cases where businesses would like to use an alternative provider to communicate with their customers using their existing phone numbers. This practice enables brands and consumers of the service to utilise the same set of phone numbers they advertise.
    44.3.   Inbound and outbound termination services should be considered as two separate services offered to and purchased by end-user customers of CSPs. End-users typically acquire an inbound call service with allocated numbers from a CSP who sets a monthly rate for supplying the number hosting and in-coming call routing services, as well as other associated services.
    44.4.   CSPs, typically acquire the numbers from a carrier who has the numbers provisioned across the carrier networks. The market for these services is highly competitive among CSPs, and carriers, and has resulted in end user charges for numbers and calls which are reflective of the underlying cost of providing the service. The cost to the carriers and CSPs of 'owning' the numbers is simply an input cost to the supply of the numbers and incoming call service to end users. A separate competitive market for the carriage of the outbound call, including the caller CLI, has resulted in end user charges for calls which are reflective of the underlying cost of providing the service.
    44.5.   It is common practice for customers to acquire outbound call and SMS termination services from multiple CSPs in a competitive marketplace. It is important to note that, in particular, predominantly business end-users are able to purchase these services on a competitive basis and they are not prevented from doing so under the so called rights of use argument put forward by some carriers. The end-user of the service should also be in a position to define the caller line identification (CLI) or sender ID that their communications will display to recipients, in accordance with the rules set by the SCAM Code.
    44.6.   Some carriers have been implementing call blocking on a unilateral basis effectively refusing to terminate calls (and SMS) impacting legitimate end users. This is based on their own interpretation of what may or may not constitute SCAM and effectively results in anti-competitive practices as CSPs are unable to offer their services if indiscriminate call blocking is taking place.
    44.7.   Hard blocking is a blunt and indiscriminate tool where the ability to disrupt scam traffic is possible but with substantial collateral damage to legitimate traffic, use cases and a competitive market.
    44.8.   Restricting the use of numbers to only the CSP (and carrier) hosting that number would inevitably combine both inbound and outbound services, reducing competition for outbound service capabilities leading to higher costs and loss of service resiliency.

45. Which of the 3 potential options do you consider to be most viable in the circumstances and why? Please provide details.

    45.1.   Pivotel considers Option 1, Status Quo, to be preferable in combination with a mandatory CSP register, sender-id register and existing obligations on CSPs under the Scam Calls and Scam SMs Industry Code.

    45.2.   Option 2, Introducing Rules, will be cumbersome, and difficult to implement and manage, using the 'whitelisting' rules suggested. Such rules will damage the dynamic competitive marketplace leading to reduced innovation and higher end user costs while also creating opportunities for gaming by incumbent CSPs (and carriers).

    45.3.   Option 3 is clearly a very blunt tool for trying to deal with the issue of SCAM calling and will result in less competition, choice and innovation. The reasons not to introduce such restrictions are clear.

    45.4.   Hence Option 1 supported by increased compliance and enforcement around end user rights to use numbers would appear to be the most rational approach whereby the market is allowed to be competitive and flourish without restrictive practices being forced on the industry by large national incumbents.

46. What are the potential benefits and costs to industry and end-users of each option?

    46.1.   See Q44

47. If option 2 were preferred, what should the rules be and how would these best be achieved/implemented? Are different solutions required for voice and SMS or fixed and mobile services? What are the potential timeframes needed to implement these arrangements from an industry and consumer perspective?

    47.1.   If Option 2 were preferred then rules should be linked to preventing, identifying and blocking SCAM calls and messages, not blocking all calls unless they are 'whitelisted'. Mandatory registration of CSPs and the use of sender id register will help on the prevention side. In an ideal world it would be more efficient and cost effective to have one solution for identifying and blocking both SMS and Voice, however this is problematic as CSPs are unable to determine the content of a voice call in contrast to an SMS.

    47.2.   Australia is already proceeding with an SMS Sender ID registry which is a good first step. In order to make this effective in combatting harmful SCAM this should be a mandatory process, coupled with validation of any Call to Action (CTA) contained in the SMS. CTA within an SMS is the means by which harmful SCAM is perpetrated as it requires a hyper-link, or phone number to call, where the end-user has to provide personal details in order for the SCAM to be actioned. The technology to validate SenderID in combination with a valid CTA exists today and should be progressed as soon as possible to help manage fraud and protect consumers from harmful SCAM.

    47.3.   Voice on the other hand creates additional challenges, however there are similar validation techniques available that are in use in their markets including the USA and Canada such as STIR/SHAKEN whereby "calls traveling through interconnected phone networks can have their caller ID "signed" as legitimate by originating carriers and validated by other carriers before reaching consumers. STIR/SHAKEN digitally validates the handoff of phone calls passing through the complex web of networks, allowing the phone company of the consumer receiving the call to verify that a call is in fact from the

number displayed on Caller ID".[2] This effectively enables the receiving party to verify the legitimacy of the CLI and validate the CLI is not spoofed.

47.4.   Additionally real-time phone number validation and qualification technology can help prevent different types of fraud including CLI refiling and artificial traffic generation to spoofing of voice caller IDs. This kind of solution evaluates the validity of a phone number by ensuring the number being used is an active in-use number as opposed to a number that may have been allocated by the ACMA however is inactive or not is use.

48. Are there other solutions or measures that could be implemented to address the concerns to date?

48.1.   See above Q47.

49. Is legitimate use of the multiple-service practice a problem? Please explain and provide specific details.

49.1.   Clearly the issue of SCAM calling as described in the ACMAs well considered discussion paper is a problem. Practices which address SCAM calling and SMs at the source, or where a SCAM call/message can be clearly identified, should be prioritised and preferred in light of the potential alternative, which is a more constrained market that leaves consumers with more limited choice and competition in terms of solution providers and solutions available.

Answers to questions 50 and 51 can be provided to the ACMA in-confidence.

50. If you are a CSP that uses the multiple-service practice to originate calls/SMs using numbers issued to your customers by another CSP:

[2] https://www.fcc.gov/call-authentication

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Provisions of Pre-selection Determination

52. Is the Pre-selection Determination still fit for purpose? Please provide reasons.
    52.1.   No Comment

53. Is the Pre-selection Determination still required to support the competitive delivery of long distance, international and fixed-to-mobile calls? What is the demand for pre-selection? Please provide details.
    53.1.   No Comment

54. 54. Should the ACMA remake the Determination? If so, are there any changes that should be made to the Determination?
    54.1.   No Comment

55. What would be the likely effect of allowing the Determination to sunset on end-users and/or to any other arrangements, including on the operation of the FAOS?
    55.1.   No Comment

56. Are there any other factors the ACMA should consider when reviewing the Determination?
    56.1.   No Comment

Portability Service Suppliers Determination

57. Is the Determination still fit for purpose? Please provide reasons.
    57.1.   No Comment

58. Should the ACMA remake the Determination?
    58.1.   No Comment

59. Are there any other factors the ACMA should consider when reviewing the Determination?
    59.1.   No Comment

For any questions concerning this response please contact:

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