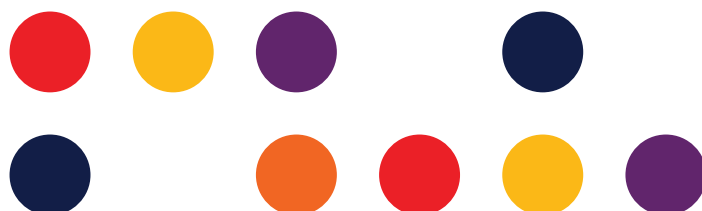


2024 Review of the Numbering Plan - TPG Telecom comment on submissions

Australian Communications and Media Authority

August 7, 2024

[Public]



Submission

Thank you for the opportunity to make comment and provide feedback on the submissions provided to the ACMA on potential changes to the Numbering Plan 1997 (the Plan).

About TPG Telecom

TPG Telecom is Australia's third-largest telecommunications provider and home to some of Australia's most-loved brands including Vodafone, TPG, iiNet, AAPT, Internode, Lebara and felix.

We own and operate nationwide mobile and fixed networks that are connecting Australia for the better.

Executive summary

As we stated in our submission TPG Telecom and reiterate here, we believe the Plan needs to have significant changes to clarify:

- number use in a more consistent manner for all number types;
- a clear set of principles for the Plan;
- New number ranges introduced for new number ranges for IoT and data only services;
- how numbers can be used for call origination and termination across networks; and
- how Australian numbers can be used for origination of traffic from outside Australia

The Australian telecommunications landscape largely operates on the basis of trust. Trust that telecommunications carriers and carriage service providers will operate within the boundaries of regulation and will do the right thing. Australia regulators lack time and resources to keep track of all telecommunications operators and their individual compliance and relies upon reporting of bad behaviour either by other telecommunications providers, other regulators, the Telecommunications Ombudsman and/or consumers to identify that an area of regulation is not being met, is grey or does not exist.

Such was the case with scam communications that led to the development of the Industry Code C661 Reducing Scam calls and Scam SMs and the consequential findings that numbers were being used in a way that was not foreseen by regulation.

It is evident from submissions there remain disparate views on number use and finding a balance of views will be challenging. If ACMA chooses to open the Plan and focuses predominantly on the Plan as a pro-competitive model it can be guaranteed that all carriers and CSPs will be looking to participate in providing the competitive services that

are currently the domain of a certain category of CSPs and this is highly likely to create difficulty in the regulatory arrangements for IPND, data retention operations, interception arrangements, and generally keeping track of calls across networks, etc. unless other regulatory changes are enacted, such as the IPND having an ability to recognise number use across multiple CSPs.

By comparison, reverting to a traditional view of the 1:1:1 relationship of a customer to CSP and to the network used for communications to and from that number ensures the ongoing arrangements for IPND, emergency calls, enforcement and investigation agencies remain unaffected.

To avoid future cases of misuse of numbers a process solution is required to identify future new services and how they might use numbers.

TPG Telcom has comment on some of the matters raised in submissions below:

LTIE and use of numbers

Quite rightly Twilio points out that the ACMA should be guided by the primary objects of the Telecommunications Act.

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.*

However, taking the view that the Long-Term Interests of End users (LTIE) means encouragement of new competitive services trumps all and that competition has no adverse effects on the greater bulk of consumers is false.

Major telecommunications suppliers like TPG Telecom have robust procedures to monitor and track compliance. So called competitive products are being brought to market by non-major entities providing network facilities and carriage services that seek out grey areas in regulation and stretch regulatory expectations in a way that causes harm to the greater community of consumers and has detrimental national security impacts through

misuse of numbers inconsistent with regulation and in some cases non-compliance with IPND obligations.

Any of the major suppliers could provide the same type of 'competitive' services as the non-major carriers and CSPs but don't, because they understand the broader community impacts.

TPG Telecom for instance is well placed to provide cost effective alternate call origination to customers of Optus, Telstra and other CSPs, yet we don't because we understand the fundamentals that apply to number use and the flow on impacts to enforcement and investigation agencies.

So called 'innovative' services may be seen by some to be in the LTIE by providing cheaper services for some businesses and they are certainly profitable for those selling the product, usually because they have little cost by way of regulatory overhead (e.g. ignoring IPND obligations. However, there is an overall cost that is seemingly ignored where other CSPs are left with extra regulatory costs as they are left with addressing harms caused to impacted retail subscribers, who relevant regulations are designed to protect.

The social costs of 'innovative' services cannot be ignored. We have seen ongoing increases in consumer losses due to fraud and scams. While ongoing efforts are having some effect it does not address scam controls in an efficient cost-effective way and continues to be a game of 'whack-a-mole' vs. a holistic effective approach of proper traffic management which could significantly curtail scam traffic. It cannot be in the LTIE for effective scams controls to be limited and for some CSPs to develop commercial strategies and products which seek to exploit regulatory grey areas.

We understand there are differences of opinion on what is in the LTIE, and we have a schism where major carriers seek return to the expected regulatory arrangements and others would have more of a 'wild west' approach.

TPG Telecom is firmly of the view that the Plan needs some fundamental reforms, including a complete rewrite and clarity of number use to curtail what we consider to be illegitimate use of numbers because of breaching regulatory instruments relating to 'rights of use', IPND, and support for investigation and enforcement agencies. We have offered an example of what a new Plan should look like.

There needs to be a balance in the use of numbers, with some fundamental that apply to number use such as the fundamental principle of a 1:1:1 relationship between a customer the number issued to them and the networks on which they can use the number to avoid the way in which numbers are being misused that is clearly detrimental to the broader community through enabling scam calls while limiting scam controls.

A lack of process to consider new innovative services has seen a detrimental impact that has led to an increase in misuse of numbers and limited ability to control scam traffic. This needs to change with a proper review process being needed to monitor and review new products and services and agree a solution that does not cause unintended consequences across the telecommunications industry.

TPG Telecom have some further observations on the responses to the Plan review sent to the ACMA as follows:

ACCAN comments:

'ACCAN is concerned by the continued ability of scammers to use the numbering system to deceive and harm consumers using Australian numbers.'

The ACCC commented:

'Ultimately, the Numbering Plan should safeguard the integrity of numbering by providing consumer and telephone user trust in the allocation of numbers.'

And

'We understand that the format of mobile numbers and geographic numbers remain well recognised, particularly the 04 number range. We consider that it will be important for the ACMA's review to fully explore the value of specified numbering ranges with consumers and other end-users when considering these issues'

Keith Edwards wrote:

I have a fear that answering a call may put me in peril and that doing so will add my number to some hidden list of numbers that answers calls which then just causes more unwanted calls. I am not the only person I know with this fear and I suspect it is becoming pervasive in the Australian community.

And

'Although I am certainly in favour of lowering the cost of all things it should not be at the expense of allowing/facilitating criminal and antisocial behaviour.'

TPG Telecom supports these views. It is imperative that the Plan balances new innovative services against broader consumer impacts. It should not be the case that some companies be allowed to launch so called innovative solutions without consideration of the broader impacts enabling them to profit at the expense of the general consumer while breaking conventional regulatory arrangements, such as IPND obligations.

Compete comments:

'Flexibility should be promoted by engaging in more frequent reviews into emerging technology and global communications services trends that impact the numbering approach.'

While TPG Telecom agrees the need for continuous review of technical trends and opportunities, the changing technology landscape requires an agreed approach to the rollout of new services in Australia to assess against the regulatory landscape and rather than the current approach whereby certain companies launch a service only looking at the consequential impact to their bottom line without consideration of the broader regulatory and societal impacts.

New products and services that break the current regulatory nexus need a regulatory analysis and where required potential work around's need to be agreed with involved parties via the ACMA's Numbering Advisory Committee (NAC) before they are launched.

As noted by Netnumber:

'In many countries, like the United States, phone numbers dynamically change their type based on their current use, for example, subscribers enhance landline numbers to behave identically to mobile numbers by changing the respective number type from fixed number to mobile number. Another example from the United States is the use of landline numbers for over-the-top applications like Google Voice.'

While a service may be able to be launched and operate in Australia in the same manner as overseas there are reasons why Australian regulations exist as they do today. Australia has a different approach to use of numbers, including the difference between a local service and a mobile service and other regulation such as: IPND, retained data, interception and managing scam communications., etc. these act as a cohesive whole and to simply launch a product because its seen as profitable without broader discussion of the community impacts is irresponsible and we see the result in the increase in scam and spam traffic.

Consumers have an expectation about use of numbers as noted in the ACCC response:

'However, we also acknowledge that the absence of barriers to misuse has created serious vulnerabilities which are being exploited by scammers. The financial and emotional trauma for Australian victims, and the associated erosion of trust in phone and text message communications needs to be weighed against any benefit of these use cases.'

Mitigating the serious impact of telephone-enabled scams on consumers and business must also be a key consideration in the approach to a revised Numbering Plan.'

There needs to be a process for assessment of the potential new products that operate outside the realm of current regulation that needs full consideration of broader community impact.

General mobile number use:

TPG Telecom has previously commented, as have others, that a mobile number needs to be used in association with a mobile network, as per the Telco. Act.

TPG Telecom's view is that communications over a mobile network can be via:

- data services providing two-way immediate text and/or voice capability on a data channel (e.g. apps, web pages, etc.);
- one way store and forward (' e.g. SMS/MMS) on the messaging channel; and
- two way immediate (e.g. calls) on the voice channel.

TPG Telecom has no concern about mobile numbers being used, for voice calls in association with a mobile service delivered via a mobile network, voice calls that use an app where the mobile number is used as the personal identifier and the call is delivered over a mobile network via the mobile network data service and for messaging services delivered to a mobile service via a mobile network.

The present concern held by TPG Telecom is the ongoing misuse of mobile numbers being used for originating voice calls from ostensibly a 'fixed' or non-mobile 'data' network where the majority of these calls are predominantly scam traffic.

ACCC comments:

'However, limiting the use of mobile numbers to mobile networks may stifle innovation, competition and access to services sought after by consumers, particularly for over-the-top services. Demand for connectivity via over-the-top communications applications such as WhatsApp, Facetime, and Signal continues to grow, and may be displacing some demand that was previously expressed for fixed and mobile voice calls.'

TPG Telecom has put forward an approach to use an alternate number range (09) for innovative mobile like services that do not use a mobile network.

Commpete raises the issue of trust associated with 04 numbers. And that use should 'not be limited to established carriers or prohibited from innovative users'.

TPG Telecom observes that the growing misuse of mobile numbers for a range of services offered on non-mobile networks degrades the very trust that is being exploited.

Data services

Commpete raised the issue of cloud-based services:

'The use of digital mobile numbers has been necessary to meet demand for services that can terminate to mobile phones or other devices registered to mobile networks in Australia.'

It is not necessary to use a mobile number to terminate a voice or traditional messaging service on a mobile number, these can originate from a range of numbers in the Plan

Pivotel commented:

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.

TPG Telecom generally agrees with Pivotel re use of numbers for strictly data services over a data network and that the Plan should focus on the delivery of calls and traditional messaging.

There are no special requirements that either require or limit an app (e.g. WhatsApp) from using any public number over a data network. In the case of WhatsApp which uses the data channel of a mobile network the use of a mobile number is at the consumer device end to identify that specific device other apps may use alternative solutions as the device identifier.

TPG Telecom has suggested that cloud services that provide voice call and traditional messaging capability over data networks should use a specific type of public number (e.g. 09).

Porting

Pivotel wrote:

'Porting of virtual fixed numbers used with cloud and application-based services should be managed using a simplified (sic) 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.'

TPG Telecom in its submission put forward that a unique number range (e.g. 09) would be a better approach for cloud services providing voice call and traditional messaging capability with no fixed location and that they should be portable using the MNP approach.

Messaging services

As commented by Netnumber:

'In the United States, it is established practice to use and register a different CSP for messaging than for voice services. This is especially popular with businesses as it allows them to use their established call center numbers for messaging channels. For example, a CSP provides a phone number, VoIP services, but no messaging services to a business. This business can use another CSP for messaging services on the same number, enriching its customer engagement portfolio.'

It is also common practice in Australia to use alternate suppliers of messaging services, however there is no scheme that recognises entities that may supply these services. Messaging services using the messaging channel on a mobile network have long originated from non-mobile networks and there was no previous concern about this activity as the mobile carriers such as TPG Telecom have long standing arrangements that allow use of messaging services that originate from a mobile number because one way messaging has little impact upon enforcement and investigation agencies and was previously of limited concern re origination of scam traffic. The IPND obligation although technically required is largely redundant for messaging services.

Only in recent years has this changed as we now see the issue of scam messaging originating from unscrupulous sources and of particular concern is the origination of voice calls from a network other than the home network and where there are no controls over the origination source.

TPG Telecom is aware of some messaging services using a number where the entity providing the messaging services does a validation that the request comes from a party authorised to permit those messages using similar protocols to an MNP pre-port authorisation, however this is not a common or regulated practice. Where messaging services are being provided without any authentication this can result in misuse of numbers and is often used by scammers to spoof a number that may belong to a customer, it may be time for a regulated approach requiring messaging service providers to undertake a 'know your customer' check before allowing use of their messaging capability.

The use of mobile numbers as access points for apps has no relevance as these services are provided as over the top services using the data channel and customer device data capability. Given most of these services are operated from outside Australia developing and applying enforcement for similar 'know your customer' checks may be more problematic for these services.

Using mobile numbers on other than mobile networks

Symbio comments:

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

Pivotel said:

'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.'

And

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.

The community has an expectation about the person-to-person nature of mobile numbers and the specific location information obligations that apply to emergency calls from a mobile service. TPG Telecom has put forward an approach of using an alternate numbering range for services that are non-location specific. This approach provides a third range of numbers catering to services that have no fixed location and provide an opportunity for a hybrid fixed – mobile service that recognises the mobile nature of certain services, yet they do not meet the definition of a mobile service in the Telecommunications Act. It will also allow for a community understanding of these types of services and provide an opportunity for a discrete approach to the location requirements to be delivered in association with an emergency call. Cloud services using SIP have the option to provide more granular location data however this would require the location capability obligations to be specifically defined and captured in a new industry guideline. Such a numbering range could interconnect as a geographic service and also be associated to messaging services and use the

MNP approach for a number portability solution.

As Optus noted and to which TPG Telecom agrees:

A separate public number range for these services would reduce the demand for Digital Mobile Numbers which are considered to be a finite Australian resource.

Allocation rules and CSP registration

Allocation arrangements, number issue and CSP registration seems to cause some confusion.

Commpute confuses sub-allocation with the use of numbers across multiple networks.

'...it is not the practice of sub-allocation that is problematic, in fact, sub-allocation allows numbering resources to be used where there is demand, promotes customer choice of service providers, service provider diversity and ease of switching.

And

a CSP who sub-allocates numbers to another CSP obtains additional information when contracting with the sub-allocatee. Any proposal to impose additional information gathering requirements should occur only after an assessment of whether existing, industry wide, Know Your Customer practices are sufficient, and whether the additional burden is in fact the most effective means to address the issue that is being solved for, through a thorough cost benefit analysis.

Alternatively, if effective central registry was in place for CSPs to verify who holds the rights of use of a number, then that could avoid the need for a register of CSPs who are authorised to provide service to the rights of use holder.

And:

'...flexibility for sub-allocation and maintaining the customer's choice and flexibility to use numbers with service providers of their choosing.'

Sub-allocation is a practice of a CSP gaining access to a range of numbers from another CSP. As TPG Telecom wrote in our submission we believe that sub-allocation arrangements need to reflect those relating to the original allocation to ensure that sub-allocation does not enable a gateway to misuse of numbers. There is no need for 'Know your customer arrangements' to issue a number from a pool of numbers to a new customer. 'Know your customer' arrangements are only required where the CSP has no current direct relationship with the customer and does not presently hold the number (e.g. port in, providing a messaging service, etc.).

Commpute raises a number of uses cases for using a 'spoofed' number as the call originator. Some of which are mis-leading, for example:

Business communications – most businesses use a 13 or 18 number as their public facing number and these cannot be used as a call origination number as per the Scam Code.

Therefore, this number cannot be used for their general customer traffic. Calls to workforces do not need a what might be referred to as a 'directory' number, any number recognisable to the employee would suffice. For workers in the field who call a customer, they typically use a mobile phone and that number will always originate from the mobile network and be used as the CLI, or the call may have CLI masked.

Telehealth – similar to above. Calls from the clinic via a PABX generally shows the main switch number or the individual extension for call back and should be on the home network to enable consistent approach to blocking scam calls across networks.

Unified Comms – same as above.

Critical services – same as above. Services such as Lifeline, etc. are often distributed services and again most often use 13 Or 18 numbers which cannot be used as CLI and most outbound calls have the CLI masked as such agencies usually don't want the number of their agent publicly available.

The reasons claimed as valid uses above are the very same approach used by scammers and **while ever we allow calls to originate using numbers on other than their home network we will have no effective tool to stop scam traffic.**

Rights of use

Knowing who has 'rights of use' is only required if wanting to use a number that was issued to a customer by another CSP. As we have written in our submission TPG Telecom does not support arrangements to use a number for voice calls across multiple networks.

Commpete also incorrectly stated that:

'In our view, numbers are purchased and can be used by businesses and consumers primarily as a standalone product, enabling a reply-path to the communications they are sending, but also often for branding purposes on outbound communications, so that consumers can become accustomed to interacting with them via a consistent set of phone numbers.'

Consumers, including businesses do not 'purchase' numbers. They are given a 'right of use' to use the number on their 'home' network (C566 4.3.4). The only numbers a business can purchase are smartnumbers and the customer is not purchasing the number but rather an enhanced 'rights of use'. Importantly, smartnumbers cannot be used as CLI and requires the customer to choose a single network as the 'home' network for use of that number.

The important matter raised by Commpete is:

...consumers can become accustomed to interacting with them via a consistent set of phone numbers.'

Having a consistent set of numbers does not require use of another CSPs numbers.

As we raised in our submission and as supported by Optus and Telstra the lack of compliance action has led to a situation where there are a range of misuses that have crept into the numbering sphere, from allowing non-mobile network operators accessing mobile numbers, to reselling mobile numbers that have been conditioned to a mobile network to be used to originate traffic on a fixed network and traffic originating on networks using numbers not held by that CSP. The fact that this blatant misuse of numbers has been allowed to perpetuate thwarting stronger scam controls is not an excuse to endorse this misuse.

The scam traffic issue being faced in Australia relates directly back to the lack of control over where calls can originate using a particular number.

The regulatory arrangement for IPND and subsequently emergency services and the enforcement and investigation agency communities is premised upon a 1:1:1 relationship the fact that some CSPs are breaking this arrangement should not be reason to ignore existing regulation that is based on this 1:1:1 relationship.

If Australia was to move to a similar model to the US where mobile and local numbers are used interchangeably and traffic can originate using either number type on any network it would have a profound impact on the communities understanding of the use of numbers and other effects such as the IPND and the arrangements for knowing who to contact to access retained data and to apply interception.

The arguments put forward for use of numbers across multiple networks to provide:

- Service redundancy
- Throughput/performance enhancement
- Greater commercial leverage through more competitive supply
- Utilisation of features, products and/or technology unique to each specific CSP

is something of a red herring as it does not require use of numbers not held by that CSP to provide these capabilities. It may be more convenient to use another CSPs numbers because it lowers the regulatory cost of taking the customer on board, such as via a number portability solution and the consequential obligations relating to managing that customers service, such as IPND, TCP Code compliance, etc. This approach of only supplying the profitable parts of a service (e.g. call origination) enables a CSP to maximise profit and reduce regulatory overhead. We may well see a future where number portability becomes redundant and where customers are stranded with a CSP that is making no profit from the service and may eventually have to terminate the

service as no other CSP wants to take on board providing a service for which there is little to no return.

Scam control

Commpete asks:

It is also not clear how hard blocks across entire ranges of numbers being used as CLIs and sender IDs could enhance a network's ability to identify scam traffic.

To which TPG Telecom responds that strict network rules would simplify scam control through protocols that identified the number originating traffic and matching that against which network is associated to traffic for that number. This is accomplished via using the tools that deliver traffic across networks every day and include where numbers are conditioned and number portability data.

This approach would leverage existing network capability and immediately stop traffic that originated outside of its home network. In this way there is certainty that the traffic was coming from an authorised source and if that carrier network allowed the delivery or transport of scam traffic there should be a more easily identifiable customer that was generating the traffic, whereas at present scam calls can originate from a myriad of customers using a myriad of originating and transit networks without any control. and it is the carriers that argue for greater flexibility that deliver

TPG Telecom advocates for a regulatory model where order is restored, numbers are used consistent with the Telecommunications Act and the Plan, consumers understand the meaning and use of number types and where scam calls and messaging are significantly reduced via rigorous rules in the Plan, rather than relying on the current whack-a-mole approach that can never be fully effective in bringing this insidious activity under control.

We have identified how these issues can be best addressed in our original submission and hope that our additional comments provide the ACMA the necessary information to make decisions about the Plan that lead to the goals we have outlined.