

**TERMS FOR LOCAL AND MOBILE NUMBER
PORTABILITY IN NEW ZEALAND**

“LMNP TERMS”

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Explanatory Statement

The number porting arrangements for local and mobile numbers in New Zealand are provided for in the Commerce Commission's determination pursuant to Decision number [specify], including:

- Terms for Local and Mobile Number Portability in New Zealand (LMNP Terms); and
- Network Terms for Local and Mobile Number Portability in New Zealand (Network Terms).

LMNP is an overall project comprising of two sets of terms and conditions, the LMNP Terms and the Network Terms. Therefore, for a party to deliver an LMNP solution in compliance with the Commission's determination, the solution will have to comply with both the LMNP Terms and the Network Terms.

The LMNP Terms detail the processes that enable end-users to port their numbers and set out the rights and obligations of parties to these terms in a number portability environment. These processes are based around an Industry Portability Management System (IPMS) which facilitates number portability between service providers and carriers but relies on carriers to configure and update their networks and support systems to ensure voice calls and short messages to and from ported numbers are correctly routed.

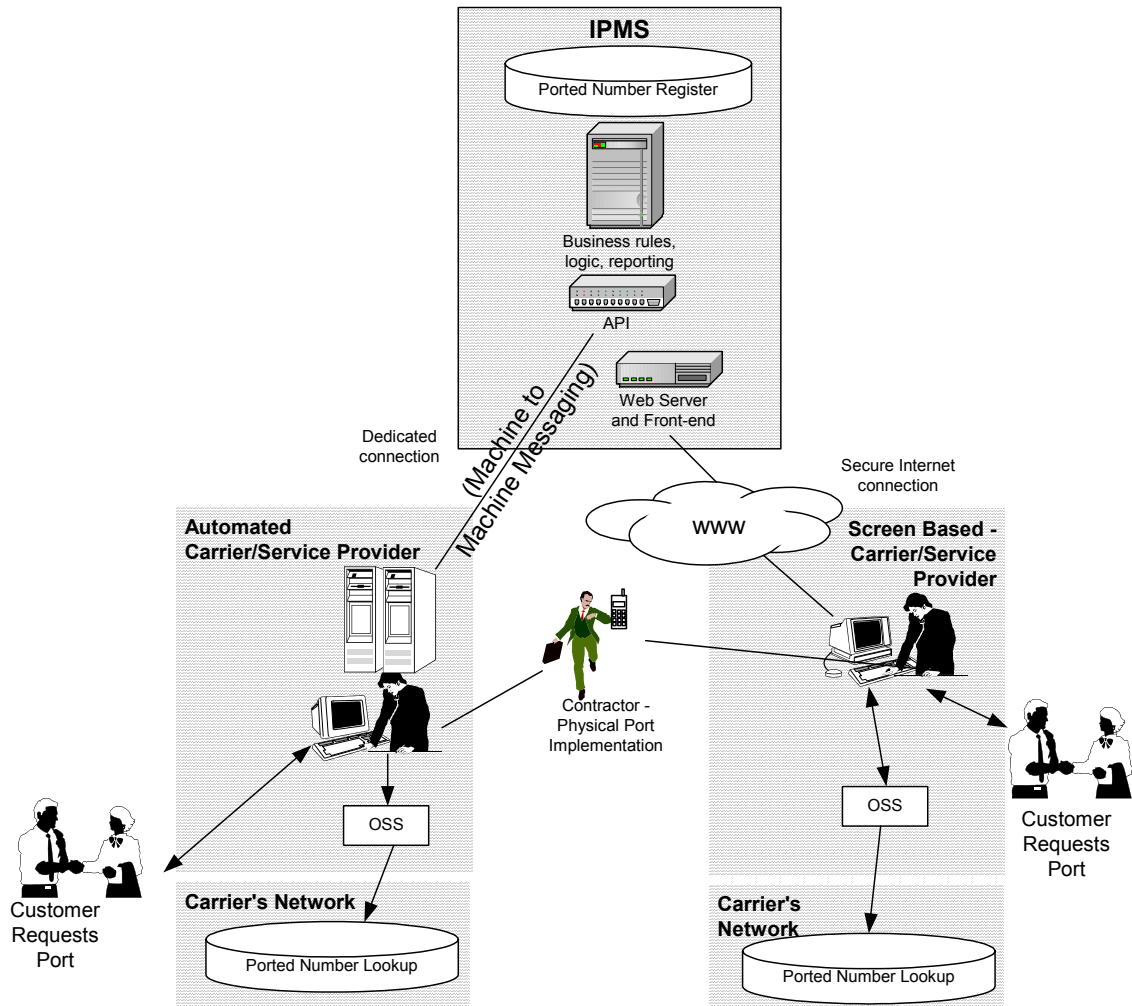
In a number portability environment, changes are required to the traditional way in which voice calls and short messages are routed from originating carriers to terminating carriers. For voice services, this applies to local, national, fixed-to-mobile, mobile-to-fixed, mobile-to-mobile, incoming and outgoing international and other calls involving Local or Mobile Numbers.

These LMNP Terms detail the processes that will enable Customers to Port their Local and Mobile Numbers. They set out the rights and obligations of participating Carriers in a Local and Mobile Number Portability (LMNP) environment.

The processes for portability in New Zealand will be based around a centralised Industry Portability Management System (IPMS).

The role of the IPMS is to provide reliable message transport, process tracking, coordination, and management. It is a tool which will facilitate LMNP, but relies on the Networks being able to support portability. The IPMS will not handle call routing, but will be the sole authority on all Ported Numbers. This will be used by Carriers to update their own Networks to ensure calls to Ported Numbers are correctly routed.

LMNP - IPMS Architecture Overview



All the participants in LMNP will need to communicate their requests and responses via the IPMS.

The Key Attributes of the IPMS

The centralised architecture will comprise:

- A Ported Number database containing the Ported Number Register;
- A Number Portability Management System, containing the business rules, logic and systems for managing Port Requests;
- An applications programming interface (API) for a consistent transactional interface with Carriers and Service Providers to the IPMS;
- A Web Server providing HTTP service interface for browser based sessions using the same rules and capabilities that the API uses; and

e) Management applications, reporting, logging, and security reports.

Access may be either via a dedicated leased line or secure internet connection.

Service Provider/Carrier Environment Options

Access to the IPMS will be flexible and will allow parties to select the approach that best suits them:

Screen based: parties may choose to access IPMS via simple Screen GUIs;

Automated: transactions could be responded to automatically via a machine-to-machine interface. Transactions will be presented to a user within internal systems if the response cannot be dealt with automatically; or

Hybrid: parties could use a combination of both screen based and automated processes, selecting the most appropriate option.

Further details are contained in the body of these LMNP Terms.

For more information please contact the Telecommunications Carriers' Forum Administrator on: tcfinfo@tcf.org.nz.

1 Effect of the LMNP Terms

1.1 Purpose

The purpose of these LMNP Terms is to provide for the business requirements for Local and Mobile Number Portability (LMNP).

1.2 Status of the LMNP Terms

These LMNP Terms are determined under the Telecommunications Act 2001, for the implementation of the processes that will allow the on-going management of LMNP. The LMNP Terms apply to all parties to the Determination who are access seekers or access providers in relation to either of those designated multinetwork services.

1.3 Anticipated Benefits to Industry

The purpose of these LMNP Terms is to provide benefits to the industry and end-users of telecommunications services in New Zealand, including by:

- a) Standardising industry practices in relation to LMNP, and providing certainty in their operation as well as cost effectiveness and efficiency;
- b) Minimising industry costs of compliance to implement and maintain the IPMS;
- c) Ensuring that all Carriers are able to meet their call routing responsibilities so that calls to Customers with Ported Numbers are routed successfully;
- d) Ensuring service to the Customer is maintained by specifying Service Levels; and
- e) Ensuring the efficient and effective inter-Service Provider and inter-Carrier operational arrangements using the IPMS.

1.4 Provision of Porting Service

1.4.1 Each party to the Determination who is an access seeker or an access provider in relation to local telephone number portability service must ensure that end-users are able to Port Local Numbers in accordance with the Commission's Determination not later than 1 April 2007.

1.4.2 Each party to the Determination who is an access seeker or an access provider in relation to cellular telephone number portability service must ensure that end-users are able to Port Mobile Numbers in accordance with the Commission's Determination not later than 1 April 2007.

1.4.3 On or before 1 January 2007, each party to the Determination must advise the Commerce Commission in writing whether it considers:

- (a) all Network changes;

- (b) all commercial arrangements with other Carriers and Service Providers; and
- (c) all necessary connections to and testing of the IPMS,
required by the Determination will be completed on or before 1 April 2007.

2 Scope and Objectives

2.1 Scope

- 2.1.1 The LMNP Terms set out operational procedures and processes, between Service Providers and Carriers, for the implementation and ongoing management of Porting Processes.
- 2.1.2 It is expected that there will be a continuing relationship between a given Service Provider and its Carriers. This relationship shall enable the parties to meet the requirements of the LMNP Terms. These LMNP Terms do not define all the details of this relationship. Service Providers and the Carriers, on whose Network they are providing services, may agree procedures for those transactions that take place between them, consistent with the procedures detailed in the LMNP Terms. Procedures provided in the LMNP Terms must be supported.
- 2.1.3 The LMNP Terms are binding on all parties to the Determination, in accordance with the Telecommunications Act.
- 2.1.4 All Service Providers and Carriers must provide LMNP in accordance with these LMNP Terms and any relevant legislation or determinations of regulatory bodies except to the extent that an exemption has been granted to a Carrier under the Network Terms. If such an exemption has been granted under the Network Terms, the relevant Carrier will be exempted from particular provisions in these LMNP terms in relation to the specific period and purposes, Customers or classes of Customers, or conditions for which the relaxation has been granted under the Network Terms.
- 2.1.5 In the event of any inconsistency between these LMNP Terms and any legislation or determinations of regulatory bodies, then such legislation or determinations will prevail, to the extent of the inconsistency.
- 2.1.6 The Service Levels in these LMNP Terms will be the default minimum industry standard and can be improved by bilateral arrangements provided that those bilateral arrangements do not impact on the ability of other participants to interwork with parties to those arrangements in accordance with the minimum Service Levels.
- 2.1.7 The functionality of the IPMS will allow for the following scenarios:

	Change in Carrier	No Change in Carrier
Change in Service Provider	✓	✓
No Change in Service Provider	✓	X

- 2.1.8 These LMNP Terms apply specifically to enable LMNP. Clarification or reconsideration of these LMNP Terms by the Commerce Commission may be sought in accordance with the Telecommunications Act.
- 2.1.9 Nothing in these LMNP Terms shall prevent any party from enforcing these LMNP Terms in accordance with section 61 of the Telecommunications Act.

2.2 Objectives

2.2.1 The objectives of the LMNP Terms are to:

- a) Set out procedures between Service Providers to enable a Customer to retain their Number when transferring from one Service Provider to another, notwithstanding that the relevant Number range containing the Number will continue to be held by the Donor Carrier;
- b) Allow a Customer to relocate premises coincident with, or after the Porting of their Local Number, provided the Local Number remains in the same Donor Carrier Local Calling Area;
- c) Set out competitively neutral and non-discriminatory processes for the implementation and operation of LMNP;
- d) Set out competitively neutral processes by which Service Providers may exchange relevant information with each other to support the Porting Processes;
- e) Set out procedures that will ensure a minimum break in or loss of service during a Port;
- f) Set out criteria against which the compliance of Service Providers and Carriers with the LMNP Terms may be measured; and
- g) Provide a robust process that can support LMNP in a timely fashion.

3 Conventions in the LMNP Terms

3.1 Interpretations

In the LMNP Terms:

- 3.1.1 Sections, clauses and other headings are for ease of reference only and will be ignored in constructing the LMNP Terms;
- 3.1.2 Unless the context otherwise requires, references to sections, clauses and appendices are references to sections and clauses of, and appendices to, the LMNP Terms;
- 3.1.3 Any reference in the LMNP Terms to a statute, statutory instrument, regulation or order will be construed as a reference to such statute, statutory instrument, regulation or order as amended or re-enacted from time to time;
- 3.1.4 Any references to a “party”, is to a party to the Determination (unless the otherwise requires or unless specifically provided to the contrary) and will be deemed to include its successors and permitted assigns;
- 3.1.5 A reference to a “person” includes an individual, firm, company, corporation, unincorporated body of persons, state or government or agency thereof, and any other body or entity (in each case whether or not having separate legal personality);
- 3.1.6 Any reference in the LMNP Terms to any gender includes all genders and a reference to the singular includes the plural and vice versa;
- 3.1.7 If a period of time is specified and dates from a given day or the day of an act or event, it is to be calculated exclusive of that day; and
- 3.1.8 A reference to a day is to be interpreted as the period of time commencing at midnight and ending 24 hours later.

3.2 Definitions

In the LMNP Terms, unless the context requires otherwise:

Term	Definition
Account Number	Means the unique reference number used by a Service Provider for a given Customer, which should appear on invoices.
Approved Port	Means a Port that has been approved in accordance with the Port Request process.
Approved Port Change or APC	Means the process set out at Clause 8.3.

Term	Definition
Associated Persons	Has, in relation to a party to the LMNP Terms, the same meaning that that expression has pursuant to section OD7 of the Income Tax Act 1994.
Audit IPMS Client	Has the meaning ascribed in clause 7.4.1.
Bilateral Agreement	Means an agreement between a party who is obliged to comply with the LMNP Terms and another party (who might or might not also be a party to the LMNP Terms).
Billing Relationship	Means a relationship where the Service Provider has a bona fide right to charge the Customer for any chargeable activity relating to the Local Services or Mobile Services provided to that Customer.
Business Day	Means a day on which registered banks are open for normal banking business, excluding Saturdays, Sundays and nationwide public holidays. Regional public holidays are considered to be Business Days.
Carrier	Means an entity that operates a public switched telephone network (or a functionally equivalent system) that originates, transmits or terminates calls. The same person may be both a Carrier and a Service Provider. If a party to the LMNP Terms has more than one Network, it can be classified as more than one Carrier.
Change Requester	Means the person who requests an Approved Port Change and, for the avoidance of doubt, may be the Gaining Carrier, Gaining Service Provider or Losing Carrier.
Complex Dispute	Has the meaning ascribed in clause 7.2.1.
Complex Port	Means a Port which involves a group of Local Numbers or a group of Mobile Numbers for a Customer, which the GSP and LSP agree are to be treated as a Complex Port.
Contractor	Means a third-party that performs on-site work on behalf of a Carrier.
Co-operative Period	Means the period of time beginning when a LSP queries a Port Request with an GSP, or vice versa, and ending on the earlier of resumption of the Port Process or the expiry of one (1) week, during which the Gaining Service Provider will liaise directly with the Losing Service Provider (for example by phone or email) to identify and resolve any problems. The Losing Service Provider shall co-operate with the Gaining Service Provider to facilitate Porting for the Customer.
Customer	Means a person who has a bona fide Billing Relationship with a Service Provider in respect of a Local Service or Mobile Service.

Term	Definition
Customer Authorisation	Means a valid authorisation by the Customer or the Customer's duly appointed agent to Port the Customer's Number.
Customer Request	Means a request from a Customer to a GSP to Port a Number.
Departing Party	Has the meaning ascribed in clause 7.3.
Determination	Means the Commerce Commission's determination pursuant to Decision number [specify].
Donor Carrier or DC	Means the Carrier that has been allocated the Number by the NAD, or that is recognised by the NAD as having been allocated the Number.
Emergency Return	Has the meaning ascribed in section 8.7.
Enforcement Agency	A person nominated by the TCF and approved by the Commerce Commission or, if the TCF fails to nominate a person, a person appointed by the Commerce Commission, whose role is to monitor and enforce compliance with the Service Levels.
Event	Means an instance of one of the agreed set of processes that can arise from a specific Customer action, for which a specific Process exists.
Gaining Carrier or GC	Means the Carrier that will become the Host Carrier, after the completion of a Port.
Gaining Service Provider or GSP	Means the Service Provider to which the Number is moving, or has already moved, in a Port.
Hand-off Code or HOC	Means a prefix code passed between Carriers used for call routing.
Host Carrier	Means the Carrier on whose Network the Ported Number is connected.
Industry Portability Management System or IPMS	Means the software, hardware and other shared facilities used to give effect to the LMNP Terms.
Initiator	Has the meaning ascribed in clause 7.2.2.
LMNP Terms	Means these Terms for Local and Mobile Number Portability in New Zealand, including all Appendices hereto, as determined by the Commerce Commission.
Local and Mobile Number Portability or LMNP	Means Local Number Portability and Mobile Number Portability.
Local Calling Area	Means that geographic area defined by the Donor Carrier within which Customers have access to a Local Service.
Local Number	Means an 8 digit number, in the form: area code + NXXXXXX

Term	Definition
	where area code equals 3,4,6,7 or 9 and “N” equals digits 2 to 9 (excluding 50AB).
Local Number Portability or LNP	Means the local telephone number portability service, as defined in the Telecommunications Act.
Local Service	Means the service associated with a Local Number.
Losing Carrier or LC	Means the Carrier that is the Host Carrier prior to the completion of the Port.
Losing Service Provider or LSP	Means the Service Provider that is losing the Number in a given Port Event.
Mediation Period	Has the meaning ascribed in clause 7.2.4.
Message	Means an identifiable step in the Porting Process. It is a defined communication between Service Providers or between Carriers. Examples of Messages include completion advice in relation to a Port Activation, or a rejection of a Port Request.
Mobile Number	Means a number in the form 02N + XXXXXX[XX] where “N” equals 1,5,7 or 9 and other cellular numbers allocated by the NAD, or recognised by the NAD as having been allocated.
Mobile Number Portability or MNP	Means the cellular telephone number portability service, as defined in the Telecommunications Act.
Mobile Service	Means the service associated with a Mobile Number.
Multiple Number Port	Means a Port of more than one Number, of the same type, for the same Customer and the same RFS Date, under the same SOM.
Negotiation Period	Has the meaning ascribed in clause 7.2.3.
Network	Means a system comprising telecommunication links to permit telecommunication.
Network Terms	Means the Network Terms for Local and Mobile Number Portability in New Zealand determined by the Commerce Commission.
Number	Means a Local Number, a Mobile Number or both, as the case requires.
Number Block	Means a contiguous set of individual Numbers that are managed as a single entity. Number Blocks will typically exist for multi-line Customer configurations such as PBX, DDI, and centrex implementations. Where the LMNP Terms refer to a Number Block, it could be referring to a contiguous block of centrex or DDI numbers.
Numbering Administration	Means the organisation established under the Numbering

Term	Definition
Deed or NAD	Administration Deed dated 20 December 1998, or any such successor organisation or agreement that may be formed.
Operational and Support Manual for LMNP	Means a multilateral agreement between Carriers that covers operational issues that are not dealt with by the LMNP Terms or Network Terms.
Originating Carrier	Means the Carrier on whose Network a voice call or short message originates.
Other Carrier	Means a Carrier that is a party to the LMNP Terms, but is not involved in a given Port Event as a Gaining Carrier, Losing Carrier, or Donor Carrier.
Port Activation	Means the process set out in section 8.2.
Port Expiry Process	Means the process set out in section 8.5.
Port or Porting	Means a process which achieves LMNP.
Port Request	Means a request for a Port pursuant to clause 8.1.4 and including the data required as per the Appendix, Table 1.
Port Withdrawal	Means the process set out in section 8.6.
Ported Number	Means a Number that is currently hosted by any Carrier other than the Donor Carrier.
Ported Number Register or Register	Means a file maintained by the IPMS, which contains a list of the Numbers that have been Ported. Access to this Register is required for all participating Carriers.
Ported Number Relinquishment Process	Means the process set out in section 8.4.
Porting Process	Means the processes described in Section 8.
Ready for Service Date or RFS Date	Means the intended date and the time window for the Port Activation.
Relevant Party	Has the meaning ascribed in clause 7.2.3.
Service Levels	Means the service levels set out in the Appendix, Table 2.
Service Order Management Number or SOM Number	Means a unique reference to a given single Port or Multiple Number Port.
Service Provider or SP	Means any person providing a Local Service or Mobile Service to a Customer and who has the Billing Relationship with the Customer for that service. The same person may be both a Carrier and a Service Provider.
Simple Port	Means a Port involving one or more Local Numbers or Mobile Numbers for a Customer which the gaining and losing parties agree is to be treated as a simple Port.
Standard Hours of	Means 8.00am to 5.00pm on Business Days.

Term	Definition
Operation	
Technical Dispute	Has the meaning ascribed in clause 7.2.1 (a).
Working Hours	Means elapsed hours during the Standard Hours of Operation.
Working Minutes	Means the elapsed minutes during the Standard Hours of Operation.

4 Business Rules

4.1 General Business Rule

4.1.1 Prior Notice

The GSP is not required to give any prior notice of a Port outside of the processes described in the LMNP Terms. This does not prevent consultation between the parties for coordinating Ports.

4.1.2 Non-discrimination

In implementing and operating the LMNP Terms, all parties must act in a competitively neutral and non-discriminatory manner and must facilitate Porting by acting in compliance with principles and processes that are consistent with section 18 of the Telecommunications Act.

4.1.3 Compliance with Service Levels

Each party subject to the LMNP Terms must comply with the Service Levels. If a party fails to meet the Service Levels, the provisions set out in clauses 7.4 to 7.7 will apply.

4.1.4 Privacy and Use of Information

Information relating to Port Processes will be kept confidential at all times by the parties to the LMNP Terms except as set out in this clause 4.1.4.

Information provided in Porting Processes can only be used for Porting, the routing of calls or in association with the delivery of telecommunications services, for Customer and network fault management and complaint handling. Information provided in Porting Process must not be used for any other purposes (including winback and marketing purposes).

A Service Provider or Carrier, which receives any type of information relating to the Porting of a Number may only use such information in accordance with *Privacy Act 1993*, the *Telecommunications Information Privacy Code 2003*, and the LMNP Terms.

If there is any inconsistency between the LMNP Terms, the *Privacy Act 1993*, and the *Telecommunications Information Privacy Code 2003*, the *Privacy Act* and the *Telecommunications Information Privacy Code* prevail.

4.1.5 Subject to New Zealand Law

Parties to the LMNP Terms must comply with the laws of New Zealand (including any statute, subordinated legislation or decision of any court of regulatory body). In the event of any conflict or inconsistency, the laws of New Zealand prevail.

4.1.6 Good Faith

All parties will act co-operatively and in good faith to facilitate Porting Processes.

4.1.7 Need for Separate Bilateral Agreements

Parties to the LMNP Terms may agree terms and conditions, in their Bilateral Agreements, for the provision of all appropriate and relevant services and service information that is required to facilitate and support the Porting Processes in an efficient and expeditious manner.

Parties to the LMNP Terms must ensure that any (subsequent) Bilateral Agreements are consistent with the LMNP Terms. Bilateral Agreements shall not reduce the minimum level of service prescribed in the LMNP Terms, but they can improve upon them.

4.1.8 Local Calling Area Requirements

- a) A Ported Local Number must physically remain within the Donor Carrier's relevant Local Calling Area. A Customer with a Ported Local Number wishing to move premises can retain that Local Number provided that the new premises are within the same Donor Carrier's Local Calling Area.
- b) The GSP is responsible for determining if a Ported Number can be allocated to new premises. The Donor Carrier will provide this information on request.

4.1.9 Message Timing

Messages sent outside Standard Hours of Operation are deemed to have been sent at 8am on the next Business Day.

4.1.10 After Hours Porting

Customers wishing to Port Numbers may require those Numbers to be Ported at a time convenient to the requirements of the Customers, including any time outside Standard Hours of Operation. The LMNP Terms do not impose an obligation on a Service Provider or Carrier to process, or continue to process to completion, a Port outside the Standard Hours of Operation. Arrangements for processing and completing Ports outside the Standard Hours of Operation may be the subject of Bilateral Agreement.

4.1.11 Multiple Porting of Numbers

A Customer must be able to Port their Number more than once to different Carriers. That is, an initial Port from the Donor Carrier to a new Host Carrier may be followed at later dates by subsequent Ports from that Host Carrier to other Host Carriers, including the original Donor Carrier.

4.1.12 Change of Directory Number

Porting shall not require Customers to change their directory number, nor have to know, nor use any Number other than their directory number.

4.2 Number Management

- 4.2.1 No ownership rights, title or interest in any Number or numbering scheme will be conferred upon a Carrier, Service Provider, or Customer by the LMNP Terms or by any Porting Process pursuant to the LMNP Terms.
- 4.2.2 Each Number shall only have a single Service Provider and Host Carrier associated with it at any given point in time.
- 4.2.3 Each Number shall only have a single Donor Carrier associated with it. The Donor Carrier does not change as a result of any of the Porting Processes pursuant to the LMNP Terms.
- 4.2.4 Service Providers and Carriers are required to ensure the continuing integrity of Number Blocks associated with a Porting Process, and:
 - a) Number Blocks may from time to time contain unused or inactive Numbers, these Numbers are considered to be part of the Port, and hence all Numbers within a Number Block may be Ported;
 - b) Unused or inactive Numbers within a Number Block may not be allocated or used for any purpose for any Customer other than the Customer who has the other Numbers within that Number Block;
 - c) Unless the Billing Relationship has ceased, to keep the Number Block intact Numbers within a Ported Number Block that are relinquished do not need to be relinquished under the prescribed Ported Number Relinquishment Process; and
 - d) Where a Port Request includes Number Blocks, the Port Request may include relinquishment information for Numbers that are specifically not required to be Ported.

4.3 Equivalent Service

To the extent that the IPMS contains Service Levels performance data, and data on the status and timings of Porting Processes, these may be relevant to investigations into Equivalent Service (as that term is defined in the Network Terms).

4.4 New Entrants

To determine what needs to be done to become a party to the LMNP Terms, a person should contact the Telecommunications Carriers' Forum.

5 Service Provider Responsibilities

5.1 General Service Provider Responsibilities

Once the Port Activation Process commences, the GSP will be considered the primary Service Provider. It is the GSP's responsibility to ensure the smooth transition of the Port for the Customer.

5.1.1 Right to Port

Service Providers shall only initiate a Port Request for a Number where the person requesting the Port has made a representation that they are the Customer for that Number, and that they have the authority to request the Port. Prior to submitting a Port Request for each Number, the GSP must obtain a valid Customer Authorisation from the Customer seeking to Port the Number.

5.1.2 Right to refuse to Port

GSP's have the right to accept or reject any Port Request made on behalf of a Customer wishing to Port their Numbers to that GSP.

5.1.3 Categorisation of Ports

The GSP must initially nominate a category to be used to Port a Number. These categories are:

- a) Simple Local;
- b) Simple Mobile;
- c) Complex Local; or
- d) Complex Mobile.

If the LSP disagrees with the category of the Port nominated, it must be resolved between the GSP and the LSP during the Co-operative Period. If the GSP and LSP cannot resolve such disagreement before the expiry of the Co-operative Period, that disagreement shall be treated as a Technical Dispute and resolved in accordance with clause 7.2 of these LMNP Terms.

5.1.4 RFS Date

The RFS Date notice period must comply with the minimum and maximum notice periods set out in the Appendix, Table 3. The RFS Date is determined by the GSP.

5.1.5 SOM Number to be used to Track Events

All Numbers associated with a GSP's Port Request for the Customer must be identified by a unique SOM Number covering all the Numbers being Ported from

a LSP. Once a SOM Number is issued, all Messages for Porting Processes must include that SOM Number.

5.1.6 Port Request Content

A valid Port Request must include the information prescribed in the Appendix, Table 1.

5.1.7 Port Request Rejection

The GSP is required to reject the Port Request where the details required to be supplied by the LSP are incomplete or incorrect or there is material doubt as to their completeness or correctness, and the issue cannot be resolved in accordance with Clause 8.1.9.

5.1.8 Porting Delays

A Service Provider must advise all affected Service Providers as soon as practicable after becoming aware of any Porting delays, whether system or validation, that prevents processing of Porting Events in compliance with the Service Levels. Such advice does not relieve the Service Provider from its responsibility to meet the Service Levels or the consequences of any failure to do so.

Other delays such as Network failures or major outages shall be managed in accordance with the relevant provision contained in Bilateral Agreements between the parties.

5.1.9 Service Provider Responsibilities

The Service Provider is responsible for maintaining:

- a) Appropriate records to satisfy the routing, billing and audit requirements of the LMNP Terms; and
- b) An interface with the processes required for the Porting Process through which they can request Ports, respond to Port Requests, and carry out all other Porting Processes prescribed in Section 8.

5.2 GSP Responsibilities:

5.2.1 Customers Right to Information

The GSP must advise the Customer that:

- a) Any changes to the Port Request may impact the Porting RFS Date;
- b) Once the Port Activation Process has begun it shall be completed;
- c) A subsequent Port Request will be required to change part or all of the original Port Request; and
- d) The Customer may continue to have outstanding obligations to the LSP.

5.2.2 Port Requests

The GSP bears sole responsibility for ensuring that all Port Requests are valid and correct.

The GSP bears sole responsibility for ensuring that, prior to inputting a Port Request into the Porting Process for each Number, a valid and complete Customer Authorisation has been obtained from the Customer requesting Porting of the Number.

A Customer Authorisation must contain, at a minimum, the following:

- a) the Customer's details including title, name or business name and address and (where applicable) authorised representative;
- b) acknowledgement that the Customer is authorised to request Porting in respect of the Number(s) set out in the Customer Authorisation;
- c) name of the Gaining Carrier or GSP;
- d) name of the Losing Carrier or LSP;
- e) Numbers to be Ported and associated Account Numbers;
- f) the date of the Customer Authorisation;
- g) the Customer's express authorisation for the Port to take place;
- h) the Customer's express acknowledgement that he or she has been advised by the Gaining Carrier or GSP that:
 - (i) by Porting the Number, the service(s) associated with that Number will be disconnected from the Losing Carrier or LSP and may result in finalisation of the Customer's account for that service;
 - (ii) although the Customer has the right to port his or her Number(s), there may be costs and obligations associated with the Port, which may include early termination fees and Porting fees; and
 - (iii) by Porting the Number, any services associated with that Number other than voice calls and short messages might not be able to be supported by the Gaining Carrier or GSP.

A Customer Authorisation shall cease to be valid at the end of thirty (30) days following the day on which it is given.

The GSP must retain all Customer Authorisations for a period of two (2) years following completion of the Port to which they relate and make them available for inspection on request by the Commerce Commission.

The GSP must provide a copy of the relevant Customer Authorisation to the LSP within five (5) Business Days, if requested by the LSP to resolve a Customer complaint or disputed Port.

A Port shall be deemed to be unauthorised if the Customer Authorisation relating to the Number and Port in question:

- a) cannot be produced by the GSP on request within the specified time;
- b) is not complete and valid;
- c) is illegible; or
- d) had expired at the time the Port Request was notified.

If a Port is unauthorised and the Customer wishes to return to the LSP, the LSP shall:

- a) If the Port is completed, activate the Emergency Return process; or
- b) If the Port is not completed, reverse the Port process to restore the Number to the LSP.

5.2.3 Relinquishment

Subject to clause 4.2.4, the Service Provider must commence Ported Number Relinquishment for a Ported Number within 5 Business Days after the Billing Relationship with the relevant Customer for that Ported Number terminates.

5.3 LSP Responsibilities

5.3.1 Porting Facilitation

The LSP:

- a) Must not initiate any activity associated with the Numbers in the Port, including Customer or Service Provider initiated changes, that impact adversely on the Porting Process once the GSP has approved the Port; and
- b) Must use all reasonable endeavours to minimise the length of the Co-operative Period and to facilitate the Porting of the Number. Regardless of the Co-operative Period, the Service Levels shall continue to apply.

5.3.2 Bad Debts are not a reason for Port Rejection

The fact that a Customer has a bad debt or unpaid invoice with the LSP is not in itself sufficient grounds to reject the Porting of that Customer's Number in accordance with the LMNP Terms.

5.4 Fault Management

Prior to commencement of the Port Activation process, the LSP and Losing Carrier are jointly responsible for management of all faults associated with a Number and will liaise with other parties, as required.

After the Port Activation process commences, the GSP will be responsible for the management of all faults associated with a Ported Number and will liaise with the LSP, Losing Carrier, Donor Carrier and other parties, as required.

5.5 Transfer of Ported Number to Another Person

The legitimate transfer of a Ported Number to another person when requested by the Customer is allowable if it meets the Service Provider's normal criteria used in the case of non-ported Numbers. The transferee has the same rights as the transferor to subsequently Port the Number if they wish. In case of the simultaneous transfer and Port of a particular Number, these LMNP Terms shall apply only in relation to the Port.

5.6 Right to use the Ported Number Register

All Service Providers participating in Porting have the right to access the Register in accordance with clause 9.6, and to access information contained in the Register on the Ported Numbers for which they are the Service Provider.

6 Carrier Responsibilities

It will be the responsibility of each Carrier to ensure that they meet the required Service Levels. Each Carrier is free to determine how it handles calls, either within its own Network or with the assistance of another Carrier. Where the LMNP Terms refer to the responsibility of a Carrier, the responsibility under the LMNP Terms remains with the Carrier, regardless of whether the Carrier may have contracted with a third party for performance of the activity in question.

6.1 Carrier Rules

- a) Each Carrier will maintain an interface with the IPMS for the transmission of messages for the Porting Process.
- b) Carriers will receive Porting Messages via their interface to the IPMS. The Porting Process will only be accessed by Carriers in this manner.
- c) Carriers providing Local Service and Mobile Service will require awareness of the other aspect of portability if they want to route calls directly to the current Host Carrier.
- d) Subject to clause 6.1(e), each Carrier will make the necessary changes, additions or deletions to its Network to give effect to the instructions issued by the Porting Process.
- e) The LMNP Terms do not cover the requirements for the routing of calls to or from Ported Numbers, nor the details of the call/signalling interoperability between the Networks of the Carriers.
- f) The Network aspects of LMNP are set out in the Network Terms.

g) Carriers must act in good faith to facilitate Porting.

6.2 Maintaining Records of Ported Numbers

6.2.1 Accuracy of Ported Number Register

The IPMS will be the sole source of information for the status of any or all Ported Numbers. Carriers should check their routing tables with the IPMS only and ensure they maintain consistency with it. Tools for helping this are detailed in clause 9.5.

6.2.2 Right to use the Ported Number Register

All Carriers participating in Porting have the right to access the Register. The information contained in the Register is to be used for the sole purpose of ensuring that participating Carriers' Network records are consistent with the IPMS.

6.3 RFS Date Notice Period

A Port Request must specify an RFS Date which complies with the minimum and maximum notice periods set out in the Appendix, Table 3. The notice period is the elapsed time between when the Port Request is sent and the RFS Date.

7 Administrative Issues

7.1 Clarification and Reconsideration of the LMNP Terms

The LMNP Terms are subject to Subpart 5 of Part 2 of the Telecommunications Act.

7.2 Dispute Resolution

7.2.1 Dispute

For the purposes of these dispute resolution procedures, a “dispute” is any matter relating to the LMNP Terms about which any of the parties to the LMNP Terms disagree or are unable to agree where a matter requires their agreement and which:

- (a) Is substantially a dispute of fact of a technical nature (**Technical Dispute**), including a service level default, but is not a Complex Dispute as defined in sub-clause (b); or
- (b) Is a dispute (**Complex Dispute**) that:
 - (i) May, in the opinion of a party to the dispute and the LMNP Terms have significant commercial implications for that party; or
 - (ii) Includes a substantial issue of fact of a non-technical nature or a substantial issue of law.

If a dispute is not a Technical Dispute, then it is to be resolved as a Complex Dispute.

7.2.2 Telecommunications Act 2001

No party to the LMNP Terms is prevented by these dispute resolution procedures from exercising any rights under the Telecommunications Act, including but not limited to:

- (a) Applications for determinations, price reviews, clarifications, reconsiderations to the Commerce Commission under Part 2 of the Telecommunications Act;
- (b) Appeals against Commerce Commission determinations and proceedings for enforcement of Commerce Commission determinations to the High Court under subpart 5 of Part 2 of the Telecommunications Act; and
- (c) Investigations by the Commission under subpart 6 of Part 2 and Schedule 3 of the Telecommunications Act.

If there is a dispute about the extent of a party’s rights under the Telecommunications Act, then that dispute may be resolved in accordance with the procedures in the Telecommunications Act and these dispute resolution procedures will not apply to such a dispute.

If a dispute has not been resolved by the end of the Negotiation Period (and, if applicable, the Mediation Period), a party to the dispute may choose to resolve the dispute by pursuing any applicable rights under the Telecommunications Act or, in the alternative, by submitting a Technical Dispute for expert determination under clause 5 or by submitting a Complex Dispute for arbitration under clause 6.

Once a party (the “**Initiator**”):

- (a) has commenced a process under the Telecommunications Act; or
- (b) has submitted a dispute for expert determination or arbitration,

then, subject to clause 7.2.7 below, the Initiator cannot commence an alternative process, unless the process that has been commenced is held by the decision maker of that process not to apply to the resolution of the dispute in question.

If the Initiator submits a dispute for expert determination or arbitration, that will not preclude the other parties to the dispute from pursuing any rights they may have under the Telecommunications Act.

7.2.3 Good faith negotiation

Any party to the LMNP Terms may at any time give notice describing a dispute to any other party (or parties) to the LMNP Terms who are involved in the dispute (**Relevant Party**). The party who gave notice of the dispute and the Relevant Parties are together referred to as the “parties to the dispute”.

If a party gives notice of a dispute, then during a period of 10 Business Days from the date notice of the dispute was given (**Negotiation Period**), the authorised representatives of the parties to the dispute must attempt in good faith to negotiate a resolution of the dispute.

If the authorised representatives are unable to resolve the dispute within the 10 Business Day period, the parties to the dispute may agree to refer the dispute to their respective Managing Directors, in the case of Complex Disputes, or operational managers, in the case of Technical Disputes, who must attempt in good faith to resolve the dispute within a further 10 Business Days. If the parties agree to this further negotiation period, then for the purposes of the final paragraph of this clause 7.2.3, and for clauses 7.2.2, *and 7.2.4 to 7.2.6 (inclusive)* the “Negotiation Period” includes this further 10 Business Day period.

If by the end of the Negotiation Period the parties to the dispute are unable to agree whether the dispute is a Technical Dispute or a Complex Dispute then, for the purpose of these dispute resolution procedures, the dispute shall be regarded as a Complex Dispute, and subject to clause 2 resolved under these dispute resolution procedures as such.

7.2.4 Mediation

At any time during the Negotiation Period, the parties to a dispute may agree to refer the dispute to mediation. The mediator will be appointed by agreement between the parties to the dispute, but failing agreement within 5 Business Days of the parties

agreeing to refer the dispute to mediation, will be selected by the Chairperson of LEADR (Lawyers Engaged in Alternative Dispute Resolution) New Zealand Inc (or his or her nominee). Unless otherwise agreed in writing, the then current model mediation agreement issued by LEADR New Zealand Inc must be used and the mediation must be completed within 20 Business Days of the mediator's appointment (**Mediation Period**). The costs of the mediator will be paid by the parties to the dispute equally.

7.2.5 Determination of Technical Disputes by an independent expert

If a Technical Dispute has not been resolved by the end of the Negotiation Period (and, if applicable, the Mediation Period), a party to the dispute may give written notice to the relevant parties requiring the dispute to be determined by an independent expert.

The independent expert will be appointed by agreement between the parties to the dispute, but failing agreement within 5 Business Days from the date the notice was given under this clause, will be appointed at the request of the Initiator by the Chairperson of the Board of the Telecommunications Carriers' Forum.

To be eligible for appointment, the expert must be independent and impartial, and must be experienced in telecommunications and will preferably be experienced in dispute resolution procedures. He or she must not have performed any duties, whether as an employee, consultant or contractor, for any of the parties to the dispute or any related party during a 12-month period prior to the date the notice of the dispute was given.

The expert will act as an independent expert and not as an arbitrator. The dispute will be resolved as soon as possible in accordance with the procedure determined by the expert, but in accordance with the principles of natural justice. Where the independent expert has primarily technical qualifications, he or she may seek independent legal advice regarding the appropriate procedures for resolution of the dispute.

The parties to the dispute agree to be bound by the decision of the independent expert, in the absence of manifest error. The costs of the independent expert (including the costs of any independent legal advice sought by the expert in accordance with these dispute resolution procedures) will be shared equally by the parties to the dispute. Reference to the independent expert will not be a submission to arbitration for the purposes of the Arbitration Act 1996 and that Act will not apply to or govern resolution of the dispute.

7.2.6 Arbitration of complex disputes

If a complex dispute has not been resolved by the end of the Negotiation Period (and, if applicable, the Mediation Period), then, subject to clause 7.2.2, a party to the dispute may then give notice referring any part of the dispute to arbitration. The notice will be a submission by the parties to the dispute of the dispute to arbitration and each party to the dispute agrees to confirm this submission if requested by any other party to the dispute. Unless otherwise agreed in writing:

- (a) The arbitration will be subject to the Arbitration Act 1996 and its Schedules;
- (b) The parties to the dispute will endeavour to appoint a single arbitrator within 10 Business Days of notice being given;
- (c) The arbitrator must have experience and expertise in telecommunications and competition issues;
- (d) If the parties to the dispute fail to agree on a single arbitrator within the 10 Business Day period, then the President of the New Zealand Law Society (or his or her nominee) shall appoint the arbitrator at the request of any of the parties to the dispute;
- (e) The arbitrator must adopt a procedure which, in the arbitrator's opinion, is expeditious. If feasible in the circumstances the arbitrator will endeavour to complete the arbitration within 2 months of the arbitrator's appointment (or such lesser period as is appropriate);
- (f) The arbitrator may determine the dispute without a hearing unless any party gives notice requiring one, in which case the arbitrator must treat that as a material consideration in assessing costs;
- (g) The arbitrator must not adopt inquisitorial processes;
- (h) The arbitration must take place in Wellington or Auckland (at the arbitrator's discretion);
- (i) The arbitrator must determine the dispute under New Zealand law;
- (j) Any party may appeal to the High Court on any question of law arising from an award; and
- (k) The arbitrator may commission assistance or any reports from any expert or other person which, in his or her opinion, would assist him or her in making the award. The cost of this assistance or report is:
 - (i) To be a cost of the arbitration; and
 - (ii) Unless the arbitrator orders otherwise, to be shared equally between the parties to the dispute.

The arbitrator must:

- (iii) provide copies of any assistance or report to the parties to the dispute;
- (iv) allow each party to make submissions in response to that assistance or report;
- (v) allow each party to produce evidence on any issue raised in that assistance or report; and

- (vi) allow each party to make submissions in response to any evidence produced by any party.

7.2.7 Court proceedings

Notwithstanding the above dispute resolution procedures, a party to the LMNP Terms may at any time commence court proceedings relating to any dispute if that party seeks urgent interlocutory or interim relief. Otherwise, and except where a party to the dispute chooses to pursue any rights it may have under the Telecommunications Act as contemplated by clause 7.2.2, the dispute resolution procedures in the LMNP Terms are mandatory and parties to the LMNP Terms contemplate that they will not resort to court proceedings. If court proceedings other than proceedings contemplated by clause 7.2.2 are commenced, a relevant party shall be entitled to seek a stay of court proceedings in favour of an appropriate dispute resolution procedure under the LMNP Terms.

7.2.8 Continuance of obligations

Except where the dispute renders it impossible to do so, the parties to the dispute must continue performing their respective obligations under the LMNP Terms while the dispute is being resolved or is subject to expert determination, arbitration or court proceedings, or a party is pursuing its rights under the Telecommunications Act. Each party to the LMNP Terms must use all reasonable endeavours to ensure that where a dispute is reasonably foreseeable, it is dealt with at a sufficiently early stage to ensure that there is a minimum effect on the ability of any party to perform its obligations under the LMNP Terms.

7.2.9 Use or disclosure of information

No party to a dispute may use, other than to attempt to resolve the dispute, any information disclosed by any other party to the dispute in the course of negotiation, expert determination, mediation or arbitration under the dispute resolution procedures. Any such information remains the property of the party supplying it and remains confidential to that party. Disclosure in the course of negotiation, expert determination, mediation or arbitration under the above procedures shall not constitute a waiver of confidentiality.

Neither party may disclose any such information to anyone other than an adviser or independent witness who has entered into a deed undertaking:

- (a) not to disclose any of the information, or any analysis of the information, other than to the parties to the dispute, an independent expert, a mediator, an arbitrator or court, except as compelled by law; and
- (b) to return all material on which such information is recorded on completion of the adviser's or independent witness's services.

7.2.10 Bilateral Agreements

The dispute resolution procedures set out in this clause 7.2 apply to the extent they are not inconsistent with the dispute resolution procedures in a Bilateral Agreement

that incorporates the LMNP Terms in full or in part for a dispute under the Bilateral Agreement relating to the subject matter of the LMNP Terms.

7.3 Exiting the IPMS

In the event that a Service Provider or Carrier ceases to be a Service Provider, Carrier, or both (“**Departing Party**”), or their use of the IPMS is terminated for any reason, the Departing Party shall activate arrangements to make the necessary changes to the IPMS to:

- a) Maintain the integrity of the IPMS;
- b) Continue to facilitate LMNP in accordance with the LMNP Terms; and
- c) Ensure that calls to Ported Numbers managed by the IPMS can continue to be correctly routed.

The Departing Party shall agree the proposed changes with the TCF to meet the requirements set out in clause 7.3 (a), (b), and (c).

7.4 Failure to meet Service Levels

7.4.1 If a Service Provider or Carrier does not meet the Service Levels (“**Audit IPMS Client**”), the Enforcement Agency may issue that Audit IPMS Client with a written:

- a) Caution Notice of Breach;
- b) Warning Notice of Breach; or
- c) Public Censure Notice.

7.4.2 The Enforcement Agency must consider the seriousness of the non-compliance of the Audit IPMS Client, and the Audit IPMS Client’s past conduct with respect to compliance with the Service Levels when making a determination whether to issue a notice under clause 7.4.1. The Enforcement Agency must first have issued a Caution Notice of Breach and then a Warning Notice of Breach to the Audit IPMS Client in relation to the particular breach in question before making a determination to issue a Public Censure Notice relating to the Audit IPMS Client.

7.4.3 The Enforcement Agency will provide a copy of any Caution Notice of Breach, Warning Notice of Breach or Public Censure Notice issued to all parties to LMNP Terms and, at the same time, to the Commerce Commission. Parties to the LMNP Terms who receive a copy of a Caution Notice of Breach or Warning Notice of Breach shall keep such notice confidential.

Caution Notice of Breach

7.4.4 The written Caution Notice of Breach to the Audit IPMS Client will include a request that one or more of the following actions be undertaken by the Audit IPMS Client:

- (a) rectification of the breach;
- (b) specific corrective actions; and
- (c) an internal review of the Audit IPMS Client's state of compliance with the Service Levels.

7.4.5 The Caution Notice of Breach will specify a timetable within which the action is required to be completed, with duration dependent upon the nature and complexity of the action. The Enforcement Agency will also seek confirmation from the Audit IPMS Client of receipt of the Caution Notice of Breach.

Warning Notice of Breach

7.4.6 The written Warning Notice of Breach to the Audit IPMS Client is a more severe version of the Caution Notice of Breach, and may be appropriate for situations where the Audit IPMS Client has failed to undertake voluntarily the actions requested by the Caution Notice of Breach, within the timetable specified therein. The Warning Notice of Breach to the Audit IPMS Client will include an order that one or more of the following actions be undertaken by the Audit IPMS Client:

- (a) rectification of the breach;
- (b) specific corrective actions;
- (c) arrange for an independent audit of its compliance procedures in relation to the Service Levels. The auditor must be approved by and report to the Enforcement Agency on compliance with the Service Levels. The Audit IPMS Client will be required to implement recommendations of the audit; and
- (d) that the Audit IPMS Client conduct relevant education of its relevant staff to address knowledge inadequacies that may have led to the breach.

7.4.7 The Warning Notice of Breach will nominate a timetable within which the action is required to be completed, and the steps needed to be taken by the Audit IPMS Client to address the action required by the Warning Notice of Breach, with duration dependent upon the nature and complexity of the action. The Enforcement Agency will also seek confirmation from the Audit IPMS Client of receipt of the notice.

Public Censure Notice

7.4.8 In the event of a refusal or failure on the part of the Audit IPMS Client to undertake to the Enforcement Agency's satisfaction any actions required by a Warning Notice

of Breach within the timetable specified therein, the Audit IPMS Client will promptly be formally advised by the Enforcement Agency that a Public Censure Notice is to be prepared for widespread publication. The Audit IPMS Client will be sent an advance copy of the intended Public Censure Notice, which will:

- (a) identify the Audit IPMS Client by name;
- (b) give details of the breach;
- (c) list all requests/orders previously made of the Audit IPMS Client;
- (d) report on whether an independent audit has been ordered and, if so, state the results of the audit;
- (e) state that at the date of publication, the requests of the Caution Notice(s) of Breach and the orders of the Warning Notice(s) of Breach have not been complied with;
- (f) specify a final timetable by which any corrective action must be completed by the Audit IPMS Client.

7.4.9 The Audit IPMS Client will also be advised that publication of the Public Censure Notice will not occur until a specified time period has elapsed from the date the advance copy of the public censure notice is sent, (the period of time is at the discretion of the Enforcement Agency). If the Enforcement Agency is fully satisfied that the Audit IPMS Client has fully complied as ordered prior to the date the Public Censure Notice is due to be published, then the Public Censure Notice shall not be published.

7.4.10 If the Public Censure Notice is proceeded with, it will be published in the New Zealand Gazette, the TCF's newsletter, and at the Enforcement Agency's discretion, in any relevant industry newsletter or magazine, in the national newspapers and in Consumer bulletins.

7.5 [omitted]

7.6 Exemptions

7.6.1 The Audit IPMS Client may advise the Enforcement Agency of an exemption granted in accordance with clause 15 of the Network Terms, exempting the Audit IPMS Client from meeting specified obligations under the LMNP Terms in respect of the Service Levels. If the Enforcement Agency is satisfied that the exemption under the Network Terms will prevent the Audit IPMS Client from carrying out any sanction imposed on it by the Enforcement Agency under the LMNP Terms within the timeframe provided for by the Enforcement Agency, the Enforcement Agency will have the discretion to suspend the sanction for so long as, and to the extent

that, the IPMS Carrier is exempt from compliance with the Service Levels. The Enforcement Agency will notify all interested parties of any such decision.

7.6.2 [omitted]

7.7 Section 61

For the avoidance of doubt, the procedures set out in clauses 7.2 to 7.6 are additional to, and not exclusive of, any other rights a party may have under the Telecommunications Act, at law or in equity and nothing in clauses 7.2 to 7.6 will prevent any party from exercising its right to enforce compliance with the Service Levels, or the Determination generally, in accordance with section 61 of the Telecommunications Act.

8 Porting Processes

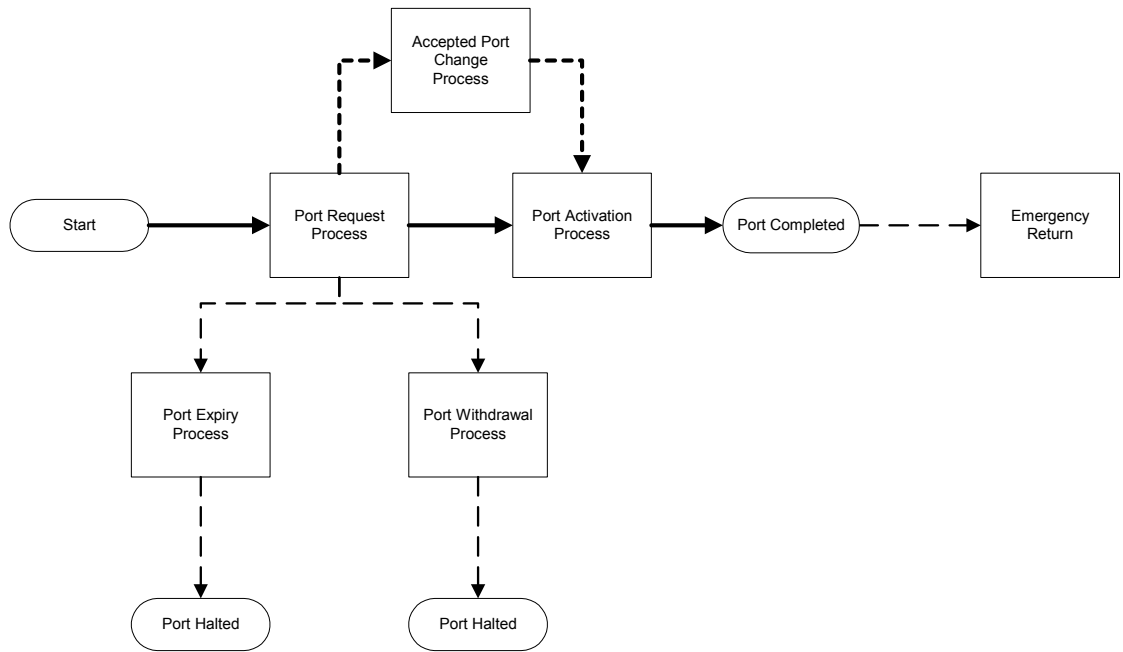
The focus of the LMNP Terms is on the Porting Processes that are required in a LMNP environment.

Service Providers and Carriers may be separate parts of the same organisation.

Functions are normally classified in these Processes as being either a Service Provider or Carrier function. It is not a requirement that these functions are performed by resource clearly identified as being part of the Service Provider or Carrier. In some circumstances there will not be a business need to pass information from the Service Provider to the Carrier function. In some circumstances the Gaining Service Provider can also be the Losing Service Provider or the Gaining Carrier can also be the Losing Carrier.

The following outline flowchart illustrates how the separate Porting Processes work for a typical Port:

Pre-Port Processes



There are seven major Porting Processes defined in this section:

Process	Function
Port Request	Enables the Customers' request to Port Numbers to be validated, approved and subsequently managed by the IPMS.
Port Activation	Activates Ports registered in the IPMS in compliance with the LMNP Terms. Initiated and managed by the GSP.
Approved Port Change	Enables specific Port details to be amended in IPMS. Typical of these are RFS Dates and Numbers to be Ported.
Ported Number Relinquishment	Allows IPMS to make the necessary Carrier notifications to enable a Customer to relinquish a Ported Number. The Number is returned to the Donor Carrier.
Port Expiry	This Process warns the GSP to reschedule or withdraw a Port Request that has not been activated on the RFS Date.
Port Withdrawal	Enables a Port that is currently active in the IPMS to be withdrawn. Typically the Customer would initiate this.
Emergency Return	Enables the return of a completed Port, or part of a Port in the case of a Multiple Number Port, to be regressed to the original status. This is basically a Port Request but the normal validation checks may be overridden to expedite the Emergency Return variation of a Port Request.

PR6 to PR8	Port Request Complete	Within one Business Day	Within two Business Days	Within 30 Working Minutes
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8.1.3 PR1. Customer Requests Port

- a) The Customer makes a request to Port their Number to the GSP.

8.1.4 PR2. GSP Prepares the Port Request

- a) The GSP must follow an appropriate Customer Authorisation process to ensure that the GSP obtains all relevant information required to ensure a valid Customer Authorisation.
- b) The purpose of the Customer Authorisation process is to:
 - Validate that the person requesting the Port is the Customer or the Customer's duly authorised Agent;
 - Collect the information required by the GSP; and
 - Collect the information required for the Port Request.
- c) The GSP is expected to verify the details with their nominated Gaining Carrier. It is assumed that the Gaining Carrier will discuss any issues with the GSP and resolve any issues before proceeding. A site audit is likely to be part of the investigation in Local Ports.
- d) Problems and issues identified by the Gaining Carrier and the site audit should be resolved as an internal matter between the GSP, Gaining Carrier, and the Customer. The Port Request Process is not to proceed until the details are correct.
- e) The Port Request is submitted to the IPMS. This will include the data required as per the Appendix, Table 1.
- f) If the Port Request has been rejected due to the LSP being incorrect (for example, where a Number is currently reassigned), the GSP can override the IPMS rejection so that the transaction can be processed by the LSP.

8.1.5 PR3. IPMS Performs Basic Checking Using Rules

- a) The IPMS shall perform all the basic tests listed in the Appendix, Table 4.
- b) The IPMS will respond based on whether the Port Request passes or fails all the basic tests listed in the Appendix, Table 4.
- c) IPMS performs basic tests on Port Request, as follows:
 - The IPMS will immediately respond to the CSR at the GSP if the Port Request fails the basic tests;
 - The IPMS will include all reasons for failure (if there are more than one);
 - The GSP is expected to correct all errors before submitting the Port Request again; and

- A counter for the number of rejections of a given Port Request may be used.
- d) If the GSP manually overrides the LSP validation, as set out in 8.1.4 (f), the IPMS will not check the LSP and will continue the process.

8.1.6 PR4. IPMS Queues the Port Request for Review by the Losing Service Provider

- a) The IPMS will record the time that the Port Request was added to the queue.
- b) The status of the Port Request in the IPMS changes to “awaiting review”.
- c) The Port Request is presented by the IPMS to the LSP for the LSP’s response.

8.1.7 PR5. LSP checks the Port Request Queue

- a) The LSP checks that the Port Request has been correctly completed.
- b) The LSP is presented with the Port Request as per the detail in the Appendix, Table 5.
- c) Discussion between the LSP and the GSP regarding the Port Request is allowed during the Co-operative Period. In the interests of preventing unnecessary rejection or confusion, the LSP has the right to contact the GSP to check if there is any doubt or concern over the details of the Port Request before they submit their response.
- d) The LSP enters their understanding of the details if they differ from the information presented by the IPMS. This can include addition or removal of Numbers for a Multiple Number Port.
- e) The LSP submits their response to the IPMS.

8.1.8 PR6. IPMS Updates the Queue of Reviewed Port Requests Awaiting GSP Check

- a) The queue of reviewed Port Requests is available for checking.
- b) The response time of the LSP is recorded when it is updated in the IPMS.
- c) The IPMS uses the same basic tests in PR3, to ensure the LSP responses appear to be valid.

8.1.9 PR7. GSP Checks LSP Response

- a) The GSP reviews the Port Request after the Losing Service Provider’s response.
- b) The GSP can make use of the Co-operative Period to contact the LSP if there is any doubt.
- c) Should the LSP have marked the Account Number as incorrect, the GSP shall have the option of making the necessary correction and resubmitting the Port Request. This option may be exercised no more than twice for the same Port Request.

- d) The GSP may need to contact the Customer or the Contractor that performed the audit whilst investigating any differences.
- e) The IPMS will permit the GSP to choose either the data they submitted or the response from the LSP as appropriate. No other alternative will be possible. If the correct answer is neither that submitted by the GSP nor the LSP the Port Request must be rejected.
- f) The GSP must act in good faith and only accept Port Requests that are correct.
- g) The GSP must reject a Port Request at this point if the details are incomplete or incorrect or there is material doubt as to their completeness or correctness.
- h) The result of the GSP review is recorded in the IPMS and the status is set to “approved” or “rejected”.
- i) If the Port Request is rejected, it must be presented as a new Port Request if it is to be resubmitted later.

8.1.10 PR8. IPMS Stores the Port Request and Updates Status

- a) The IPMS re-performs the basic tests on the final result of the Port Request to ensure it is correct. If the GSP has manually overridden the LSP validation, the LSP is not checked. The IPMS will update the Ported Number Register with the correct LSP.
- b) The Port Request is flagged as being either approved or rejected.
- c) The Port Request status will be visible on the Port Request queue for both the LSP and GSP.

8.1.11 PR8T. IPMS Logs Port Request Rejection

- a) The IPMS logs the rejected Port Requests.
- b) The formal process for a rejected Port Request finishes at this point.

8.1.12 PR9. The Port Request is Added to the Approved Queue

- a) The approved Port Requests are presented in this queue to both the Gaining Carrier and Losing Carrier.
- b) The Approved Port Change process handles any changes required beyond this point.
- c) The Port Request process is complete at this point.

8.1.13 PR10-11. Approved Ports Can be Reviewed by all Interested Parties

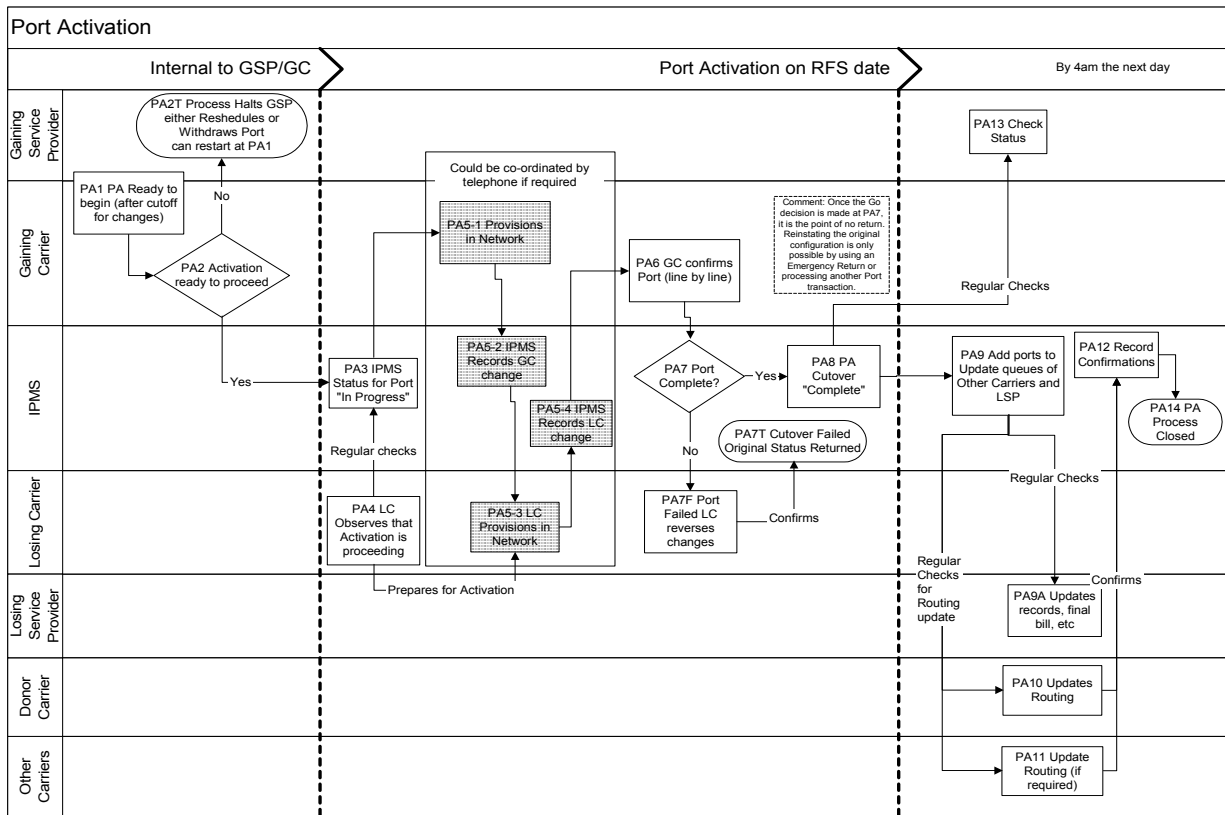
- a) Interested parties are able to review all outstanding approved Port Requests. The interested parties are the Gaining Carrier, GSP, Losing Carrier, LSP.
- b) The Gaining Carrier and Losing Carrier are required to use this queue to ensure they are prepared for all impending Ports.

8.2 Port Activation Process

The Port Activation process is used to implement a Port that has been already approved.

The order of Network updates will vary depending upon the process. The Losing Carrier and the Gaining Carrier will be the primary coordinators of the Porting Process. In some cases the Donor Carrier will be a third-party and will need to be notified. Other Carriers will be notified when it is appropriate for them to re-route calls.

8.2.1 Port Activation Process Flowchart



8.2.2 Port Activation Process Timing Table

Flowchart	Port Activation Process	Response Times		
		Simple Local Port	Complex Local/Mobile Port	Simple Mobile Port
PA7 (accepted)	Activate Port	Within RFS window (half day block)	Within RFS window (half day block)	Within ten Working Minutes

PA9 to PA12	Donor and Other Carriers (if Required) Updates Routing and confirms to IPMS	By 4am the next day	By 4am the next day	By 4am the next day
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8.2.3 Changes to the RFS Date

- a) All parties have the right to change the RFS Date after acceptance of the Port Request and before Port Activation, within the prescribed window. This is addressed in section 8.3.

8.2.4 PA1. GSP Ready to Begin

- a) The GSP communicates with the Gaining Carrier to establish whether or not they are ready to proceed. This should be timed to enable completion on the RFS Date.

8.2.5 PA2. Gaining Carrier Decides whether they are Ready for Port Activation

- a) The Gaining Carrier will make an entry in the IPMS to either reschedule the Port or proceed.
- b) This will be done within the RFS Date window.

8.2.6 PA2T. Gaining Carrier Halts Port Activation

- a) The Gaining Carrier will either use the Port Withdrawal process or the Approved Port Change process at this point.

8.2.7 PA3. The IPMS Changes the Port Status to “In Progress”

- a) This information will update the queue for both the Gaining Carrier and Losing Carrier.

8.2.8 PA4. Losing Carrier Observes that Port Activation is proceeding

- a) The Losing Carrier needs to regularly review the Port Activation queue to ensure that they are ready for all Ports to proceed.
- b) The Losing Carrier prepares for the Port Activation.

8.2.9 PA5. Closely Co-ordinated Port Activation

- a) Port Activation is a time-sensitive process that requires close co-ordination between the Gaining Carrier, the Contractor, and the Losing Carrier.
- b) There are three key aspects to the Port Activation:

PA5-1. The Technician/Contractor cuts over the Customer to connections of the Gaining Carrier whilst the Gaining Carrier provisions the routing changes in their Network;

- PA5-2. The Gaining Carrier updates the IPMS and confirms that the change has been made and that they should activate the changes in their Network;
- PA5-3. The Losing Carrier is notified by the IPMS and makes the changes in their Network; and
- PA5-4. The Losing Carrier updates the IPMS by confirming that their provisioning is complete.

The Gaining Carrier is entitled to contact the Losing Carrier by telephone and ensure that they are aware of the change and can wait verbal confirmation that the change has taken place.

- c) Once these steps are complete, the Gaining Carrier either:
- Confirms that the Port is complete; or
 - Confirms that the Port has not been completed and instructs the Losing Carrier and the on-site Technician to return the configuration to that pre-Port state.
- d) A Complex Port can be cancelled at any point where it is agreed by the Gaining Carrier and the Losing Carrier that there is less work to reverse existing changes than complete the process and then Port back to the LSP. The decision as to which approach should be taken should be agreed between the parties (with input from GSP as appropriate).
- e) The process then continues at step PA6.

8.2.10 PA6. Confirmation that the Port is Complete

- a) If the Port is completed in PA5, the Gaining Carrier marks the Port Activation as “complete” in the IPMS.
- b) If the Port is not completed in PA5, the Gaining Carrier marks the Port Activation as “failed” and the Port Request re-enters the queue for re-scheduling and Port Activation.
- c) The Gaining Carrier can select a partial Port Activation if some lines were not Ported in a multiple line Port. The Gaining Carrier must co-ordinate this with the Losing Carrier to ensure consistent routing for all affected Numbers.

8.2.11 PA7. The IPMS records the Port as Complete or Failed

- a) If none of the Numbers are successfully Ported, the Port fails and the process terminates at step PA7T.
- b) The IPMS notifies the Losing Carrier of work they need to reverse if the Port fails, in step PA7F.

8.2.12 PA7F. The Losing Carrier Reverses the Failed Port

- a) The Losing Carrier reverses the Port, returning all Ported Numbers to their pre-Port state.
- b) Once the work is complete, the Losing Carrier confirms the action in the IPMS.
- c) The process is then complete at step PA7T.
- d) The GSP or Gaining Carrier must then either reschedule using the Approved Port Change process or withdraw using the Port Withdrawal Process.

8.2.13 PA7T. The Original Status is Restored

- a) In respect of a failed Port, the Numbers to be Ported are restored in the IPMS to their original pre-Port state.

8.2.14 PA8. The Port Cutover is Complete

- a) If the Port is completed, the Port Activation is marked as completed.
- b) The GSP can observe that the Port Activation is complete.

8.2.15 PA9. IPMS Adds Ports to Update Queues of Other Carriers and of LSP

- a) At this point, notice of the Port Activation is available to all other interested parties.

8.2.16 PA9A. The LSP Updates Their Records

- a) The LSP has a number of tasks to perform.
- b) The LSPs involvement in the process is complete.

8.2.17 PA10. The Donor Carrier Routing Update

- a) This may be an addition, and removal, or a change, depending on whether the Donor Carrier is the Losing Carrier, the Gaining Carrier, or Other Carrier.
- b) The IPMS will not notify the Donor Carrier if they are also the Losing Carrier or the Gaining Carrier in the Port Activation.
- c) The Donor Carrier will update their Network Routing and confirm with the IPMS.

8.2.18 PA11. Other Carriers update their records

- a) If required for their routing, Other Carriers will update their routing tables from their IPMS Update queue on a regular basis.
- b) If they do update their routing, they need to inform the IPMS when it is completed.

8.2.19 PA12. The IPMS receives notification of Routing Updates

- a) The IPMS records the network update confirmations of all Other Carriers (being neither the Gaining Carrier or Losing Carrier).
- b) The Gaining Carrier has the right to view the progress of a Port Activation and observe which Carriers have completed the updates.
- c) When all required updates are confirmed, the Port Activation process is completed.

8.2.20 PA13. GSP Notified of Port Activation Result

- a) The GSP will be able to observe the result of the Port Activation and take appropriate action.
- b) Steps taken to resolve any issue are outside the scope of this process.
- c) Restarting this process to activate the same Port relies on the Gaining Carrier and the Losing Carrier agreeing a new RFS Date once the problems have been resolved.
- d) The Port could be withdrawn as a result of a failed Port Activation.

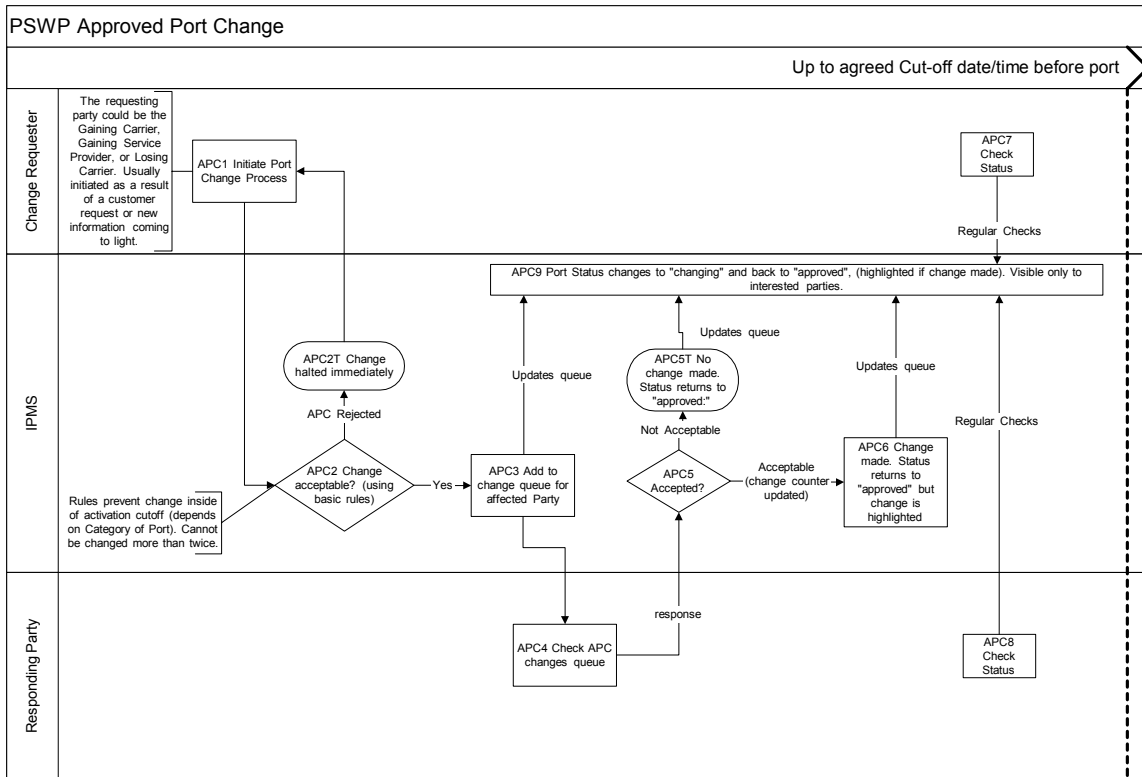
8.2.21 PA14. The IPMS Closes the Port Activation

- a) Once all updates are confirmed the Port Activation is closed. No further changes are possible without a new Port Request.

8.3 Approved Port Change

The Approved Port Change Process allows the GSP, Gaining Carrier, or Losing Carrier to request a change to the details of an Approved Port. It may be used to change an Approved Port before the RFS Date, after the RFS Date has been missed, or after a Port failed to be completed.

8.3.1 Approved Port Change Process Flowchart



8.3.2 Approved Port Change Process Timing Table

Flowchart	APC Process	Response Times		
		Simple Local Port	Complex Local/Mobile Port	Simple Mobile Port
APC3 to APC5	Responding Party checks change queue and responds	Two Working Hours	Four Working Hours	Two Working Hours
Frequency				
APC7 and APC8	Gaining Carrier and Losing Carrier should review this queue regularly	Every Working Hour	Every Two Working Hours	Every Working Hour

8.3.3 APC1. Change Requester Initiates APC Process

- a) The Change Requester may be the Gaining Carrier, GSP or the Losing Carrier.
- b) An Approved Port Change may be requested: (i) by a Customer; (ii) by the Gaining Carrier, GSP or the Losing Carrier following the discovery of pertinent information that is required for the Port Activation to be carried out successfully; (iii) by the Gaining Carrier, after reaching point PA2T; or (iv) by the Gaining Carrier, GSP or the Losing Carrier after reaching point PA7T in a Port Activation.
- c) APC changes will be limited to moving the RFS Date and changes to the Numbers involved in a given Approved Port.
- d) Parties must use the APC process in good faith and not to enable Ports to be scheduled at times outside the proposed RFS Date range.

8.3.4 APC2. IPMS Checks that the Change is Acceptable

- a) An Approved Port Change is not possible once a Port is expired or withdrawn.
- b) The Approved Port Change may not be used more than twice on a Port before the RFS Date.
- c) The IPMS will check that the changes to Numbers pass the tests used in the Port Request process. It will reject a change on a Port whilst a change is already in progress.

8.3.5 APC2T. IPMS Aborts the Change

- a) If the APC fails the tests, the Change Requester is immediately informed.

8.3.6 APC3. IPMS Queues the APC Request

- a) If the APC passes the tests, the IPMS adds the request to the change queue of the responding party.

8.3.7 APC4. Responding Party Checks their APC Request Queue

- a) Each party to the LMNP Terms is required to regularly check this queue.
- b) The responding party should respond to requests in good faith, bearing in mind that the requesting party should only be asking for change when there is a genuine need.
- c) The respondent has the ability to accept a change that does not comply with normal RFS Date notice periods, but only if they can re-schedule resource to allow them to comply.
- d) The responding party may use a Co-operative Period to communicate with the requesting party at this stage.

8.3.8 APC5. IPMS Receives Response

- a) The IPMS will either change the status of the APC request to either “accepted” or “rejected”.

8.3.9 APC5T. IPMS Updates the APC Queue with a Rejection

- a) The IPMS will flag the APC request as being rejected.
- b) The change will be visible in the queue to the requesting party.

8.3.10 APC6. IPMS Updates the APC Queue with an Acceptance

- a) The IPMS will change the status of the APC request to “accepted”.
- b) It will then update the details in the approved Port Requests queue, as appropriate with new RFS Date or change to the Numbers.
- c) The change will be highlighted to ensure that the responding party is notified to update their works order.

8.3.11 APC7. The Change Requester Checks the IPMS APC Queue for Acceptance

- a) The Change Requester must then reschedule any work required for the Port Activation to take place.

8.3.12 APC8. The Responding Party Checks the IPMS APC Queue for Changes

- a) The responding party should already be aware of any APCs that it accepted.
- b) All parties must monitor this queue for changes.
- c) All parties must update their records as per the details in the approved Port Requests queue as required.

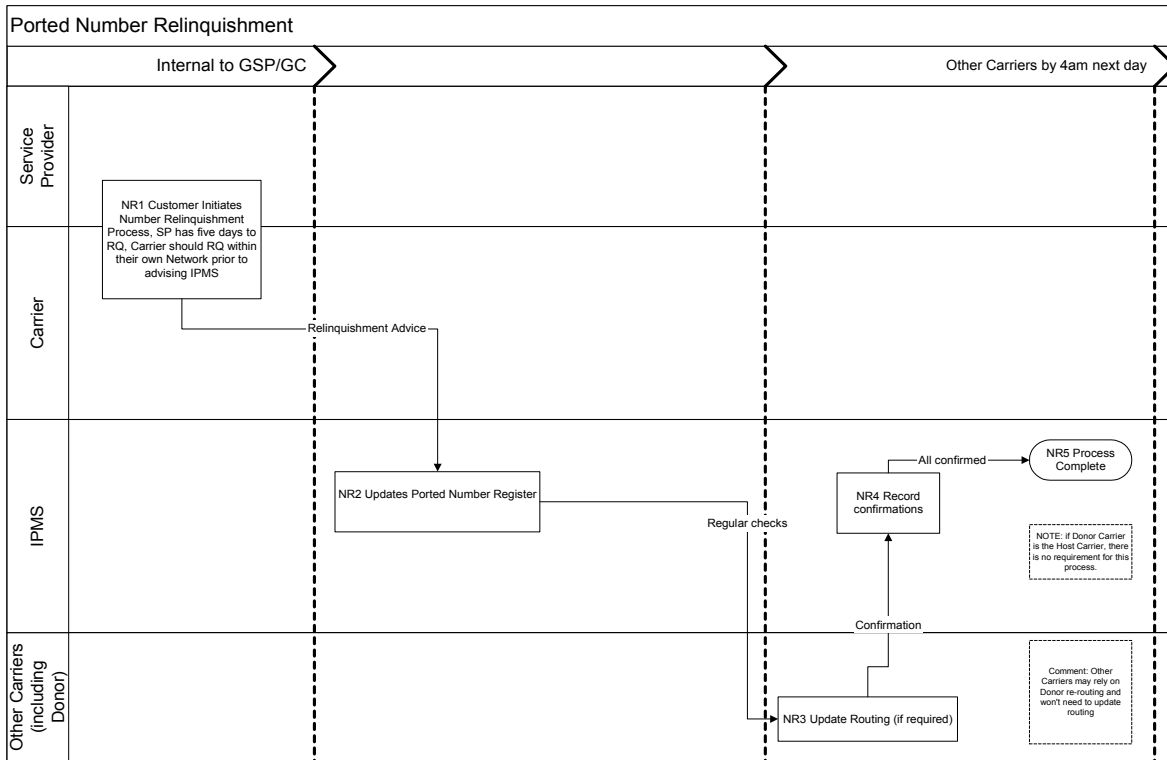
8.3.13 APC9. The IPMS Continually Updates the Approved Port Queue

- a) Any interested Carrier or Service Provider can review this queue at any time and observe those approved Ports that are subject to change and those that have changed.

8.4 Ported Number Relinquishment Process

The Ported Number Relinquishment Process is used when a Customer relinquishes a Ported Number. The Ported Number Relinquishment Process is not required if the Host Carrier is the Donor Carrier (as the Number is not considered to be Ported, even if it has been Ported out and back again).

8.4.1 Ported Number Relinquishment Process Flowchart



8.4.2 Ported Number Relinquishment Process Timing Table

Flowchart	Ported Number Relinquishment Process	All Relinquishments
NR2	Notification to IPMS that the Ported Number has been relinquished.	Within five Business Days of Customer initiating Ported Number Relinquishment Process.
NR3 to NR4	Donor Carrier and Other Carriers (if required) update routing.	By 4am the next day.

8.4.3 NR1. The Customer Notifies their Service Provider of the Relinquishment

- a) For a Ported Number, the Service Provider shall follow their standard procedure as for relinquishment of a non-Ported Number. For a Ported Number, the Service Provider must initiate the Ported Number Relinquishment Process within five Business Days of the Customer relinquishing the Number.
- b) The Service Provider should not relinquish a Number that is part of a Number Block.
- c) If all the Numbers in a given Number Block are being relinquished at the same time, or the last Numbers that are in use in a given Number Block are relinquished, then the Ported Number Relinquishment Process applies.
- d) The Carrier checks that the Numbers are not part of a Number Block that needs to be kept intact, as per NR1 (b) & (c).
- e) The Carrier provisions the relinquishment in their Network.
- f) The Carrier then sends a relinquishment advice to the IPMS.

8.4.4 NR2. The IPMS updates the Ported Number Register

- a) The IPMS flags the Ported Number as pending relinquishment.
- b) At this point, the Ported Number cannot be Ported and any Port Request will be rejected as it is pending relinquishment.
- c) After 30 calendar days from the date of the relinquishment advice, the IPMS will flag the Ported Number as relinquished and will allow step NR3 to commence.

8.4.5 NR3. Other Carriers Update Routing

- a) The Donor Carrier must update their Network routing to reflect this change.
- b) If it is their policy to do so, the Other Carriers should remove the relinquished Number from their routing tables. Carriers that rely on donor network re-routing do not need to follow steps NR3 & NR4.
- c) The Donor Carrier is able to allocate the relinquished Numbers to another Customer once this process is complete.
- d) When complete, they send confirmation of updated routing information to the IPMS.

8.4.6 NR4. IPMS Records the Confirmations

- a) The IPMS updates the Ported Number Register as it receives notification of updates.
- b) A live version of this information is available in the fault enquiry screen for all Carriers.

8.4.7 NR5. Number Relinquishment Process Complete

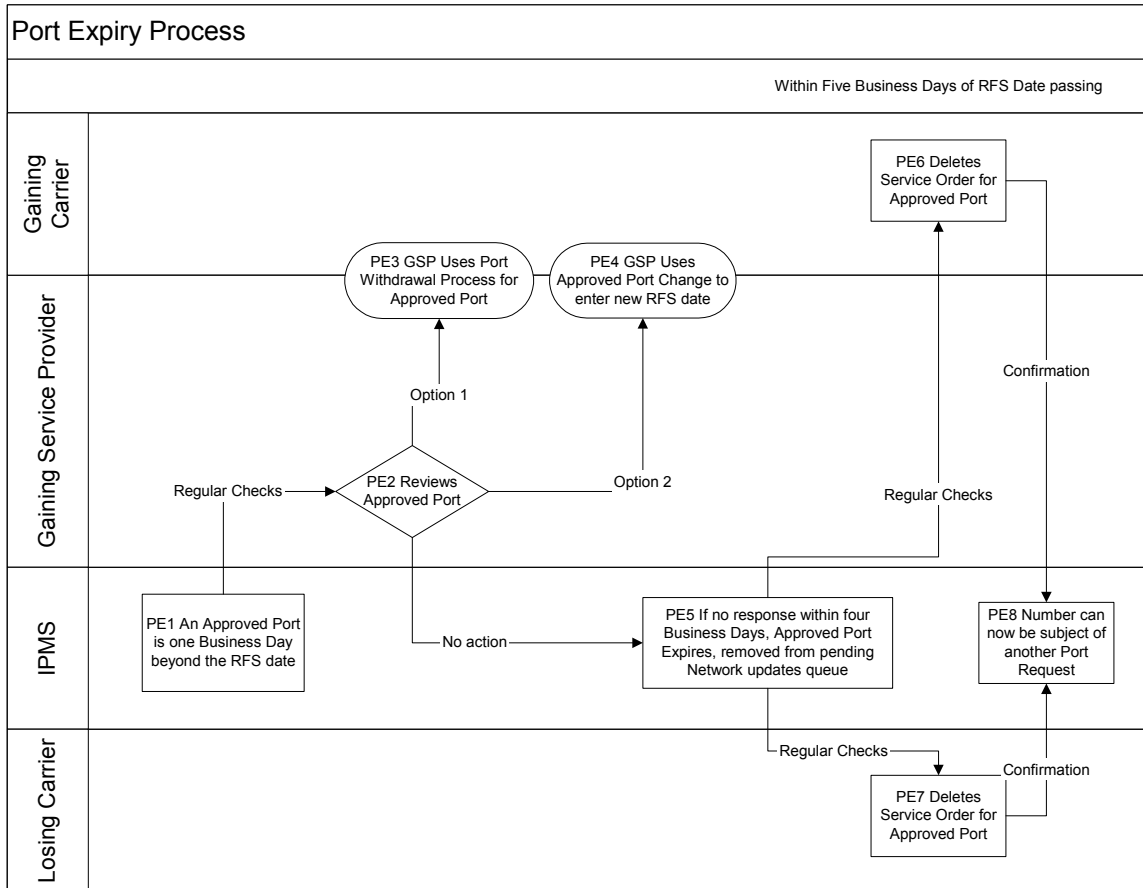
- a) The Number is no longer considered to be a Ported Number.
- b) The Donor Carrier is now able to allocate the Number, subject to clause 8.8.

- c) If the Donor Carrier is the Host Carrier, there is no requirement for this Ported Number Relinquishment Process.

8.5 Port Expiry Process

The Port Expiry Process occurs when an accepted Port Request has not been activated within the RFS Date. The IPMS will run the Port Expiry Process at midnight on each Business Day.

8.5.1 Port Expiry Process Flowchart



8.5.2 Port Expiry Process Timing Table

Flowchart	Port Expiry Process	Response Times
Entire Port Expiry Process		Within five Business Days of RFS Date.
PE5 to PE8	Gaining Carrier and Losing Carrier confirming expiry.	Within four Working Hours.

8.5.3 PE1. The IPMS Identifies Expired Port

- a) The IPMS identifies an Approved Port that has lapsed one Business Day beyond the due RFS Date.

- b) The IPMS notifies the GSP that an Approved Port is about to expire and requires action.

8.5.4 PE2. GSP Checks the Expiry Notification

- a) The GSP has one Business Day to consult with the Customer to confirm the Customer preference if not already known.
- b) The GSP has three courses of action open to it. It may use the Port Withdrawal to withdraw the Approved Port, it may use the Approved Port Change to reschedule the Port, or it may choose to do nothing.

8.5.5 PE3. The GSP Withdraws the Approved Port

- a) The GSP can use the Port Withdrawal Process to Withdraw the Approved Port if the Port is not going to be rescheduled.

8.5.6 PE4. The GSP Reschedules the Approved Port

- a) The GSP can use the Approved Port Change process to reschedule the Port.

8.5.7 PE5. The IPMS Records the Approved Port as Expired

- a) If there is no response from the GSP within four Business Days, the IPMS will mark the Approved Port as expired.
- b) The Approved Port is marked as “expired” in the Network update queue for both the Gaining Carrier and Losing Carrier.

8.5.8 PE6. Gaining Carrier Notifies the IPMS of Update

- a) The Gaining Carrier observes the change in the Network update queue.
- b) The Gaining Carrier confirms that they have deleted the works order for the Approved Port from their internal update queue.

8.5.9 PE7. Losing Carrier Notifies the IPMS of Update

- a) The Losing Carrier observes the change in the Network update queue.
- b) The Losing Carrier confirms that they have deleted the service order for the Approved Port from their internal update queue.

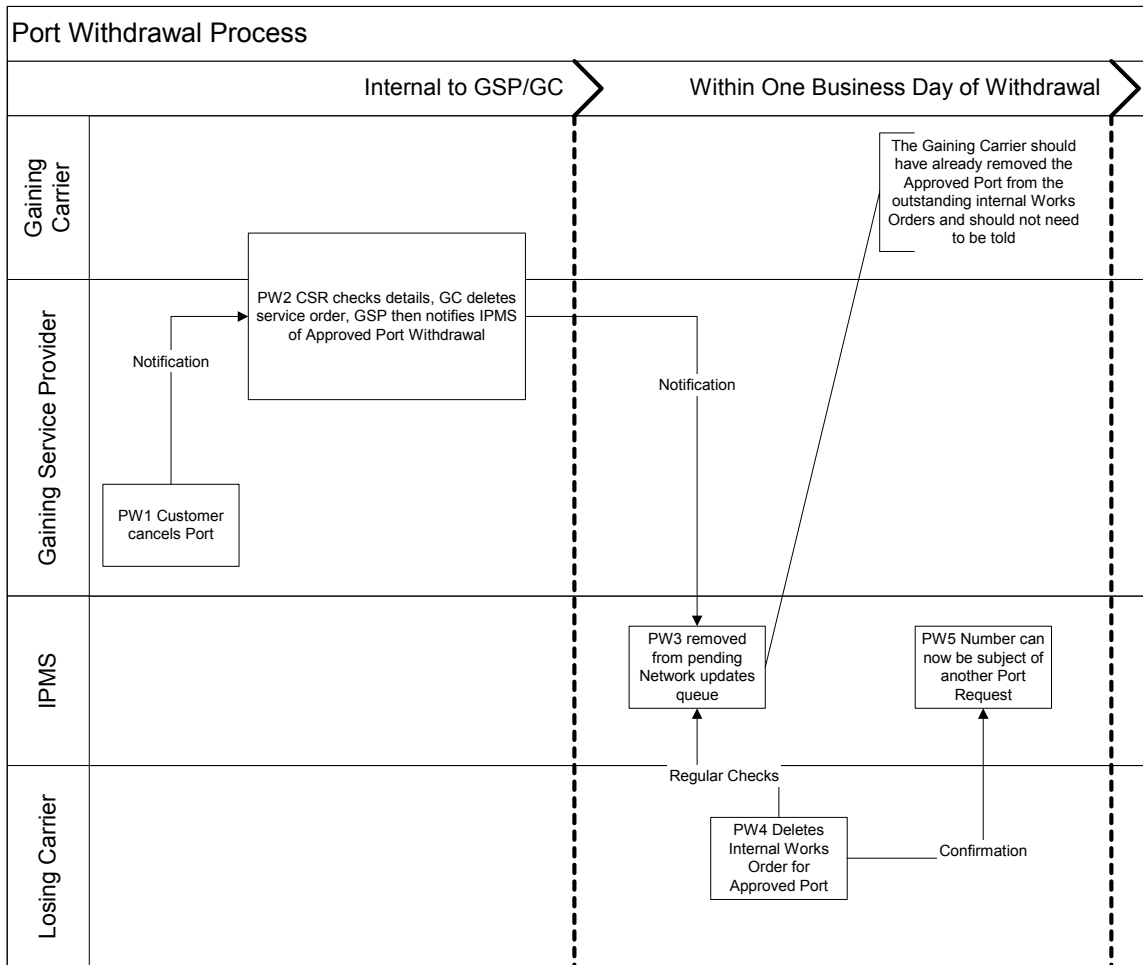
8.5.10 PE8. Port Expiry Process Complete

- a) The IPMS marks the Port Expiry Process as complete.
- b) The GSP is able to resubmit a new Port Request if required.

8.6 Port Withdrawal Process

The Port Withdrawal process is used when a Customer withdraws a Port. Any Port Request that has been accepted can be withdrawn before the Port Activation, or after a failed Port Activation. It must be done before a subsequent Port Request can be processed for that Number.

8.6.1 Port Withdrawal Process Flowchart



8.6.2 Port Withdrawal Process Timing Table

Flowchart	Port Withdrawal Process	Response Times
Entire Port Withdrawal Process		Within four Working Hours of Withdrawal, faster if close to the RFS Date.
PW3 to PW5	Losing Carrier confirming Withdrawal.	Within two Working Hours.

8.6.3 PW1. The Customer Cancels the Port

- a) The Customer informs the GSP that they no longer wish to Port Numbers associated with an accepted Port Request.

8.6.4 PW2. GSP Verifies the Details

- a) The GSP shall adopt and follow appropriate internal procedures to ensure that the person requesting withdrawal of the Port Request has authority to do so.
- b) The GSP must inform the Customer of any charges that may be incurred due to Port Withdrawal.
- c) The Gaining Carrier looks up the SOM Number, verifies that the details are correct, and deletes their internal works order.
- d) Removing the internal works order ensures that the Port won't be implemented.
- e) The GSP then notifies the IPMS that the Port is withdrawn.

8.6.5 PW3. IPMS notifies the Losing Carrier of Withdrawal

- a) The IPMS changes the Approved Port to "withdrawn" and removes it from the Network updates queue for the Losing Carrier.
- b) IPMS checks that Port Withdrawal is possible. It will not allow withdrawal of a Port that is in the process of being Activated.

8.6.6 PW4. Losing Carrier Deletes Internal Works Order

- a) The Losing Carrier deletes the works order within their system.
- b) They confirm the deletion on the IPMS.

8.6.7 PW5. IPMS Records the Port Withdrawal is Complete

- a) A new Port Request can now be processed for that Number.
- b) Should the GSP wish to pursue the Port, it can approach the Customer and resubmit a Port Request.

8.7 Emergency Return

An Emergency Return may be required if a problem with an activated Port is identified. It may only be used within one Business Day of the completion of a Port Activation, except in the case of an unauthorised Port.

The Gaining Carrier and the Losing Carrier must agree that an Emergency Return is required, except in the case of an unauthorised Port. The Losing Carrier and Gaining Carrier must coordinate the Emergency Return as mutually agreed. Notice periods for RFS Dates do not apply.

The Emergency Return must use an existing completed Port Activation as a reference. The Emergency Return does not have to reverse all Numbers in a given Port. An Emergency Return will be processed in exactly the same way as a normal Port Activation, except that the RFS Date rules are not enforced.

The IPMS will require the SOM Number of a previously completed Port. The IPMS will check that the Port was activated within a Business Day of the request of the Emergency Return. Numbers that did not Port successfully in the original Port Activation cannot be returned.

The Gaining Carrier initiates the Emergency Return in the IPMS. The Gaining Carrier must get agreement from the Losing Carrier for the RFS Date of the Emergency Return.

8.8 Number Quarantine

The IPMS will hold relinquished Numbers in quarantine for 30 calendar days prior to notifying other Carriers of the relinquishment. After this period the Donor Carrier may further quarantine the Number in accordance with their existing practices.

If a Customer requests a recently relinquished Ported Number, the Service Provider is entitled to warn the Customer of the recent relinquishment of the Number and the implications of using such a Number before they allocate the Number.

9 IPMS Capabilities

9.1 Basic Methodologies

The same messaging transport and package method will be used for all Local and Mobile Porting messages but there will be some differences:

- a) Some elements of given messages will differ between message types;
- b) Some elements of given messages will differ between classes of messages;
- c) Rules for turnaround will vary;
- d) Rules for validation will vary; and
- e) The IPMS will need to take these differences into account.

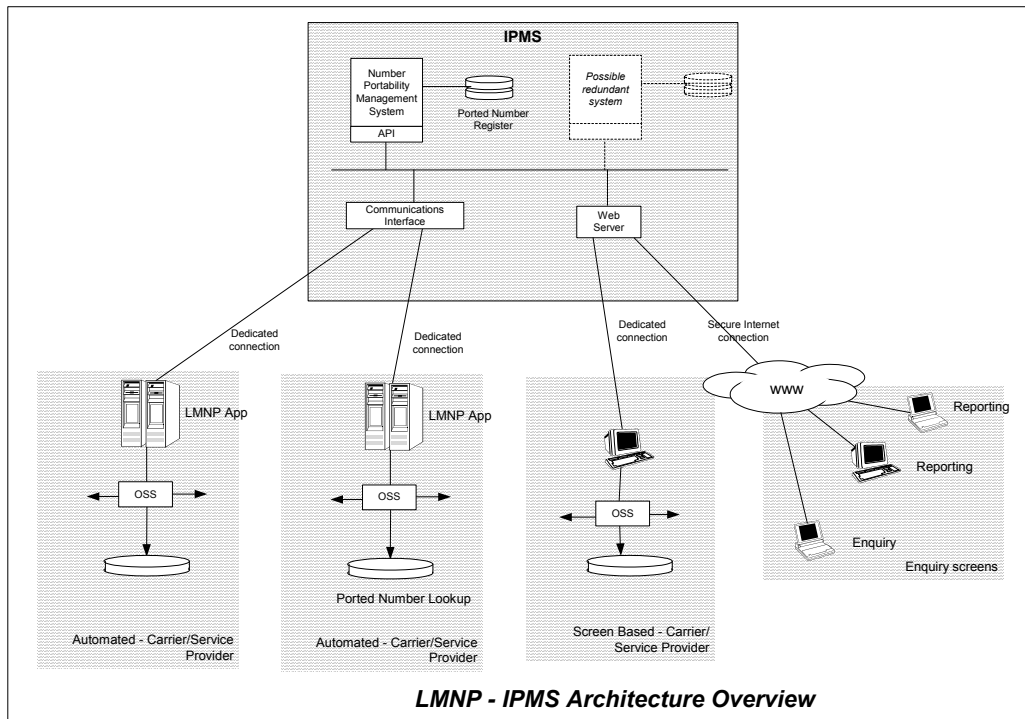
9.2 Technology Specifications

This section sets out the required functions of the IPMS.

9.2.1 Architecture

The IPMS is a centralised system, the role of which is to provide reliable message transport, process tracking, coordination, and management. It is a tool, which will facilitate LMNP but relies on the Networks being able to support portability. The IPMS will not handle call routing, but will be the sole authority on all Ported Numbers. This will be used by Carriers to update their own Networks.

Architecture Overview of the IPMS:



The architecture is based around a logically centralised IPMS node. Physically this may be mirrored to achieve the required Service Levels.

The IPMS provides transaction processing logic to manage the porting process. Management of the porting process involves the IPMS maintaining a database of Ported Numbers (the Ported Number Register). All Carriers synchronise their Ported Number lookup tables with the IPMS. Typical information in the IPMS will include:

- a) Number and current Service Provider;
- b) Status of Numbers and when service is to be implemented;
- c) Tasks that are still to be completed and by what Service Providers.

All Service Providers shall access the IPMS via an IPMS API. All the participants in LMNP shall achieve rapid and reliable communication of their requests and responses from the IPMS.

Basic API functionality requires:

- a) The ability to accept requests to perform a function, for example processing a Port Request;
- b) The ability to notify a Service Provider automatically to do something, for example the notification of a Port Activation; and
- c) Allowing a Service Provider system to monitor transaction queues for messages, and then respond to them with the appropriate result.

In the case of automated access, there is a direct interface with the API. A web server is to be available to allow Service Providers and Carriers to perform Port related functions manually, as well as generate queries and reports. The Web server must also use the API to interface with the IPMS.

The API will be a “black box system”, meaning Service Providers and Carriers would only know the interface and messaging specifications. They will not require awareness of how the API communicates to the IPMS.

9.2.2 System Interface

The IPMS interface will be standardised to ensure ease of communication. It is likely to be based around some form of XML messaging. The IPMS will be able to communicate with parties via a web browser front-end or a machine-to-machine interface.

All the logic and business rules will be in a common layer in the IPMS. This will ensure that the same rules are used for all communication with the parties.

The Operational and Support Manual for LMNP may include detailed screen layouts and specifications for all aspects of web browser screen design.

9.2.3 Connection Methods

The type of connection between each party and the IPMS must meet basic standards for speed, security, and reliability.

Each party will access the IPMS by dedicated private communications connection or secure internet connection. If parties wish to use a VPN, this will need to be acceptable to all parties, to ensure system security and integrity.

Connections to the IPMS must be protected by software encryption/authentication protocols such as SSL and HTTPS.

9.2.4 Queues

The IPMS will use a set of transaction queues to facilitate the management of outstanding Port Events. There will be a Port Request queue, an Approved Port Request queue, and a Network updates queue, the characteristics of which may be specified in the Operational and Support Manual for LMNP.

Their usage will vary between those parties using a web-client and those using a machine-to-machine connection.

9.2.5 System Response Times

Most processes will require some immediate feedback in terms of basic checking or presentation of information to the user. Such on-line interactive use will be supported by short response times. Under normal system load, an interactive processing request shall be responded to in less than one second.

The response time will depend on the connection method used by an individual party, as well as the performance of the IPMS. Performance will be measured as the elapsed time for the IPMS to queue a response to the router at the central site. Any further network latency introduced due to the capacity of the network connection or Client LAN will be the responsibility of the organisation.

9.2.6 Reliability

The reliability requirements for the IPMS are:

- a) It must be available for transmitting messages 99% of the time on a 24 hour by 7 day a week basis, except for scheduled maintenance periods;
- b) It should not be unavailable for more than four contiguous Working Hours; and
- c) There will be no provision for a formal or structured fallback procedure for when the IPMS is down. It is expected that all Porting activity will halt during an outage. In such a situation, calls to Ported Numbers are not impacted.

9.3 Users and Security

A record must be created in the database for each user who has access to the IPMS. All transactions and responses made will be tracked and logged by user. User access controls will ensure that users are confined to the parts of the IPMS demanded by their role.

Processes will be available to enable user records to be maintained, along with security access and user preference options.

Parties to the LMNP Terms that use a machine-to-machine connection may use only a limited number of users, as few as one. They are expected to track their own

user activity within their system, and may be required to do so if investigation of a given event is required.

Security access and user preference/default values will be held in user profile records. Groups of users within each party to the LMNP Terms who have common access requirements will share a common user profile. That will simplify the process of maintaining access for a large number of users. A user administrator responsible for user access and preferences will be able to change the preferences for a group of users by changing a single user profile record. Users will not have access to change their own user profile.

It will be possible to create, change and activate/deactivate user and user profile records. Those records may also be deleted, but only after all other references to the record have been removed from the database by archiving/ageing processes (to ensure data integrity).

9.4 Error Handling

The IPMS must ensure that the processes are reliable and accurate. The following tools will be used to minimise and handle errors:

- a) Logging of faults/abnormal events;
- b) The ability to rollback and/or recover within the IPMS; and
- c) Track process confirmations and acknowledgements.

9.5 Reporting and Data Extracts

A number of reports will be required to enable and manage the Porting processes. The reports detailed here may be supplemented during the implementation of the IPMS.

The following reports will be produced by the IPMS on a regular basis, outside of standard hours of operation. All reports will be available either in a form for viewing or in a standard format (such as comma separated value (CSV) format text files) for importing in to other applications. Automated processes will generate the regular reports.

Reports with a limited number of pages may be viewed directly from the web browser interface. Longer reports may be required to be downloaded, before viewing, to minimise the impact on system performance. Details of which reports may be viewed on-line will be given in the Operational and Support Manual for LMNP.

Access to reports and data extracts will be controlled by parameters in the user profile.

The intention of the data extracts is to enable parties to the LMNP Terms to produce their own reports, in whatever format they prefer, involving any transactions to which they are a party.

Each IPMS party will have access to a data extract or report giving the details of any transaction performed by users belonging to their organisation.

Minimum information in the detailed data extracts and reports will include:

- a) Local Number or Mobile Number;
- b) Type of transaction;
- c) User ID;
- d) Carrier/Service Provider; and
- e) Date/time of the transaction.

9.5.1 Ported Number Register Daily Changes for Carriers

All Carriers will have access to the same data extract of all Network routing updates (Ports and relinquishments). It will also be available as a formatted report.

This extract/report will automatically be produced daily. The data extracts will accumulate on the IPMS server in a file for each calendar month. This will provide fast access for the Carriers to the state of Ported Numbers at any time without unduly slowing the Porting processes. Each monthly file will remain available for the Carriers to download for one calendar year from the time of the original transaction.

Ports will only appear in this extract/report once the Port is complete.

Information will include the date/time when each update was first created in IPMS, Host Carrier ID , confirming carrier ID, date/time(s) when each update was confirmed as implemented by each Carrier, and date/time of final confirmation if all confirmations are complete.

9.5.2 Ported Number Register Daily Changes for Service Providers

A separate data extract will be produced, for each Service Provider, of all transactions involving that Service Provider.

The Service Provider may choose to receive the data formatted as a report.

This extract/report will automatically be produced daily. The data extracts will accumulate on the IPMS server in a file for each calendar month. Each monthly file will remain available for the Service Provider to download for one calendar year from the time of the original transaction.

Information in the extract/report will include the following events:

- a) Relinquishments;
- b) Ports Requests made by this Service Provider, including Port status (e.g. approved, rejected, cancelled, expired, waiting);
- c) Ports completed by new Host Carrier;
- d) Date/times of when Network updates were confirmed by all Carriers;
- e) Port Requests made to this Service Provider with date/time and the full details of the response;
- f) Fault enquiries performed by the Service Provider; and
- g) Fault enquiries performed by another Service Provider on Numbers Ported to this Service Provider.

h) Port Activations where the Service Provider is the LSP.

9.5.3 Full Ported Number Register

A data extract for Carriers will be produced giving the current status of all Ported Numbers at the end of every day. Carriers are to be able to run this report at any time on request.

Carriers will have access to this register of the Host Carrier for every Ported Number. Host Carriers shall be able to use this process to verify the integrity of the IPMS database. The Carriers can also use this process to verify that their networks will route calls as expected by the other parties to the LMNP Terms.

The Register will list all Ported Numbers, their status (Ported, approved for Port, outstanding Port Request) of each Number, date when the status last changed, and the previous status.

Alternatively a list for a smaller range of Ported Numbers can also be retrieved from the IPMS.

9.5.4 Ported Number by Carrier Summary Report

A Ported Number by Carrier summary report lists the total quantity of Ported Numbers held by each Host Carrier at midnight on any given day. (This gives a quick summary that can be used by a Carrier to confirm that their internal records are up to date.)

This report will be produced daily or weekly.

The report will show quantity of Ported Local Numbers and Mobile Numbers as separate figures, the last Local Number and Mobile Number to be Ported to and away from each Carrier, and the Port Activation date and time of both Ports for each Carrier.

9.5.5 Transaction Log Activity Report

A party to the LMNP Terms may run a report of transactions performed by all its users. Alternatively this report may be requested for a single user.

This report will be produced daily or weekly and will show:

- a) User ID;
- b) Transaction type;
- c) Number; and
- d) Date/times;

9.5.6 Performance Summary Report for Service Providers

A performance summary report for Service Providers shall highlight transaction volumes and average times for transactions to be completed. Each Service Provider will have access to a version of this report for transactions initiated by their own users to allow them to monitor their performance and ensure they are meeting required Service Levels.

This report will be generated weekly or monthly.

It will show:

- a) Total number of relinquishments;
- b) Average and maximum time for relinquishments to be confirmed by Gaining Carrier;
- c) Average and maximum time for relinquishments to be confirmed by the Losing Carrier and third-party Carriers;
- d) Total number of Port Requests created;
- e) Total number of Port Requests approved, withdrawn and rejected;
- f) Average time for incumbent Service Providers to respond to Port Requests;
- g) Total number of Ports confirmed by Carriers in their roles as Gaining Carrier, Losing Carrier, Donor Carrier, and other Carrier;
- h) Average and maximum time for Ports to be confirmed by Gaining Carrier;
- i) Average and maximum time for Ports to be confirmed by Losing Carriers;
- j) Average and maximum time for Ports to be confirmed by Donor Carriers; and
- k) Average and maximum time for Ports to be confirmed by other Carriers.

Other measurements could be added during the implementation phase as required.

9.5.7 Service Level Performance Summary Report

This monthly report gives the average time and the maximum time taken for each Carrier to respond to Port, and for each Service Provider to respond to Port Requests, as well as the percentages for Port Request rejection and Port Request acceptance for both Port Requests made and received. The report will also show the system-wide average response time for the same transactions.

9.5.8 Activity Report

A report will show a summary of Carrier and Service Provider activity over a date range as required. A summary output file will be produced quarterly and could be used by the IPMS administrator to generate invoices to parties to the LMNP Terms.

Parties to the LMNP Terms may run this report for their company's activities for a specified date range, either at a summary or detailed level.

9.5.9 Fault Enquiries Report

This report will list the Number fault enquiries made by each party to the LMNP Terms, including the Number for each enquiry, the user ID, date and time. The report will also show a total count of fault enquiries made by each IPMS party. The IPMS administrator may use this report to verify acceptable use of the fault enquiry function.

9.5.10 Security Access Violations Report

A report will be available to the IPMS administrator, listing failed attempts to access the IPMS via an invalid user ID or password.

9.5.11 Extract of Ports for Directory Services

A regular data extract will be created listing each Port performed, showing the old and new Service Providers for the Ported Number. If agreed by the IPMS administrator, this data could be made available to companies providing telephone directory services. The directory companies could use this information to help maintain telephone directory listings and directory billing for the Service Providers and their Customers.

9.5.12 Extract of Ported Numbers for Emergency Services

A regular data extract could be created listing each Port performed, showing Number, the Gaining Carrier, and the Gaining Service Provider. The GSP and Gaining Carrier may need to use this report and add Customer details (such as name and address) for supply to emergency services.

9.6 Enquiry Screens

Enquiry functions must be provided in the IPMS to ensure that various participants have the necessary visibility of Ports to allow them to respond to other parties' Ports and manage their own.

9.6.1 Number Fault Enquiry Function

For fault and troubleshooting purposes an enquiry function will be available which will return all information held by the IPMS about a particular Number.

This function can be used to enquire on only one Number or SOM Number at a time. No wildcard search criteria or ranges will be accepted.

Information returned will include details of all changes to the Number status stored in the on-line transaction activity log. It will show the date and time when each Carrier confirmed implementation of the latest update to the Number. It will also reveal the name of the incumbent Service Provider, Host Carrier, and Donor Carrier for the Number.

Access to this fault enquiry function will be controlled by a separate security parameter on the user profile. All use of this function will be logged and reported to the IPMS administrator.

Users with access to this function should not be able to access Customer service oriented functions such as Port Request, unless those users are fixing faults and need access to those functions to perform that role.

9.6.2 Port Request Status Screen - GSP

The Port Request status screen will show each outstanding Port Request that are in the Port Request Acceptance process or has been accepted. Ports would stay on this list until the Port Activation process commences.

It will list SOM Number, RFS Date, Port category, status, and Number(s) (limited quantity of Numbers) and will give an indication of when a response is expected.

Each entry would display a reminder if it were awaiting a response from the GSP to move forward.

9.6.3 Port Request Status Screen - LSP

A Port Request status screen will show each outstanding Port Request that the LSP has in their queue. Ports will stay on this list until the response has been sent.

The Port Request status screen will list SOM Number, RFS Date, Port category, status, and Number(s) (limited quantity of Numbers) and will give an indication of when a response is expected.

Each entry will display a reminder if awaiting a response from the LSP to move forward.

9.6.4 Approved Ports Status Screen

An Approved Ports status screen will show the queue of approved Ports that are yet to be activated. The Ports in the queue will be those where the Carrier is the Gaining Carrier or the Losing Carrier. The GSP will also have visibility of its approved Ports.

Port status information will be displayed in RFS Date order. Any approved Ports that are subject to an Approved Port Change request will be highlighted, as will any that have changed as a result of an Approved Port Change request.

9.6.5 Approved Port Changes (APC) Status

An Approved Port Change screen will display any Port changes where the Carrier, LSP or GSP is either the requesting or responding party.

It will display Approved Ports that are subject to change in order of the oldest requests first. Both the respondent and requester will be able to access an individual Port change from the screen and respond to it.

9.7 Archiving

Messages, logs, and histories must not be deleted and must be archived in a form that is readily accessible.

9.8 Migration

It will be necessary to migrate current porting data onto the IPMS.

New parties will be able to follow a migration process to move onto the IPMS and take part in LMNP.

9.9 Data Integrity/Synchronisation

Where there is inconsistency between Carriers' data and the IPMS Ported Number Register, the IPMS will be considered to be the correct data. Carriers shall develop processes for using the reports specified in the LMNP Terms to verify their own routing tables and procedures for correcting them.

Appendix: Tables

Table 1: Port Request Fields

The following is a list of the required items to include in a Port Request, with their relevance to different types of ports:

Field	Source	Local		Mobile	
		Simple	Complex	Pre-Pay	Post-Pay
SOM	Auto	Required	Required	Required	Required
Type of message	GSP	Required	Required	Required	Required
Category of message	GSP	Required	Required	Required	Required
Date of request	Auto	Required	Required	Required	Required
Time of request	Auto	Required	Required	Required	Required
Account Number	Customer	Required	Required	N/A	Required
Handset Reference	Customer	N/A	N/A	Required	N/A
Phone number	Customer	Required	Required	Required	Required
GSP	Auto	Required	Required	Required	Required
Losing Service Provider	Customer	Required	Required	Required	Required
Gaining Carrier	GSP	Required	Required	Required	Required
RFS Date	Customer	Required	Required	Optional	Optional
Customer name	Customer	Required	Required	N/A	N/A
Customer service address	Customer	Optional	Optional	N/A	N/A
Customer contact number	Customer	Optional	Optional	N/A	N/A
Losing Carrier	Auto	Required	Required	Required	Required

Type of message refers to whether it is a Port, APC, Port Withdrawal, Port Expiry, or Ported Number Relinquishment.

Category of message refers to whether it is a simple local, simple mobile, complex local, or complex mobile.

Gaining Carrier is completed by the GSP.

Losing Carrier is completed by the IPMS.

Handset Reference is required for Pre-Pay

Pre-Pay or Post-Pay is at the time of the Port Request, not what the Customer intends to be with the new Service Provider.

Some fields will be inserted into the request by the IPMS – specifically the SOM Number, date of request, and time of request.

Other Transaction Fields:

These have yet to be defined in detail, but it is expected that most other messages will consist of date, time, SOM Number, and message type.

Table 2: Service Levels

The table below sets out the Service Level for given steps in the Porting Processes.

Party	Process	Action	Local		Mobile	
			Simple	Complex	Simple Pre-Pay or Post-Pay	Complex Post-Pay
LSP	Port Request	Responds to Port Request (PR4 to PR6)	Within one Business Day	Within two Business Days	Within 30 Working Minutes	Within two Business Days
GSP	Port Request	Reviews LSP response and Approves/Rejects (PR6 to PR8)	Within one Business Day	Within two Business Days	Within 30 Working Minutes	Within two Business Days
Gaining Carrier	Port Activation	Port as Gaining Carrier (PA5-1 to PA7)	At agreed time ²	At agreed time ²	N/A ¹	At agreed time ²
Losing Carrier	Port Activation	Port as Losing Carrier (PA5-3 to PA5-4)	At agreed time ²	At agreed time ²	N/A ¹	At agreed time ²
Donor Carrier	Port Activation	Port as Donor Carrier (PA10 to PA12)	By 4am Next Day	By 4am Next Day	By 4am Next Day	By 4am Next Day
Other Carrier	Port Activation	Port as 3 rd party (if required) (PA11 to PA12)	By 4am Next Day	By 4am Next Day	By 4am Next Day	By 4am Next Day
Responding Party	Approved Port Change	APC Response to request (APC3 to APC5)	Within two Working Hours	Within four Working Hours	Within two Working Hours	Within four Working Hours
Gaining Carrier and Losing Carrier	Approved Port Change	APC update service orders from APC changes (APC7 and APC8)	Every Working Hour	Every two Working Hours	Every Working Hour	Every two Working Hours
Host Carrier	Ported Number Relinquishment	Relinquishment of Ported Number (NR2)	Within five Business Days	Within five Business Days	Within five Business Days	Within five Business Days
Donor Carrier	Ported Number Relinquishment	Relinquishment as Donor Carrier (NR3 to NR4)	By 4am Next Day	By 4am Next Day	By 4am Next Day	By 4am Next Day

Other Carrier	Ported Number Relinquishment	Relinquishment as 3 rd party (if required) (NR3 to NR4)	By 4am Next Day	By 4am Next Day	By 4am Next Day	By 4am Next Day
Gaining Carrier and Losing Carrier	Port Expiry	Confirmation of service order deletion for Port Expiry (PE5 to PE8)	Within four Working Hours	Within four Working Hours	Within four Working Hours	Within four Working Hours
GSP	Port Withdrawal	Port Withdrawal (entire process)	Within four Working Hours	Within four Working Hours	Within four Working Hours	Within four Working Hours
Losing Carrier	Port Withdrawal	Confirming Port Withdrawal (PW3 to PW5)	Within two Working Hours	Within two Working Hours	Within two Working Hours	Within two Working Hours

¹ The Gaining Carrier activates as soon as they wish to.

² Agreed between both the GSP and LSP, being within the prescribed half-day window for Local and Complex Mobile and within ten minutes for Simple Mobile Ports.

Parties are expected to meet these Service Levels 95% of the time.

Table 3: RFS Date Minimum and Maximum Notice Periods

	Minimum	Maximum
Local Number ports:		
Simple Ports	Two Business Days	30 calendar days
Complex Ports	Five Business Days	30 calendar days
Mobile Number Ports:		
Simple Ports	One hour	Seven calendar Days
Complex ports	Two Business Days	30 calendar days

Table 4: Port Request Tests

Initial IPMS Port Request Tests:

Actions performed on Port Request in initial IPMS check at PR3, and repeated in PR6 and PR8.

Field	Test
SOM	Not checked, but must be present.
Type of Message	Must be valid type, rules are enforced based on type.
Category of Message	Checks that the Port Request is correctly categorised as Local or Mobile, Simple or Complex.
Date of request	Not checked, but must be present (automatically inserted in web client).
Time of request	Not checked, but must be present (automatically inserted in web client).
Account Number	If not Pre-pay, checks for the presence of an account number that meets the account number length test.
Handset reference	If Pre-pay, checks for the presence of a handset reference number that meets the handset reference number length test.
Phone number	Checks the presence of valid Numbers, based on the Message category and prefix and number length rules. Checks Number isn't the subject of an outstanding Port Request or Approved Port.
GSP	Could be checked but should be inserted automatically.
Losing Service Provider	Can check number in Ported Number Database, if not present can check if the Numbers are in the Number range of the Losing Service Provider.
Gaining Carrier	Check for completion with valid Gaining Carrier.
RFS Date	Check that it is in the proper window for the category of Message.
Customer name	No check.
Customer service address	No check.
Customer contact number	No check.
Losing Carrier	The IPMS can insert this based on Carrier Number ranges, or from the Ported Number Register.

Table 5: Checks performed by the Losing Service Provider at step PR5

This table sets out the mandatory checks to be performed by the LSP at step PR5 and it gives examples of other information that may be provided to the LSP and checks may be performed by the LSP. This may be supplemented, but not derogated from, by agreement among Carriers and Service Providers.

Field	Description
SOM Number	No check.
Type of Message	No check.
Category of Message	Mandatory - LSP must confirm that they agree, shall only disagree if they consider the Port to be Complex when the GSP has nominated Simple.
Date of request	No check.
Time of request	No check.
Account Number	Mandatory - for non-Prepay, checks that the Account number is valid and checks the Numbers are allocated to this account.
Handset Reference	Mandatory - for Prepay, checks that the Handset reference is valid and checks the Number is allocated to this reference.
Phone Number	Mandatory - see Account Number/Handset Reference above.
Gaining Service Provider	Mandatory - allows the LSP to contact the GSP if required during the Co-operative Period.
Losing Service Provider	Mandatory - the LSP checks that this is their Number above.
Gaining Carrier	Not presented to the LSP.
RFS Date	Presented to the LSP for reference but not subject to checking, already validated by IPMS.
Customer name	If completed by GSP – it will be presented to the LSP. It can be used to help ensure the details are correct.
Customer service address	If completed by GSP – it will be presented to the LSP. It can be used to help ensure the details are correct.
Customer contact number	If completed by GSP – it will be presented to the LSP. It can be used to help ensure the details are correct.
Losing Carrier	Presented to the LSP, no check required.