Submissions on the review of the Numbering Plan and other instruments

8 July 2024

Public Version

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1.   EXECUTIVE SUMMARY

1.1   Twilio welcomes the opportunity to contribute to the Australian Communications and Media Authority's (the "**ACMA**") review of the Numbering Plan and other instruments dated June 2024 (the "**Review**"). Twilio considers that the Review is of paramount importance to ensuring that Australia's communications regulatory framework supports competition, efficiency and innovation so that Australian consumers and businesses can communicate cheaply, effectively and securely.

1.2   This Review of the Numbering Plan is timely given the scale of innovation that has occurred over the last decade. While competition from new entrants has seen new technologies and use cases emerge under the existing Numbering Plan, the Review presents an opportunity to ensure that it continues to deliver benefits to Australians by allowing numbers to be used flexibly and efficiently. The Review also represents a crossroads for telecommunications in Australia and raises issues that go well beyond the allocation of numbers. It marks a choice between establishing regulatory settings which allow competition and innovation to thrive and those which stifle innovation and entrench the market power of incumbents.

1.3   Some industry participants might argue that recent innovations are harmful and should be prohibited or curtailed because they constitute incorrect or inappropriate uses of numbers. This is a fallacy and one that, if heeded by the ACMA, would see it regulate in a manner contrary to the objects of the Act. Twilio hopes this will not occur.

1.4   Twilio also submits that the review of the Numbering Plan should not occur in isolation. Whilst the Discussion Paper identifies a number of legislative instruments that are relevant, Twilio submits that the ACMA should also consider how the Numbering Plan operates in conjunction with a number of other instruments or industry codes including the *Telecommunications Interception and Access Act 1997*, the *IPND Code*, the *Declaration of Mobile Terminating Access Service* and the *Reducing Scam Calls and SMs Code* ("the "**Scam Code**"). These instruments are already being reviewed or a review appears imminent and any changes to the Numbering Plan should ensure that regulatory alignment is maintained.

1.5   Finally, the Review also provides the ACMA with an opportunity to benefit from the experiences of international regulators, such as OFCOM, ARCEP and the FCC but also to help shape the way they and other regulators globally tackle these important issues.

1.6   Twilio has limited its submissions to the following issues:

Issue	Question Range
Principle based approach	1-2
Digital Mobile Numbers	6-7
Short Codes	13-14
Use of digital mobile numbers	15-17
VoIP and Cloud-based services	18-20
Traffic origination outside Australia	24-26
Allocation – Rules	30 – 36

Multiple services to a number	43 − 51
Pre-selection Determination	52

It has done so to ensure that its efforts are focussed on those areas where it has the most to contribute.

2. ABOUT TWILIO

2.1 Twilio is a leading global Communication Platform as a Service Provider ("**CPaaS**") and a carriage service provider (**CSP**) pursuant to s.87 of the Telecommunications Act 1997 (Cth) (the "**Act**"). It is also a 'registered' CSP for the purposes of being directly allocated numbers by the ACMA under the Numbering System.

2.2 Twilio's software allows its customers to communicate with consumers across all their communication channels including voice, SMS, messaging or email. Twilio customers are able to incorporate Twilio communications services into their own applications across a range of industries.

2.3 Twilio also works with a broad range of customers. These include both international household name brands and small to medium sized local businesses. Twilio.org is Twilio's charitable arm which enables charitable organisations, social enterprises, healthcare and education institutions to meet their communications needs with Twilio's technology and funding (through the Twilio Impact Fund)[1].

2.4 Twilio is a trusted member of committees both in Australia and internationally that are shaping the future of telecommunications in the jurisdictions in which Twilio does business. Twilio is committed to developing industry best practices and standards to build trust among all stakeholders in the telecommunications ecosystem, and in particular to combat scam traffic. In the United States of America, for example, Twilio sits on the board of the Alliance of Telecommunications Industry Solutions ("**ATIS**"), the Industry Traceback Group Executive Committee and Steering Committee, and co-chaired the Robocalling and Communication ID Spoofing Group which produced a comprehensive and coordinated view of all robocalling and spamming efforts across the industry and considered the need for further standards development[2].

2.5 In Australia, Twilio is an active member of Communications Alliance and is a voting member of a number of its working committees including those that have responsibility for the development of a number of industry codes that are relevant to the current consultation, namely: "*Rights of Use of Numbers*", "*Integrated Public Number Database*" and "*Reducing Scam Calls and SMs*". Twilio's involvement in these committees as a provider of CPaaS services and as a CSP as distinct from a carrier or a national mobile network operator means it has a unique and important perspective to offer when considering the issues that the Discussion Paper raises.

3. OPERATION OF THE NUMBERING PLAN

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[1] https://www.twilio.org/support-and-resources/impact-fund

[2] In addition, Twilio is also a member of the Communications Fraud Control Association (CFCA) as well as One Consortium. Both industry associations are focussed on efforts to stop fraud and illegal or unwanted traffic.

3.1   In the absence of a numbering scheme manager, the ACMA is required to make a plan for the numbering of carriage services and the use of numbers in connection with the supply of such services. Section 455 of the Act affords considerable discretion to the ACMA in making a plan, providing simply that it *may* set out rules about:

- the allocation of numbers to CSPs;

- the transfer of allocated numbers between CSPs;

- the surrender or withdrawal of allocated numbers;

- the portability of allocated numbers; and

- the use of allocated numbers in connection with the supply of carriage services to the public in Australia (including rules about the issue of allocated numbers by CSPs to their customers for use in connection with the supply of carriage services).[3]

The ACMA should therefore be guided by the objects of the Act in making a new numbering plan.

3.2   The primary objects of the Act, when read together with Parts XIB and XIC of the Competition and Consumer Act 2010 (Cth) ("**CCA**") are to provide a regulatory framework that promotes:

(a)   the long-term interests of end-users of carriage services or of services provided by means of carriage services ("**LTIE**"); and

(b)   the efficiency and international competitiveness of the Australian telecommunications industry; and

(c)   the availability of accessible and affordable carriage services that enhance the welfare of Australians.

Additional objects of the Act include:

(d)   ensuring that standard telephone services are:

- reasonably accessible to all people in Australia on an equitable basis;

- supplied as efficiently and economically as possible; and

- supplied at performance standards that reasonably meet the social, industrial and commercial needs to the Australian community;

(e)   to promote the supply of diverse and innovative carriage services; and

(f)   to promote the development of an Australian telecommunications industry that is efficient, competitive and responsive to the needs of the Australian community.

3.3   It is in that context that the ACMA prepared the Numbering Plan 2015 (the "**Numbering Plan**"). The Numbering Plan sets out at section 6, the objects that should be considered when interpreting and making decisions under the Numbering Plan. These objects include:

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[3] S455(5) Telecommunications Act 2015

- the objects of the Act;

- the desirability of ensuring consistency with the objects of the telecommunications access regime contained in Part XIC of the CCA; and

- the desirability of ensuring that the management of numbers under the Numbering Plan is carried out in a way that is consistent with the requirements of other instruments made under the Act.

3.4   The object of Part XIC of the CCA is to promote the LTIE. Under section 152AB of the CCA, in determining whether a particular thing promotes the LTIE, regard must be had to the following objectives:

(a)   promoting competition in markets for listed services;

(b)   achieving any-to-any connectivity; and

(c)   encouraging economically efficient use and investment in infrastructure.

Collectively, these objects make it clear that the Numbering Plan should further the broader economic and social objectives of Australia's telecommunications regulatory framework. Put simply, the plan should enhance the welfare of Australians by ensuring that numbers are used in a way that promotes competition and economic efficiency, whilst not compromising reliability or accessibility. It should also enhance Australia's international competitiveness, particularly as numbers are a scarce and valuable resource.

4.   PRINCIPLES - BASED APPROACH

Questions

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?
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.

4.1   Twilio supports a principles-based approach to regulation in general, as not preferencing particular technologies is likely to foster competition and innovation. However, it has some concerns about the extent to which current regulations on important issues such as scam traffic are covered by industry codes which have been drafted by committee and which tend to reflect the interests and perspectives of traditional local operators.

4.2   The communications landscape in Australia is constantly evolving, both in terms of the way that Australians communicate with each other and businesses, as well as the technology that enables these communications. When the first Numbering Plan was introduced in 1997, it was designed to set numbering arrangements for services provided over networks based on circuit-switched PSTN technology. Since then, even traditional operators have largely retired that technology in their networks in favour of digital and IP-based technology and are moving to Cloud-based solutions. There has also been a rapid expansion of new (often global) service providers who provide a diverse range of communications solutions based almost entirely on Cloud-hosted software applications. Twilio's own cloud-based telecommunications services, for example, offer customers innovative and customisable communications solutions.

4.3 The way that Australians communicate is also changing with a decline in the use of landline phones, and an increase in the use of mobile phones, digital platforms, and apps.[4] Twilio considers that methods of communication, and the use of phone numbers, will continue to evolve overtime with the convergence of fixed and mobile telephony, and the development of Internet of Things ("IoT") and machine-to-machine communications.

4.4 In this context, Twilio considers that a principles-based approach to the Numbering Plan, is most likely to accommodate the rapid degree of technological change that characterises today's communications sector by providing the flexibility to innovate. It will also ensure that regulation does not create barriers to new services being offered and fosters competition between current and evolving technologies and services (which in turn promotes the LTIE and Australia's international competitiveness). As the Authority has recognised, industry codes continue to be an important self-regulatory or co-regulatory mechanism in the Australian communications and media sectors.[5]

4.5 Industry codes can also promote flexibility and adaptability, as well as lowering compliance and administrative costs by drawing upon industry expertise.[6] It is critical, though, that the process for the development and implementation of codes (including consultation on draft codes) meaningfully involves *all* industry participants, including providers of CPaaS and CaaS services, and not just traditional carriers and national mobile network operators. There may also be a need for greater guidance from the ACMA and/or other regulatory bodies on some key issues such as the need for genuine competition and technology neutrality.

4.6 Twilio also agrees with the ACMA that a simplified and streamlined version of the Numbering Plan will be easier for industry to interpret and apply to the benefit of enterprise customers (including SMEs) and consumers. Twilio acknowledges the improvements in the current Numbering Plan, however it considers there is scope for the Numbering Plan to move towards becoming a more principles-based document.

4.7 That being said, there are a few areas where greater clarity and certainty would help to promote the objects of the Act referred to above. These are discussed further below and include the expanding use cases for mobile numbers which are no longer simply used for P2P communications between handsets, and amendments to clarify that contractual sub-allocation of numbers is permitted where it promotes the LTIE. These matters should not be left solely to industry given their importance to the promotion of competition and Australia's international competitiveness, particularly as industry bodies have tended to be dominated by incumbent operators.

A principles-based approach and the importance of numbers to the telecommunications ecosystem

4.8 Twilio considers that telephone numbers remain extremely important to consumers and businesses'. Customers rely on phone numbers to identify themselves to the persons they call and message and to recognise people who call and contact them. Trust in these numbers by the entire ecosystem (i.e. businesses, persons, and electronic communications providers) also ensures that customers', businesses and brands can thrive, and consumers can use communications services with confidence. The use of phone numbers will also continue to

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[4] ACMA, How we communicate – executive summary and key findings (December 2023). Available at: https://www.acma.gov.au/sites/default/files/2023-12/ACMA_How%20we%20communicate_Executive%20summary%20and%20key%20findings.pdf

[5] ACMA, Optimal conditions for effective self- and co-regulatory arrangements (Occasional paper, September 2021). Available at: https://www.acma.gov.au/sites/default/files/2019-08/Optimal%20conditions%20for%20self-%20and%20co-regulation%20Sep%202011%20pdf.pdf.

[6] Ibid.

evolve overtime (e.g. in relation to IoT and machine-to-machine services). Put simply, most Australians use phone numbers every day.[7] In 2023, for instance, almost all adults used their mobile phones to make calls (97%) and text (96%, increasing from 91% in 2022).[8]

4.9 It is also important to remember that numbers ultimately belong to the Commonwealth and not individual operators, even those to whom the numbers were originally allocated. They are a scarce resource and should be used and regulated in a way that promotes their utility to Australian consumers and businesses and the economy more broadly. They should not be allowed to become a new bottleneck in the hands of incumbent operators.

4.10 As mentioned above, there are an increasing number of CPaaS providers, which offer creative solutions that allow businesses to integrate communication channels (e.g. SMS, voice, and messaging) into applications and websites through the use of APIs. These applications provide real value to customers by allowing them to communicate with consumers in a fast, reliable and cost-effective manner. Twilio itself uses a range of different numbers, including fixed and mobile numbers, to provide communications services. Current Twilio customers using programmable voice and SMS include ██ ██ ██.

4.11 CPaaS providers like Twilio help Australian businesses to meet their customers wherever they are located through simple but innovative multi-channel communication products. Since it was founded, Twilio has focused on enabling small businesses to offer a customer engagement experience on par with a large enterprise but without the need for large spend on infrastructure or technical teams. For example, a business can set up alerts and notifications such as time-based appointment notifications, real-time account security alerts or purchase confirmations. Businesses can utilise Voice APIs to customise call experiences, route calls efficiently, mask calls, track call volume peaks and facilitate use of AI virtual agents. Twilio's products are used to support multinationals, small businesses and charities around the world giving them simplified access to a global communication network.

4.12 Critically, though, the ability of CPaaS (and other telco providers) to innovate and offer competitive communications solutions depends on their ability to access and use essential inputs, such as phone numbers. Some of the submissions to ACMA's scoping consultation that the ACMA refers to in the Discussion Paper, such as the proposal to only allow the allocation of mobile numbers to MNOs would foreclose access to numbers and seriously harm competition and innovation. In Twilio's view, this highlights the risk that phone numbers become a new bottleneck service.

4.13 With this in mind, it is critical that the Numbering Plan (and the telecommunications regulatory framework more broadly) promotes competition and ensures the access and use of numbers for all industry participants. In particular, the ACMA must ensure that access to numbers at the wholesale layer does not impede competition at the retail layer. Any lessening of competition would harm the LTIE. In Twilio's view, the Numbering Plan (and the broader regulatory framework) should be technology-agnostic to allow for competition between old and new technologies, and it should not create barriers for new services. This will help to ensure the efficiency and international competitiveness of the Australian telecommunications industry moving forward.

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[7] Australian Government- Phone numbers (Web Page). Available at: https://www.infrastructure.gov.au/media-technology-communications/phone/phone-numbers.
[8] ACMA, How we communicate – executive summary and key findings (December 2023). Available at: https://www.acma.gov.au/sites/default/files/2023-12/ACMA_How%20we%20communicate_Executive%20summary%20and%20key%20findings.pdf

5. DIGITAL MOBILE NUMBERS

> **Questions**
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> 6. Should digital mobile numbers be listed as a discrete number type? Why or why not?
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> 7. Are there specific rules that should apply to this number type? If so, please provide details and reasons.

5.1   Twilio submits that digital mobile numbers should be listed as a discrete number type within the Numbering Plan rather than as a subset of special service numbers. Digital mobile numbers are the second most common number type in use. For that reason alone, it is odd that these are not treated as a distinct number type. Twilio considers that treating digital mobile numbers as a discrete number type would also enable the ACMA to provide greater clarity about the permitted use cases for mobile numbers, in circumstances where they are now crucial to many types of services that businesses (including SMEs) use to communicate with their customers.

5.2   Twilio acquires access to all digital mobile numbers through arrangements with carriers and uses these to provide a range of services to end-users. For example, Twilio supplies digital mobile numbers to its customer, Zoom2U, an Australian owned business, which offers an innovative platform built on Twilio that enables radically fast deliveries (three hours or less) with live tracking technology by building a marketplace that connects local couriers with customers. Zoom2u leverages the Twilio Programmable Messaging API to be able to send SMS alerts to customers with a link that allows them to track their delivery or package in real-time. Zoom2u connects the customer directly with the courier removing the courier's head office from the middle.

5.3   As covered in more detail in section 7 of this submission, there are some carriers which contend that only MNOs should be permitted to be allocated mobile numbers[9]. However, this confuses ownership of infrastructure with rights to use numbers, and importantly does not reflect the way in which mobile numbers are now used by carriage service providers. To impose such a restriction now would be regressive and backward-looking. This is because it would preclude carriage service providers from being directly allocated numbers from the ACMA and instead leave them beholden to incumbent network operators which are also their competitors.

5.4   As such, this approach would also stifle competition by handing a significant advantage to the national MNO's that already have significant market power. This could lead to anti-competitive behaviour such as predatory pricing, discriminatory practices, bundling, or creating unfair barriers to entry. It would also stifle innovation by making it harder for new entrants to join the market and provide innovative alternative products. The telecom industry globally is rapidly evolving, with new technologies and services continuously emerging. Restricting mobile number allocation to MNOs would slow down the adoption of new technologies and the introduction of new services that might otherwise drive industry growth and consumer benefits.

5.5   Ultimately this would run contrary to the LTIE by reducing consumer choice and innovation, while likely increasing costs. The dampening of competitive pressure is also likely to reduce

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[9] ACMA Discussion Paper pg.12

quality of service. Instead Twilio considers that the ACMA should consolidate the use cases of digital mobile numbers into the Numbering Plan and expand upon the use cases that apply to mobile numbers recognising that these are no longer simply used for person-to person communications between handsets.

5.6   Save for expanding upon the use cases that apply to digital mobile numbers, Twilio does not support implementing specific rules for mobile numbers. Twilio would prefer to see consistency maintained in the rules across different number types (in particular, mobile and local services) and believes this is more consistent with a principles-based approach to regulation. This would make the Numbering Plan simpler and easier to understand for all stakeholders including service providers and consumers. It would also ensure a level playing field for all service providers, regardless of the type of service they offer (mobile, local, or otherwise) and promote healthy competition across the industry. Consistency would also make the plan more adaptable for new technologies, therefore futureproofing it as the telecommunications landscape evolves. Uniform rules can also help ensure that consumers receive consistent levels of service quality, transparency, and protection across different types of telecommunications services, as well as reflecting how businesses and consumers now use numbering resources.

5.7   Importantly, the use of both mobile and geographic numbers has evolved significantly since the current Numbering Plan was introduced in 2015 with fixed-to-mobile convergence accelerating not just in Australia but globally[10]. In circumstances where fixed and mobile are used interchangeably, it makes sense for the use of numbers to likewise converge.

5.8   The growing importance of mobile numbers to Australians is also reflected in recent statistics. For example, the ACMA's latest report found that in June 2023, the use of landline phones declined in 2023 to 18% (from 23% in 2022)[11], whereas mobile phones are used to make calls by 97% of Australians[12]. Increasingly, mobile phones (and consequently, mobile numbers) are taking on the role that was once filled by fixed line services (and geographic numbers). This also applies in the B2B sector, where businesses are increasingly removing desktop handsets and replacing these with CPaaS and VoIP solutions which use the geographic number, but may deliver voice traffic to both a desktop application and a user's mobile device.

5.9   Finally, Twilio points to the recent findings of OFCOM as part of its "Future of Numbering" research. OFCOM considered whether local/geographic numbers remained necessary. Ultimately, it resolved to retain geographic numbers because of their use by older demographics, but it also found that:

> We proposed retaining the current rules on location significance and to continue to allow phone users the option of using numbers out of area. We recognised younger phone users tend not to value or understand location significance, and therefore we would expect to see the value of area codes continue to decline. We considered this decline is also likely to accelerate as the migration to IP progresses and numbers are used more flexibly. However, we proposed not to take steps to hasten the erosion of this link which remains of value to many phone users and businesses[13].

5.10   Given this clear trend, Twilio submits that there would be limited benefit in having separate rules for mobile and geographic numbers when the use of these numbers is continuing to converge.

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[10] Future of telephone numbers: statement on geographic numbering – March 2022
[11] ACMA, Communications and media in Australia – How we communicate Executive Summary and Key Findings pg.3
[12] ACMA, Communications and media in Australia – How we communicate – Interactive Graph
[13] Future of telephone numbers: statement on geographic numbering March 2022 para 3.5

6. 'SHORT CODES

Questions

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

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

6.1   Twilio supports the introduction of short codes for use in accordance with the Numbering Plan. Short codes are widely accepted internationally, and Twilio offers end-users this service in a number of jurisdictions including Argentina, Brazil, Canada, Colombia, Dominican Republic, France, Germany, India, Mexico, New Zealand, Spain, Sweden, United Kingdom and the United States of America.

6.2   Short codes allow the efficient use of numbering resources. By way of example, shared short codes allow small and medium sized businesses to share the cost associated with the number, with the keyword associated with the short code then being used to distribute the message to the appropriate business. The use of short codes can also potentially free up the use of numbers in other number ranges, for example mobile numbers where the ACMA has already observed that 83.2% of numbers in the 04 range have already been allocated[14].

6.3   There are also benefits to consumers and industry as short codes can be used as a part of the scam mitigation toolbox. Functionally, introducing short codes may also provide better oversight such as requiring pre-approved use cases. Indeed, the ACMA itself has already identified the potential benefits to consumers that can be realised through the use of short codes. The ACMA's previous consultation into the Numbering Plan conducted in 2022 proposed a short code for consumers to be able to alert their carrier or carriage service provider regarding scam texts. Following the consultation, the ACMA introduced the '7226' (SCAM) short code into the Numbering Plan. Telstra released its '7226' scam reporting service in 2023 and as of February 2024 had received over 250,000 messages[15].

6.4   Similarly, in the United Kingdom, Stop Scam UK, an industry body whose members are comprised of telco's, banks and digital platforms employs a short code '159' which enable consumers to dial that number and be connected to their bank safely in the event they consider they may have been conversing with a scammer. As at April 2023, the '159' short code was able to connect customers of more than 97% of the UK's retail banks' current accounts to their bank and over 375,000 calls had been made to it.

7.   USE OF DIGITAL MOBILE NUMBERS

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[14] ACMA Discussion Paper pg.8

[15] https://www.telstra.com.au/exchange/keep-snitching-on-scammers--how-our-new-7226-reporting-number-is

Questions:

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

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.

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

7.1　Twilio does not agree that mobile numbers should only be used to originate calls from mobile networks. Nor does it consider that 'MNOs' should have exclusive access to mobile numbers. In any event, there are also real questions around what constitutes a 'mobile network operator' in a world where soft-switching, internet telephony (including LTE) and outsourcing of core network functions frequently characterise carrier operations, not just in Australia but globally.

7.2　Mandating exclusive access to MNOs would run contrary to the objects of the Act because:
- it would stifle innovation;

- it would not promote competition or economic efficiency. Rather, it would stifle innovation and favour incumbents;

- it would not be technology-neutral but favour traditional telephony solutions;

- it is likely to drive up the costs of providing services to end-users as well as limiting choice. Those cost increases would almost certainly be passed on both to those businesses that rely upon these services and ultimately to consumers; and

- rather than promoting the international competitiveness of the Australian telecommunications industry, it would be regressive and isolationist. Whereas other jurisdictions are opening up the use cases for numbers[16], this would see use cases for mobile numbers diminished for the next decade.

In Twilio's experience, arguments that seek to foreclose mobile numbers from CSPs are generally made by mobile network operators that wish to preserve their market power and use scam prevention as a pretext for doing so. Additionally, it appears often overlooked but "mobile network operator" is simply an industry term and has no definition in the Act or the CCA.

7.3　It has been accepted by the ACCC that MNOs have a monopoly over terminating traffic on their own networks[17]. This already provides MNOs with a competitive advantage in downstream markets. For CSPs that do not originate or terminate traffic (both calls and SMS) on a mobile network and rather procure wholesale services from existing MNOs for access to

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[16] By way of example, in France, ARCEP has created a new category of numbers to provide for solutions between mobile subscribers and technical platforms. Refer: https://en.arcep.fr/news/press-releases/view/n/numbering-plan-050922.html. While Twilio considers there are issues with how these changes have been implemented, Twilio agrees that mobile numbers should allow for innovative use cases.

[17] ACCC Draft Report on Declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service pg.48: "*there is currently no constraint on the mobile network operators in exercising monopoly power in the provision of mobile voice termination services*".

services such as MTAS, their ability to compete is based upon the ability to innovate and provide creative software-based solutions that businesses and consumers can use. By way of example, a company such as DoorDash uses Twilio's messaging and voice solutions to enables diners to connect directly with the driver[18].

Claims about scam are exaggerated and self-interested

7.4   The ACMA Discussion Paper acknowledges claims from certain stakeholders that use of mobile numbers outside of the origination of calls is a source of scam traffic. Twilio acknowledges that scam is a significant global issue within the telecommunications industry and is committed to stamping out the practice. That said, Twilio does not consider that the solution to scam traffic is to prohibit legitimate use cases which businesses and consumers clearly value. This would be the equivalent of using a sledgehammer to crack a walnut and would be economically inefficient. In addition, it is often overlooked that scam SMS and voice traffic represents a very small percentage of overall traffic. For example, the ACCC in its recent MTAS declaration inquiry considered that the total SMS sent in 2023 was approximately 30 billion (comprised of 13.9B A2P SMS)[19], while mobile voice minutes to the year ending June 2021 were 72.8 billion[20]. Over the same time periods, the volume of scam SMS reported to Scamwatch in 2023 was 109,615, while the volume of scam calls reported to Scamwatch for the year 2021 was 144,603 (including both fixed and mobile calls)[21].

7.5   Twilio supports whole of industry initiatives to prevent scam traffic comprising both industry investment and Government intervention. Australia is making significant strides in this regard. At the government level, current initiatives include:

- the Reducing Scam Calls and SMs Code;

- sender ID registry – currently in trial phase; and

- mandatory industry code consultation.

7.6   The benefit of the Scam Code is now being realised with 336.7 million scam texts having been blocked between 1 July 2022 and 30 September 2023.[22] While the last 12-18 months has seen a significant increase in ACMA enforcement action to ensure compliance with the Scam Code. Importantly, the obligations under the Scam Code are not limited to 'mobile network operators' but rather apply to all carriers and CSPs providing mobile voice or SMS services, across the supply chain whether they are the originating, transit or terminating CSP. To the extent that the ACMA (or Federal Government) decides to move to a registration model for CSPs[23], this will also facilitate the investigation of any alleged non-compliance.

7.7   The last two Federal Budgets have made provision for funds to combat scam. In the 2023/24 budget, $10.9 million was allocated for launching the Sender ID register, which would assist in combatting scam traffic using alphanumeric sender IDs (similar to the Campaign Register used in the United States which led to a significant reduction in scam SMS traffic). While in

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[18] https://customers.twilio.com/en-us/doordash
[19] ACCC Declaration Inquiry Discussion Paper pg. 47-48
[20] ACCC Declaration Inquiry Discussion Paper pg.34
[21] Scamwatch – scam statistics
[22] https://www.acma.gov.au/articles/2023-11/336-million-scam-texts-blocked-telcos

[23] https://www.infrastructure.gov.au/have-your-say/discussion-paper-carriage-service-provider-csp-registration-or-licensing-scheme-telecommunications

the 2024/25 Federal Budget, 67.5 million has been allocated over 4 years with $38.9 million of that being used to rollout the mandatory industry scam codes across Treasury, the ACCC, ACMA and ASIC[24].

7.8   Similarly, industry players are also introducing their own scam filtering initiatives. For example, Telstra's SMS scam blocking feature allegedly blocked 225 million messages between April and December 2022.

7.9   ██
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Twilio supports the introduction of additional use cases for digital mobile numbers

7.11   As previously noted at paragraphs 5.1, Twilio supports language in the Numbering Plan explaining the types of use cases that digital mobile numbers can support without limiting the adoption of future legitimate use-cases. However, given the level of convergence between the use of fixed and mobile services (and therefore numbers), Twilio does not consider that specific rules should apply to the use of mobile numbers (for example, the rules relating to allocation or withdrawal should not differ for mobile numbers). Rather the Numbering Plan should be technology-neutral and should be use-case based.

7.12   The ACMA also queries whether the definition of 'digital mobile services' is still fit for purpose. Twilio submits that the definition should be expanded to cover other use cases. While the ACMA (and the majority of the industry) appear to accept that the present definition covers more than just traditional handset to handset use of mobile numbers, there is a risk that some carriers and traditional operators may look to use any lack of clarity to hamper innovation by non-traditional CSPs.

8.   VoIP AND CLOUD BASED SERVICES

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[24] Budget Paper No.2 pg.180
[25] https://www.twilio.com/en-us/blog/twilio-verify-fraud-guard-a-powerful-defense-against-sms-pumping-fraud

8.1   Twilio submits that the Numbering Plan should clarify that VoIP and Cloud-based services may use numbering resources (including both local and mobile numbers) and that CSPs supplying those services may be allocated numbers for that purpose. This would remove any potential ambiguity that may exist. Increasingly, VoIP services are the norm including for fixed-line phone services and this clarification would clearly support the current and emerging use cases for numbers.

8.2   Twilio would also be in favour of the acknowledgement of the valid use of alphanumeric sender-IDs. Use of alphanumeric sender IDs in lieu of a number is increasingly popular amongst businesses of all sizes to communicate with their customers in a way that also promotes their brand identity. The Scam Code presently defines an alphanumeric sender ID as "*a personalised identifier (for example, the name of a business or organisation) instead of a Number*[26]. The Scam Code contains additional obligations on Originating CSPs to obtain evidence of a valid use where messages use an alphanumeric sender ID. This has been an area of the Scam Code that has caused some confusion for industry participants and has been one of the most common contraventions of the Scam Code to date. The Sender ID register which is currently being trialled is also aimed at ensuring accurate and legitimate use of sender IDs. The Numbering Plan should reflect their use, which is more frequent for CPaaS and VoIP service providers[27].

8.3   Twilio considers that further changes to the definition of "Local Service" may be appropriate given advances in technology. The definition appears outdated in light of new and emerging use cases and in particular, the uptake of VoIP based calling services using geographic numbers. Customers are no longer using their services in the method contemplated by the existing iteration of the Numbering Plan. In particular, geographic boundaries bear little relevance to the provision of services from cloud-based providers like Twilio. As noted at paragraph 5.8, fixed line phone use has fallen to 18% of Australians[28].

8.4   Twilio considers that the Numbering Plan presents an opportunity for the ACMA to introduce definitions of Application-to-Person (A2P) and Person-to-Person (P2P) SMS. The ACMA recognises submissions by stakeholders that the Numbering Plan currently relies upon an assumption that SMS and MMS will be provided by mobile numbers. However, increasingly application-based messaging forms such as A2P SMS enable the use of alphanumeric sender IDs. Twilio submits that the distinction between a P2P and A2P message is more nuanced than simply being about the origin of the message—whether from a handset or software. It should also depend on the nature of the interaction and the characteristics of that communication. Regulating messaging in this manner ensures that the rules are centred around user experience and the intent behind the messages, rather than being technologically prescriptive.

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[26] Reducing Scam Calls and SMs Code C661_2022 clause 2.2

[27] https://www.comreg.ie/media/2021/07/ComReg-15136R3.pdf

[28] ACMA, Communications and media in Australia – How we communicate – Interactive Graph

8.5   In Twilio's view, P2P messaging should encompass all SMSs communication where the interaction is ongoing between parties, including interactions facilitated by software. For instance, direct support messages from a business to a customer, initiated through software, should be classified as P2P as these are direct communication and involve two-way interaction. Another example would be a real estate company engaging with a tenant or a purchaser through a technology platform. Essentially these types of messages are person to person interactions through a software application.

8.6   Conversely, A2P messaging should have a limited definition that targets the traffic that the ACMA wishes to regulate. The A2P definition should capture mass marketing messages that do not involve targeted, two-way interactions. A2P should also include more generic messaging that has a broader reach, for example bulk promotional texts, one-time passcodes (OTPs) or delivery updates. That is, A2P is where the message is more a broadcast and not a channel for two-way communication.

8.7   This distinction, based on the characteristics of the communication, rather than technology used, better reflects the realities of modern communication. By focusing on the purpose and the end use of the service, the ACMA can ensure that regulations remain flexible and adaptive to evolving technologies. This approach also prevents unnecessary restrictions on legitimate P2P interactions conducted via software, which are increasingly common.

8.8   Ultimately, regulating based on interaction creates a more user-centric framework, ensures that innovative use cases are promoted, valuable use cases are protected and enables seamless, direct communications between businesses and their customers. A practical reflection of this definition has already been implemented in France by the Autorité de Régulation des Communications Électroniques et des Postes (ARCEP).

8.9   Twilio cautions against rules that stifle innovation and disrupt existing business use cases and consumer benefits. Many businesses have numbers that are known to their customers, this helps ensure that the communication is efficient and trusted. Requiring many businesses to change over to a new prefix would unnecessarily disrupt functioning use cases and inadvertently punish technology forward businesses.

9.   TRAFFIC ORIGINATION OUTSIDE AUSTRALIA

> **Questions:**
>
> 24. Should there be rules about the use of Australian numbers to originate calls from locations outside Australia? Why or why not?
>
> 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.
>
> 26. What would be the effect of such rules on businesses and consumers?

9.1   Twilio supports the legitimate use of Australian numbers to originate calls from locations outside of Australia. At present, the Numbering Plan is silent on this, but the Scam Code and its corresponding Guidelines provide some guidance. Twilio would support a move to bring the authorisation of the offshore use of numbers into the Numbering Plan given that neither the Guidelines to the Scam Code nor clause 4.2.5 of the Scam Code itself provide sufficient clarity as to what constitutes a "genuine call case". This lack of clarity has seen local carriers take unilateral action to block inbound international calls in circumstances where they have little or no objective evidence that a genuine use-case does not exist. This is particularly problematic in circumstances where those same carriers may well obtain a competitive

advantage by blocking those calls as it makes it harder for their customers to acquire innovative new services from competitors (such as Twilio and a number of others).

9.2   Offshore traffic origination is important for multinational corporations doing business in Australia and large Australian businesses which may operate offshore outbound call centres. Limiting this use case will restrict innovation and make Australian businesses less competitive. It is also likely to increase costs for businesses. For example, if offshore origination was prohibited, a large Australian business operating an offshore call centre would either need to bring that service back onshore in order to access domestic numbers (which is unlikely), use international numbers or CLI overstamp the international number. The use of unknown international numbers is more likely to be viewed by consumers as likely scam and therefore less likely to be picked up or to be blocked locally, which will increase costs to business and reduce efficiency and productivity. Ultimately, that is not in the LTIE.

9.3   In addition, for VoIP-based services, there is an inherent difficulty in identifying where an outbound call from an international caller originates from. These have nothing to do with scam and are simply an attribute of the flexibility and transportability that Cloud-based services can provide. By way of example, if the call is from an outbound call centre but is delivered over IP servers into Australia, and then "originated" from Australian services, then this service arguably originates in Australia notwithstanding that the A-Party is based offshore.

9.4   Despite their limitations, the Guidelines to the Scam Code cite a number of genuine call cases for offshore origination using Australian numbers. These include[29]:

- *As allowed under section 11 of the Telecommunications (Telemarketing and Research Calls) Industry Standard 2017.*
- International mobile roaming:
  - ➢ An Australian outbound roamer, in a foreign country makes a call to another Australian Number.
  - ➢ An Australian outbound roamer received an incoming call from another Australian Number, but a call forwarding condition resulted in the call coming back into Australia.
- Australian CSPs that provide SIP trunking services should closely monitor the CLI used by their customer, and investigate originating calls with a non-Australian CLI, unless there exists a prior written agreement for use of an international CLI.
- Offshore outbound call centres of Australian entities where the Australian entity has rights of use of the Australian Number.
- Use of Unified Communications with domestic geographic Numbers received from offshore.
- Satellite telephony call re-routing or other redirection.

While Twilio would submit that this list is not as extensive as it could or should be, it does serve as a useful guide. To prohibit legitimate offshore origination would not be in the LTIE and would simply reward incumbent carriers for monopolistic behaviour.

9.5   Nor would curbing these practices mitigate scam traffic or be a 'silver bullet' in the important fight against scam. This is because as interconnects are IP-based, scam callers outside Australia may simply use a virtual private server inside Australia to originate traffic locally. This presents an easy solution for bad actors to circumvent such a prohibition. Legitimate users would be unfairly punished with no public benefit to outweigh the detriments. As Twilio has observed at paragraph 7.2, there is a legitimate concern that some stakeholders use claims

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[29] Industry Guideline G664:2022 Reducing Scam Calls and Scam SMs – Supplementary Information: section 4.2

regarding the proliferation of scam as a means of dampening competition and foreclosing innovation.

9.6   In addition, there are considerable volumes of scam traffic that originate onshore using sim-boxes to send multiple "P2P" messages at the same time[30].

9.7   Twilio has set out its views on the appropriate measures to tackle scam traffic in detail at paragraphs 7.5 to 7.10. In its view, the efforts already being undertaken by industry and the broader regulatory settings created by Government will have a meaningful impact in reducing scam traffic without stifling legitimate use cases.

10.   ALLOCATION – RULES

Questions

30. Should there be stronger, or more prescriptive, rules for allocating numbers to C/CSPs in the Numbering Plan? Why or why not?

31. Should the ACMA seek additional information from CSPs during the application process for numbers? Would this strengthen the integrity of the numbering ecosystem?

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?

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?

34. Do you support the ACMA revisiting its proposal for CSPs to be registered in the Numbering System before they can be assigned numbers?

35. Do you support provisions requiring annual audits in the Numbering Plan? Why or why not?

36. What specific costs or burdens could arise due to these proposals? Please provide specific details.

10.1   In the Discussion Paper, the ACMA asks whether there should be stronger or more prescriptive rules for allocating numbers to C/CSPs. Twilio does not consider that more prescriptive rules are required for the *allocation* of numbers (other than the clarifications regarding acceptable use-cases referred to above). Generally, the existing practice works effectively. Twilio would however, support changes to make it clear that the contractual sub-assignment of numbers is permitted and to increase transparency of sub-assignments by requiring the establishment of a general register of CSPs as contemplated by the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA)[31]. Twilio considers that initiatives to promote transparency of sub-assignments would benefit both CSPs and consumers.

10.2   There is a distinction between registration for the purposes of being allocated a block of numbers directly from the ACMA and a general register or licensing regime for CSPs that CSPs could rely upon for KYC and vetting purposes before contractually sub-assigning numbers.

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[30] https://www.abc.net.au/news/2024-01-17/nsw-court-text-messages-scammer-fraudulent-millions/103350912

[31] https://www.infrastructure.gov.au/have-your-say/discussion-paper-carriage-service-provider-csp-registration-or-licensing-scheme-telecommunications

The existence of a single source of truth capturing all CSPs would assist regulatory authorities and other industry participants. At present, there is no complete list and in many instances, the best that can be pieced together is to search across the Numbering System, the Integrated Public Number Database ("**IPND**"), the CommCom list and the TIO database. Yet, even this is not a complete list and is inefficient.

10.3   Twilio submits that the Numbering Plan should be amended to clarify that contractual sub-assignment of numbers is permitted. While Twilio considers that the Number Code already authorises or at least contemplates this practice, it would be preferable for this to be addressed in the Numbering Plan directly, with the detail to be provided in the Number Code.

10.4   Sub-assignment has and will continue to benefit end users in Australia by giving them access to more options to suit their electronic communications needs through new and innovative services, providers and technology. This in turn will promote the objects of the Act and in particular the LTIE.

10.5   In Twilio's view, there are legitimate reasons and consumer benefits to the sub-assignment (or sub-allocation) of numbers. By way of example, the allocation of mobile numbers in the Numbering Plan requires a registered CSP to apply for a multiple of 10,000 numbers in a contiguous block. Prior to 2022, this was a multiple of 100,000 mobile numbers. While the 2022 change was an improvement for smaller operators, it does not allow for many of the innovative use cases now available. Sub-assignment is a means of navigating this as it would enable a smaller volume of numbers to be acquired by a CSP for a specific customer use case or where the CSP's business requirements did not otherwise support the allocation of a *standard unit* of numbers.

10.6   On balance, Twilio does not consider that the ACMA should revisit proposals for CSPs to be registered in the Numbering System before they can be assigned numbers. When the ACMA last considered this, it did so with the stated aims of "enhancing the Numbering Plan's efficiency and effectiveness by: (i) supporting scam disruption initiatives; and (ii) enabling efficient allocation of numbers". It is not clear how the proposed requirement for CSPs to register on the Numbering System will achieve these aims. Twilio supports efforts to minimise and disrupt scam activity both in Australia and internationally, but Twilio considers that the measures proposed by the ACMA in the draft variation to the Numbering Plan will have limited benefit while imposing considerable administrative burden on CSPs throughout the supply chain. As discussed above, Twilio supports a central register for *all* CSPs which can be used by a CSP to undertake KYC checks. Twilio believes that requiring CSPs that are contractually assigned numbers to register on the Numbering System would simply add another level of regulatory burden with minimal benefit for industry or end users.

10.7   CSP's that sub-allocate numbers already have obligations under the Number Code in relation to the sub-assigned numbers. In particular, a CSP must obtain the name and contact details of the other CSP and must maintain records during the period of assignment including the number, the date of assignment and the contact details of the assignee.

10.8   Similarly, the Scam Code deals with scam disruption initiatives including requirements for exchange of information between CSPs and the ACMA. Therefore, it is not clear how a requirement for a CSP to merely register on the Numbering System supports scam disruption over and above the requirements in the Communications Alliance Number Management and Scam Codes. It is also likely that the Scam Code will be reviewed given Treasury has allocated budget for the introduction of Mandatory Industry Codes including in the telecommunications sector.[32]

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[32] Budget Paper No.2 pg.180

10.9   In addition, the IPND Code requires CSPs providing a carriage service to a customer to provide certain customer data to the manager of the IPND (**Telstra**). This information includes the identity of the CSP providing services to customers.[33]

10.10   As the obligations described in paragraphs 10.7 – 10.9 above all form parts of registered industry codes, the ACMA has existing powers to conduct investigations into compliance pursuant to s.455 of the TA and to direct CSPs to comply in the event it identifies a contravention. The ACMA has recently been active in doing so, particularly in relation to the Scam Code and IPND Code.

10.11   It is also not clear how requiring a CSP to register on the Numbering System to receive a contractual assignment of numbers that is not recorded on the Numbering System would support the efficient allocation of numbers. Sub-assignment itself can support the efficient allocation of numbers by providing an alternative mechanism for providers to enter the market, thereby increasing competition and giving end users greater choice and lower prices. However, merely requiring a CSP to register on the Numbering System prior to being able to be contractually sub-assigned a number, does not seem to enhance the efficiency of number allocation. Rather, it adds another layer of complexity to the regulatory landscape particularly for international CSPs that do not have a local presence and will likely increase costs for providers and their customers.

10.12   If there is to be a requirement for CSPs to register, then this should be a general licensing regime so that there is no doubt that the receiver of a number that provides a listed carriage service and the CSP that was allocated the number are both CSPs within the meaning of the Act.

10.13   As previously submitted to the ACMA, Twilio does not support an arbitrary limit on the number of times that a number can be sub-assigned contractually outside the Numbering System. As it observed during the 2022 Numbering Plan review, Twilio has not seen any information about what harm such a limitation would seek to address, let alone how it would do so effectively. Given the lack of an identified harm or evidentiary basis for the Numbering Plan limiting the number of times a number can be contractually sub-assigned outside the Numbering System, Twilio is opposed to such a restriction being introduced. This is particularly so, given CSPs are already required to keep records of their sub-assignments[34]. A general register of all CSPs providing services would also render a restriction on the number of sub-assignments unnecessary as all parties to the sub-assignment could be satisfied of the status of the assignor/assignee.

10.14   Furthermore, any restriction would disproportionately penalise the ultimate assignee which will be constrained in its rights in using the number or potentially, from reorganising its business by sub-assigning numbers intra-group. Introducing restrictions on the number of times that a number can be sub-assigned will also restrict competition and innovation and prevent consumers and businesses accessing the variety of new use cases that this practice has facilitated over the past several years.

10.15   At paragraph 11.17 below, Twilio proposes that the ACMA consider implementing a revised IPND that could be overseen by the ACMA and include extra fields which could be used to capture the current sub-assignee.

11.   MULTIPLE SERVICES TO A NUMBER

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[33] Industry Code C555:2020 Integrated Public Number Database clauses 2.2 and 4.2.1

[34] Industry Code C566:2023 Number Management – Use of Numbers by Customers clause 3.1.3

11.1 Business and consumers as well as the Australian economy more generally have all benefited from the multiple service practice which, as the name suggests, is already an established part of the telecommunications sector in Australia (and beyond). This practice ensures that maximum value can be extracted from scarce number resources and is a perfect example of competition and innovation delivering greater choice and lower prices to end-users.

11.2 The use of numbers has already moved well beyond the traditional scenario where a carriage service provider would be allocated a number and would subsequently issue that number to a customer in order for that customer to make calls or send messages. Indeed, Twilio is at the forefront of innovation and finds that increasingly its customers require solutions that one CSP alone is unable to supply. This trend has been accelerated by the shift to software-based communication solutions and VoIP. Twilio submits that regulation, and the Numbering Plan in particular, should support this practice and the benefit it brings.

11.3 The multiple-service practice is an important component of the telecommunications landscape in Australia and internationally. It fosters innovation and efficiency and avoids the need for customers to obtain more numbers than they actually require. That is not to say that some adjustments to the regulatory settings are not desirable. The reasons for this are two-fold: firstly, because some of the MNOs have sought to restrict the practice notwithstanding that the ACMA has clearly stated that the practice of CLI overstamping is legal and this is reflected in the Communications Alliance industry guidance note[35]. Secondly, because there is an opportunity to better distinguish between legitimate CLI overstamping and CLI spoofing (which is prohibited).

11.4 While numbers are allocated to CSPs by the ACMA, they remain the property of the Commonwealth and do not 'belong' to the CSP. In addition, the reality is that customers also have rights of use and a key interest in the numbers that are issued to them. The number identifies an individual or business, allowing them to make or receive calls or SMs. Numbers often reflect customer brand identity and are therefore very valuable to that customer.

11.5 As a result, Twilio supports the introduction of targeted rules to manage the multiple-service practice and ensure it continues to deliver benefits to customers. Rules should be contained either in the Numbering Plan or another regulatory instrument, rather than being left to industry codes or a guidance note. This is particularly important for the reasons referred to in paragraph 4.1.

11.6 The multiple-service practice brings considerable benefits to participants throughout the supply chain from carriage service providers to their customers and ultimately to consumers. Allowing end users to use a number with multiple services provides a clear benefit to those end users. In the short term, it gives consumers choice and flexibility, allowing them to choose different communications products or services that suit their use-case. It also drives competition and innovation, particularly in relation to enterprise communications products. Without multiple-service practices, end users would be "locked in" to the suite of products and services offered by their existing CSP who would have less incentive to innovate. That would be inconsistent with the objects of the Telecommunications Act, and in particular, the LTIE.

11.7 The ACMA consultation paper itself provides useful case studies of the benefits and legitimate use of the multiple-service practice. Twilio's own use of the multiple-service practice includes:

- A regional Australian tech startup that allows small businesses to register on their platform to streamline their workflows, register jobs, protect customer data and cut paperwork. The customer of the start-up, after verifying they hold the number

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[35] Industry Guidance Note (IGN 009) CLI management

through a OTP, can call through the platform to their own customers showing their CLI as their existing mobile or landline. This platform is particularly valuable for small businesses trying to better manage data in the context of the Privacy Act review. This also allows the small business to maintain the functionality of their current mobile or landline service while being able to ensure their customers pick up their calls or call them back.

- An Australian tech start-up in the aged care sector that coordinates all critical communications such as nurse call systems, nurse call management and duress alerts. This platform also ensures that multiple aged care sites or desks within centres, each with a different phone line, can all dial out to make hospital appointments, pharmacy orders and in making calls to the loved ones of the people in their care. The functionality of their current mobile or landline service is maintained, but when dialling through the platform the recipient still recognises the number and picks up or calls back.

- A charity that uses CLI overstamping enables its dispersed workforce to dial through the platform from home using their own mobile phone. The platform means that the workforce can be dispersed across Australia allowing people to log on from anywhere removing the need to access a single site. In this context this technology is supporting regional jobs and workers with access barriers. Such a service was critical during the COVD 19 pandemic helping to keep workers safe and reducing spread of the virus. The number that the call recipients see is a recognised number, and crucially does not expose the personal number of the worker.

- A medical appointment reminder business that makes reminder calls for GP surgeries, pathology or diagnostic imaging appointments. This service increases attendances, reduces missed appointments and helps increase efficiency across the healthcare system.

- A Twilio financial services customer employs the multiple-service practice is where a financial institution obtains the bulk of its number requirements from a carrier that is its principal provider of telephony services but wishes to have some of those numbers sub-assigned to a CSP like Twilio that can provide recorded lines specifically for use by brokers or traders of financial products. Those brokers place trades over the phone and their calls need to be recorded for compliance and audit purposes. The customer understandably wishes to have the trader's number overstamped with a number recognisable as belonging to the institution.

Twilio customers rely upon multiple-service use to provide innovative solutions while retaining the brand identity that is associated with their 'primary' numbers and that has been developed over time. This builds consumer awareness and trust.

11.8   The Discussion Paper considers three possible options for the future treatment of the multiple-service practice. Those are:

- retain the status quo;

- introduce rules to manage the multiple-service practice; and

- prohibit the multiple-service practice.

Twilio submits, for the reasons outlined below, that the option that will best promote the LTIE and the objects of the Act more broadly is to introduce rules to manage the multiple-service practice. However, it also submits that those rules need to be targeted to ensure the benefits of the practice are not lost by dampening competition and innovation.

11.9   In Twilio's experience, the status quo is not working effectively at present. Twilio has itself experienced issues with carriers seeking to block traffic particularly for numbers that they were originally allocated and therefore claim as 'theirs'. This has been a point of real contention in industry forums and Twilio understands that concerns have been raised with both the ACMA and the ACCC given the anti-competitive effects of attempts to block legitimate traffic. Twilio is also concerned that some carriers have implemented measures that block traffic where the CLI displayed has not been allocated to the originating CSP. This has the immediate effect of blocking a substantial amount of legitimate traffic from Twilio's customers. If this conduct persists, it will have the effect of foreclosing competition (as it may be intended to do) and forcing customers to deal exclusively with the national fixed and mobile operators. If customers want to use their existing number, they cannot choose Twilio and are instead forced to use their incumbent provider.

11.10   This conduct also runs contrary to the provisions of the Reducing Scam Calls and SMs Code, and more specifically the Guidelines attached to this, which (along with the CLI Management Guidance Note) contemplate genuine use cases for CLI overstamping. For example, the Scam Code Guidelines set out call case exceptions for the use of internationally originated calls using Australian numbers.

11.11   The Scam Code explicitly defines CLI spoofing as "the unauthorised use of a number by an end-user". As noted above, CSPs and carriers do not own the numbers they are allocated, these belong to the Commonwealth and end-users may be granted rights of use over those numbers. The consumer should therefore have the right to choose how that number is used, whether that entails another CSP providing a service using that number or the porting of that number. Unfortunately, some legacy operators consider numbers to be their property.

11.12   As a result of these issues and to avoid the damage to competition and innovation, Twilio submits that the ACMA should shift from the status quo to a rule-based system set out either in the Numbering Plan or another legislative instrument. Twilio's views on rules that the ACMA should consider (or not consider) are set out at paragraph 11.17.

11.13   Twilio submits that prohibiting the multiple-service practice outright would be extremely damaging and run directly contrary to the objects of the Act. A prohibition will hamper innovation and competition and rather than promoting technology-neutral solutions, will favour the incumbent local operators. Twilio is also concerned that a prohibition will curtail the types of services that customers can presently acquire and that there is a demand for. It will also likely serve to increase costs to end-users as competition shrinks. To the extent that CSPs do continue to provide innovative new services, it will also lead to the inefficient use of numbering resources as customers will require an additional pool of numbers to provide separate services from each CSP.

11.14   Twilio agrees with the ACMA's view that:

As it appears that the multiple-service practice has been used for many years and is prevalent throughout the telco industry, a key risk is that we would be prohibiting an established practice used to deliver innovative carriage services valued by business customers who want to display a single number their customers are familiar with for outbound communications. This could be disruptive for businesses and CSPs currently using this practice.[36]

11.15   Twilio also considers that claims that the multiple-service practice will perpetuate scam or alternatively that prohibition of the practice will curb scam are misconceived. This is because:

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[36] Discussion paper pg.23

- as the ACMA rightly states, requiring CSPs to use separate numbers for separate customer services "*would likely be exploited by brand impersonation scammers and undermine scam mitigation efforts*". This would result in consumers having less of a connection between a brand and its number if suddenly there was a proliferation of different numbers for that brand.

- as the Discussion Paper has identified, there are already regulatory measures in place that prohibit: (i) the origination of traffic using a CLI; and (ii) a CSP from using a number that has not been allocated to it, unless the CSP has collected evidence that the customer has the rights of use ("**ROU**") in that number. In each case, this would be a contravention of the Scam Code and the ACMA has powers to investigate and to issue directions to comply where it suspects a contravention. In short, there are already measures to deal with scam associated with the misuse of CLI, and these could be further enhanced as part of any future review of the Scam Code (as contemplated in the most recent Federal Budget).

- The existing Numbering Plan also grants the ACMA existing powers to withdraw numbers where it has reasonable grounds to believe that a number has been used in connection with scam communications or fraudulent activity.

- It follows that appropriate rules already exist to manage when a CSP can originate traffic where it isn't the holder of a number and how the fraudulent use of numbers can be appropriately addressed without disrupting legitimate and innovative use cases.

11.16 On its face, the status quo may have an allure for Twilio given that it seems that the only argument being advanced for regulatory intervention in relation to the multiple-service practice is that its use may enable scam traffic, which Twilio submits is better dealt with under dedicated scam rules. However, Twilio considers that a system of rules is to be preferred because Twilio's primary interest is to ensure that its customers' messages and calls are not arbitrarily blocked. To that end, it may be better to support a version of option 2 that establishes some rules around when and how multiple use may occur.

11.17 Twilio submits that new rules that expressly permit the use of the multiple-service practice should take into account the following:

- the Numbering Plan should provide that C/CSPs cannot block traffic simply because the CLI displayed is a number that has not been allocated to the originating CSP and processes should be put in place by CSPs to ensure that their scam reduction measures do not interfere with legitimate traffic.
- as the ACMA will be aware, there is a well-accepted distinction between Type 1 and Type 2 errors with the former being particularly damaging in markets such as communications and technology, which are characterised by competition and rapid innovation[37]. Blocking all overstamped numbers would be a classic example of a Type 1 error.

- there are also many other regulatory options that can significantly reduce the risks of CLI overstamping being abused and Twilio encourages consideration of these by the ACMA. Twilio's own experience of the application of these regulatory levers, in particular in the US, is detailed below.

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[37] Geoffrey Manne and Joshua Wright, 'Innovation and the Limits of Antitrust" (2010) 6(1) *Journal of Competition Law & Economics* 153.

- Twilio would support an obligation on the originating CSP to require uplifted KYC and have validated ROU. There may be real benefit to industry and end-users in upgrading the IPND to include extra fields identifying that a number is subject to overstamping and by whom. Importantly, Twilio considers that 'ownership' of the IPND should shift to the ACMA or another independent body rather than being administered by an industry participant (e.g. Telstra). This is important because providing any industry player with this data would provide a market participant that already has significant market power with a distinct competitive advantage and access to sensitive business information. For example, information regarding which clients are using overstamping, who they are using it with, in what volumes and for what services. Even the perception of an unfair competitive advantage risks undermining the industry and eroding consumer and business confidence.

- For similar reasons, Twilio has significant reservations regarding the proposed use of industry held whitelists (e.g. what Telstra currently operates) under which CSPs can advise overstamped numbers that its customers will use. This is because, unless the underlying data is held and maintained by an independent regulator such as the ACMA, this otherwise provides sensitive information to competitors. This is also cumbersome for CSPs and customers whose legitimate calls can be blocked for days without a clear SLA given by the MNOs and requires manual reactive intervention.

- Twilio considers that the following examples demonstrate the issues that whitelisting can present:

Scenario A: Carrier 1 number---overstamp with Twilio---calls another Carrier 1 number.

In this scenario Twilio has commercial concerns particularly around high-volume business customers. A carrier would already know that a customer is a high-volume user, before we provide their name / number to the whitelist.

However, what the carrier does not know until we include the customer on the whitelist, is that its customer is using a CLI product. This means that every time Twilio provides a number to the whitelist, it provides commercial information and a very specific product insight to the whitelist holder.

This is extremely problematic for the functioning of a competitive market as the carrier now holds a whitelist that can be used as a very targeted prospecting list for a sales team particularly where that carrier may have significant market power in adjacent markets.

Scenario B: Carrier 1 number---overstamp with Twilio---calls a Carrier 2 number.

Where an overstamped number is being provided to another carrier to ensure CLI termination on all networks, then this involves Twilio sharing both the commercial volume information as well as the CLI product information.

While scenario A is the more typically discussed, scenario B is equally concerning as this captures not only over-stamped numbers, but numbers that have been sub-assigned to Twilio.

- Twilio does not agree that CSP B (in the multiple-service practice) should be required to pay a fee to CSP A for the right to use an over-stamped number. While Twilio understands that some stakeholders have claimed that they have lost revenue as a

result of the practice, Twilio would dispute that any loss of revenue is associated with overstamping, rather the lost revenue is because an alternative CSP can provide a different service for the customer in a competitive and cost-effective manner. Twilio also does not agree that the CSP that holds the number has incurred any extra cost as a result of overstamping as they will continue to provide primary services using that number to the shared customer. Furthermore, it does not appear clear to Twilio that CSP B is "avoiding charges" as alluded to in the Discussion Paper, rather CSP B would have procured their own numbers separately (whether by direct allocation or contractual assignment) and would have charges for those numbers.

- In Twilio's view there is a real risk that introducing charging for overstamping of numbers could have myriad unintended consequences and lead to perverse incentives. For example, it could lead to number hoarding or the commoditisation of the numbering resources more broadly. It could also be used to make innovative new services less competitive, this in turn will hamper innovation and is not in the LTIE. Finally, Twilio would reiterate that carriers and CSPs do not "own" numbers. Numbers belong to the Commonwealth and end-users have rights of use in those numbers.

- Twilio does not support the use of bilateral arrangements between CSPs for the use of numbers.

- Twilio has already expressed support for creating a CSP register which would bolster transparency and support targeted enforcement where required. The register would serve as a centralised database, detailing all carriage service providers operating within Australia. The CSP register will also facilitate more efficient communication between the ACMA (or another regulator) and CSPs, streamlining the enforcement process and enabling the proactive identification of emerging issues within the industry. This increased transparency will foster a more competitive environment, ensuring that all providers are subject to the same regulatory settings, thereby enhancing consumer protection and trust. Rather than allowing some CSPs to stay under the radar.

- As set out above, Twilio supports additional KYC obligations for the use of CLI overstamping as this can significantly mitigate the risk of bad actors. Stricter requirements for these use cases would discourage bad actors and also help all CSPs trace the origins of scam messages.

- Twilio would also support a requirement in the Numbering Plan that a CSP must verify the ROU before a customer is able to obtain a CLI overstamping service. This will likely reduce "spoofing" of numbers assigned to another user. Verification could be completed either through documentation (such as a customer's phone bill) that shows that the customer is the holder of that phone number or through a process such as two factor authentication using an OTP. This process could also be supplemented by: (i) requiring periodic reviews at set intervals for numbers that are high-volume users; and (ii) revalidation after periods of inactivity to ensure that verification is not merely "set and forget", but rather an ongoing obligation.

- To complement the above pre-usage tools, Twilio would also support a number of "in-flight" and "post-flight" requirements for all traffic terminating to Australian numbers. For example, Twilio would support the introduction of obligations on CSPs operating in Australia to supply the regulator with details of the reasonable steps taken to combat illegal robocalls and fraudulent traffic. Requirements of this kind exist in the US and include submitting a public facing robocall mitigation plan and adherence to those mitigation practices, which include the implementation of the STIR/SHAKEN authentication framework, responding to tracebacks within a 24-hour period, operating a 'Do-Not-Originate' list, using automated and manual detection methods

to combat and prevent unwanted and fraudulent calls, and describing KYC requirements.

- Twilio recognises that it may not be appropriate to simply transpose the US framework into the Australian regulatory regime given that there are a number of differences. However, it is generally a supporter of STIR/SHAKEN as it has proven to be a substantial success in combating robocalls and enhancing consumer trust in telecommunications in the US. The use of digital certificates to verify the authenticity of caller information, effectively reducing the prevalence of spoofed calls has been an innovative solution that is now being adopted in other jurisdictions[38]. Since its adoption, there has been a decrease in fraudulent robocalls, as evidenced by consumer reports and US industry data[39].

- Finally, Twilio would support multi-factor authentication as a means of confirming that the underlying customer holds ROU as contemplated in the discussion paper. Importantly, if such a practice is to be implemented CSPs will need a significant lead-time to enable end-users to be educated and onboarded regarding the new measures.

11.18   The ACMA has also requested information from CSPs that use the multiple-service practice to originate calls using numbers issued to their customers by another CSP. ██████████████

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12.   PROVISION OF PRE-SELECTION

Questions

52. Is the Pre-selection Determination still fit for purpose? Please provide reasons.

12.1   Twilio does not consider that the Pre-selection Determination remains fit for purpose nor is it necessary given the evolving use case of carriage services and the decline in the use of fixed line services coupled with the bundling of packages offered by carriers and CSPs. As a result,

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[38] https://cstga.ca/about/ and https://www.gov.br/anatel/pt-br/assuntos/noticias/conselho-diretor-decide-ampliar-o-uso-do-codigo-0303-para-atividade-de-cobrancas-e-determinar-interlocucao-para-diminuir-falha-em-bases-cadastrais

[39] https://transnexus.com/blog/2024/shaken-statistics-april/

consistent with the ACMA's desire to ensure that the Numbering Plan remains 'fit-for-purpose' for the next ten years. Twilio considers that the determination should be allowed to expire.

12.2   As the ACMA has observed, the purpose of pre-selection was to promote competition and benefit consumers by allowing consumers with a fixed line eligible standard telephone service to obtain certain pre-selectable services (e.g. long-distance calls or calls to international or mobile numbers) from an alternative provider. It did not apply to mobile services which have subsequently been the source of much of the competition in the communications sector.

12.3   The ACMA's latest report found that in June 2023 the use of landline phones declined in in 2023 to 18% (from 23% in 2022)[40] whereas, mobile phones are used to make calls by 97% of Australians[41]. The ACMA concluded that in 2022, only 1.6% of Australians had just a landline.[42] Conversely, when the Pre-selection Determination was last reviewed in 2020, use of a landline phone to make calls had been at 40%[43]. The ACCC's reporting indicates that this use of fixed line voice services includes both legacy copper lines and VoIP based services (for which there are likely substitutes given these rely on internet connectivity)[44].

12.4   The ACCC Communications Market Report for 2022-23 also found that only a few standalone voice plans for fixed line voice services on the legacy copper network remained available. These plans included the Dodo Legacy Voice Plan, Telstra Ultimate Voice Plan and Optus Plus Phone Everyday plan[45]. The Dodo plan no longer appears on its website. While both the Telstra and Optus plans include local, national and mobile calls as bundled services. Many mobile phone service providers also offer bundled services which include unlimited local, national, and mobile calls together with a monthly inclusion of international call minutes.

12.5   In addition, the completed rollout of the NBN means that there is a neutral wholesale network which facilitates competition at the services layer for the vast majority of fixed-line users.

12.6   Given the falling use of fixed line voice services, the rollout of the NBN, the ubiquity of mobile services, and the fact that many legacy voice services include pre-selected services as part of a bundle, Twilio considers that the Preselection Determination should be allowed to sunset on 1 April 2025.

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[40] ACMA, Communications and media in Australia – How we communicate Executive Summary and Key Findings pg.3
[41] ACMA, Communications and media in Australia – How we communicate – Interactive Graph
[42] ACMA "How Australians make voice calls at home" snapshot to March 2022. Link attached
[43] ACMA, Communications and media in Australia – How we communicate – Interactive Graph
[44] ACCC Communications Market Report 2022-23 pg.24
[45] ACCC Communications Market Report 2022-23 pg.25