



# Structure of Australia's telephone numbering plan

Submission by the Australian Communications Consumer Action Network  
to the Australian Communications and Media Authority



December 2010



## **About ACCAN**

The Australian Communications Consumer Action Network (ACCAN) is the peak body that represents all consumers on communications issues including telecommunications, broadband and emerging new services. ACCAN provides a strong unified voice to industry and government as consumers work towards availability, accessibility and affordability of communications services for all Australians.

Consumers need ACCAN to promote better consumer protection outcomes ensuring speedy responses to complaints and issues. ACCAN aims to empower consumers so that they are well informed and can make good choices about products and services. As a peak body, ACCAN will activate its broad and diverse membership base to campaign to get a better deal for all communications consumers.

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# Preamble

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On 10 September 2010 the Australian Communications Consumer Action Network (ACCAN) along with the Australian Council of Social Services (ACOSS) and the Australian Financial Counselling and credit Reform Association (AFCCRA) lodged a Super Complaint with the ACMA. The Super Complaint concerned the costs of calling freecall (1800) and local rate (13 and 1300) services from mobile phones and urged the ACMA to investigate and implement changes to treat mobile and fixed line calls to these services equitably.

We congratulate the ACMA for using this Discussion Paper to canvass the views of industry on this vitally important question. We note, however, that our organisations and the 70 organisations that have signed up to support the campaign are ultimately looking for the ACMA take action to remove a policy that blatantly disadvantages some of our most vulnerable citizens.

As a way forward ACCAN recommends that the ACMA move immediately to quantify the depth of the problem and the net cost to consumers of the status quo.

**ACCAN recommends the ACMA exercise its information gathering powers to identify the changing nature of traffic being directed to freephone and local rate numbers. The following information should be sought:**

- **All organisations that provide 13/1300/1800 numbers should disclose the proportion of calls (by number and duration) directed to freephone and local rate numbers from geographic and mobile numbers and the net revenue from these calls for each of the last three completed financial years.**
- **All mobile operators to provide effective average price per call minute data for calls to geographic numbers, freecall numbers and local rate numbers for each of the last three completed financial years.**

In this submission we also address questions raised regarding geographic numbering. The views expressed in this submission should be considered as supplementary to the views already put by ACCAN to the ACMA earlier this year in the form of a submission to the Discussion Paper on changes to Geographic Numbers. Our submission of April 2010 can be found on ACCAN's website: [http://www.accan.org.au/policy\\_submissions.php](http://www.accan.org.au/policy_submissions.php)

ACCAN would be very concerned to see an unravelling of access to local rate numbers. While we support innovation, we would not accept it at the cost of access to untimed local calls.



# Response to Consultation Paper Questions

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## A. Freephone and local rate numbers

ACCAN along with ACOSS and AFCCRA has made extensive submissions to the ACMA about the freephone and local rate numbers in the Super Complaint lodged on 10 September 2010. The full Super Complaint can be found at ACCAN's website: [http://www.accan.org.au/campaign\\_full.php?id=23](http://www.accan.org.au/campaign_full.php?id=23).

In this submission we discuss some additional detail, particularly focussing on interconnection, intelligent routing and the three reform options.

### **16. What purpose is now served by:**

- ***A distinction between freephone and local rate numbers?***
- ***The continuation of freephone numbers?***
- ***The continuation of local rate numbers?***

The Super Complaint outlines the type of services that typically utilise freephone and local rate services. Rather than restating these use of services and how they benefit consumers, this submission will address some of the other benefits of the freephone and local rate numbers, naming the intelligent routing that facilities these services.

In discussing the utility of inbound numbers it is important to recognise that they are not simply charging arrangements. Both freephone and local rate numbers (or "inbound") services use "intelligent routing". The service provider offering the inbound service identifies which location the call should be directed to and assigns the appropriate geographic number for that location. This number is usually referred to as "C party" number (the A party being the caller, the B party being the inbound service number.)

Most typically this is some form of geographic routing directing traffic to the relevant office, but it can include time of day routing. The level of granularity of the routing can be quite fine – being based on actual address if the calling party is not marked as silent in the IPND, but otherwise to exchange level. The carriage service providers also provide detailed call statistics, including information on calls that were not visible to the end customer because all incoming call routes were busy.

A consequence of the different routing capabilities is a difference in where calls are handed over. If a customer on Telstra's network in Sydney rings a directly connected Optus customer in Perth using a geographic number, Telstra hands the call over at the Point of Interconnect (POI) in Perth closest to the customer. If the Telstra customer rings an inbound service number, Telstra hands the call over at the nearest POI in Sydney so that Optus can determine where the call should be routed to (which may be the Perth office in which case Optus carries the call across the continent).



In simple terms calls to geographic numbers use far end handover while calls to inbound service numbers provides near end handover. It may perhaps be possible to provide similar functionality with “flexible numbers” but a distinction between “near end” and “far end” handover general numbers might be required.

It would be theoretically possible to make the whole operation of inbound services based on signalling – that is the provider who first has the call doesn’t just identify the provider of the inbound service but actually does the look-up to identify the “C number”. However, the consequence would be the loss to the customer of the inbound service of the detailed traffic statistics they currently receive. In many cases these traffic statistics are critical elements in managing customer service for large incoming call businesses.

It therefore seems that there is a continued need for a specific number range to support inbound services.

The distinction between freephone and local rate (from fixed line) continues to be relevant because the charging for the customer subscribing to the inbound service varies accordingly. In addition local rate numbers have included a small number of premium six digit numbers used typically where recalling numbers is important.

It would also appear that any change to the freephone and local rate numbers is an impossibility given the decision to utilise a price based allocation system for the expanded range. The promotion of phone words has made the concept of abandoning the ranges irrelevant.

In summary, inbound services are still required for their intelligent routing options – as much as their price signals to end users. End users and operators of freephone and local rate service are aligned in the need to retain the freephone and local rate prefixes and their meanings.

***17. To what extent is there a problem with affordability and clarity of charges for calls to freephone and local rate numbers from mobile phones? In what ways is the problem manifested, and how extensive is it?***

The extent of the problem can be measured in the ACMA’s own research. The report *Take up and use of voice services by Australian consumers* claims that at June 2010 14% of mobile phone subscribers did not have access to a fixed line at home.

The Discussion Paper notes;

*“The balance in the total number of calls between those originating on landline phones and those originating on mobile phones is shifting towards the latter. It is likely that an increasing number of calls to freephone numbers, and perhaps a majority, are now made from mobile phones, and are consequently not free. This represents a substantial shift from when freephone services were introduced, when almost all calls to freephone numbers were free.” (ACMA paper, P. 46)*

The ACMA is the organisation best placed to identify the changing nature of calls to inbound services. The ACMA has significant information gathering powers, in particular under s521 of the *Telecommunications Act 1997*.



ACCAN recommends the ACMA exercise these powers to identify the changing nature of traffic being directed to freephone and local rate numbers. The information request should be directed to all organisations that are known to provide services of 13/1300/1800 numbers (which is identifiable from the participation in the numbering scheme INMS). The request should ask that for each of the last three completed financial years the proportion of calls (by number and duration) directed to freephone and local rate numbers from geographic and mobile numbers.

ACCAN is also concerned that the degree of price movement in calls to 13/1300/1800 numbers has not matched the price movement of calls to geographic numbers over recent years. The ACMA could also require the mobile operators to provide effective average price per call minute data for calls to geographic numbers, freecall numbers and local rate numbers for each of the last three completed financial years.

***18. To the extent there is a need to address the affordability of calls to freephone and local rate numbers from mobile phones, how should this be done? To what extent is each of the proposals in Table 7 feasible?***

Each of the proposals drawn from the Super Complaint in Table 7 is feasible.

ACCAN encourages ACMA and industry to review the technological solution of creating a new range that would be controlled in charges to the originator of the call regardless of originating service type.

The regulatory reform path is achievable. The simplest process to achieve the change is changes in the Numbering Plan to the definition of each of “low charge amount”, “freephone” and “local rate” to remove the restriction of the charging regime to calls from standard telephone services other than public mobile telephone services.

It would be beneficial at the same time to change the detail on charging included in the actual plan. Currently freephone and local rate numbers are limited to a “low charge amount”, which is an amount also used for other numbers. This should be changed to be “no charge” and “local rate” respectively. “Local rate” should be defined as “for an STS other than a PMTS the same charge as would apply were that customer to be making a local call” and “for a PMTS the same charge as would apply were that customer placing a call to a geographic number in their immediate vicinity”. “Free rate” should be defined as “no charge to the end user”.

If this path is pursued, the inbound service providers may need to amend their interconnection agreements. Unfortunately, as the ACCC does not deal with this interconnection issue, providers will have no regulatory support for gaining this access nor for arbitration on the terms and conditions of access. Technically however the mobile carriers are equally unsupported in obtaining access to terminate calls to inbound numbers (they are not covered by the PSTN OTA service). The inbound operators could attempt to force the mobile operators to negotiate by refusing to terminate the calls. Please see below for a wider discussion of interconnection issues.

One feature of the industry is that two operators are both mobile operators and inbound service operators, Telstra and Optus. VHA is a mobile only operator, while AAPT and



Primus offer inbound services but are not mobile operators. It is unclear what stance the integrated operators intend to take.

The absence of the necessary declared service may make the industry-led solution more attractive. However, there is a risk that a meeting between providers to agree on the prices to be charged to consumers would breach prohibitions on collusion, despite the fact that the objective would be to reduce rather than increase prices.

A consequence of changing the charges to call originators and changing interconnect arrangements may be increases in charges born by customers of inbound calling services. This should be assessed as part of any proposal for reform.

As with most aspects of the telecommunications regime implementation of effective fixed rate and local rate number access from mobiles implementation will most effectively be achieved by a co-operative approach between industry and regulators. The ACMA should convene a working party of representatives of the mobile operators (only those that actually operate the networks and negotiate interconnect agreements), the inbound service providers, the ACMA, the ACCC, ACCAN and ATUG to determine the appropriate way of implementing the changes. We understand that the Communications Alliance has been working with industry representatives on this issue. Unfortunately ACCAN has not been invited to participate in these discussions and we urge the ACMA to take leadership on the issue.

#### **A note on Interconnection Issues**

The discussion of the arrangements for freephone and local rate numbers will benefit from greater attention to why the current situation arises whereby calls to mobile numbers are so costly. Ultimately this requires an understanding of interconnection arrangements.

When two networks connect with each other so that calls can be made from one network to the other there is a need for both technical arrangements and for commercial arrangements. The technical arrangements are largely determined by industry agreement and are based on international standards. However, there are incentives that result in the commercial arrangements not being so readily agreed. As a consequence the regulatory regime makes provision for certain services to be “declared” by the ACCC. Network operators are, in defined circumstances, obliged to provide these declared services to anyone who requests them. The regime encourages the terms of provision to be commercially agreed, but provides for various methods by which the commercial terms can actually be determined by the ACCC.

There are two fundamental types of interconnection “access services”. The first are terminating access services. This is a service that a network operator who is charging their customer for a call acquires from another network operator so that callers on the first network can reach parties on the second network. The originating network pays the terminating network a fee for terminating the call.

The second type is an originating access service. The simplest case of an originating access service is where a customer has chosen a different provider for their long distance calls (either by pre-selection or dialling an over-ride code). The long distance provider will be charging the customer for the call and carrying on its network in the long distance



segment. As a consequence they are required to pay the network to which the customer is actually connected for the originating access. (If it is a national long distance call they will usually also pay a terminating access fee to deliver the call as well).

Another case of the acquisition of an originating access service is a freephone (1800) service, where the called party is paying its service provider for the call. In this case the called party's network provider acquires the originating access service from the calling party's network provider. A similar arrangement applies for 13/1300 calls though usually a slightly lower access charge is paid to reflect that a "local call fee" is paid by the calling customer.

With the commencement of the new regime in 1997 the ACCC was empowered to deem that certain services that were already being supplied were declared services. The services "deemed" to be declared included the PSTN Originating and Terminating Access service (PSTN-OTS), and similar access services that became known as the Mobile Terminating Access Service (MTAS) and the Mobile Originating Access Service (MOAS).

The PSTN originating service covered the cases of long distance calls (through pre-selection and override codes and to 13/1300/1800 numbers. The MOAS covered only the 13/1300/1800 cases as there was no pre-selection or over-ride requirement.

As the Discussion Paper notes elsewhere the MTAS rate has declined dramatically over recent years. When first determined by the ACCC it was 22.5c a minute (and had been higher before this) whereas it is now 9c per minute – and there are good reasons why it should be lower still.

The ACCC has discontinued its declaration of the MOAS. It has thus become common to charge "extra" for calls to inbound calling numbers from mobiles. (In some other jurisdictions the alternative outcome is that the calls simply cannot be made from mobiles).

Two things have changed since then.

The first is that the ACCC has significantly reduced the MTAS rate, and one would expect a similar decline would apply to the MOAS rate were the MOAS still a declared service. (For very simple reasons the cost of providing MOAS should be less than MTAS as in the case of the former there is no transport of the call by the mobile operator interstate, whereas there can be for MTAS).

The second is as referenced in the ACMA's recent research that there is an increase of consumers who only use mobile services. This has been accompanied by pricing structures that can make calling a fixed line phone from a mobile cheaper than an equivalent call from a fixed line.

## B. Geographic numbers

The discussion of geographic numbers recognises the significance of the designation of a "local call". This designation is important in the determination of the charging for such calls. The designation of a call as a "local call" is also important for the purposes of routing calls. In particular the obligation to provide pre-selection only applies to calls that are not local



calls. The ability of customers to identify whether a specific call is a local call not only affects their understanding of the price of the call, but also their options in terms of how they might place the call.

#### ***4. What information conveyed by geographic numbers is of value to end-users?***

The information conveyed by numbers to end users is primarily in relation to the charges that will apply to dialling the specified number. Additional information about the location of the person called, or calling if the receiving party's service supports Call Line Identification display, may be conveyed.

The untimed local call is a benefit to both calling and called parties. There are called parties who wish to be accessible for the price of a local call, without incurring the expense of a 1300 style number.

While service providers of VoIP services may have expressed an interest in having the flexibility for a customer to retain their geographic number when they move, the obligation on service providers whose customers are calling the number is to provide an untimed local call between places, not between numbers.

In the extreme case a VoIP customer who relocates from Sydney to Melbourne but takes the number with them would be entitled to receive local calls in Melbourne on the Sydney number if the service was "identified" as being at the new location (as it would need to be for emergency service purposes). As noted in the Discussion Paper, there are already cases where customers use a geographic number from one area but actually answer the call in another. These "presence" numbers were extensively used for dial-up ISP businesses.

It is incorrect to describe the relationship between numbers and locations for call charging simply the way the Discussion Paper does as, "while carriage service providers rely on an association between the first few digits of the numbers of calling and called parties and local call areas to deliver on the legislative obligation to provide an option of untimed local calls." If interrogation of the number cannot be used to determine location then a look-up of a database would be required that identified the call as local. The single provider most impacted would be Telstra where the obligation to determine whether a call is local or not relates to pre-selection as well as call charging.

#### ***5. Does the list of uses of information conveyed by geographic numbers in Table 2 encompass all of the major uses of this information by carriage service providers and end-users?***

The description in Table 2 of the "major uses" of the information contained in geographic numbers adds to the underlying use some further information or assumptions. In particular call routing is a generic action and the particulars of how it occurs are irrelevant. Similarly, the determination of whether a call is a local call or not needs to be made by the major service provider as part of pre-selection arrangements. Once calls are routed the call charge record is not usually stamped as to whether the call was local or not, so call charging is usually conducted from the originating and terminating numbers in the billing system. Finally, the service provider makes no decisions about "which store is closest to the customer" they merely follow the instructions of the acquirer of the inbound calling service.

It is appropriate to acknowledge that the definition of a “local call” is more complex than a call where both numbers being in the same standard. However, the choice of the simple example continues to mask the fact that the identification of what truly is a local call is complex, resting as it does on the concept of calls within a standard zone or between adjoining standard zones.

As the ACMA leaflet *Implementing the untimed local call access arrangements*<sup>1</sup> makes clear the definition adopted in the *Telecommunications Act 1997* of the calls that must be offered as an untimed local call is based on Telstra’s charging arrangements at 30 June 1997. The leaflet explains the function of charging precincts and how these are used to provide certain users untimed local calls to non-adjoining standard zones.

The fact that users cannot easily identify from number examination whether a specific call will be local or not is not a reason to abandon the relationship between numbers and charging. The fact that large numbers of people use mobiles to originate calls is no reason why those customers still using a fixed line should not get the little information that can be made available. The table provided in the Discussion Paper also makes the presumption that all national non-local calls are charged by providers at the same rate. While this is the current paradigm there is no guarantee that it will not further change.

The table below is a more accurate description.

|  |   |
|--|---|
| <p><b>Carriage service providers</b></p> | <ul style="list-style-type: none"> <li>&gt; To identify a called party in order to correctly route a call. (This may also involve identifying another service provider and a terminating exchange).</li> <li>&gt; To identify whether the calling and called parties are in the same local call area, in order to determine whether the call is a pre-selectable long distance call or is a local call.</li> <li>&gt; To identify the defined geographic areas in which exchanges serving the calling and called parties are located, in order to apply the appropriate charge to a call.</li> <li>&gt; To identify the location of the calling party, in order to carry a call according to the instructions of the subscriber of an inbound calling service.</li> </ul> |
| <p><b>End-users</b></p>                  | <ul style="list-style-type: none"> <li>&gt; To identify the charge for a call; in particular, to identify whether a call will be charged as a local call or a long distance call (and if there are differential rates, at what rate).</li> <li>&gt; To identify the general location of a called party; for example, in order to determine whether a business is located near to the end-user’s area.</li> </ul>  |

**6. What advantages and disadvantages would be associated with the proposed efficiency improvement of removing sector partitions in major metropolitan areas?**

If as the Discussion Paper claims the partitioning of Standard Charge Zones into sectors has no relevance for the determination of what calls count as local calls, then there is no purpose to maintain those partitions. However, the ACMA paper that explains the local call definition

<sup>1</sup> Available at [http://www.acma.gov.au/webwr/assets/main/lib100283/implementing\\_the\\_untimed\\_local\\_call\\_obligation.pdf](http://www.acma.gov.au/webwr/assets/main/lib100283/implementing_the_untimed_local_call_obligation.pdf)

that applies based on Telstra 1997 charging structures refers to calls within certain “precincts” being entitled to local calls to locations that are in non-adjointing standard zones.

The greatest improvement in numbering efficiency would be a thorough review of the local call arrangements. As has been noted by others the areas communities regard as “local” have changed dramatically since the current arrangements were established.<sup>2</sup> The untimed local call provision needs to be retained but redefined to something that is explicitly outlined in regulatory instruments, not by reference to some pre-existing regime. Suggested drafting would be that untimed local calls would be available between locations as defined by the ACMA, but that any call that would have been a local call at 1 July 1997 must still be a local call.

**7. Given the technical and service innovations affecting the use of geographic numbers:**

- ***What are the circumstances in which geographic numbers should be converted to flexible and general purpose numbers?***
- ***What is the best strategy for undertaking such a conversion?***

The question is premised on the capabilities available to service providers whose technology necessarily involves database look-ups to route traffic. The task is nowhere near as simple for service providers who route traffic from traditional voice switches. In particular, the service provider with the greatest obligation to determine whether a call is local or not as part of the decision on how the call is to be routed, that is Telstra, relies upon such switches.

In brief there is no need to “convert” numbers to a more flexible approach. The process would effectively be by switchover, and that switchover would only logically occur once the major provider was no longer utilising traditional voice switches. However, planning is needed prior to that point to ensure that the configuration of new “soft switches” was designed to support the flexible number structure being considered.

The same decision will have implications for the way local number portability operates. The ACMA should invite Communications Alliance to prepare advice on how the rules of number portability would be modified to support numbers being more flexible in their geographic assignment.

**8. If geographic numbers move from the present tight constraints on their use to more flexible and general purpose numbers, what will be required to guarantee transparency of call costs to end-users?**

There are two alternatives. The first would be to revert to the use of “pips” at the start of a phone call that were introduced when subscriber trunk dialling was introduced that advised the caller and called party that this was not a local call. The second would be to create a “reverse number directory” so that the address of a service could be derived from the number. Neither is attractive.

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<sup>2</sup> For example a Peter Gerrand editorial in the TJA “Blues with Black Spots”, and appeared in TJA Vol. 56 No.1, 2006, pp.34-36. An electronic copy is available at: <http://peter.gerrand.id.au/2006/02/26/blues-with-black-spots/#more-14>