Course Snapshot

For LNP Basics

About this "Snapshot"

The LNP Basics class was developed as a Web based training course. This snapshot has been prepared from the web-based material for students who do not have access to the AT&T Wireless Web space. It is highly recommended that students take this course online and use the LNP Basics Reference Document to review course topics.

Welcome to LNP Basics

This class presents a brief overview of Local Number Portability (LNP) at AT&T Wireless. You do not need any technical knowledge of wireless telephony to benefit from this class. This class is intended for all AT&T Wireless employees. Whether you are a new employee or an experienced manager or executive, this class is intended as the basic foundation for an understanding of LNP.

What is LNP?

Local Number Portability (LNP) is a process mandated by the Federal Communications Commission (FCC). It provides customers with the ability to retain their existing local dialable numbers when switching from one local service provider to another, within the same service area.

In 1996 Congress modified the Telecommunications Act to promote competition and reduce regulation in all telecommunications markets. Before that time, a major barrier to competition was the inability of customers to keep their dialable numbers when they switched from one telephone company to another. Congress directed local telephone companies to offer "telephone number portability."

AT&T Wireless is in the process of working with other wireless service providers, as well as landline service providers, to develop the capability of providing this kind of number portability.

Before LNP

1. Subscriber receives service from service provider A.

2. Service provider B makes an offer to the subscriber.

3. Subscriber wants to change service.

4. Subscriber moves to new service provider.

5. Subscriber gives up existing dialable numbers.

6. Subscriber receives new dialable numbers.

Service Provider A

Dialable Numbers: XXX-222-1234
XXX-222-1235
XXX-222-1236

End result to subscriber.

Must Change Dialable Numbers

Service Provider B

Dialable Numbers: XXX-444-1234
XXX-444-1235
XXX-444-1236

After LNP

1. Subscriber receives service from service provider A.

2. Service provider B makes an offer to the subscriber.

3. Subscriber wants to change service.

4. Subscriber moves to new service provider.

5. Subscriber's dialable numbers move to new carrier.

5. Subscriber's dialable numbers remain the same.

Service Provider A

Dialable Numbers: XXX-222-1234
XXX-222-1235
XXX-222-1236

End result to subscriber.

Dialable Numbers Unchanged

Service Provider B

Dialable Numbers: XXX-222-1234
XXX-222-1235
XXX-222-1236

If you remain in the same local calling area, you may be able to keep the same dialable number indefinitely, no matter how often you change your service provider.

Knowledge Check* 1

see the answer key at the end of the document for the correct responses.

1.   (T/F) Local Number Portability is an AT&T Initiative:

   a.   TRUE

   b.   FALSE

2.   Local Number portability provides customers with the ability to:

   a.   Retain their existing local dialable numbers when switching from one local service provider to another, within the same service area.

   b.   Retain their existing local dialable numbers when switching from one local service provider to another, in any service area.

   c.   Change their local dialable numbers whenever they want to have a new number.

   d.   Give their local dialable number to another party without incurring a service charge.

3. In what year did the FCC extend the goal of LNP to wireless service providers:

   a.   1984

   b.   1996

   c.   1999

   d.   2002

Why Implement LNP

Local Number Portability (LNP) has been mandated by the FCC for both wireless and wireline service providers. It is not an optional program. Service providers have applied for, and received, extensions in the original timetable for compliance, due to unexpected technical complications.

The implementation of LNP has many far-reaching effects. This topic summarizes some of the more important effects to AT&T Wireless and the wireless industry as a whole.

Industry Impacts

The impacts of Local Number Portability (LNP) go beyond AT&T Wireless:

- LNP affects all domestic wireless service providers in the top 100 MSAs. The FCC extended the compliance date to November 2003 in order to allow providers to comply fully with the LNP provisions.

- It will no longer be possible to route calls or identify a subscriber's service provider from the dialable number assigned to their telephone.

- LNP forces operational interactions between wireline and wireless industries, which are governed at different levels. Wireline service providers are governed by state public utilities commissions (PUCs), while wireless service providers are governed by the FCC.

- The LNP Implementation is occurring at the industry's busiest retail season.

Business Impacts

Local Number Portability (LNP) changes how we interact with our customers:

- There is no opportunity to "save" customers at time of cancellation. In some cases, the first notice we receive for a cancellation is notification from the new service provider (NSP).

- There is the potential for a temporary increase in churn as customers learn that they can keep their dialable numbers while changing service providers.

- Activation processes for porting-in customers will change for all points of sale, which may result in longer activation processing times. LNP lengthens the sales acquisition and activation processes for all service providers.

- Porting processes are not completely in the control of AT&T Wireless. Because many ports are coordinated with other service providers, AT&T Wireless must coordinate and accommodate the policies and procedures of other providers.

- Data Structures, Activation, Billing, Roaming and Reporting systems must be modified to comply with the LNP mandated requirements.

> The business impacts of LNP are shared by all service providers equally. The results of LNP to AT&T Wireless depend on our committment to quality and to serving the customers' needs efficiently and effectively.

Digital Service* Impacts

Digital Service is the preferred term for TDMA networks.

The following equipment, system and network changes have already been implemented in support of LNP processes.

- The Mobile Identification Number (MIN) has been separated into two components called the Mobile Dialable Number (MDN) and Mobile Subscriber Identifier-Mobile Identification Number (MSID-MIN). Digital customers now have two numbers associated with their service instead of one. The MDN is referred to as the dialable number and the MSID-MIN is referred to as the Network Routing Number (NRN).

- Device Programming processes have changed to support programming of the MSID-MIN instead of the MIN into the numeric address module (NAM). All TDMA devices must now be programmed with the customer's assigned MSID-MIN in order to register with the wireless network and use their services.

- Nokia and Motorola have added an additional field in NAM programming labeled as MDN. This enables us to manually program both the MDN and MSID-MIN into the customer's device.

General Impacts

Local Number Portability (LNP) is an ongoing process. The following equipment, system or network changes have already been implemented for the top 100 metropolitan service areas (MSA) in support of LNP processes.

1996   FCC Mandates LNP compliance dates: In 1996 Congress modified the Telecommunications Act to promote competition and reduce regulation in all telecommunications markets. Before that time, a major barrier to competition was the inability of customers to switch from one service provider to another while retaining the same dialable number. Congress directed local providers to offer "telephone number portability."

2002   Thousands Block Number Pooling (TBNP)*: AT&T Wireless successfully implemented the Thousands Block Number Pooling program, to aid in the conservation of numbering resources. Instead of assignment of ranges of 10,000 dialable numbers to one service provider, number assignments will be done in thousand number increments.

Intra-Company Porting: AT&T Wireless began the intra-company porting process of assigning location routing numbers (LRNs) to dialable numbers while not interrupting the existing customer's service to support the TBNP mandate.

* 1000 Block: An allocated block of 1000 dialable numbers assigned for use to AT&T Wireless from the Number Pooling Administrator.

2003   LRN Assignment: A location routing number (LRN) identifies the new home MSC on which a customer's dialable number is serviced. For all customers whose number fell into a pooled block range or to support technology migration, an LRN is associated with their dialable number for call routing purposes. LRN's could be associated with both Digital and Next Generation dialable numbers.

Local Number Portability: Mandate states carriers must support LNP within top 100 Metropolitan Statistical Areas (MSAs) on November 24th, 2003. Local Number Portability begins. All network elements and business systems must support LNP architecture.

Knowledge Check* 2

see the answer key at the end of the document for the correct responses.

1. T/F) An AT&T Wireless customer must contact us before they can change service providers:

    a. TRUE

    b. FALSE

2. One major business impact of LNP is:

    a. The expense burden to AT&T Wireless because other service providers do not have to comply with LNP.

    b. Potential for a temporary increase in churn as customers learn they can keep their old dialable numbers when changing service providers.

    c. Upgrading AT&T Wireless systems to accommodate a sudden increase in customers.

    d. There are no significant business impact from LNP.

3. All Digital Service devices must now be programmed with the customer assigned:

    a. MIN in order to register with the wireless network and use their services.

    b. NAM in order to register with the wireless network and use their services.

    c. MSID-MIN in order to register with the wireless network and use their services.

    d. SSN in order to register with the wireless network and use their services.

4. LNP is being implemented:

    a. Simultaneously world-wide.

    b. After careful industry preparation and consultation with customers.

    c. During the traditionally slack period for retail sales.

    d. During the industry's busiest retail season.

The LNP Process

Local Number Portability (LNP) operations can be divided into:

- A port-in (customers coming from other service providers)
- A port-out (customers going to other service providers)

There are several different kinds of porting. Understanding the different kinds of porting is important to setting customer expectations for the LNP process.

Port-in

The following process identifies the main steps in setting up a new AT&T Wireless account for a customer who wishes to retain the dialable number they had with their old service provider (OSP). To do this, you would:

- Verify customer eligibility.
- Perform financial eligibility check.
- Initiate port request.
- Activate the customer's account.
- Inform the customer of the time anticipated to make the changeover.

When the port request is performed, the customer data is transmitted to the OSP for verification.

It normally takes less than half an hour to verify the eligibility of the customer's dialable number to be ported. Then, to complete the request takes another three hours.

For landline-to-wireless ports, the customer should anticipate a minimum of four business days before the port process is complete.

After activation, but while the port process is incomplete, the customer can make outbound calls through AT&T Wireless, but their inbound calls are routed to their old service provider (OSP). This can affect call backs from e911 operators during this partial service period.

Port-out

If an AT&T Wireless customer moves to a new service provider (NSP) and asks to transfer their number to this NSP, then:

- AT&T Wireless receives a request from the new service provider.

- The customer information received is validated against our records.

- AT&T Wireless confirms the customer information with the NSP.

- AT&T Wireless receives a confirmation that the port is complete.

- AT&T Wireless cancels the customer's service.

If the request is received from a non-automated NSP (via fax), the Porting Administration Group (PAG) manually processes the customer information and responds to the NSP via fax.

It is very important that the port-out process be handled efficiently and promptly. In some cases, this will be the last direct contact that the customer may have with AT&T Wireless for a long period. It is important that they recall it as a positive experience so that in the future they will look forward to returning to AT&T Wireless service.

Single vs. Multi-line Ports

Single Ports

A single port represents a single line.

Notice that you can port from any local number to any local number; it does not matter whether that number is wireless or landline. However, only wireless-to-wireless ports are considered simple ports.

Multi-line Ports

A multi-line port is one that includes any of the following:

- multiple number of lines

- multiple service providers

- non-consecutive numbers

These are more difficult to complete and require negotiation and coordination between the old and new service providers. For a variety of reasons, the porting of multiple lines requires much more preparation and configuration.

Intera- vs. Inter- Carrier Ports

Intra-carrier

An intra-carrier port transfers the dialable number within the same service provider's service networks. Typically, intra-carrier ports are associated with moving a customer from a 2G Digital (2G) to a Next Generation (2.5G) network, or vice versa.

Inter-carrier Ports

An inter-carrier port transfers a dialable number from service provider A to service provider B. This would happen when a customer of another wireless provider changed to AT&T Wireless and retained their dialable number from the old service provider (OSP) or when an AT&T Wireless customer transfers to another service provider.

Knowledge Check* 3

see the answer key at the end of the document for the correct responses.

1. One When a customer activates a new AT&T Wireless service and keeps the same dialable number, this is:

    a.   A multi-line port-out.

    b.   A single port-in

    c.   A single port-out

    d.   A multi-line port-in

2. A mulit-line port involves:

    a.   Multiple lines.

    b.   Multiple service providers.

    c.   Non-consecutive numbers.

    d.   All of the above.

3. An inter-carrier port:

    a.   Transfers the customer's dialable number to AT&T Wireless

    b.   Transfers the customer's dialable number from the 2G to the 3G network.

    c.   Transfers the customer's balance to the new service provider.

    d.   Transfer a customer's dialable number from one service provider to a different service provider.

4. When a customer moves to a new state and changes service providers, this is:

    a.   A single port-out.

    b.   A multiple-line port-in.

    c.   Not LNP.

    d.   A single port-in.

Implementing LNP

Implementing Local Number Portability (LNP) is not a simple process and requires the use of several tools. Few employees will use all these applications to perform their job functions, but an understanding of all these applications is important in understanding how the activation process has been affected by LNP.

LNP Applications

The following applications are used for Local Number Portability (LNP) porting:

- **POET:** Porting and Offer Eligibility Tool
  POET includes the existing OREA Tool. It is a new tool, which different groups will access in different ways.

- **PIT:** Port Initiation Tool
  The PIT is a new tool used to implement the porting process.

- **Nightfire**
  Nightfire is the Inter-Carrier Communications System.

- **OrderPath**
  OrderPath communicates directly with the Number Portability Administration Center (NPAC) to manage orders for porting requests, until they are completed.

POET: Porting and Offer Eligibility Tool

The POET includes the existing OREA Tool. The POET is used to determine port-in eligibility and the offers a customer is eligible to receive. The POET queries can be done using the dialable number (returns port-in eligibility only) or the zip code (returns offer eligibility only) or by using both the dialable number and the zip code (returns both port-in and offer eligibility information). The POET provides the following specific details:

- Whether the MDN is eligible to port-in.
- Whether the MDN can port-in to the Digital network.
- If eligible to port-in to the Digital network, the Digital usage area and market information.
- Whether the MDN can port-in to the Next Generation network.
- If eligible to port-in to the Next Generation network, the Customer Subscriber Area (CSA), Usage Area and Next Generation market information.

Many different organizations use the POET to determine eligibility. Check with your manager to determine whether your team will be using this application.

Which applications you receive training on and use depends upon your organization. Very few organizations use all of these applications.

PIT: Port Initiation Tool

The PIT is used to capture the required customer information needed to initiate a port-in and start the activation process for a potential customer. The PIT is a new tool which different groups will access in different ways.

The PIT has two levels of access:

- **View only mode** - allows users to access information, but does not permit editing or insertion of information.

- **Order entry mode** - allows users full control to access and modify information.

Users are granted access rights needed to perform the functions assigned to them. Many different organizations use the PIT to capture customer information. Check with your manager to determine whether your team will be using this application.

Nightfire Inter-Carrier Communications System:

This application:

- Receives the port-in requests from the PIT.

- Sends the information to the customer's old service provider (OSP) for validation.

- Receives port-out requests from other service providers when a customer requests to port their AT&T Wireless dialable number to another service provider.

This system is used primarily by the AT&T Wireless Porting Administration Group (PAG). Check with your manager to determine whether your team will be using this application.

OrderPath: Service Order Administration (SOA) System

OrderPath communicates directly with the Number Portability Administration Center (NPAC) to manage orders for port requests.

OrderPath is used by the AT&T Wireless Porting Administration Group (PAG) to troubleshoot port-in and port-out statuses, and Location Routing Number (LRN) Assignment along with any errors generated that must be resolved before the port-in process can be completed.

The PIT can be used to check the status of a port, but OrderPath is needed to determine why a given order is not progressing as expected.

Knowledge Check* 4

see the answer key at the end of the document for the correct responses.

1.   The application that determines the eligibility of a customer's number for LNP is:

   a.   OrderPath

   b.   Nightfire

   c.   PIT

   d.   POET

2.   The Nightfire application is:

   a.   An inter-carrier communication system.

   b.   A port configuration system.

   c.   A number eligibility application.

   d.   All of the above.

3.   The PIT application is used to gather:

   a.   OREA information.

   b.   Customer information.

   c.   Rate information.

   d.   Account statistics.

4.   One of the chief functions of OrderPath is:

   a.   Entering customer account information.

   b.   Troubleshooting

   c.   Entering service level changes.

   d.   Skip tracing delinquent customers.

Answer Key

Knowledge Check 1

Q1   False   Local Number Portability is mandated by the FCC and is not an AT&T Wireless initiative.

Q2   b.   Local Number Portability allows customers to retain their existing local dialable numbers when switching from one local service provider to another, within the same service area.

Q3   b.   The FCC mandated LNP in 1996.

Knowledge Check 2

Q1   False   The customer does not need to contact AT&T Wireless before changing service providers.

Q2   b.   There is the potential for a temporary increase in churn as customers learn they can keep their old dialable numbers when changing service providers.

Q3   c.   MSID-MIN must be programmed into digital service devices in order to register with the wireless network and use their services.

Q4   d.   LNP is being implemented during the industry's busiest retail season.

Knowledge Check 3

Q1   b.   This is a single port-in.

Q2   d.   A multi-line port can include any or all of the above.

Q3   d.   An inter-carrier port transfers a customer's dialable number from one service provider to a different service provider (not just AT&T Wireless).

Q4   c.   This is not LNP. LNP involves only local numbers.

Knowledge Check 4

Q1   d.   POET: Porting and Offers Eligibility Tool.

Q2   a.   Nightfire Inter-Carrier Communications System.

Q3   b.   The PIT is used to gather customer information.

Q4   b.   One of the chief functions of OrderPath is troubleshooting.