

BOX #	Name	Description
		necessary to determine why the transmission was not received by the OICP.
14B	Begin time tracking	If yes to "Rcvd trans. Confirm?" (Box 14), then the NICP initiates the time tracking mechanism that tracks the elapsed time during the Inter-carrier Communication Process.
15	Timer expired?	The box represents the on-going time tracking that occurs during the process.
15A	No action required	If the timer (Box 15) does not expire or if the timer ends due to the completion of the Inter-carrier Communication Process, then no action is required.
15B	Alarm received	If the timer does expire (Box 15) before the completion of the process then an alarm is sent to the NSP.
16	Contact OSP & resolve	The NSP initiates proprietary process to contact the OSP to determine why the Response has not been received within the proper time frame.
17	End timer	This box represents the portion of the time tracking mechanism whereby the timer is ended when the NICP receives a Response from the OSP.
18	Customer wants to continue?	This box represents the NSP proprietary process initiated with the customer when a Resolution Required Response Type for a porting telephone number is received from the OSP. This could include such things as verification of customer information or notification that the MDN is not a portable number.
	END	Represents the end of the Inter-carrier Communication Process.

4.3.2.2 Narrative for Process Flow

The process begins when a customer requests to port their telephone numbers to a new service provider. The NSP should gather the appropriate subscriber information to populate the Request. This includes obtaining an Authorization from the subscriber to initiate the porting process as required by company policy (Box 1). NSP should refer to the Data Elements for mandatory subscriber information.

The information gathered should be entered into the proper system, either an integrated POS or SOE system or directly into the NICP (Box 2). The data is edited and formatted according to the rules defined by the ICP (Box 3). If the edits fail, an error message will be returned to the point of data entry. The formatted record is stored and forwarded to the proper OSP based on a table of Company Code routing information (Box 4).

The OSP receives and stores the Request. The Request is passed to the OSP's B&CC system (Box 5). When the OICP receives a Request, a Confirmation of Receipt is issued back to the NICP (Box 15). Once the NICP receives the Confirmation, the Timer is started (Box 15B). If a receipt is not received within the defined time period, the NSP initiates a resolution process (Box 15A).

The OSP validates the subscriber information contained on the Request based on proprietary processes (Box 6). A decision is made to either Deny or Accept the Request (Box 7). If the Request is invalid, the OSP populates the proper fields to indicate a Denial Response to the NSP (Box 7A). If the Request is valid, the OSP populates the proper values for indicating an Accept Response (Box 7B). The data required to issue a Response can be entered through proprietary systems or directly into the OICP.

The OICP Edits and Formats the data (Box 8) according to the Data Dictionary. If the edits fail, an error message will be returned to the point of data entry. The formatted record is stored and forwarded to the proper NSP based on a table of Company Code routing information (Box 9).

BOX #	Name	Description
5A	Can validate within 30 mins?	Since the Request is a multi-line port, the OSP will determine if it is too complex to complete within the 30 minutes allowed. If no, then a Response (Box 7A) is sent indicating the need for more time.
6	Validate Request	Each porting telephone number within the Request is validated by the OSP. This can be a manual, semi-automatic or automatic procedure. (Note: the resulting Response could contain a mix of valid and invalid porting telephone numbers.)
7	Data valid for each number?	This box represents decisions based on the validity of each ported line number within the Request.
7A	Complete Response w/reasons & remarks	If no to "Data valid for each number" (Box 7) or no to "Can validate within 30 mins?" then the OSP prepares the Response with reasons and remarks as to why a ported line number is being denied. (Note: This Response could include a mix of valid and invalid ported line numbers.)
7B	Complete "Accept" Response	If yes to "Data valid for each telephone number" (Box 7), then the OSP prepares a Response that indicates acceptance for each ported line number.
8	Edit & format Response	The OICP edits the Response and formats the request into the proper record format. This Response was either fed into the OICP or manually entered directly into the OICP.
9	Store & transmit Response	The OICP stores the Response and then transmits it to the NSP according to the routing information
10	Rcvd transmit Confirm?	The OICP contains functionality that will verify the NICP receipt of the transmission of the Response. This is to ensure that transactions are complete between the NSP and the OSP. This box represents a decision based on whether or not the NICP sent a confirmation for the receipt of the transaction sent by the OSP.
10A	OSP resolution	If no to "Rcvd trans. Confirm?" (Box 10), then the OSP takes steps necessary to determine why the transmission was not received by the NICP.
10B	Continue porting process	If yes to "Rcvd trans. Confirm?" (Box 10), then the OSP continues with proprietary porting processes.
11	Response rcvd, edited & stored	The NICP receives the OSP Response, confirms that receipt back to the OICP, edits the Response and stores it.
12	Response type equals C?	This box represents a decision based on the type of Response received from the OSP. The Response can be either C = Confirmation, D = Delay or R = Resolution Required.
12A	Check reason code & remarks	If no, to "Response = C" (Box 12), the NSP will check for the reason code and remarks to determine the problem with the Request.
12B	Continue porting process	If yes to "Response = C" (Box 12) then the NSP will continue with their proprietary porting processes.
13	Response type equals D?	This box represents a check to determine if the Response Type was "D" for Delay.
13A	Reset Timer	If yes to Response Type of "D", then the timers are reset to reflect the delay.
13B	Resolve	If no to Box 13, then continue with a resolution process that the NSP will initiate if the OSP Denies the Request.
14	Rcvd trans. Confirm?	The NICP contains functionality that will verify the OICP receipt of the transmission of the Request. This is to ensure that transactions are complete between the NSP and the OSP. This box represents a decision based on whether or not the OICP sent a confirmation for the receipt of the transaction sent by the NSP.
14A	NSP resolution	If no to "Rcvd trans. Confirm?" (Box 14), then the NSP takes steps

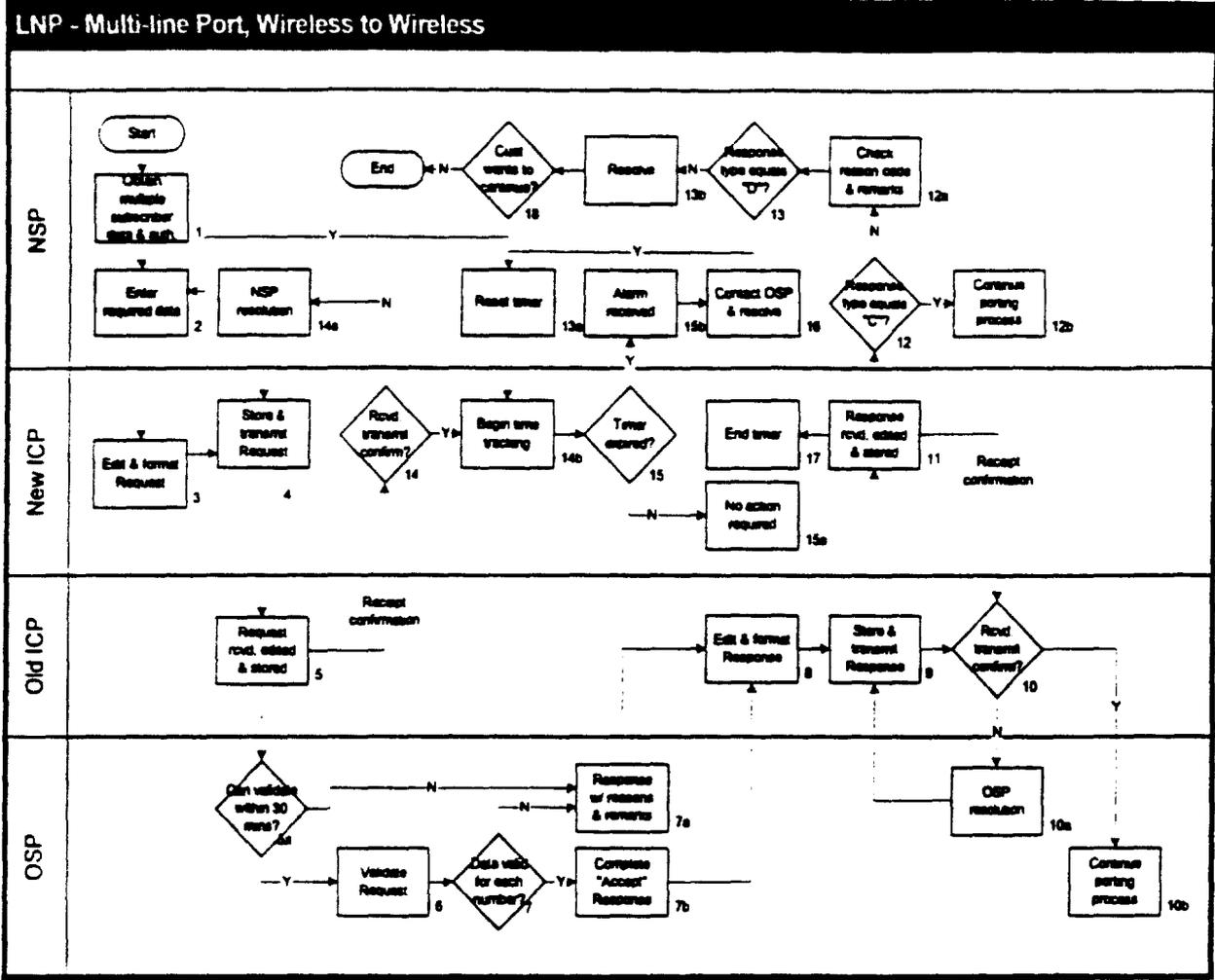


Figure 3 - Multi-Line Port, Wireless to Wireless

4.3.2.1 Detail Description of Process Boxes

BOX #	Name	Description
	Start	The Start Point in the Process Flow
1	Obtain multiple subscriber data & auth	The process of obtaining the multiple subscriber information and the authorization to port the numbers.
2	Enter required data	The multiple Subscriber information is entered into either the NSP's system and fed to the NICP or manually entered directly into the NICP.
3	Edit & format Request	The NICP edits the input and formats the Request into the proper record format.
4	Store & transmit request	The NICP stores the Request and then transmits it to the OSP according to the routing information.
5	Request rcvd, edited & stored	The Request is received by the OICP, edited for validity and stored within the OICP. Optionally, it can be forwarded to the OSP's internal systems.

The Receipt of the Response (Box 11) ends the Timer (Box 17) that was started when the NICP received the OICP confirmed receipt of the Request (Box 14B). If the Timer expires (Box 15) before the receipt of the Response, an alarm will be issued from the NICP and sent to the NSP (Box 15B). The NSP will then contact the OSP for resolution (Box 16). If the Timer is not expired, then no action is required (Box 15A).

The NSP reads the Response to determine if it has been confirmed, denied or is delayed (Box 12). If the Response is "C" for Confirmation, then the NSP interprets Response Type and the Reason Code (Box 12A). If the Response Type is "D" for Delay (Box 13), then the timer is reset to allow for the extra time requested by the OSP (Box 13A). If the Response Type is "R" for Resolution Required, then the NSP initiates a resolution process (Box 13B). Depending on the reason for the Deny, the NSP determines if the port request should continue (Box 18). The NSP can either end the port (END) or correct the information and resubmit the Request (Box 2). If the Response is confirmed, then the NSP continues with the porting process (Box 12B). The NSP should not start the NPAC process without receipt of a Confirmation Response from the OSP.

4.3.2 Multi-line Port Wireless to Wireless

The following sections define the process for a multi-line wireless to wireless report including the OSP options of either accepting or denying the Request. The shaded boxes represent the significant changes that differentiate the multi-line port from the single port.

Element	Description	Validation Description
	<p>NSP system</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values:</i> 1-99999</p>	
OLSP	<p>Old Local Service Provider – Service Provider ID (SPID) of the Old Service Provider. Identifies the Service Provider requesting the port.</p> <p><i>Record and Location</i> – Port Request – Field #2 Port Response – Field #2</p> <p><i>Derivation:</i> Assigned by NECA (National Exchange Carrier Association)</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values:</i> Valid SPID value</p>	4 position Alphanumeric
ONSP	<p>Old Network Service Provider – This information is used by the NSP in generating the subscription version create to the NPAC and to help the facility-based provider coordinate the port. A Reseller OSP must provide the ONSP Company Code as part of Response.</p> <p><i>Record and Location</i> – Port Response – Field #3</p> <p><i>Derivation:</i> Assigned by NECA (National Exchange Carrier Association).</p> <p><i>Conditions:</i> Mandatory on the OSP Response.</p> <p><i>Values:</i> Valid SPID value</p>	4 position Alphanumeric
PSWD/PIN	<p>Password/Pin Number – Indicates the customer's password or pin number specified on his/her account within the OSP's internal systems.</p> <p><i>Record and Location</i> – Port Request – Field #28</p> <p><i>Derivation:</i> NSP system</p> <p><i>Conditions:</i> Optional</p> <p><i>Values:</i> Alphanumeric values</p>	15 position Alphanumeric
PORTED#	<p>Porting Telephone Number – A single telephone number (TN) or range of consecutive TNs to be ported.</p>	17 position Alphanumeric

Element	Description	Validation Description
	<p><i>Record and Location</i> – Port Request – Field #32 Port Response – Field #19</p> <p><i>Derivation:</i> NSP system on the Request OSP populates from Request</p> <p><i>Conditions:</i> Conditional – Required for all Port Requests. Required for Port Responses when RT= C or R. Not required on the Responses when RT = D.</p> <p><i>Values: Alphanumeric values</i></p>	<p>NPA-NXX-L111-L222 Left justified, blank filled</p> <p>Examples: Single Telephone Number 409-696-1234</p> <p>Range of Consecutive Numbers 409-696-1000-1999</p>
RCODE	<p>Reason Code – Per each Porting Telephone Number (TN) or consecutive range of TNs, the OSP issue requiring resolution regarding a request to port. In addition, RCODE is used to provide an explanation when the Response Type is D for Delay.</p> <p><i>Record and Location</i> – Port Response – Field #20</p> <p><i>Derivation:</i> OSP system from valid Reason Codes</p> <p><i>Conditions:</i> Conditional – RT – Response Type is equal to R or D</p> <p><i>Values:</i> <i>Response Type = R</i> <i>1B = Scheduling/Work load</i> <i>1C = Network SP not ready</i> <i>1E = End user not ready</i> <i>1L = Frame Due Time cannot be met</i> <i>1M = Requested Due Date less than Published Interval</i> <i>1N = Due Date and time cannot be met</i> <i>1P = Other</i> <i>6A = MDN not found</i> <i>6B = Same new and old Network Provider</i> <i>6C = Customer information does not match</i> <i>6D = MDN not active</i> <i>6E = Due Date can't be met</i> <i>6F = Due Time can't be met</i> <i>Response Type = D</i> <i>6G = Port Complexity</i> <i>6H = System Outages</i> <i>6J = High Volume</i></p>	2 position Alphanumeric
RDET	<p>Reason Code Detail – For each RCODE, the OSP narrative detail as to why the portRequest requires resolution (Response Type = R) or is delayed (Response Type = D).</p> <p><i>Record and Location</i> – Port Response – Field #21</p> <p><i>Derivation:</i></p>	60 position Alphanumeric

Element	Description	Validation Description
	OSP system <i>Conditions:</i> Conditional – required when there is a RCODE <i>Values: Alphanumeric values</i>	
REMARKS	Remarks – This field may be used for comments by the NSP or OSP <i>Record and Location – Port Request – Field #34 Port Response – Field #22</i> <i>Derivation:</i> NSP system or OSP system <i>Conditions:</i> Conditional – Must be populated if Supplement Type has a value of “3” <i>Values: Alphanumeric values</i>	160 position Alphanumeric
REP	Representative - OSP Contact Representative for issues surrounding this port response. (same verbiage as NSP contact) <i>Record and Location – Port Response – Field #11</i> <i>Derivation:</i> OSP system <i>Conditions:</i> Mandatory <i>Values: Alphanumeric values</i>	15 position Alphanumeric
REQ_NO	Request Number – A unique number assigned by the New Service Provider’s ICP to track Requests generated by the system. It is the responsibility of the NSP to ensure that their corporate processes or their implementation of the ICP does not generate duplicate REQ NOs. <i>Record and Location – Port Request – Field #3 Port Response – Field #4</i> <i>Derivation:</i> System <i>Conditions:</i> Mandatory <i>Values: NSP Specific</i>	16 position Alphanumeric
RESP_NO	Response Number – Provided by the OSP on the Response and is mandatory on all NSP supplemental Requests. This number uniquely identifies the Response going back to the NSP. <i>Record and Location – Port Request – Field #7</i>	18 position Alphanumeric

Element	Description	Validation Description
	<p style="text-align: center;">Port Response – Field #9</p> <p><i>Derivation:</i> OSP's ICP system</p> <p><i>Conditions:</i> Conditional for NSP Initial Request. Must be provided on subsequent Requests Mandatory on OSP Response</p> <p><i>Values: Alphanumeric values</i></p>	
RT	<p>Response Type – Indicates to the NSP the type of response coming from the OSP. If all Porting Telephone Numbers within the Request have been accepted by the OSP then the Response Type would be C for Confirmation. If any Porting Telephone Numbers within the Request have been denied, then the Response Type would be R for Resolution Required. If the OSP can not validate the Request within the 30-minute guideline, then a Response with a Response Type of D for Delay is required.</p> <p><i>Record and Location – Port Response – Field #7</i></p> <p><i>Derivation:</i> OSP system</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values:</i> C = Confirmation D = Delay R = Resolution Required</p>	1 position Alpha
SSN	<p>Social Security Number – The SSN or Tax ID number of the end user. May be used to help identify the subscriber.</p> <p><i>Record and Location – Port Request – Field #26</i></p> <p><i>Derivation:</i> NSP system</p> <p><i>Conditions:</i> Optional</p> <p><i>Values: includes embedded dashes</i></p>	11 position Alphanumeric XXX-XX-XXXX XX-XXXXXXXX
STATE	<p>State – The Billing State for the subscriber</p> <p><i>Record and Location – Port Request – Field #24</i></p> <p><i>Derivation:</i> NSP system (perhaps postal abbreviations?)</p> <p><i>Conditions:</i></p>	35 position Alphanumeric

Element	Description	Validation Description
	<p>Mandatory</p> <p><i>Values:</i> Valid Postal Abbreviations for US and Canada</p>	
SUP	<p>Supplement Type – Indicates the type of Request from the NSP. It is used to indicate to the OSP a change in the type of the Request from the previous issuance.</p> <p><i>Record and Location</i> – Port Request – Field #5</p> <p><i>Derivation:</i> NSP System</p> <p><i>Conditions:</i> Conditional - on a Request being a supplement to the initial Request.</p> <p><i>Values: blank = initial Request</i> 1 = Cancel the Request 2 = New Due Date and/or Time 3 = Other – this value requires an entry in the Remarks field to specifically identify the changes.</p>	<p>1 position Numeric</p> <p>The SUP field is always blank on the initial Request</p>
TNQTY	<p>Telephone Number Quantity – Indicates the quantity of telephone numbers involved in the port request.</p> <p><i>Record and Location</i> – Port Request – Field #30 Port Response – Field #16</p> <p><i>Derivation:</i> NSP system populates on the Request OSP system populates from Request</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values: 1-999999</i></p>	<p>6 position Numeric</p>
TEL NO (IMPCON)	<p>Telephone Number – This is the telephone number for the Implementation Contact (IMPCON). It includes an extension.</p> <p><i>Record and Location</i> – Port Request – Field #19</p> <p><i>Derivation:</i> NSP system</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values: Number is embedded with dashes. NANP number with 4 position extension</i></p>	<p>17 position Alphanumeric</p> <p>NPA-NXX-LLLL-XXXX</p> <p>Left justify and blank fill extension.</p>
TEL NO (REP)	<p>OSP Contact Representative Telephone Number for issues surrounding this port request and response.</p>	<p>17 position Alphanumeric</p> <p>NPA-NXX-LLLL-XXXX</p>

Element	Description	Validation Description
	<p><i>Record and Location</i> – Port Request – Field #12</p> <p><i>Derivation:</i> OSP system</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values: Number is embedded with dashes. NANP number with a 4 position extension</i></p>	Left justify and blank fill extension
VER ID REQ	<p>Version Identification for the Request - It is used to identify subsequent issues related to the original port request.</p> <p><i>Record and Location</i> – Port Request – Field #4 Port Response – Field #5</p> <p><i>Derivation:</i> NSP System manages sequential numbering. OSP System uses Ver ID REQ from NSP Request.</p> <p><i>Conditions:</i> Conditional</p> <p><i>Values: No value on initial request from NSP. 01 – 99 – as additional updated Requests are sent from the NSP to the OSP.</i></p>	2 position Alphanumeric
VER ID RESP	<p>Version Identification for the Response - It is used to identify subsequent issues related to the original port request.</p> <p><i>Record and Location</i> – Port Response – Field #6</p> <p><i>Derivation:</i> OSP System manages sequential numbering.</p> <p><i>Conditions:</i> Conditional</p> <p><i>Values: No value on initial Response from OSP. 01 – 99 – as additional updated Responses are sent from the OSP to the NSP.</i></p>	3 position Alphanumeric
ZIP CODE	<p>ZIP Code – The Billing Postal Code for the subscriber</p> <p><i>Record and Location</i> – Port Request – Field #25</p> <p><i>Derivation:</i> NSP system</p> <p><i>Conditions:</i> Mandatory</p> <p><i>Values: Includes embedded dashes</i></p>	<p>10 position Alphanumeric</p> <p>xxxxx-xxxx for US</p> <p>xxxxxx - Canadian</p>

9 Glossary of Terms

Term/Acronym	Definition
AMPS	Advanced Mobile Phone System
ATIS	Alliance for Telecommunication Industry Solutions
B&CC	Billing & Customer Care
CC	Customer Care
CDMA	Code Division Multiple Access
CMRS	Commercial Mobile Radio Service
CTIA	Cellular Telecommunications Industry Association
EDI	Electronic Data Interface. A standard mechanized exchange of data. Standards developed at the national level.
FCC	Federal Communications Commission
FOC	Firm Order Commitment. A Service Provider returns an FOC in response to an initial LSR from another Provider. The FOC is the document or data structure used to either confirm that the information presented in the LSR is correct and accurate or to reject the LSR based on errors, omissions, or requests that cannot be met. In an LNP environment, the FOC is sent by the "losing" or "old" service provider back to the "requesting" or "new" service provider. If the recipient of the LSR is not the current provider of the requested TN's, then the LSR should be rejected.
GSM	Global System for Mobile Communication
ICP	Intercarrier Communication Process
IMSI	International Mobile Station Identifier. 15-digit, non-dialable identifier, specific to a service provider, and unique for each mobile station. Currently, the IMSI is used in GSM networks. It equates to the MIN in non-GSM networks.
LNP	Local Number Portability
LNPA_WG	Local Number Portability Administration Working Group
LRN	Location Routing Number. A 10 digit number that uniquely identifies a switch. Every ported subscriber's MDN is associated with an LRN. This number will be used to route a call to the ported subscriber. The number will point to the entry point switch to which the calls will be routed to for call completion.
LSMS	Local Service Management System
LSF	Local Service Provider
LSR	Local Service Request. An established document or data structure currently is use by the Wireline industry for the purpose of communicating between providers. The standard mechanized exchange is EDI. These are also manually exchanged by fax. Each service provider must agree with every other service provider individually as to what method of exchange will be used.
MDN	Mobile Directory Number - the 10 digit NANP number that is dialed to reach a specific terminal.
MIN	Mobile Identification Number - a 10 digit number used by the cellular network for the purpose of communication between the cellular switch and the cellular phone. This is the number that, along with the Electronic Serial Number (ESN), is programmed into the cellular phone. In the pre-LNP environment, the MIN and MDN are the same number. In the post-LNP environment, the MIN and MDN will be different for ported MDNs. The MIN and IMSI are referred to collectively as MSID (Mobile Subscriber Identity).
MSID	Mobile Station Identifier—either a MIN or IMSI will be used. This could be a 10 digit MIN in the NPA-NXX-XXXX format or an E.212 IMSI.
NAG	Number Advisory Group
NANC	North American Numbering Council
NANP	North American Numbering Plan

NECA	National Exchange Carrier Association
NICP	New Inter-carrier Communication Process
NP	Number Portability
NP DB	Number Portability Database
NPAC	Number Portability Administration Center. The porting database in the sky. AKA: RSMS (see for more info)
NPAC-SMS	Number Portability Administration Center Service Management System
NSP	New Service Provider
OBF	Ordering and Billing Forum
OICP	Old Inter-carrier Communication Process
OSP	Old Service Provider
OSS	Operations Support System
POS	Point of Sale or Point of Service
PSTN	Public Switched Telecommunications Network
RBOC	Regional Bell Operating Company
RFI	Request for information
RSMS	Regional Service Management System. The portability database in the sky. There is one RSMS per each of the seven regions. Companies formed LLCs to design & administer. Lockheed Martin is vendor for all seven.
SLA	Service Level Agreement
SMR	Specialized Mobile Radio
SMS	Short Message Service
SOA	Service Order Administration. The software that sits between a Billing/Customer Care SOE system and the NPAC that facilitates communication with the NPAC. Among other functions, it is the vehicle used to establish a ported number entry in the NPAC.
SOE	Service Order Entry. A focal point where requests from multiple users are funneled to pass to the SOA. This may be the billing/customer care system or another delivery point that would provide the funnel from multiple system(s) locations. This architecture needs to be designed.
TDMA	Time Division Multiple Access
TLDN	Temporary Local Directory Number
UTC	Universal Time Coordinated
WICSG	Wireless Inter-carrier Communication Sub-Group
WNP	Wireless Number Portability. Interchangeable with LNP, but often used when pointing out differences between the Landline and Wireless porting processes.
WSP	Wireless Service Provider

10 Version Control

Inter-carrier Communication Revision History

Version	Issue Date	Update Author	Section, Page(s), Revisions
1.0	12/23/99	Tracy Frank	First Draft to CTIA Number Advisory Group
1.1	01/07/00	Tracy Frank	Revisions per the CTIA Number Advisory Working Group.

			<ol style="list-style-type: none"> 1. Change to Response Type = J, now D for Delay. Additional verbiage to clarify when Response Type D can be used. Multiple sections modified. 2. Porting Process Flows modified to include representation of "Confirmation of Receipt" for Request and Response transactions. Sections 4.3.1 and 4.3.2 modified. 3. Clarification on Reseller Open Issue. Section 7 modified. 4. Clarification on Prepaid Open Issue. Section 7 modified. 5. Deletion of verbiage regarding unsubstantiated wireline porting problems. Section 3 modified. 6. Deletion of reference to a Letter of Authorization. Section 4.2.1 modified. 7. Additional OSP responsibilities added. Section 4.2.2 modified. 8. Numbering of RCODE values. Data Dictionary Modified. 9. Minor changes to correct spelling and grammar. Multiple sections modified.
2.0	3/06/00	Dunice Harrell	<p>Revisions per the CTIA Number Advisory Working Group and WICSG.</p> <ol style="list-style-type: none"> 1. Added PSWD/PIN field to Port Request Record. 2. Added TNQTY field to Port Request and Response Record. 3. Added ACCT field to Port Request Record. 4. Added ACCT, TNQTY and PSWD/PIN to Data Dictionary. 5. Modified LNUM description in Data Dictionary. 6. Modified NPQTY description in Data Dictionary. 7. Added NPQTY to Port Response Record. 8. Removed 3rd Open Issue (Wireless/Wireline). 9. Added statement regarding record retention. 10. Modified Requirements section. 11. Modified Goals section. 12. Added clarification to opening statement in Introduction section. 13. Modified Impacts and Responsibilities section. 14. Minor changes to correct spelling and grammar. Multiple sections modified.
2.1	4/7/00	Tracy Frank	Per CTIA Number Advisory Working Group and WICSG, added a new section 4.5 - Standard Communication

Appendix B

Wireless Number Portability Timeline Phase 2

Wireless Number Portability Timeline - Phase 2



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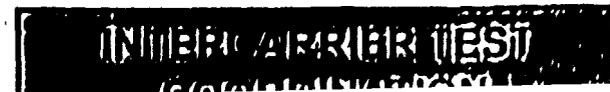
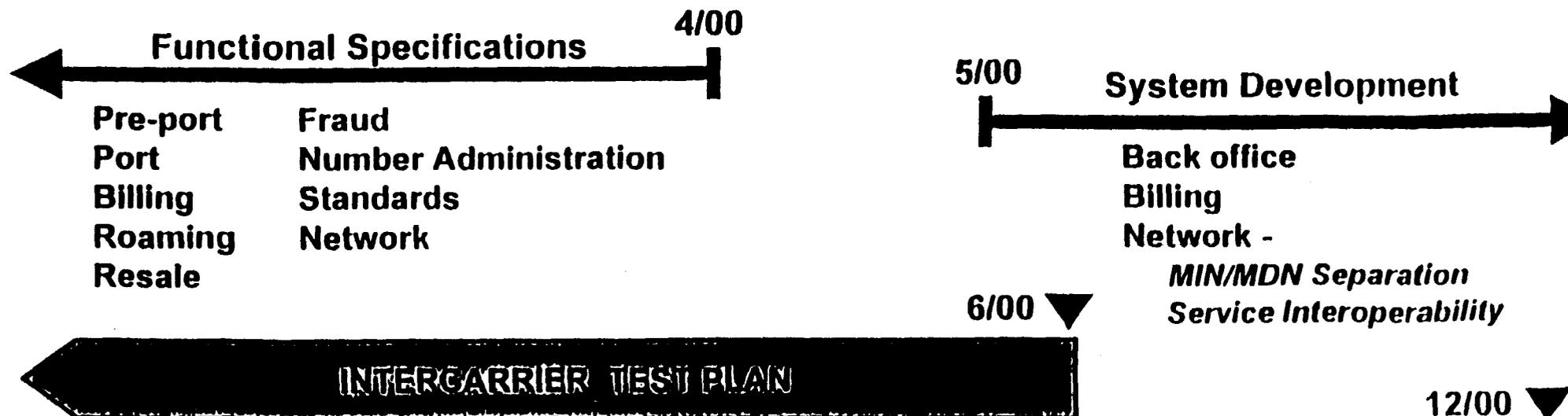
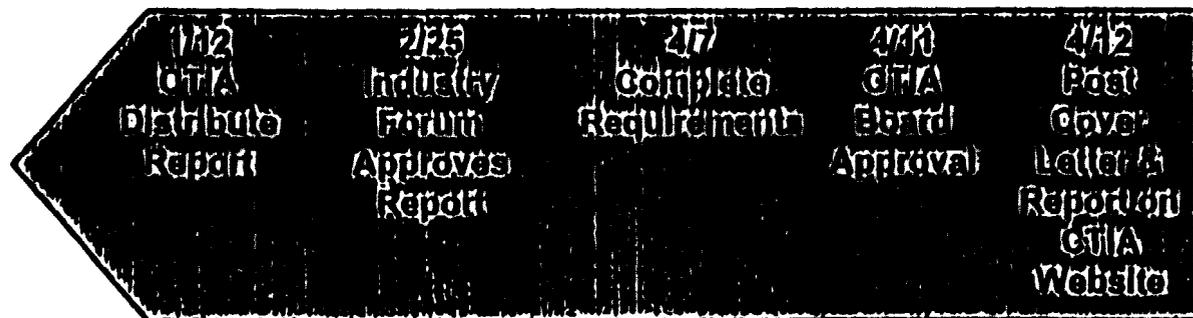
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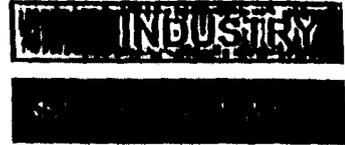
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INTERCARRIER COMMUNICATION PROCESS



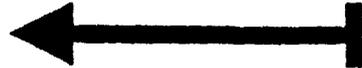
Wireless Number Portability Timeline - Phase 2



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DEVELOPMENT



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TESTING

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Back Office
Billing
Network

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NPAC TURN UP TESTING

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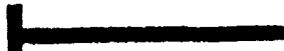
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INTERCARRIER TESTING LOGISTICS

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Wireless Number Portability Timeline - Phase 2

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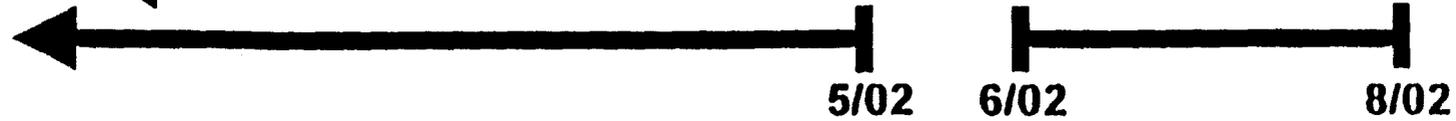
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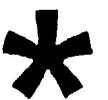
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**FINAL
ADJUSTMENTS**



11/24/2002

Appendix C
Wireless Wireline Integration Reports

North American Numbering Council

**Local Number Portability Administration
Working Group Report
on Wireless Wireline Integration**

May 8, 1998

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SECTION 1 EXECUTIVE SUMMARY

- 1.1 The LNPA Working Group (LNPAWG) prepared the Wireless Wireline Integration Report to address concerns regarding the implementation of number portability as delegated to the North American Numbering Council (NANC) by the Federal Communications Commission (FCC).
- 1.2 In the First Report and Order the Commission established rules mandating number portability for both LECs and CMRS providers. A separate timetable was established for CMRS providers, requiring them to implement service provider number portability by June 30, 1999.
- 1.3 Previous activities of the LNPAWG and associated Task Forces focused primarily on the wireline segment of the industry and subsequently published associated recommendations on April 25, 1997.
- 1.4 This report addresses the integration of LEC and CMRS provider number portability issues as well as wireless specific issues related to number portability.
- 1.5 In the Introduction (Section 2) the LNPAWG's responsibilities are discussed.
- 1.6 The activities of the Wireless Wireline Integration Task Force focused primarily on wireless wireline integration issues (Section 3). These issues included: 1.) Rate Center Issue; 2.) Request for service provider portability; and 3.) Provisioning.
- 1.7 Number portability has significant impacts in areas that are wireless specific. Section 4 addresses these issues including: 1.) The separation of the MIN and MDN; 2.) Roaming; 3.) Wireless E911; and 4.) Short messaging service.
- 1.8 Through the undertaking of the Wireless Wireline Integration Task Force, in its efforts to integrate wireless wireline processes, impacts to the existing LNP architecture were brought to light. Section 5 contains a description of the updates to the LNPA Architecture Task Force report, "Architecture & Administrative Plan for Local Number Portability". The full report, which has been updated to include CMRS provider number portability issues, is contained in Appendix C.
- 1.9 Section 6 contains the LNPA and Operational Requirements Task Force Report. In this section the NPAC SMS change management orders required to implement wireless number portability are detailed.

1.10 The LNPAWG Recommendations and Open Issues section (Section 7) details the recommendations developed in its efforts to integrate wireless and wireline number portability technical and operational processes. This section also identifies issues that will remain open at the submission of this report to the FCC.

1.11 Section 8 defines terms and acronyms used in the document.

SECTION 2 INTRODUCTION TO THE LNPAWG (WWTF)

2.1 Work Directives by the FCC.

2.1.1 On July 2, 1996, the FCC ordered all Local Exchange Carriers (LECs) to begin the phased deployment of a long term service provider Local Number Portability (LNP) method in the 100 largest Metropolitan Statistical Areas (MSAs) no later than October 1, 1997, and to complete deployment in those MSAs by December 31, 1998¹. The FCC further concluded that public interest is served by requiring the provision of number portability by Commercial Mobile Radio Services (CMRS) providers because number portability will promote competition between providers of local telephone service². Number portability is ordered when switching among wireline service providers as well as among broadband CMRS providers, even if the broadband CMRS and wireline service providers or the two (2) broadband CMRS providers are affiliated³. The FCC recognized that the wireline industry had already begun to develop the processes and systems necessary to provide number portability while the CMRS carriers had only begun to address number portability. Therefore, the LNP Order established a separate schedule for CMRS provider portability.

2.1.2 All cellular, broadband PCS, and covered SMR carriers are ordered to have the capability of querying appropriate number portability database systems in order to deliver calls from their networks to ported numbers anywhere in the country by December 31, 1998⁴.

¹ *First Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 95-116 (LNP Order). On March 11, 1997, the FCC released a *First Memorandum Opinion and Order on Reconsideration*, in which the LNP deployment periods for the first two (2) implementation phases were extended.

² *Id.* At ¶ 153.

³ *Id.* At ¶ 155.

⁴ *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd. 8352 (1996) ¶ 165.

All cellular, broadband PCS, and covered SMR carriers are ordered to offer service provider portability throughout their networks, including the ability to support roaming, by June 30, 1999⁴. Further, the FCC delegated authority to the Chief, Wireless Telecommunication Bureau, to waive or stay these dates, as deemed necessary to ensure the efficient development of number portability, for a period not to exceed nine (9) months⁵. A request for such relief was filed by the Cellular Telecommunications Industry Association (CTIA) in its November 24, 1997 Petition for Extension of Implementation Deadlines. In addition, on December 16, 1997 CTIA requested the FCC to abstain from enforcing the June 30, 1999 implementation deadline at least until the five (5) year buildout period for PCS carriers expires. These petitions are currently under consideration by the Chief, Wireless Telecommunication Bureau.

2.2 Accountability of the Wireless Wireline Integration Task Force to the LNPAWG. The FCC established the North American Numbering Council (NANC), a federal advisory committee, and directed NANC to make several specific determinations regarding the selection of LNPA vendors, the overall national architecture, and technical specifications for regional databases. The NANC established the LNPA Selection Working Group and two subgroups, including the LNPA Architecture Task Force, to review and make recommendations on these issues. The LNP Architecture Task Force developed the LNPA Architecture & Administrative Plan, which was forwarded to the FCC on May 1, 1997, as an attachment to the LNPA Selection Working Group Report. This report made recommendations concerning LNP architecture, including endorsing a regional LNPA structure. The report and attachments were released by the FCC for public comment followed by release of the LNP Second Report and Order in CC Docket No. 95-116, on July 27, 1997. In this order, the FCC adopted all of the recommendations made in the LNPA Selection Working Group Report, including those contained in the LNP Architecture & Administrative Plan. These recommendations included selection of LNPA vendors by region, the process used to make these selections, the specific duties of the LNPAs, the geographic coverage of the regional databases, and adoption of technical standards.

2.3 Future Role of the LNPA Working Group. Section 7, Future Role, of the LNPA Selection Working Group Report outlined seven (7) areas

⁴ First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 95-116 (LNP Order)

⁵ 166

16 A: ¶ 167

relating to future LNP implementation activities, including integration of wireless in LNP. This was necessary as the original report was developed from a wireline only perspective. In June 1997, the LNPA Working Group established a subgroup to develop a work plan for accomplishing the integration of wireless into LNP, as well as to address several other of the areas defined in the Future Roles section of the report. This activity lead to the formation of the Wireless and Wireline Integration Task Force (WWITF). The WWITF, which is opened to all parties and is representative of all segments of the telecommunications industry, was chartered to make recommendations on the following areas from the FCC's Second Report and Order.

- 2.3.1 Modifications to the NANC Functional Requirements Specifications (FRS), which defines the requirements for the NPAC/SMS, as necessary, to support wireless number portability⁸.
- 2.3.2 Modifications to the NANC Interoperability Specifications (IIS), which defines the requirements for the mechanized interfaces with the Number Portability Administration Center (NPAC) Service Management System (SMS), as necessary, to support wireless number portability⁹.
- 2.3.3 Monitor industry efforts to develop technical solutions for implementing wireless number portability⁹.
- 2.3.4 Develop wireless recommendations to the FCC no later than nine (9) months after release of the Second Report and Order (i.e., May 18, 1998)¹⁰.

SECTION 3 WIRELESS WIRELINE INTEGRATION ISSUES

3.1 Rate Center Issue

- 3.1.1 Issue: Differences exist between the local serving areas of wireless and wireline carriers. These differences impact Service Provider portability with respect to porting both to and from wireline and wireless service providers. These differences, resulting in an impact called "disparity", exist with the current architecture, making it impossible for some wireless subscribers to port to

⁸ Second Report and Order in CC Docket No. 95-166, ¶ 61.

⁹ Id. At ¶ 64.

¹⁰ Id. At ¶ 92.

¹¹ Id. At ¶ 91.