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GENERAL NOTICE

Independent Communications Authority of South Africa

General Notice

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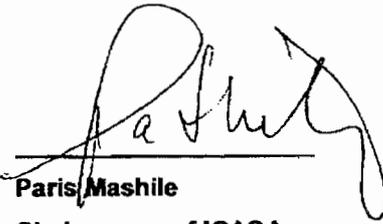
GENERAL NOTICE

NOTICE 346 OF 2010

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA ICASA

THE ORDERING SYSTEMS SPECIFICATIONS FOR GEOGRAPHIC NUMBER PORTABILITY

I, Mr Paris Mashile, Chairperson of the Independent Communications Authority of South Africa, hereby under Clause 3 (11) of the Number Portability Regulations promulgate the ordering systems specifications for geographic number portability as envisaged in the said regulations.



Paris Mashile
Chairperson of ICASA

21/04/2010

Geographic Number Portability Ordering System Specification

Geographic Number Portability Ordering System Specification

Final Ordering System Specification for Geographic Number Portability

1 DEFINITIONS

Except where otherwise stated, the definitions contained in the number portability regulations shall apply to this OSS. Except where the context indicates otherwise, the following terms in this OSS shall bear the meanings below:

- 1.1 **“Business hours”** shall be at least 09h00 to 17h00 Monday to Friday and 09h00 to 13h00 on Saturdays
- 1.2 **“Change of installation address”** means that a subscriber wishes to change the physical address where the service is currently installed.
- 1.3 **“code of practice”** means the code of practice relating to marketing, sales practices and communications referred to in clause 7 of the number portability regulations, as amended or replaced from time to time;
- 1.4 **“CRDB”** means central reference database, which is a centralised database of all geographic numbers and/or non geographic numbers that have been ported from one operator to another operator pursuant to the regulations;
- 1.5 **“dispute resolution process”** means the process contained in the Code of Practise as contemplated in clause 7(14) of the regulations.
- 1.6 **“geographic numbers”** means the number ranges referred to in clause 3 of the number portability regulations;
- 1.7 **“GNP”** means geographic number portability;
- 1.8 **“functional specification”** means the functional specification for GNP promulgated in *Gazette* 28091 of 30 September 2005 in terms of clause 3(4) of the number portability regulations, as amended or replaced from time to time;
- 1.9 **“geographic location”** means the exchange code area of the block operator.
- 1.10 **“individual application process”** means all the processes pertaining to the porting of geographic numbers up to, but excluding the physical porting of single geographic numbers and any processes subsequent thereto;
- 1.11 **“individual process”** means the physical porting of one or more individual numbers or one single range of numbers in a single Port Request;
- 1.12 **“individual number”** means a single geographic number assigned to an individual subscriber;
- 1.13 **“managed process”** means the processes leading up to, and the simultaneous physical porting of one single number range or groups (list) of associated individual geographic numbers that are of sufficient complexity to require the development of a customised porting process in terms of clause 5.1 of this process.;
- 1.14 **“network synchronisation time”** (NST) means the time during which activation and deactivation on the network and updating of routing tables shall take place;
- 1.15 **“number block”** means a set of geographic numbers as referred to in clause 2 of the number portability regulations;
- 1.16 **“number range”** is defined as a set of contiguous numbers that can be uniquely described by the start and end digits.
- 1.17 **“number portability regulations”** means the regulations promulgated in *Gazette* 28091 of 30 September 2005 in terms of section 89, read with section 96 of the Act, as amended or replaced from time to time;
- 1.18 **“numbering plan”** means the regulations promulgated in *Gazette* 28839 of 15 May 2006 in terms of section 89(1), read with section 96 of the Act, as amended or replaced from time to time;
- 1.19 **“operator”** means any electronic communication service or network licensee, also referred to as “Other Licensed Operator” (OLO);

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- 1.20 **"OSS"** means this ordering system specification for GNP promulgated in terms of clauses 3(5) to (8) of the number portability regulations, under section 96 of the Telecommunications Act of 1996(Act No 103 of 1996), as amended or replaced from time to time;
- 1.21 **"physical porting"** means the actual de-activation of a geographic number from the donor operator's network and activation of the same number on the recipient operator's network pursuant to the implementation of a port request;
- 1.22 **"port request"** means:
- 1.22.1 a request by a subscriber to port a geographic number from the donor operator to the recipient operator; or
- 1.22.2 a request by a donor operator to the recipient operator to port the geographic number of a subscriber to the recipient operator, as the context indicates.
- 1.23 **"port time"** means the time and date when physical porting of a geographic number is scheduled to take place;
- 1.24 **"ported number"** means a geographic number that has been ported from one operator to another operator pursuant to a port request;
- 1.25 **"regulations"** means the number portability regulations, the functional specification and this OSS collectively;
- 1.26 **"subscriber"** means, for the purpose of this OSS, any person that is a party to a contract or other similar arrangement with a operator for the supply of telecommunication services, inclusive of pre-paid and post-paid subscribers;
- 1.27 **"transaction"** means the various inter-operator communications via the CRDB, and communications with the CRDB relating to GNP referred to in this document.
- 1.28 **"vendor"** means the supplier of any telecommunications end user equipment that may be relevant to porting activities.

Note:

Because the Service Provider model is not as entrenched in the Fixed Line Market as it is in the Mobile market, this OSS allows for such a model but does not differentiate between the roles of Donor Service Provider and Donor Network Operator, nor between Recipient Service Provider and Recipient Network Operator. All responsibilities, actions and roles are assigned to the relevant Network Operator and it is left to those Network Operator to negotiate with their Service Providers as to the division of responsibilities.

2 SCOPE

- 2.1 The OSS prescribes the process that must be followed whenever the geographic numbers of subscribers of one operator are ported to another operator in the same geographic location.
- This OSS is binding upon all operators, service providers, and subscribers (as defined in the regulations), and the CRDB (as described in this document).

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3 OBLIGATIONS OF PERSONS BOUND BY THIS OSS

The rights and obligations of the persons who are bound by this OSS in terms of clause 2 are as set out below.

3.1 Recipient operators**The recipient operator must:**

- 3.1.1 receive, process and validate port requests received from subscribers as prescribed in the regulations;
- 3.1.2 lodge port requests with donor operators on their subscribers' behalf;
- 3.1.3 inform subscribers of the success or rejection of their port requests;
- 3.1.4 co-operate with subscribers and donor operators to ensure that all porting activities occur on time, in accordance with the required service levels and in compliance with the regulations;
- 3.1.5 confirm all Change of installation address requests with the block operator before proceeding with such changes.
- 3.1.6 return numbers to the Block Operator when service is ceased on such numbers on the same day.

3.2 Donor operators**The donor operator must:**

- 3.2.1 receive, process and validate port requests received from recipient operators as prescribed in the regulations;
- 3.2.2 accept or reject one or more individual numbers or the entire number range specified in the port request and inform the recipient operator of the results, together with reasons in case of a rejection;
- 3.2.3 co-operate with subscribers and recipient operators to ensure that all porting activities occur on time, in accordance with the required service levels and in compliance with the regulations.

3.3 Block operators**Block operators must:**

- 3.3.1 take back ported number(s) from recipient operators in the circumstances and in accordance with the procedures prescribed in the functional specification;
- 3.3.2 verify that all "change of installation address" requests conform to their exchange area boundaries;
- 3.3.3 must quarantine a returned number for a period of 3 months.

3.4 Subscribers**Subscribers must:**

- 3.4.1 only request ports in respect of geographic numbers which have been assigned to them by the donor operator;
- 3.4.2 cooperate with the recipient operator and the donor operator to ensure that all porting activities occur on time and in accordance with the regulations, including, for the avoidance of doubt:
 - i. in relation to the drawing up and execution of project plans for managed processes;
 - ii. by using their best endeavours to ensure that the suppliers of customer premises equipment and telecommunications facilities co-operate with the recipient operator and donor operator in relation to port requests;
 - iii. providing reasonable access to the subscribers' premises as required by the recipient operator and the donor operator to implement port requests.

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3.5 CRDB

3.5.1 The purpose of the CRDB shall be to:

- i. act as a central point for the facilitation and control of all transactions relating to number portability between operators;
- ii. validate and provide an audit trail of all number portability transactions between operators;
- iii. provide information and reports to:
 - a) the Authority relating to number portability to the extent required by law; and
 - b) to the recipient operator and the donor operator to the extent reasonably requested by them.

4 Architecture of the CRDB

4.1 The porting of geographic numbers will be administered by means of the CRDB. The CRDB is a computer system that will be established in order to facilitate and record transactions between operators relating to number portability.

4.2 The functions of the CRDB will be:

- 4.2.1 to act as a central point for control of transactions. The CRDB will validate, route, and provide an audit trail for transactions, and (if required) provide information to assist in the resolution of inter-operator disputes relating to geographic number portability;
- 4.2.2 to serve as a central repository for all relevant information relating to all geographic numbers that have been ported from one operator to another operator pursuant to the regulations, including but not limited to the operator currently serving such ported numbers. Operators and other interested parties will not be able to directly access the CRDB in real-time, but will be able to download copies of the CRDB for routing and reference purposes. The CRDB will not act as an online routing database;
- 4.2.3 to serve as a source of information for providing reports to ICASA on the number portability process.

4.3 The architecture of the CRDB shall be as follows:

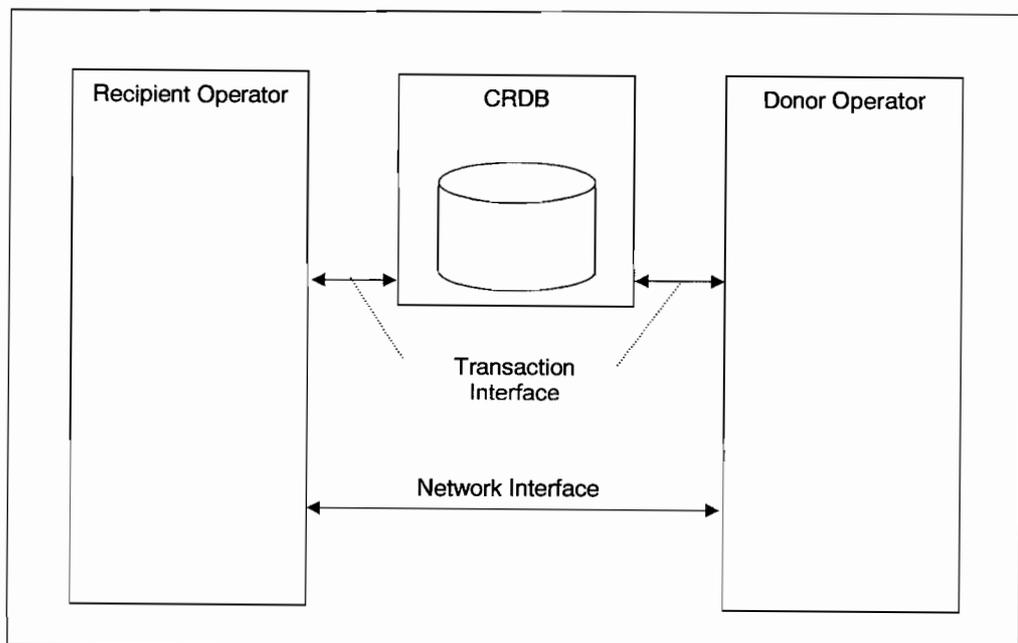


Figure 1: CRDB Architecture

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The Transaction Interface is used by all operators for messaging during any of the port transactions.

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5 PORTING PROCESS

Depending on the size and nature of the port requested, geographic numbers shall be ported from one operator to another operator according to either the managed process or the individual process as set out below:

5.1 Managed Process

The managed process shall be used to port a list of single numbers or a single range of numbers where the individual process has not been requested:

- 5.1.1 to port number ranges; and/or
- 5.1.2 to port groups of associated individual numbers that in the joint opinion of the recipient operator and the donor operator are of sufficient complexity to require the management of the porting process, including but not limited to multiple numbers provided through the switchboards of a single subscriber that service less than 1000 (one thousand) individual numbers.
- 5.1.3 The use of a managed process pursuant to the circumstances in clause 5.1.2 may be requested by the subscriber, the donor operator, or the recipient operator. Where so requested, the managed process must be used unless it is not feasible to do so in the circumstances, and this is agreed by the recipient operator, the donor operator, and the subscriber. In the event of a disagreement the dispute resolution process defined in the code of practise will be followed.
- 5.1.4 Where the managed process is used, a project team will be appointed to oversee the porting process consisting of:
 - i. at least one representative from the recipient operator, appointed by the recipient operator;
 - ii. at least one representative from the donor operator, appointed by the donor operator;
 - iii. the subscriber as required by the recipient operator or the donor operator, and/or to the extent desired by the subscriber; and
 - iv. the vendor, to the extent required by the other members of the project team.
- 5.1.5 All the parties to the project team must agree in writing to a project plan which specifies the terms and conditions upon which the managed process is to be implemented for that specific port request, including but not limited to details of the following:
 - i. the synchronisation of the process of activating a ported number on the recipient operator's network and the deactivation of such number on the donor operator's network, so as to ensure that the service to the subscriber is uninterrupted during the porting process, or if such interruption is unavoidable due to technical limitations, then it shall be of the shortest practical duration;
 - ii. the time frames for completing the managed process and for porting geographic numbers pursuant thereto. Subject to clause iii, such time periods shall only be changed in extenuating circumstances, and with the subscriber's written consent; and
 - iii. The recipient operator shall initiate a Port Activation transaction upon the completion of the physical porting of geographic numbers pursuant to a managed process.
- 5.1.6 The recipient operator shall lead the project team. Any disputes that cannot be resolved by agreement within the project team will be resolved in terms of the dispute resolution procedure stipulated in the code of practice.
- 5.1.7 High level overview of the managed process is shown in Figure 8 at the end of the document.

5.2 Individual Number Process

The individual process will be used to port one or more individual numbers, or a single range of numbers where the managed process has not been requested and agreed by all parties.

5.2.1 Business rules

Notification of activation on the recipient operator's network of all individual numbers that have been ported on the same day must take place at NST.

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5.2.2 High level overview of the individual process is shown in Figure 10 at the end of the document.

5.3 Port Cancellation Process

- Subscriber may cancel a port request on notification to the recipient operator.
- Recipient operator sends a full or partial cancellation message to donor operator through CRDB.
- If Port Notification was not sent yet, the Port Notification can be used to cancel the port.
- CRDB records the full or partial cancellation of port.
- Recipient Operator may send multiple partial cancel requests for a port.

5.4 Port Reversal Process

- This process will only be used if it is discovered that a port was erroneously performed. This reversal will be permanent.
- A port reversal must be agreed to by the donor operator, the recipient operator, and the subscriber.
- Recipient operator sends a full or partial reversal message to donor operator through CRDB
- Donor Operator accepts or rejects the entire reversal request
- Port Reversal may only be done within the Port Reversal Limit.
- The reversal can only be done based on a Port Activated message, i.e. the numbers to be reversed must have all been ported (activated)
- Only a full reversal activation is allowed, ie all the numbers accepted in the Reversal Response must be activated.

5.5 Emergency Process

- Whenever a Connected Party is experiencing technical problems this need to be communicated to the CRDB. The CRDB will inform all Connected parties of the party experiencing the problem.
- All technical problems will be labelled as either transmission, inability to update call routing tables, or as authorisation problems.
- The CRDB will queue all messages to the party experiencing a transmission problem, but will continue to deliver messages to a party experiencing other problems.
- Once a transmission problem has been resolved, the CRDB will send all queued messages, maintaining the order of the messages.
- During such time when a Connected Party experience technical problems, the CRDB will suspend all active Port Notification Time timers for the Connected Party.
- When the technical problem has been resolved, such party will communicate the Restore Notification to the CRDB immediately.

5.6 Number Return Process

- In cases where the recipient operator de-activates a ported number on its network, the recipient operator must return the ported number to the block operator.
- Once a ported number is de-activated, the recipient operator must send a number return message to the CRDB.
- The CRDB must remove the number from the ported number list in the CRDB on receipt of the number return message.
- The CRDB must send a general port notification to the authorised users of the CRDB as soon as a ported number has been returned to the block operator.
- The block operator must quarantine the ported number in accordance with the regulations.

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5.7 CRDB Download Request Process

The CRDB download request transaction process allows any authorised user of the CRDB to submit a request to the CRDB for either a full or delta download.

5.8 Change of Installation Address Process

- Subscriber approaches Recipient operator at time of the port request or after a port has already taken place.
- Recipient operator checks with Block operator if proposed address is acceptable
- Block operator checks if the address falls in the exchange area of the number and responds with a full or partial acceptance or rejection to Recipient operator.
- Change of Installation Address Process is independent of the Managed or Individual processes.

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6 TRANSACTIONS DEFINED

The transactions below are each described in terms of the following template:

- **Purpose of transaction:**
Describes the purpose for which the transaction is used.
- **Originator:**
Identifies which party starts the transaction flow.
- **Intended for:**
Identifies which party the transaction flow is intended for.
- **Time constraints:**
Describes any time constraints on when it is allowed to initiate the transaction, or which prescribe the timeframe in which an action or response is required.
- **Individual or managed process**
Identifies whether this transaction is applicable to the managed or individual processes or both.
- **Information inherent in transaction**
Describes what high-level information is contained in the transaction.

Notes applicable to all transactions:

- The Recipient Operator will assign a unique Port Identification Number to each port request at the time when such a new request is generated. The port identification number will be used thereafter as the unique identifier of that port in all subsequent transactions.
- All transactions will be acknowledged by the recipient of the message via the SOAP interface.
- The date and time in the message header will be considered as the time that operation took place, e.g. activation, deactivation, etc.

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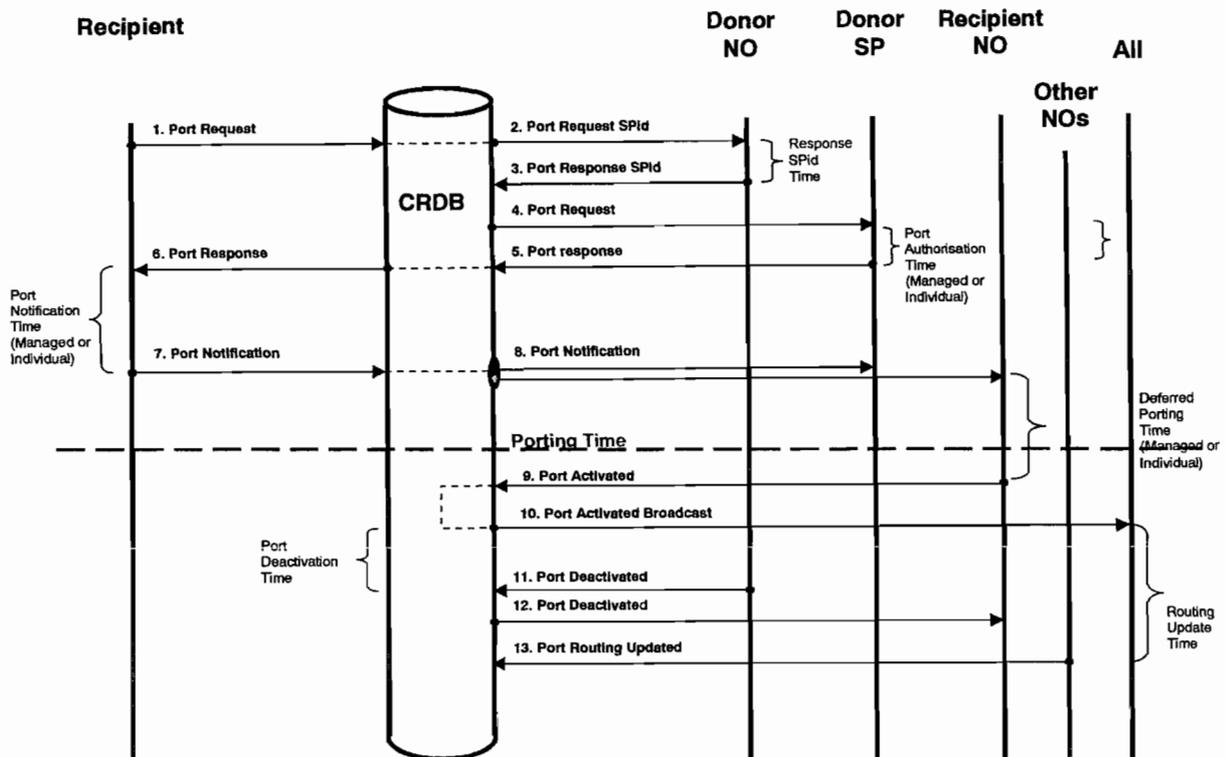


Figure 2 Port Request and Activation Process

6.1 Port Request Transaction

6.1.1 Purpose of transaction

The purpose of this transaction is for the recipient operator to inform the donor operator of a port request by the donor operator's subscribers to port their geographic numbers to the recipient operator's network.

6.1.2 Originator

Recipient operator.

6.1.3 Intended for

Donor operator

6.1.4 Time constraints

A port request transaction will be entertained only during normal business hours. The recipient operator can send the request at any time but the donor operator may be deemed to have received the request at the next working day if the request was sent after normal business hours.

6.1.5 Individual or managed process

The port request transaction is applicable to all port processes.

6.1.6 Information inherent in transaction

The recipient operator must give the donor operator the following information in respect of each port request:

- Unique port ID
- Subscriber's account number with the donor operator.

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- Subscriber ID number or other equivalent identifier for Subscriber – for instance passport number (for a foreign national) or company registration number (for an enterprise).
- List of geographic numbers or a single range of numbers that are the subject of the port request.
- Nature of port request (individual / managed process).
- In case of managed process, a contact person and contact details from the recipient operator who will co-ordinate the porting.
- In the event that a simultaneous address change is requested then the Transaction ID of the relevant Change of Installation Address Response from the Block Operator confirming the address validity must be supplied.

6.2 Port Request SPID**6.2.1 Purpose of transaction**

The purpose of this transaction is for the CRDB to determine which Service Provider is serving the number that is to be ported.

6.2.2 Originator

CRDB

6.2.3 Intended for

Donor operator.

6.2.4 Time constraints

A port request SPID transaction will be entertained only during normal business hours.

6.2.5 Individual or managed process

This transaction is applicable to all port processes.

6.2.6 Information inherent in transaction

The recipient operator must give the donor operator the following information in respect of each request:

- Unique port ID
- List of geographic numbers or a single range of numbers that are the subject of the request.

6.3 Port Response SPID**6.3.1 Purpose of transaction**

The purpose of this transaction is for the Donor operator to inform the CRDB which Service Provider is serving the number that is to be ported.

6.3.2 Originator

Donor operator

6.3.3 Intended for

CRDB.

6.3.4 Time constraints

The response must be provided within the timer Response SPID Time. (Refer to par 7 Port Timers for values)

6.3.5 Individual or managed process

This transaction is applicable to all port processes.

6.3.6 Information inherent in transaction

The donor operator must give the CRDB the following information in respect of each number:

- Unique port ID

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- The service provider that is the subject of the request or Error Code, if service provider is not provided.

6.4 Port Response Transaction**6.4.1 Purpose of transaction**

The donor operator must use the port response transaction process to inform the recipient operator whether the numbers/number range specified in the port request have been accepted or rejected. In the event of a rejection, the grounds for the rejection must be supplied by the donor operator to the recipient operator.

6.4.2 Originator

Donor operator.

6.4.3 Intended for

Recipient operator.

6.4.4 Time constraints

The donor operator must give the recipient operator a port response as soon as possible, but not later than:

- the Port Authorisation Timer (for individual or managed process as applicable);

6.4.5 Individual process or managed process

The port response transaction is applicable to all port processes.

6.4.6 Information inherent in transaction

The donor operator must supply the following information to the recipient operator pursuant to a port response transaction:

- Unique port ID.
- List of geographic numbers or a range of geographic numbers that are the subject of the port request, i.e., the same list of numbers or number range from the port request.
- Include flag, per number or number range, indicating acceptance or rejection of the numbers/range for the port.
- Reason(s) for rejection, or if accepted, whether there is a move between Managed and Individual process. If there is a move between Managed and Individual process then the CRDB must adjust the timers appropriately.
- If the Managed process was requested by the Recipient Operator or if there is a move from Individual to Managed, the contact details of the responsible person from the donor operator.

Note: The accepted numbers can be the same or a subset of the list of numbers originally specified in the port request but can not include any numbers that were not present in that request. Furthermore, if the original port request was for a number range, this may not be changed, i.e., only acceptance or rejection of the entire number range is allowed. To accept porting of an individual number or number range, the donor operator sends the response with the include flag set to "1". To reject porting of a number or number range, the donor operator sends the response with the include flag set to "0".

6.5 Port Notification Transaction**6.5.1 Purpose of transaction**

The recipient operator must use the port notification transaction to notify the Donor Operator when a physical port will take place.

This transaction can also be used by the recipient to cancel a port.

6.5.2 Originator

Recipient Operator.

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6.5.3 Intended for

Donor and Recipient Operator.

6.5.4 Time constraints

The recipient Operator must send a port notification within the Port Notification Time, or else the Port will be cancelled by the CRDB.

6.5.5 Individual process or managed process

The transaction is applicable to all port processes.

6.5.6 Information inherent in transaction

The recipient Operator must supply the following information as part of the port notification:

- Unique port identification number.
- List of geographic numbers or number range that is to be ported.
- Include flag per number or number range, indicating inclusion or exclusion for the port.
- The date and time when porting is to occur. This time may not be more than Deferred Porting Time in the future.

Note: The list of numbers for inclusion in the port can be the same or a subset of the list of numbers originally supplied in the port request but can not include any numbers that were not present in that request nor numbers that were not accepted by the donor. If the original request was for a range this must have been accepted by the donor and may not be changed. To cancel porting of a number or number range, the recipient operator sends the notification with the include flag set to "0". If all numbers in a port are cancelled, the date and time is left blank.

6.6 Port Activated Transaction**6.6.1 Purpose of transaction**

The recipient operator must use the port activation transaction to notify the CRDB of the numbers that have been successfully activated.

6.6.2 Originator

Recipient operator.

6.6.3 Intended for

CRDB.

6.6.4 Time constraints

The recipient operator must send a Port Activation message to the CRDB as soon as possible after activation of the ported numbers but not later than the next NST after the activation.

6.6.5 Individual process or managed process

The transaction is applicable to all port processes.

6.6.6 Information inherent in transaction

The recipient operator must supply the following information to the CRDB as part of a Port Activation message:

- Unique port identification number.
- List of geographic numbers or number range included in the port.
- Include flag, per number or number range, indicating activation of the numbers/range for the port.

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6.7 Port Activated Broadcast

6.7.1 Purpose of transaction

The CRDB notifies all operators of the numbers that have been successfully ported.

6.7.2 Originator

CRDB.

6.7.3 Intended for

All operators

6.7.4 Time constraints

CRDB will send the transaction immediately the Port Activated message is received from the Recipient Operator.

6.7.5 Individual process or managed process

The transaction is applicable to all port processes.

6.7.6 Information inherent in transaction

The CRDB must supply the following information as part of the message:

- Unique port identification number.
- List of geographic numbers or number range included in the port.
- The Donor Network Operator,
- The Recipient Network Routing Label

6.8 Port Deactivated Transaction

6.8.1 Purpose of transaction

The donor operator must send a port deactivated transaction to notify the CRDB that the ported numbers have been de-activated on the donor operator's network.

6.8.2 Originator

Donor operator.

6.8.3 Intended for

Recipient operator.

6.8.4 Time constraints

The donor operator shall send a port deactivation notification to the CRDB as soon as possible after an individual or range of geographic numbers has been deactivated on its network, but by no later than within the Port Deactivation Timer.

6.8.5 Individual process or managed process

The port deactivation notification transaction process is applicable all port processes..

6.8.6 Information inherent in transaction

The donor operator must include the following information in a port deactivation notification:

- Unique port identification number.
- List of all numbers or the number range in the port. When a range of numbers is ported, the numbers are not listed separately. State of all numbers in the range must be the same.

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6.9 Port Routing Updated Transaction

6.9.1 Purpose of transaction

All other Operators involved in Direct Routing send a Port Routing Updated Message within the Routing Update Time to the CRDB confirming that they have updated their routing tables. Operators not involved in direct routing will respond that they have noted the routing update.

6.9.2 Originator

All other Network operators

6.9.3 Intended for

CRDB.

6.9.4 Time constraints

Operators shall respond within the Routing Update Timer.

6.9.5 Individual process or managed process

Applicable all port processes.

6.9.6 Information inherent in transaction

The operators must include the following information in a port routing updated notification:

- Unique port identification number.
- List of all numbers or number range in the Port. When a range of numbers is ported, the numbers are not listed separately. State of all numbers in the range must be the same.

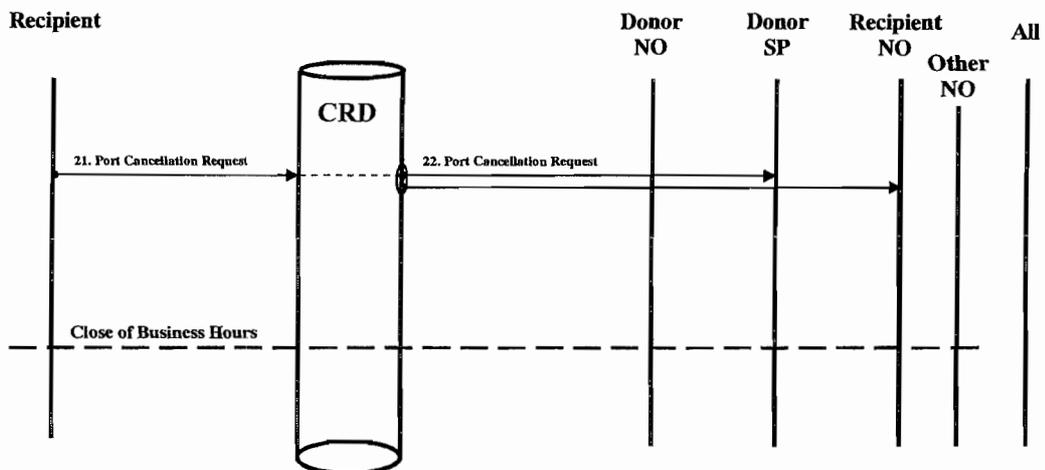


Figure 3: Schematic Illustration – Port Cancellation Process

6.10 Port Cancellation Transaction

6.10.1 Purpose of transaction

The recipient Operator must use the port cancellation transaction process to notify the donor operator that one or more numbers or the number range for a port request has been cancelled by a subscriber. The recipient Operator must retain proof of this request from the subscriber. This message can only be sent after a Port Notification message, ordering the port, has been sent and before a Port Activated message, activating the port, is sent from the Recipient network operator.

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6.10.2 Originator

Recipient Operator.

6.10.3 Intended for

Donor Operator.

6.10.4 Time constraints

The recipient operator may only use this transaction after Port Notification and before Port Activation.

6.10.5 Individual or managed process

The port cancellation transaction process applies to all port processes. For the managed process communication of the cancellation must be notified to the project team, but the transaction will still be processed by the recipient operator through the CRDB as an audit trail. The Port cancellation can only be used to cancel the port after the port notification was sent and before a port activated message is received.

6.10.6 Information inherent in transaction

The recipient operator must give the donor operator the following information:

- Unique port identification number, as per the original Port Request message.
- List of geographic numbers or number range that was included in the original port request.
- Include flag, per number or number range, indicating whether the number/range stays ordered or is cancelled for the port.
- Reason for cancellation.

Note: The cancelled numbers can be the same or a subset of the list of numbers originally specified in the port request but can not include any numbers that were not present in that request. Furthermore, if the original port request was for a number range, this may not be changed, i.e., only the entire number range is cancelled. To cancel the porting of an individual number or number range, the recipient operator sends the request with the include flag set to "1". To retain porting of a number or number range, the donor operator sends the request with the include flag set to "0".

Geographic Number Portability Ordering System Specification

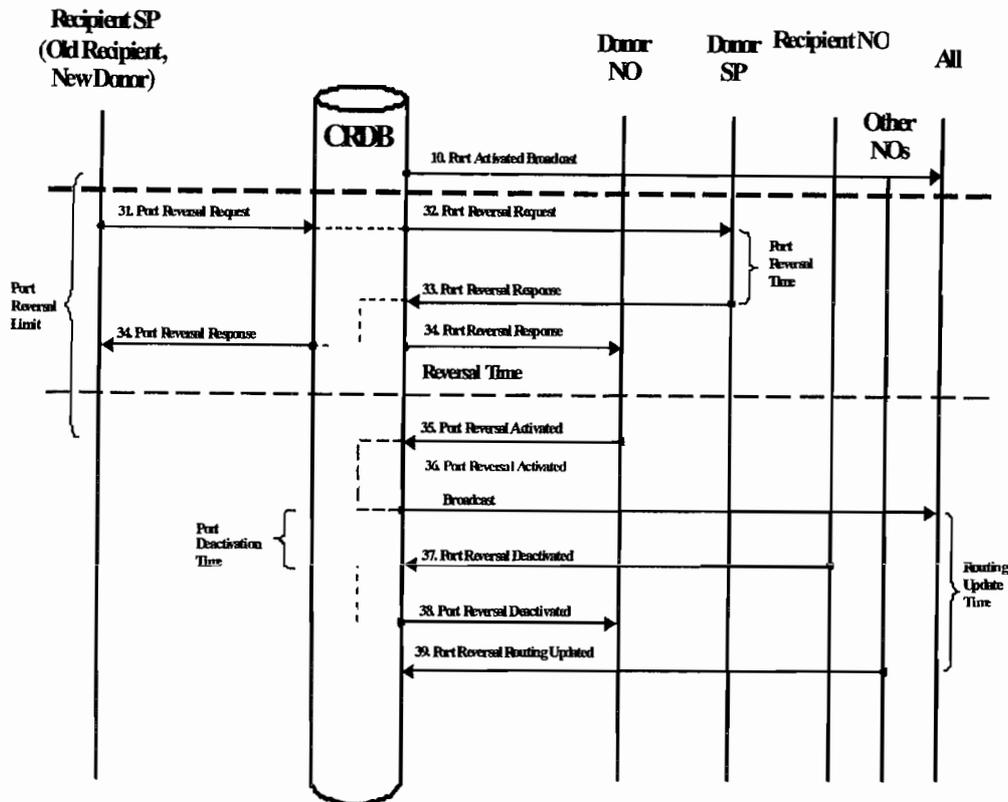


Figure 4 Schematic Illustration – Port Reversal process

6.11 Port Reversal Request Transaction

6.11.1 Purpose of transaction

This transaction will only be used if it is discovered that the port was erroneously performed. This reversal will be permanent.

A reversal must be agreed to by the donor operator, the recipient operator and the subscriber.

The reversal can only be done based on a Port Activated messages. I.e. the numbers to be reversed must have been ported in one Port Request.

A reversal is also subject to the continued availability of the previous network infrastructure on the Donor Operators network. If the infrastructure has been re-assigned in terms of normal business processes then the reversal may only take place subject to normal provisioning processes.

6.11.2 Originator

Recipient operator.

6.11.3 Intended for

Donor operator.

6.11.4 Time constraints

A port reversal request and subsequent activities up to and including Message 35 Port Reversal Activated must be completed within the Port Reversal Limit subsequent to the physical porting of the ported numbers.

Geographic Number Portability Ordering System Specification

6.11.5 Individual process or managed process

The port reversal transaction process is applicable to all port processes.

6.11.6 Information inherent in transaction

The operator originating the transaction must supply the following information to the other operator:

- Unique port identification number as per the original Port Request message.
- Reason for port reversal request.
- List of ported numbers or number range to be reversed. This must be the same list of numbers or number range or a subset of the relevant Port Activated message.
- Include flag, per number or number range, indicating the number/range to be reversed or not to be reversed for the port.

Note: The reversed numbers can be the same or a subset of the list of activated numbers specified in the port activation but can not include any numbers that were not present in that notification. Furthermore, if the activated port request was for a number range, this may not be changed, i.e., only the entire number range is reversed. To reverse the porting of an individual number or number range, the recipient operator sends the request with the include flag set to "1". To not reverse the porting of a number or number range, the donor operator sends the request with the include flag set to "0".

6.12 Port Reversal Response

6.12.1 Purpose of transaction

Response by the Donor that the reversal is accepted and may proceed or rejected and may not proceed.

6.12.2 Originator

Donor Operator.

6.12.3 Intended for

Recipient Operator

6.12.4 Time constraints

A Port Reversal Response must be submitted within timer Port Reversal Time.

6.12.5 Individual process or managed process

The port reversal transaction process is applicable to all port processes.

6.12.6 Information inherent in transaction

The donor operator originating the transaction must supply the following information to the recipient operator:

- Unique port identification number as per the original Port Request message.
- List of ported numbers or number range to be reversed. This must be the same list of numbers or number range as the relevant Port Reversal Request message.
- Include flag, per number or number range, indicating the number/range to be reversed or not to be reversed for the port, exactly as specified in the port reversal request.
- Response, indicating acceptance or rejection of the port reversal

6.13 Port Reversal Activated Transaction

6.13.1 Purpose of transaction

The donor operator must use the port reversal activation transaction to notify the CRDB that the numbers/number range have been successfully reactivated.

6.13.2 Originator

Donor operator.

Geographic Number Portability Ordering System Specification

6.13.3 Intended for

CRDB.

6.13.4 Time constraints

The donor operator must send a Port Reversal Activation message to the CRDB as soon as possible after reactivation of the ported numbers/number range but not later than the next NST after the reactivation.

6.13.5 Individual process or managed process

The transaction is applicable to all port processes.

6.13.6 Information inherent in transaction

The donor operator must supply the following information to the CRDB as part of a Port Reversal Activation message:

- Unique port identification number as per the original Port Request message.
- List of geographic numbers or number range, i.e., the same list of numbers/number range included in the Port Reversal Request.
- Include flag per number or number range indicating activated or not activated for the port reversal.

6.14 Port Reversal Activated Broadcast

6.14.1 Purpose of transaction

The CRDB notifies all network operators and SPs of the numbers that have been successfully reversed.

6.14.2 Originator

CRDB.

6.14.3 Intended for

All operators and SPs.

6.14.4 Time constraints

CRDB will send the transaction immediately the Port Reversal Activated message is received from the Donor Operator.

6.14.5 Individual process or managed process

The transaction is applicable to all port processes.

6.14.6 Information inherent in transaction

The CRDB must supply the following information as part of the message:

- Unique port identification number as per the original Port Request message.
- List of geographic numbers or number range included in the Port Reversal Request.
- The Recipient Network Operator,
- The Donor Network Routing Label.

6.15 Port Reversal Deactivated Transaction

6.15.1 Purpose of transaction

The recipient operator must send a port reversal deactivated transaction to notify the CRDB that a port number has been de-activated on the recipient operator's network..

6.15.2 Originator

Recipient operator.

6.15.3 Intended for

Donor operator.

Geographic Number Portability Ordering System Specification

6.15.4 Time constraints

The recipient operator shall send a port reversal deactivation notification to the CRDB as soon as possible after an individual or range of geographic numbers has been deactivated on its network, but by no later than the Port Deactivation Timer.

6.15.5 Individual process or managed process

The port deactivation notification transaction process is applicable all port processes..

6.15.6 Information inherent in transaction

The donor operator must include the following information in a port deactivation notification:

- Unique port identification number as per the original Port Request message.
- List of all numbers/number range in the reversal and the status of each such number. When a range of numbers is ported, the numbers are not listed separately. State of all numbers in the range must be the same.

6.16 Port Reversal Routing Updated Transaction**6.16.1 Purpose of transaction**

All other Operators involved in Direct Routing send a Port Reversal Routing Updated Message within the Routing Update Time to the CRDB confirming that they have updated their routing tables. Operators not involved in direct routing will respond that they have noted the routing update.

6.16.2 Originator

Other operator

6.16.3 Intended for

CRDB.

6.16.4 Time constraints

Operators shall respond within the Routing Update Timer.

6.16.5 Individual process or managed process

Applicable all port processes.

6.16.6 Information inherent in transaction

The operators must include the following information in a port reversal routing updated notification:

- Unique port identification number as per the original Port Request message.
- List of all numbers/number range in the reversal and the status of each such number. When a range of numbers is ported, the numbers are not listed separately. State of all numbers in the range must be the same.

Geographic Number Portability Ordering System Specification

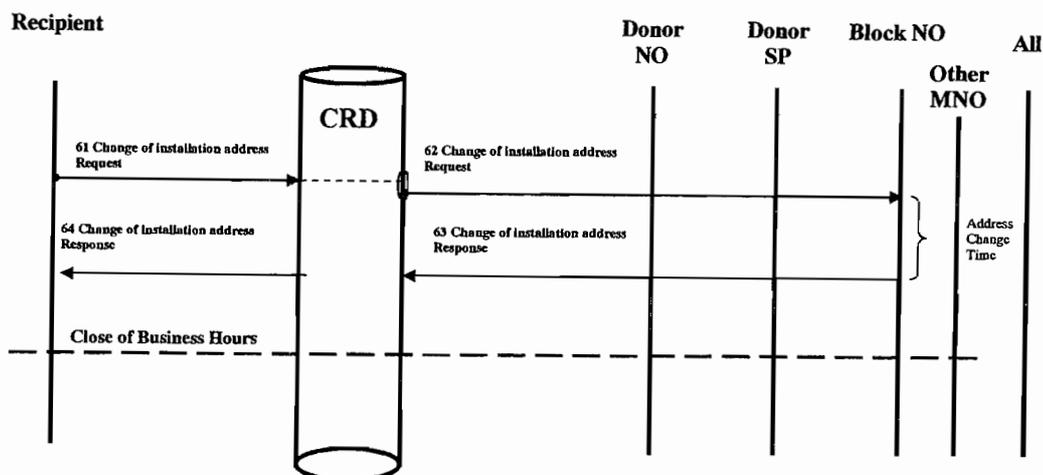


Figure 5 Schematic Illustration – Change of Installation Address Process

6.17 Change of Installation Address Request

6.17.1 Purpose of transaction

This transaction will be used if numbers/number range is to be transferred (ie the installation address is to be changed). The purpose is to ensure that the numbers/number range remains within the exchange code area of the block operator.

6.17.2 Originator

Recipient operator.

6.17.3 Intended for

Block Operator

6.17.4 Time constraints

None

6.17.5 Individual process or managed process

This transaction process is applicable to all port processes.

6.17.6 Information inherent in transaction

The recipient operator originating the transaction must supply the following information to the block operator:

- Unique port identification number.
- List of numbers/number range for which an installation address is to be changed.
- Proposed new installation address.

6.18 Change of Installation Address Response

6.18.1 Purpose of transaction

Response from Block Operator approving or rejecting the installation address change request

6.18.2 Originator

Block Operator.

6.18.3 Intended for

Recipient Operator.

6.18.4 Time constraints

Within the Address Change Timer from receipt of the request

 Geographic Number Portability Ordering System Specification

6.18.5 Individual process or managed process

Applicable to all port processes.

6.18.6 Information inherent in transaction

The block operator must supply the following information to the recipient operator:

- Unique port identification number.
- List of geographic numbers or a range of geographic numbers that are the subject of the change of installation address, i.e., the same list of numbers or number range from the change of installation address request.
- Include flag, per number or number range, indicating acceptance or rejection of the number/range for the change of installation address.
- Reason(s) for rejection.

Note: The accepted numbers can be the same or a subset of the list of numbers originally specified in the change of installation address request but can not include any numbers that were not present in that request. Furthermore, if the change of installation address request was for a number range, this may not be changed, i.e., only acceptance or rejection of the entire number range is allowed. To accept the installation address change of an individual number or number range, the block operator sends the response with the include flag set to "1". To reject the installation address change of a number or number range, the block operator sends the response with the include flag set to "0".

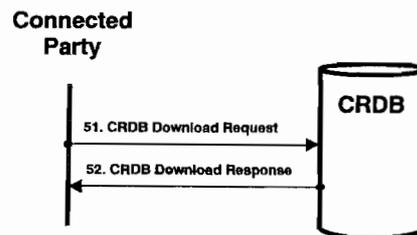


Figure 6 Schematic Illustration – CRDB Download Process

6.19 CRDB Download Request Transaction

6.19.1 Purpose of transaction

The CRDB download request transaction process allows any authorised user of the CRDB to submit a request to the CRDB for either a full or delta download.

6.19.2 Originator

Any authorised user of the CRDB and/or subscriber.

6.19.3 Time constraints

None.

6.19.4 Intended for

CRDB.

6.19.5 Individual process or managed process

The CRDB download process applies to both individual processes and managed processes.

Geographic Number Portability Ordering System Specification

6.19.6 Information inherent in transaction

The person originating the transaction must supply the following information to the CRDB:

- Download type (full download or delta download).
- Number type (mobile numbers or geographic numbers).
- Start date (for delta download)
- End date (for delta download)
- Media Type.

6.20 CRDB Download Response Transaction

6.20.1 Purpose of transaction

This transaction defines the process in terms of which the CRDB must respond to a CRDB download request.

6.20.2 Originator

CRDB.

6.20.2.1 Intended for

Any authorised user of the CRDB who submits a CRDB download request to the CRDB.

6.20.3 Time constraints

None.

6.20.4 Individual process or managed process

The CRDB download response transaction is applicable to both individual processes and managed processes.

6.20.5 Information inherent in transaction

The CRDB must include the following information in a CRDB query response:

- In circumstances where the information pertaining to the CRDB query is too bulky to be sent electronically to the recipient, the CRDB must send a message to the person originating the transaction advising that person that such information can be downloaded online from some centrally accessible point.
- In all other circumstances the CRDB must electronically send the information directly to the person originating the transaction.

Geographic Number Portability Ordering System Specification

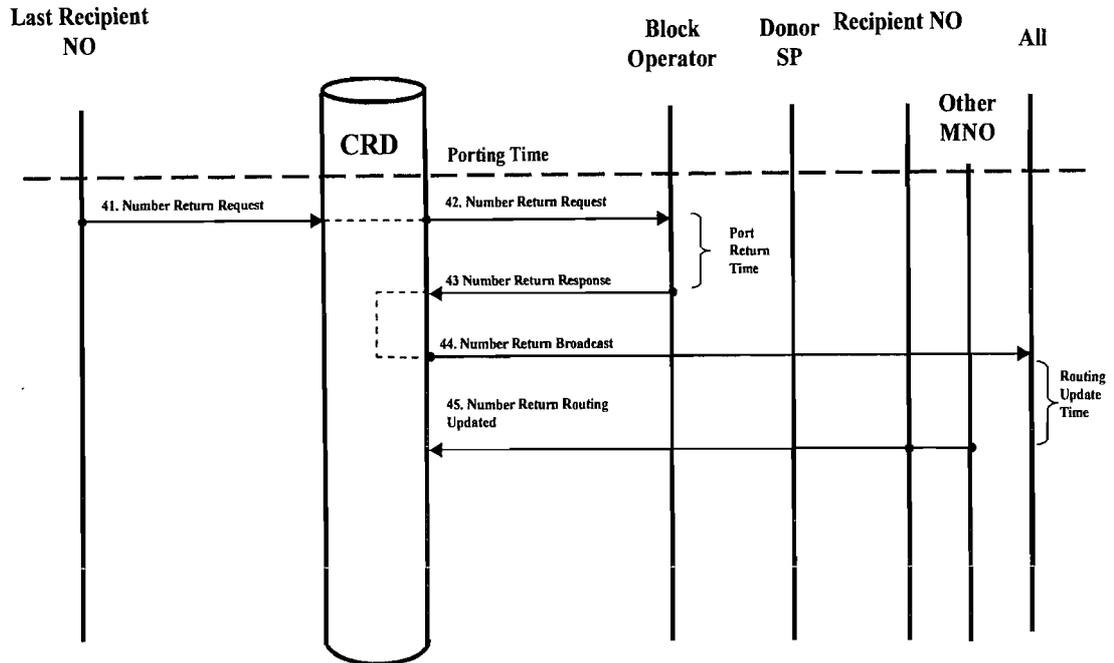


Figure 7 Schematic Illustration – Return to Block Operator process

6.21 Number Return Request

6.21.1 Purpose of transaction

Recipient operator returns number to block operator after deactivation of service.

6.21.2 Originator

Recipient operator.

6.21.3 Intended for

Block operator.

6.21.4 Time constraints

As soon as possible after deactivation of the number(s) on the recipient operator's network, but in any event by no later than the end of the day after such deactivation. The Block Operator will quarantine the numbers for a 3 month period.

6.21.5 Individual process or managed process

This transaction is applicable to all port processes.

6.21.6 Information inherent in transaction

The recipient operator must supply the following information to the block operator:

- Unique port identification number
- Number or range of numbers being returned

Geographic Number Portability Ordering System Specification

6.22 Number Return Response

6.22.1 Purpose of transaction

Block operator acknowledges receipt of returned number.

6.22.2 Originator

Block operator.

6.22.3 Intended for

CRDB.

6.22.4 Time constraints

Within Port Return Timer

6.22.5 Individual process or managed process

This transaction is applicable to all port processes.

6.22.6 Information inherent in transaction

The block operator must supply the following information to the CRDB:

- Unique port identification number
- Numbers or range of numbers being returned

6.23 Number Return Broadcast

6.23.1 Purpose of transaction

The CRDB notifies all operators of the numbers/number range that have been successfully returned.

6.23.2 Originator

CRDB.

6.23.3 Intended for

All operators.

6.23.4 Time constraints

CRDB will send the transaction immediately the Port Number Return Response message is received from the Block Operator.

6.23.5 Individual process or managed process

The transaction is applicable to all port processes.

6.23.6 Information inherent in transaction

The CRDB must supply the following information as part of the message:

- Unique port identification number.
- List of geographic numbers or number ranges included in the return.
- Block Operator.

6.24 Number Return Routing Updated Transaction

6.24.1 Purpose of transaction

All Operators involved in Direct Routing send a Number Return Routing Updated Message within the Routing Update Time to the CRDB confirming that they have updated their routing tables. Operators not involved in direct routing will respond that they have noted the routing update.

6.24.2 Originator

All operators

 Geographic Number Portability Ordering System Specification

6.24.3 Intended for

CRDB.

6.24.4 Time constraints

Operators shall respond within the Routing Update Timer.

6.24.5 Individual process or managed process

Applicable all port processes..

6.24.6 Information inherent in transaction

The operators must include the following information in a number return routing updated notification:

- Unique port identification number.
- List of all numbers/number range in the number return and the status of each such number. When a range of numbers is ported, the numbers are not listed separately. State of all numbers in the range must be the same.

7 Port Timers

All timers referred are times during business hours.

NAME	VALUE	DESCRIPTION
Port Authorisation Time (Individual process)	16 hours	The maximum time between the CRDB sending the Port Request to the Donor and the CRDB receiving the Port Response from the Donor, for an individual port process
Port Authorisation Time (Managed Process)	40 hours	The maximum time the Donor may take, for a managed process, to obtain confirmation that the porting is authorized, measured from the time of the Port Request.
Deferred Porting Time (Individual process)	31 calendar days	The maximum deferred porting time. Calculated from when the Recipient sends the Port Notification.
Deferred Porting Time (Managed process)	60 calendar days	The maximum deferred porting time. Calculated from when the Recipient sends the Port Notification.
Deferred Termination Time (Individual process)	34 days (Deferred Porting Time + 3 days)	Three day grace period before the CRDB will terminate a Port Request and Activation process if the Port Activated message did not arrive before the Deferred Porting Time
Deferred Termination Time (Managed process)	63 days (Deferred Porting Time + 3 days)	Three day grace period before the CRDB will terminate a Port Request and Activation process if the Port Activated message did not arrive before the Deferred Porting Time
Port Deactivation Time	1 hour	The amount of time specified to remove a Subscriber from active service on a network. Measured from when the CRDB sends the Port Activated Broadcast Message 10 or the Port Reversal Activated Broadcast Message 36.
Port Notification Time (Individual process)	40 hours	The maximum time between the Recipient receiving the Port Response (Message 6) and the Recipient sending the Port Notification. CRDB will terminate the port if this timer is exceeded.
Port Notification Time (Managed process)	80 hours	The maximum time between the Recipient receiving the Port Response (Message 6) and the Recipient sending the Port Notification. CRDB will terminate the port if this timer is exceeded.
Ported Lock Time	2 months	The time where subsequent port request on a number or number range will be rejected
Port Return Time	1 hour	The maximum time between the Recipient receiving the Port Return Number Request (Message 42) and the Block operator sending the Port Return Number Response (Message 43)

Geographic Number Portability Ordering System Specification

NAME	VALUE	DESCRIPTION
Port Reversal Limit	Porting Hours to 2 months	A Port Reversal Request can be issued by the Recipient during Porting Hours but not more than 2 months after the Porting Time. Note: this timer is subject to the infrastructure restrictions mentioned in section 6.11
Port Reversal Time	16 hours	The maximum time between the CRDB sending the Port Reversal Request to the Donor and the CRDB receiving the Port Reversal Response from the Donor.
Response Spid Time	5 minutes	The maximum time in which the Donor Operator responds with the Service Provider Identification to the CRDB
Routing Update Time	1 hour	The maximum time in which all Operators involved in Direct Routing must confirm to the CRDB that the new call routing has been effected. Measured from when the CRDB sends the Port Activated Broadcast Message 10, or the Port Reversal Activated Broadcast Message 36, or the Port Number Return Broadcast Message 44. Operators that do not route directly must respond that they have noted the update.
Address Change Time	16 hours	The maximum time between the Block Operator receiving an Address Change request and responding to that request.

8 VALID REASON CODES

A Port Request may only be rejected for the following reasons:

- The number(s) or number range is not valid on the donor operator's network or the number range is not exclusively used by the entity requesting the port.
- The number(s) or number range is excluded from porting under regulation 3.
- The account number provided is not the account number used by the donor operator for the number(s) or number range for which porting is requested.
- Subscriber is already subject to suspension for outgoing or incoming calls because of failure to pay a bill.
- The number(s) or number range is already subject to a porting process.
- The number(s) or number range has already been ported in the last two months

A Port Reversal can only be requested for the following reasons:

- The port was done in error.
- The port was done maliciously.
- The port was done fraudulently.
- Other reasons as agreed upon between the recipient operator, donor operator, and customer.

A Change of Installation Address request may only be rejected if the proposed installation address is outside of the geographic area associated with that number by the Block Operator.

9 Messages

The following business rules will apply to ensure operational efficiency:

1. A range is a single entity, and once porting activities have commenced must remain an entity.
2. Whilst in the porting process, all transactions on a range are "accept all" or "reject all" transactions, ie no partial acceptance/rejections/etc on subsets of a range are allowed.
3. A Range may not be split into sub-ranges or merged into larger ranges whilst in ported status.
4. A Range is used for porting a set of consecutive numbers.
5. A Port Request and all following messages may contain either a single range or a list of individual numbers.

Geographic Number Portability Ordering System Specification

9.1 General Message Header

This Message Header will be included in all Messages between the CRDB and the connected parties.

MESSAGE NAME / FIELD	TYPE	COMMENT
Reference / Porting ID	M	YYYYMMDD+hhmmss+Participant ID+DN+ SeqNr Populated by the party that triggers the first Message in the process and used throughout that porting process. DN is the first DN in the range or list of numbers in the Port Request. SeqNr is an unique number populated by the SOAP interface
Transaction Time	M	Time of sending the Message (14 digit time stamp) YYYYMMDDhhmmss
Message ID	M	Message Type (OSS Message Number)
Sender of Message	M	Participant ID of the party sending the Message
Receiver of Message	M	Participant ID of the party receiving the Message
Port Application Form ID	O	For Internal Use Only

Note: The originator of a message will populate the Receiver of Message field with the Participant ID of the CRDB. The CRDB will replace the Receiver of Message field with the Participant ID of the destination of the message.

Note: The Header shall always be present for messages. For the CRDB Download Process and the Emergency Notification Process any dummy DN can be used.

9.2 Port Request and Activation Process

1. PORT REQUEST	TYPE	COMMENT
Recipient Network Routing Label	M	Routing Label (D000, D007)
Number (n) of DN Ranges	M	Number up to n
DNfrom 1 ()	M	International format 27+NDC+SN. For a range, this is the start of the range. For a single number this is the number.
DNto 1 (DN)	O	For a range it is the last number in the range (inclusive). For single number this is blank. International format 27+NDC+SN
DNfrom 2 (DN)	C	Start of second DN in list, only if first entry is not a range.
DNto 2 (DN)	C	End of second range or blank if second DN is a single number.
↓	C	Repetitive field
DNfrom n (DN)	C	Repetitive field
DNto n (DN)	C	Repetitive field
Account Number	M	Only one Account Nr per Port Request
Account Holder / Requestor Identification Number	C	Either identification or registration number required
Pre-paid / Post-paid	O	For Donor validation
Managed / Individual	M	Identification of port process to be used
Corporate Registration Number	C	Either identification or registration number required
Contact Person	C	If Managed then M
Contact Phone Number	C	If Managed then M
Change of Installation Address Transaction ID	O	In case of simultaneous installation address change – Address Change Transaction ID required

Geographic Number Portability Ordering System Specification

1. PORT REQUEST	TYPE	COMMENT
Comment 1	O	In case additional information is required
Comment 2	O	In case additional information is required

2. PORT REQUEST Spid	TYPE	COMMENT
Number (n) of DN Ranges	M	
DNfrom 1	M	See comment in message 1
DNto 1	O	See comment in message 1
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field

3. PORT RESPONSE Spid	TYPE	COMMENT
Participant ID	C	Id for the SP currently 'owning' the subscriber
Error Code	C	

4. PORT REQUEST	TYPE	COMMENT
<i>Same as Message 1</i>		

5. PORT RESPONSE	TYPE	COMMENT
Number (n) of DN Ranges	M	Number of original ranges requested
Number (m) of Accepted DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
Include Flag 1	M	Code to indicate Flag value 1 indicate request for DN Range 1 is authorised Flag value 0 indicate request for DN Range 1 is rejected
Reason Code 1	C	Reject Reason or Accept and move to Managed/Individual. Required only if Flag = 0
RICA flag 1	O	Flag to indicate if the Donor contains the information as required by the Regulation for Interception of Communications Act
↓	C	Repetitive field
DNfrom n	C	
DNto n	C	
Include Flag n	C	Code to indicate Flag value 1 indicate request for DN range n is authorised Flag value 0 indicate request for DN range n is rejected
Reason Code n	C	Reject Reason or Accept and move to Managed/Individual
RICA flag n	O	Flag to indicate if the Donor contains the information as required by the Regulation for Interception of Communications Act
Contact Person	C	If Managed then M
Contact Phone Number	C	If Managed then M

Geographic Number Portability Ordering System Specification

6. PORT RESPONSE	TYPE	COMMENT
Number (n) of DN Ranges	M	Number of original ranges requested
Number (m) of Accepted DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
Include Flag 1	M	Code to indicate Flag value 1 indicate request for DN Range 1 is authorised Flag value 0 indicate request for DN Range 1 is rejected
Reason Code 1	C	Reject Reason or Accept and move to Managed/Individual. Required only if Flag = 0
RICA flag 1	O	Flag to indicate if the Donor contains the information as required by the Regulation for Interception of Communications Act
↓	C	Repetitive field
DNfrom n	C	
DNto n	C	
Include Flag n	C	Code to indicate Flag value 1 indicate request for DN range n is authorised Flag value 0 indicate request for DN range n is rejected
Reason Code n	C	Reject Reason or Accept and move to Managed/Individual
RICA flag n	O	Flag to indicate if the Donor contains the information as required by the Regulation for Interception of Communications Act
Contact Person	C	If Managed then M
Contact Phone Number	C	If Managed then M
DNO	M	Donor Network Operator
DSP	M	Donor Service Provider

7. PORT NOTIFICATION	TYPE	COMMENT
Number (n) of DN Ranges	M	Number of original requested
Number (o) of DN Ranges ordered	M	
DNfrom 1	M	
DNto 1	O	
Include Flag 1	C	Flag value 1 indicate DN Range is ordered Flag value 0 indicate DN Range is declined
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field
Include Flag n	C	Flag value 1 indicate DN Range is ordered Flag value 0 indicate DN Range is declined
Port Date/Time	C	Field only populated when Ordered DN's is non-zero
Comment 1	O	In case additional information is required
Comment 2	O	In case additional information is required

Geographic Number Portability Ordering System Specification

8. PORT NOTIFICATION	TYPE	COMMENT
Same as Message 7		

9. PORT ACTIVATED	TYPE	COMMENT
Number (n) of DN Ranges	M	Number of original requested
Number (o) of DN Ranges ordered	M	
DNfrom 1	M	
DNto 1	O	
Include Flag 1	M	Flag value 1 indicate DN Range is activated Flag value 0 indicate DN Range is not activated
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field
Include Flag n	C	Flag value 1 indicate DN Range is activated Flag value 0 indicate DN Range is not activated

10. PORT ACTIVATED BROADCAST	TYPE	COMMENT
Donor Network	M	Donor Network Operator Participant ID. Must be inserted by the CRDB
Recipient Network Routing Label	M	Routing Label (D000, D007). Must be inserted by the CRDB.
Number (o) of DN Ranges	M	Number of activated DN Ranges - Consolidated
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom o	C	Repetitive field
DNto o	C	Repetitive field

11. PORT DEACTIVATED	TYPE	COMMENT
Number (o) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom o	C	Repetitive field
DNto o	C	Repetitive field

12. PORT DEACTIVATED	TYPE	COMMENT
Same as Message 11		

13. PORT ROUTING UPDATED	TYPE	COMMENT
Number (o) of DN Ranges	M	
DNfrom 1	M	

Geographic Number Portability Ordering System Specification

DNto 1	O	
↓	C	Repetitive field
DNfrom o	C	Repetitive field
DNto o	C	Repetitive field
ADDITIONAL MESSAGES		
<i>Messages 14 – 20 are not used but reserved for future use.</i>		

9.3 Port Cancellation Process

21. PORT CANCELLATION REQUEST	TYPE	COMMENT
Number (n) of DN Ranges	M	Number of original requested
Number (o) of DN Ranges ordered	M	Total number of DN Ranges ordered
Number (p) of DN Ranges cancelled	M	Total number of all DN Ranges cancelled
DNfrom 1	M	
DNto 1	O	
Include Flag 1	M	Flag value 1 indicate DN Range stays ordered Flag value 0 indicate DN Range is cancelled
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field
Include Flag n	C	Flag value 1 indicate DN stays ordered Flag value 0 indicate DN is cancelled
Port Cancellation Reason Code	M	For future usage (e.g. reporting issues)
Port Cancellation Reason Explanation	O	Free text (future usage)

22. PORT CANCELLATION REQUEST	TYPE	COMMENT
<i>Same as Message 21</i>		

ADDITIONAL MESSAGES		
<i>Messages 23 – 30 are not used but reserved for future use.</i>		

9.4 Port Reversal Process

31. PORT REVERSAL REQUEST	TYPE	COMMENT
Number (o) of DN Ranges	M	Same number as DN Range in Port Activated Broadcast message
Number (r) of DN Range to reverse	M	
DNfrom 1	M	
DNto 1	O	

Geographic Number Portability Ordering System Specification

31. PORT REVERSAL REQUEST	TYPE	COMMENT
Reversal Flag 1	M	Flag value 1 indicate DN Range is to be reversed Flag value 0 indicate DN Range is not to be reversed
↓	C	Repetitive field
DNfrom o	C	Repetitive field
DNto o	C	Repetitive field
Reversal Flag o	C	Flag value 1 indicate DN is to be reversed Flag value 0 indicate DN is not to be reversed
Port Reversal Reason Code	M	Reporting. Malicious, Fraudulent, Ported in Error, Other
Port Reversal Reason Explanation	O	Free text, 200 bytes (explanation if the code is other)

32. PORT REVERSAL REQUEST	TYPE	COMMENT
<i>Same as Message 31</i>		

33. PORT REVERSAL RESPONSE	TYPE	COMMENT
Response	M	Yes / No
Number (o) of DN Ranges	M	Same number as DN Range in Port Activated Broadcast message
Number (r) of DN Range to reverse	M	
DNfrom 1	M	
DNto 1	O	
Reversal Flag 1	M	Flag value 1 indicate DN Range is to be reversed Flag value 0 indicate DN Range is not to be reversed
↓	C	Repetitive field
DNfrom o	C	Repetitive field
DNto o	C	Repetitive field
Reversal Flag o	C	Flag value 1 indicate DN is to be reversed Flag value 0 indicate DN is not to be reversed
Port Reversal Reason Code	O	Description of why the response is not approved
Port Reversal Reason Explanation	O	Free text, 200 bytes (explanation if the code is other)

34. PORT REVERSAL RESPONSE	TYPE	COMMENT
<i>Same as Message 33</i>		

35. PORT REVERSAL ACTIVATED	TYPE	COMMENT
Number (o) of DN Ranges	M	
Number (r) of DN Range to reverse	M	
DNfrom 1	M	
DNto 1	O	
Reversal Flag 1	M	Flag value 1 indicate DN Range is to be reversed Flag value 0 indicate DN Range is not to be reversed
↓	C	Repetitive field

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35. PORT REVERSAL ACTIVATED	TYPE	COMMENT
DNfrom o	C	Repetitive field
DNto o	C	Repetitive field
Reversal Flag o	C	Flag value 1 indicate DN is to be reversed Flag value 0 indicate DN is not to be reversed

36. PORT REVERSAL ACTIVATED BROADCAST	TYPE	COMMENT
Recipient Network Operator	M	Recipient Network Operator Participant ID. Must be inserted by the CRDB.
Donor Network Routing Label	M	Routing Label (D000, D007). Must be inserted by the CRDB.
Number (r) of DN Ranges	M	Number of activated DN Ranges - Consolidated
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom r	C	Repetitive field
DNto r	C	Repetitive field

37. PORT REVERSAL DEACTIVATED	TYPE	COMMENT
Number (r) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom r	C	Repetitive field
DNto r	C	Repetitive field

38. PORT REVERSAL DEACTIVATED	TYPE	COMMENT
<i>Same as Message 37</i>		

39. PORT REVERSAL ROUTING UPDATED	TYPE	COMMENT
Number (r) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom r	C	Repetitive field
DNto r	C	Repetitive field

ADDITIONAL MESSAGES	TYPE	COMMENT
<i>Message 40 are not used but reserved for future use.</i>		

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9.5 Return to Block Operator Process

41. PORT RETURN NUMBER REQUEST	TYPE	COMMENT
Number (n) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field

42. PORT RETURN NUMBER REQUEST	TYPE	COMMENT
<i>Same as Message 41</i>		

43. PORT RETURN NUMBER RESPONSE	TYPE	COMMENT
Number (n) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field

44. PORT RETURN NUMBER BROADCAST	TYPE	COMMENT
Block NO	M	The Block Operator to whom the numbers are returned
Number (n) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field

45. PORT RETURN NUMBER ROUTING UPDATED	TYPE	COMMENT
Number (n) of DN Ranges	M	
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field

ADDITIONAL MESSAGES		

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Messages 46 – 50 are not used but reserved for future use.

9.6 CRDB Download Process

51. CRDB DOWNLOAD REQUEST	TYPE	COMMENT
Download type	M	Full or Delta download required
Start date and time	C	Mandatory if Delta download
End date and time	C	Mandatory if Delta download
Media type	M	For example FTP, CD, DVD etc

52. CRDB DOWNLOAD RESPONSE	TYPE	COMMENT
Date and Time	M	
Location/link	O	The link to the actual data if electronic or location where data can be collected.
Contact details	M	Person to be contacted regarding the collection of the data.

ADDITIONAL MESSAGES
Messages 53 – 80 are not used but reserved for future use.

9.7 Change of Installation Address Request

61. CHANGE OF INSTALLATION ADDRESS REQUEST	TYPE	COMMENT
Number (n) of DN Ranges	M	Number up to n If ranges are used, then only one range may be specified, ie n=1
DNfrom 1	M	
DNto 1	O	
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field
Installation address	M	Free text

62. CHANGE OF INSTALLATION ADDRESS REQUEST	TYPE	COMMENT
Same as Message 61		

63. CHANGE OF INSTALLATION ADDRESS RESPONSE	TYPE	COMMENT
Number (n) of DN Ranges	M	Number up to n
Number (m) of Accepted DN Ranges	M	
DNfrom 1	M	

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63. CHANGE OF INSTALLATION ADDRESS RESPONSE	TYPE	COMMENT
DNto 1	O	
Include Flag 1	M	Flag value 1 indicate Change of Installation Address accepted Flag value 0 indicate Change of Installation Address rejected
Reason Code 1	C	Reject Reason or Accept and move to Managed/Individual. Required only if Flag = 0
RICA flag 1	O	Flag to indicate if the Donor contains the information as required by the Regulation for Interception of Communications Act
↓	C	Repetitive field
DNfrom n	C	Repetitive field
DNto n	C	Repetitive field
Include Flag n	C	Flag value 1 indicate Change of Installation Address accepted Flag value 0 indicate Change of Installation Address rejected
Reason Code n	C	Reject Reason or Accept and move to Managed/Individual
RICA flag n	O	Flag to indicate if the Donor contains the information as required by the Regulation for Interception of Communications Act

64. CHANGE OF INSTALLATION ADDRESS RESPONSE	TYPE	COMMENT
<i>Same as Message 63</i>		

ADDITIONAL MESSAGES		
<i>Messages 65-69 are not used but reserved for future use.</i>		

9.8 Emergency Notification Process

81. EMERGENCY NOTIFICATION	TYPE	COMMENT
Problem Code	M	Routing, Authorisation (CRM) or Transmission
Problem Code Explanation	M	
Party experiencing problem	M	Participant ID

82. EMERGENCY NOTIFICATION BROADCAST	TYPE	COMMENT
Problem Code	M	Routing, Authorisation (CRM) or Transmission
Problem Code Explanation	M	
Party experiencing problem	M	Participant ID

83. RESTORE NOTIFICATION	TYPE	COMMENT
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83. RESTORE NOTIFICATION	TYPE	COMMENT
Party restored	M	Participant ID

84. RESTORE NOTIFICATION BROADCAST	TYPE	COMMENT
Party restored	M	Participant ID

ADDITIONAL MESSAGES		
<i>Messages 85 – 89 are not used but reserved for future use.</i>		

9.9 General Messages

98. TIMER VIOLATION MESSAGE	TYPE	COMMENT
Expected Message	M	Message Id
Time of expiration	M	Time when the timer expires

99. ERROR MESSAGE	TYPE	COMMENT
Error Code	M	
Error Explanation	M	
Message Type	C	

ADDITIONAL MESSAGES		
<i>Messages 90 – 97 are not used but reserved for future use.</i>		

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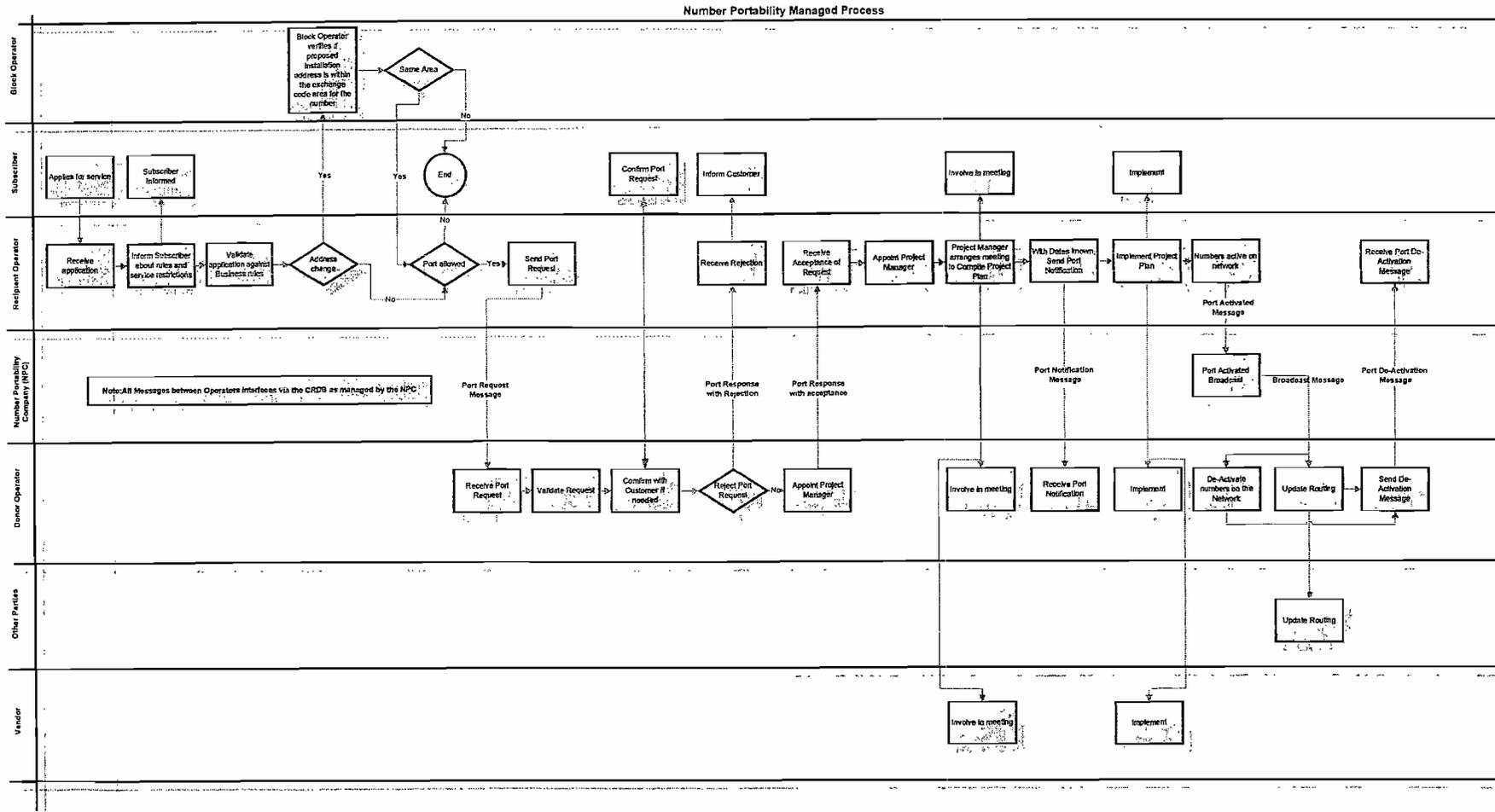


Figure 8

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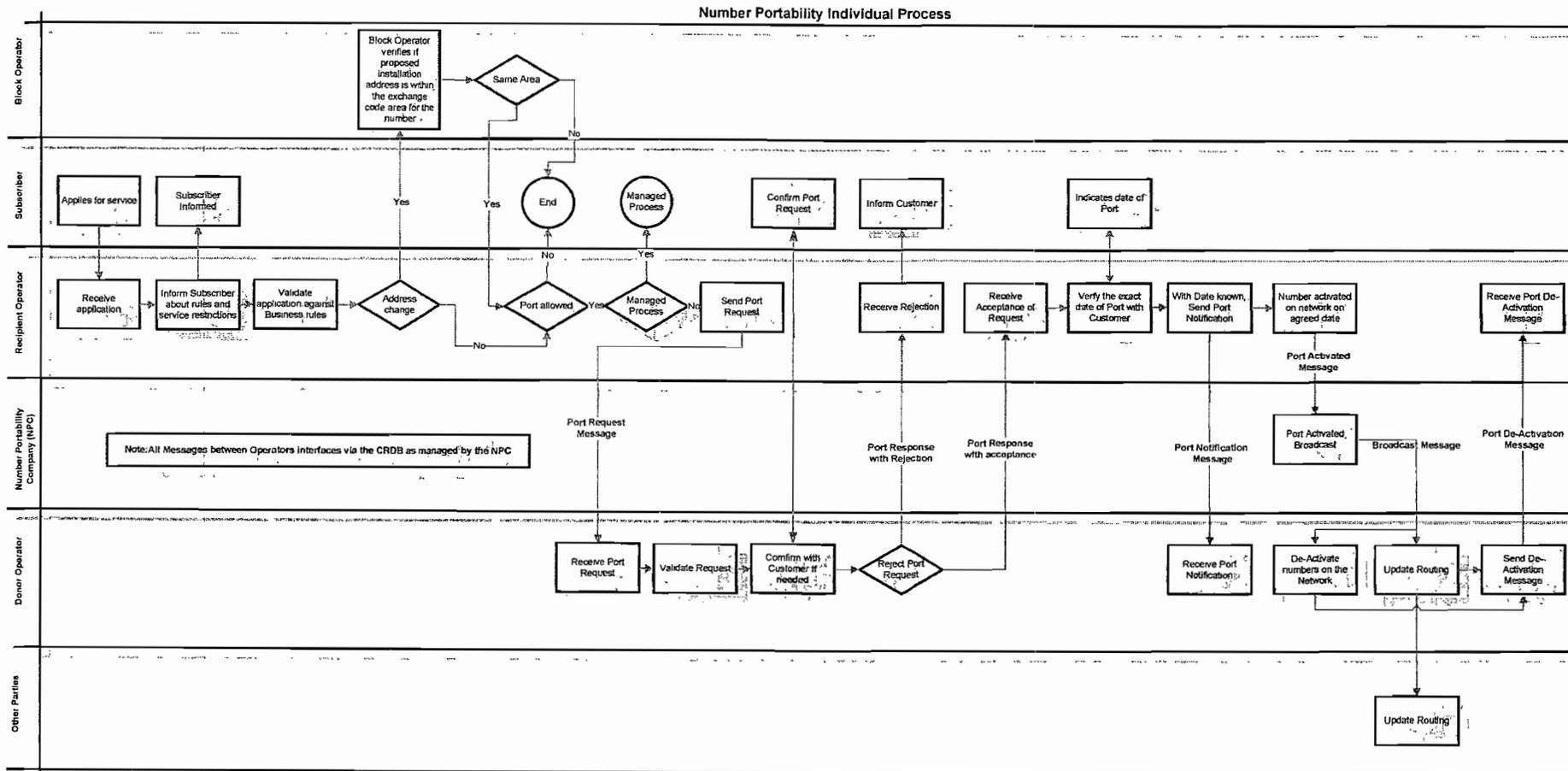


Figure 9

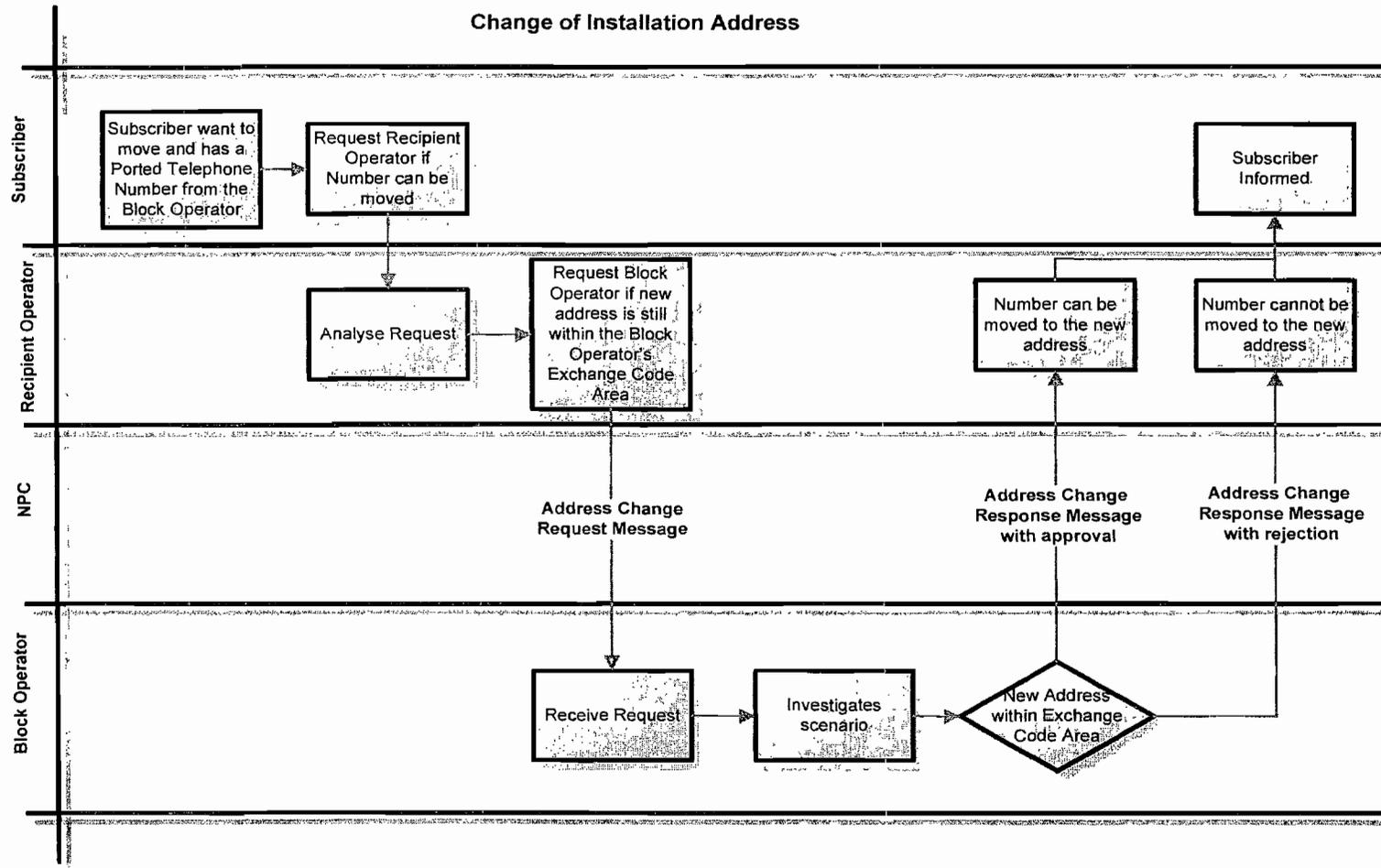


Figure 10