

COMMUNICATIONS  
ALLIANCE LTD



INDUSTRY GUIDELINE

MOBILE NUMBER PORTABILITY-  
TESTING STRATEGY FOR VOICE,  
DATA AND FAX SERVICES

G577:2009

## **G577:2009 Mobile Number Portability – Testing Strategy for Voice, Data and Fax Services**

First published as ACIF G577:2001

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## **ABOUT THIS DOCUMENT**

This document describes the joint network testing for voice, fax and data services to be conducted by PSDs and Mobile Carriers for Communications Alliance Mobile Number Portability (MNP) and was prepared by the Communications Alliance Network Testing Sub-Group (NTSG) for the implementation of MNP. This is separate to and in addition to any internal testing conducted by any PSD or Mobile Carrier.

### **Audience**

This document is intended for:

- (a) Communications Alliance MNP – Network Testing Sub-Group for information and approval;
- (b) Communications Alliance MNP –PMG for information;
- (c) Communications Alliance for information; and
- (d) PSDs and Mobile Carriers.

### **Distribution**

- (a) Communications Alliance MNP – Network Testing Sub Group;
- (b) Communications Alliance MNP – PMG; and
- (c) PSDs and Mobile Carriers.

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# 1 INTRODUCTION

## 1.1 Overview

- 1.1.1 Mobile Number Portability was required to be implemented by all PSDs and Mobile Carriers by the 25th September 2001.
- 1.1.2 The network test strategy was developed by the Communications Alliance MNP NTSG to define the testing of the network conditioning for voice, data and fax services implemented by each PSD and Mobile Carrier.
- 1.1.3 The network testing was agreed to be completed by 24th August 2001 to allow end to end testing to commence on 25th August 2001.
- 1.1.4 Note the testing of SMS was the subject of a separate Communications Alliance MNP NTSG test strategy and the Communications Alliance MNP Network Plan for SMS.

## 1.2 Test Objectives

- 1.2.1 The objective of the MNP industry testing is to test the network conditioning implemented by each PSD and Mobile Carrier for Communications Alliance MNP prior to launching commercial service to ensure that calls are routed in accordance with the Communications Alliance MNP Network Plan for Voice, Fax and Data Services.
- 1.2.2 The testing is to have no impact on end customers.

## 1.3 In Scope

- 1.3.1 The Network testing for voice, fax & data services will include, where applicable for each participant:
  - (a) Donor routed calls;
  - (b) Direct routed calls;
  - (c) Donor transit capability;
  - (d) Call termination; and
  - (e) Error Treatments.

## 1.4 Out of Scope

- 1.4.1 Items considered out of scope of this testing are:
  - (a) Testing of the Operational porting process;
  - (b) Testing of the IT component of MNP;
  - (c) Testing of short messages;

- (d) Testing for equivalent service criteria; and
- (e) Testing of interconnects (e.g. bearer bandwidth and capabilities, etc).

## **1.5 Assumptions**

1.5.1 The following assumptions have been made by the Communications Alliance MNP NTSG:

- (a) That once the voice call routing capability for MNP has been tested, then it is assumed that call routing capability for fax and data services has also been covered; and
- (b) Normal terminating charges will apply for test calls

## **1.6 2009 Revision**

In 2009, the Mobile Number Portability Code was revised. At that time all associated Mobile Number Portability documents were republished as Communications Alliance documents to reflect the change of organisational name from ACIF. Where relevant any references to other documents have also been updated.

## 2 ACRONYMS

### 2.1 Acronyms

**ACCC**

Australian Competition and Consumer Commission

**ACIF**

Australian Communications Industry Forum

**ACMA**

Australian Communications and Media Authority

**CAC**

Carrier Access Code

**C/CSP**

Carriers and Carriage Service Providers

**CTrSD**

Contracted Transit Service Deliverer

**DTrSD**

Donor Transit Service Deliverer

**GSM**

Global Service for Mobile

**MNP**

Mobile Number Portability

**NTSG**

Network Testing Sub-Group

**PMG**

Project Management Group

**PSD**

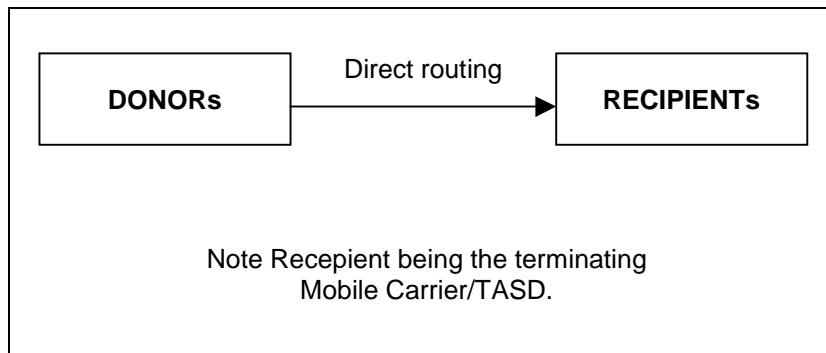
Prime Service Deliverer

### 3 TEST STRATEGY

#### 3.1 Overview

- 3.1.1 Each Mobile Carrier will setup MNP test numbers for a period of time and arrange for some test numbers to be available post-MNP. All PSDs and Mobile Carriers will then be able to make test calls to these numbers to confirm correct network conditioning has been implemented for MNP. Prior to the start of the testing period, each participating PSD or Mobile Carrier will implement the required network conditioning to handle calls to ported numbers.
- 3.1.2 The test period is planned to performed in two stages:
- (a) Stage One - Direct routing of calls by Donors (i.e. Mobile Carriers who have allocated ranges and have network) to Recipient's "ported in" numbers (refer to Figure 1).
  - (b) Stage Two – Participating PSDs route calls to Recipient's "ported in" numbers (refer to Figure 2).

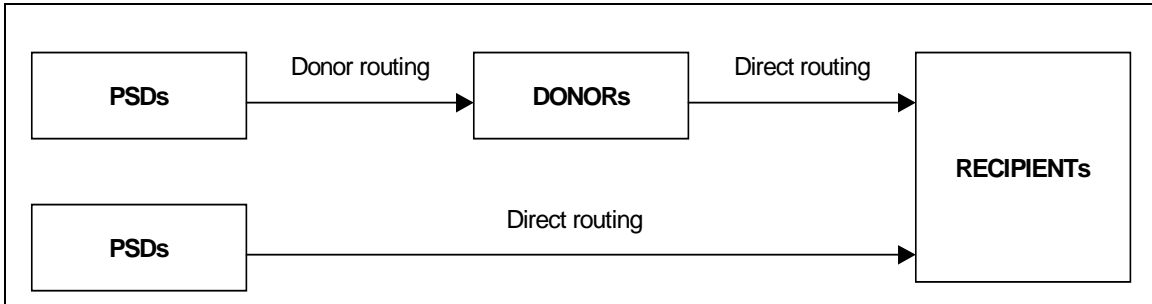
*NOTES:*  
1. PSDs may use either Donor or Direct routing.  
2. Direct routing between Donors and Recipients will have been tested during Stage One.  
3. PSDs Donor routing will only need to make one call per Donor (i.e. full combination of test calls for Direct routing are not necessary).



**FIGURE 1**

**Stage One - Direct Routing Of Calls by Donors**





**FIGURE 2**  
**Stage Two – PSD Testing of MNP**

### 3.2 Test Calls

3.2.1 Test scenarios will cover arrangements made by PSDs in accordance with the options as defined in the Communications Alliance MNP Network Plan for voice, data and fax services. These may include the following types of calls:

- (a) Nominal Network Routing, via Donor;
- (b) Nominal Network Routing, via DTrSD;
- (c) Direct Routing;
- (d) Direct Routing via CTrSD.

3.2.2 Call types will include cases to confirm error treatments.

3.2.3 Note these will be documented in detail within the later Detailed Test Plan.

### 3.3 Test Entry Criteria

**TABLE 1**  
**Test Entry Criteria**

Criteria for Entering Test (applicable to Communications Alliance MNP NTSG)
1. Communications Alliance MNP Network Test Strategy Voice, Fax and Data Services agreed and published.
2. Communications Alliance MNP NTSG Detailed Test Plan for Voice, Fax and Data Services signed-off (including nominated test ported numbers).
3. 3. Network conditioning completed and ready for testing (i.e. test numbers operational).
4. 4. Participating PSD and Mobile Carrier Fault Management Centres advised.

### 3.4 Test Exit Criteria

**TABLE 2**  
**Test Exit Criteria**

Criteria for Exiting Test (applicable to individual Communications Alliance MNP NTSG participants)
1. A 100% of test calls made by the participating PSD or Mobile Carrier meet the anticipated outcome.

### 3.5 Future Testing

- 3.5.1 MNP related test numbers will be provided by Mobile Carriers to enable new PSDs to perform testing post MNP live date, and for ongoing fault resolution between Mobile Carriers and PSDs.

## 4 DELIVERABLES

### 4.1

The following table lists the documents related to the MNP testing for Voice, Fax and Data Services.

**TABLE 3**  
**Documents Related To the MNP Testing For SMS**

Document	Description
Test Strategy	This document will define the test strategy, scope and environment.
Detailed Test Plan (DTP)	This document will evolve from the Test Strategy and include detailed test cases, test numbers, etc. This will include a template test call log for calls made (i.e. A number, B number, time and date, and result).
Test Summary Report (TSR)	A report will be produced by the Communications Alliance MNP NTSG to summarise testing results measured against the test objectives.

## **5 ROLES AND RESPONSIBILITIES**

### **5.1 Roles and Responsibilities**

- 5.1.1 The Communications Alliance MNP NTSG is responsible for developing the testing strategy for the introduction of Mobile Number Portability.
- 5.1.2 The participants in the Communications Alliance MNP NTSG will then be required to meet the test entry criteria detailed above and conduct their own testing in accordance with the agreed time table.

## 6 SCHEDULE

The following table shows the draft schedule for completion of testing by 24/8/2001.

**TABLE 4**  
**Network Testing Contacts (As at 30 March 2001)**

<b>Activity</b>	<b>Start Date</b>	<b>End Date</b>
Test Plan Agreement	In Progress	31/3/2001
Pre-conditioning for Test	In progress	6/7/2001
Testing Period *	9/7/2001	17/8/2001
Stage One – Direct Routing/Mobile Carriers	9/7/2001	20/7/2001
Stage Two - PSDs	23/7/2001	17/8/2001
Cleanup	20/8/2001	24/8/2001
Sign-off on test completion		24/8/2001

## 7 TEST ENVIRONMENTS

- 7.1** Each mobile carrier will be required to configure the following in their network for testing purposes:
- (a) A non-ported test mobile number (for error case testing)
  - (b) A "non-connected" non-ported test mobile number (for error case testing). "Non-connected" meaning the number is not live
  - (c) A test "ported" number to each other mobile carrier (where direct interconnects exist).
  - (d) A "non-setup" test "ported" number to each other mobile carrier (for error case testing). "Non-setup" meaning the recipient has not setup the number as ported in.
  - (e) A test "ported" number from each other mobile carrier.
  - (f) Provide a means to answer calls to MNP test numbers that demonstrates successful routing (e.g. voice mail box).
- 7.2** Note that for the purposes of MNP testing, handover of test calls to mobile carriers will need to be to the relevant carrier's Sydney gateway switch/s.

## 8 TEST MANAGEMENT

### 8.1 Fall Back Approach

- 8.1.1 No fall back strategy should be necessary since testing will not involve "live" customer services.
- 8.1.2 If problems are encountered with testing, the PSD or Mobile Carrier experiencing the problem will advise the other impacted PSD or Mobile Carrier via the contact list in Section 8.2.

### 8.2 Fault Resolution Process

- 8.2.1 Normal inter-carrier fault resolution processes are to apply.
- 8.2.2 Escalation of any faults for resolution will be via the Communications Alliance MNP NTSG. Refer to Section 5.2.
- 8.2.3 The participating PSDs and Mobile Carriers fault reporting areas for the MNP Network Voice, Fax & Data Services testing are as follows:

**TABLE 4**

**Fault Reporting Areas for The MNP Network SMS Testing  
(As at 30 March 2001)**

CSP	Name	Phone	Mobile
Telstra - Fixed	Jim Madden	03 9632 7667	n/a
Telstra – Mobile (both GSM & CDMA)	Prime Contact: Alex Verviris	02 9841 4457	0418209102
	Second Contact: Eve Dodds	02 9841 4485	0418209904
C & W Optus – Fixed & Mobile	Cameron Macnaughtan	02 9775 9439	0412300904
Vodafone	John Scott	02 9425 9162	0414209162
Orange	Network Operations Centre (NOC)	1800 555 544	n/a
One.Tel	Network Operations Centre (NOC)	02 9777 3999	n/a
AAPT	Network Operations Centre (NOC)	02 9377 7777	n/a

### 8.3 Reporting

- 8.3.1 During the testing period, regular (e.g. daily or as the need arises) telephone conferences will be arranged between the Communications Alliance MNP NTSG and testing participants to review progress of testing, as well as any issues and faults.
- 8.3.2 A Test Coordinator will be nominated by the Communications Alliance MNP NTSG to coordinate the above meetings and to compile the Test Summary Report.

## 9 REFERENCES

Publication	Title
<b>Industry Codes</b>	
C570:2009	Mobile Number Portability Code
<b>Industry Guidelines</b>	
G538:1999	Interconnection Model
G549:2002	Interconnection Implementation Plan
G561:2009	Mobile Number Portability - Network Plan for Voice, Data and Fax Services
G565:2009	Mobile Number Portability - Network Plan for SMS
<b>Industry Documents</b>	
<i>Telecommunications Numbering Plan 1997</i>	



## **PARTICIPANTS**

The Working Committee responsible for the revisions made to this Guideline consisted of the following organisations and their representatives:

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This Working Committee was chaired by Alexander R. Osborne. Visu Thangavelu of Communications Alliance provided project management support.

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