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October 27, 1997

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**EX PARTE**

William F. Caton  
Acting Secretary  
Federal Communications Commission  
Mail Stop 1170  
1919 M Street, N.W. , Room 222  
Washington, D.C. 20554

RECEIVED

OCT 27 1997

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Dear Mr. Caton:

Re: CC Docket No. 95-116, Number Portability; CC Docket No. 94-102, E911

On Friday, October 24, Bruce Beard, Senior Counsel, Southwestern Bell Mobile Systems, Betsey Granger, Senior Attorney, Pacific Bell Mobile Systems, Chuck Bailey, Director – Standards, Southwestern Bell Technology Resources, and I discussed the issues summarized in the attached outline with: Rosalind K. Allen, Deputy Chief and Jeanine Poltronieri, Associate Chief, of the Wireless Telecommunications Bureau; with A. Richard Metzger, Jr., Acting Chief, Blaise A. Scinto, Assistant to the Chief, Common Carrier Bureau, and Kyle D. Dixon and Steven N. Teplitz of the Policy and Program Planning Division, Common Carrier Bureau; and with Christopher J. Wright, Deputy General Counsel, and Stewart Block, attorney, Office of General Counsel. We also discussed the relationship of number portability and E911 requirements with Ms. Allen and Ms. Poltronieri. We are submitting two copies of this notice in accordance with the Commission's rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions.

Sincerely,

  
Attachment

- cc: R. Allen
- S. Block
- K. Dixon
- A.R. Metzger
- J. Poltronieri
- B. Scinto
- S. Teplitz
- C. Wright



# WIRELESS NUMBER PORTABILITY

SOUTHWESTERN BELL MOBILE SYSTEMS,  
INC.

OCTOBER 24, 1997

EX PARTE PRESENTATION

## Implementation Issues for Wireless Number Portability Require More Time to Solve

- Necessary equipment needs to be developed and tested
- Billing Questions remain--Wireless to Wireline; Roaming
- Roaming Issues are Extremely Complex
- How to effectuate Wireless-Wireline porting has not been worked out

## Wireless Number Portability Vs. Affordable Wireless Service & Nationwide Seamless Roaming

- Roaming is the ability for a subscriber of one CMRS provider to place and receiving calls on the network of another CMRS provider with whom the subscriber has no preexisting service or financial relationship
- Commission has declared that **“Roaming is an increasingly important feature of mobile telephone communications. It is one of the attributes that prominently sets mobile telephony apart from landline service. . . We conclude that we should take any steps necessary to support roaming.”** CC Docket 94-54, Second Notice of Proposed Rule Making

## Wireless Number Portability Vs. Affordable Wireless Service & Nationwide Seamless Roaming

- Implementation of Wireless Number Portability will have a drastic affect on Seamless Roaming
- Roaming system today relies on the ability to match NPA-NXX combination to a specific wireless carrier
- Wireless Number Portability destroys the roaming process efficiencies associated with being able to rely on a single NPA/NXX or specific block of numbers being assigned to a specific carrier
- Understanding the impact of number portability on roaming requires a basic primer of how roaming works

## Roaming

- Telephone number consists of 10 digits (NPA-NXX-XXXX)
- Cellular telephone emits its ten digit phone number assigned by the carrier it has service with (i.e..... Home Carrier) and the unique electronic serial number of the phone
- MIN/ESN combination is used for validation, billing and routing purposes
- Home Carrier informs its “roaming partners” of the various NPA/NXX codes it has been assigned--Roaming Partner programs such information in its switch

## Roaming

- NPA/NXX is used by the Serving Carrier (Visited Market) to validate that subscriber is from roaming partner
- NPA/NXX used to determine appropriate system ID or SID and BID assigned to Home Carrier (Industry Billing Standard--Cellular Intercarrier Billing Exchange Records-CIBER)
- Serving Carrier uses MIN and SID to validate Customer through Home Carrier

## Roaming

- Switching to having to track on ten digits or other method will drastically change roaming
- Wireless Number Portability will require development of new processes and standards

## Number Portability Is Not Essential for Competition in the CMRS Market

- The success of the new PCS entrants indicates that the Lack of Number Portability is not hindering competition
- Commission recognized in its CMRS “Competition Report” to Congress that “Competition is developing throughout the industry
- Our experience is that number portability is not essential to our ability to enter and compete in the CMRS marketplace
- Our belief is that investing money in building out our networks is more essential to our ability to compete than investing money in number portability

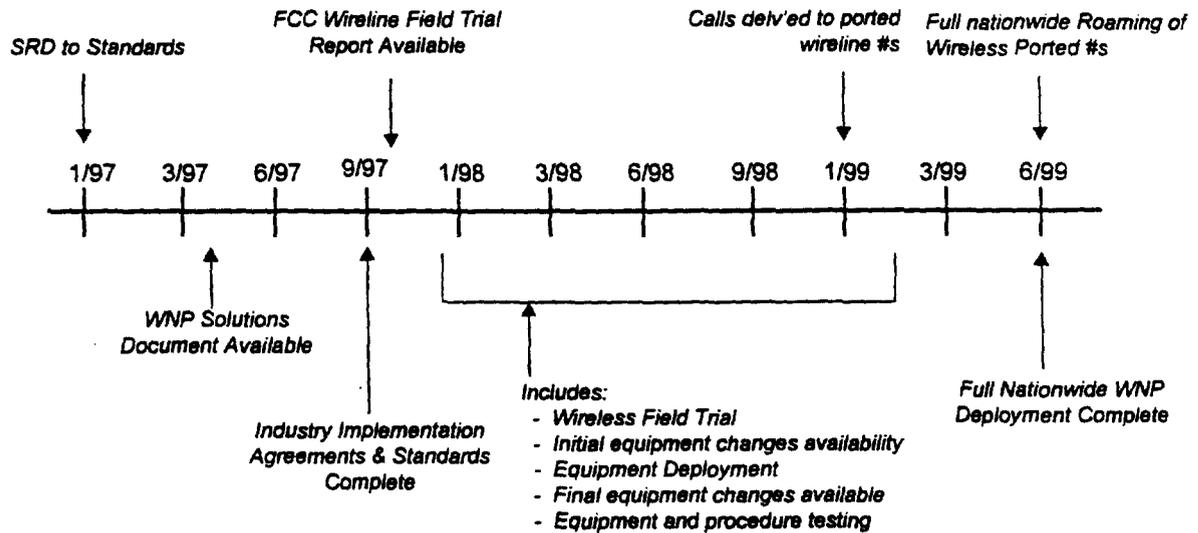
## Conflicting Policies

- **Wireless Number Portability**
- **Building Out of Networks-Both New and Incumbent Carriers**
- **Seamless Nationwide Roaming**
- **Affordable Wireless Service**

## Commission Needs to Allow Time for Technical Implementation and Evaluation of Actual Competitive Need for Number Portability

- Wireless Telecommunication Bureau should grant a 9-month extension pursuant to delegated authority as soon as possible
- FCC should re-open the record to assess the value of number portability in the current competitive environment

Figure 1-2 Potential Timeline Necessary to Meet FCC Mandate



Note: that the time points above the line are either actual or derived by the FCC.

The following is a short description for each of the time points:

- *SRD to Standards*: This is a completed activity. The initial CTIA SRD on WNP was delivered to TIA, TR45.2, TR46 and T1P1 in January, 1997.
- *WNP Solutions Document*: This point represents the release of this document.
- *FCC Field Trial Report Available for Wireline*: This is the FCC ordered date for a report of the field trial of wireline
- *Industry Implementation Agreements and Standards Complete*: This is a derived date based on the time needed to develop and deploy equipment to meet the FCC dates. This substantially shortens the typical interval to develop standards and come to industry agreement.
- Bracketed area illustrates the time frame in which all of the following items must be accomplished in some form:
  - *Wireless Field Trial*: A field trial of the wireless solution must be made prior to deployment of equipment on any significant scale due to the fundamental impacts of these changes. Due to the limited time available, this trial must be on a limited scope and short time frame. Other forms of testing will also be necessary to prepare for and supplement the trial.

# Rate Centers vs Wireless Service Areas

## Background:

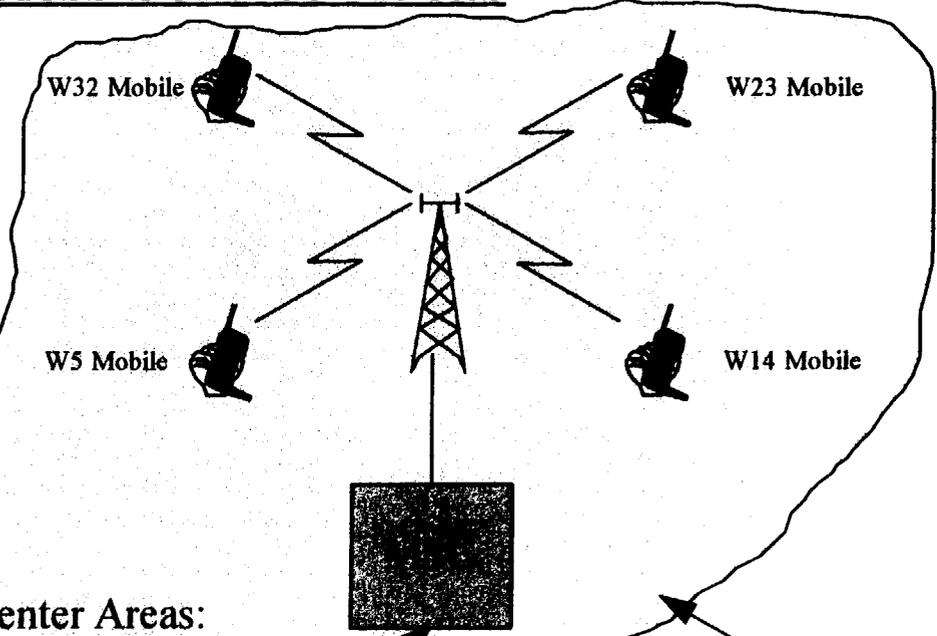
1) How are wireless NPA-NXXs selected?

or

2) Why aren't there as many wireless exchanges as wireline exchanges in a given geographic area? Because...

L1-to-L36 = LEC rate centers / exchanges

W5, W14, W23 & W32 = Wireless exchanges



### LEC Geographic Rate Center Areas:

L1	L2	L3	L10	L11	L12
L4	L5 W5	L6	L13	L14 W14	L15
L7	L8	L9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

Likewise, exchanges L28-to-L36 have local calling to exchange L32...

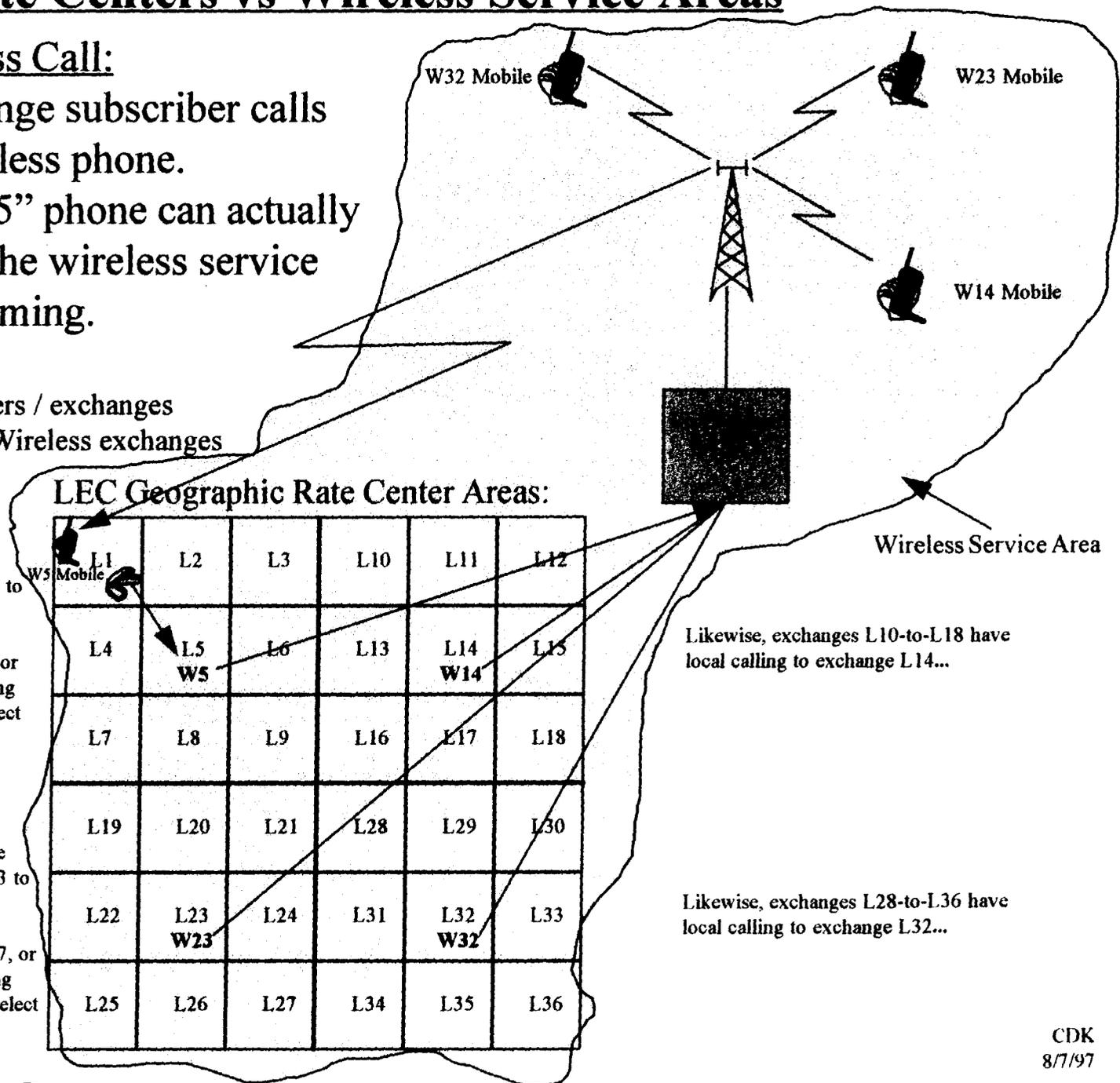
Wireless Service Area

## Rate Centers vs Wireless Service Areas

### Wireline-to-Wireless Call:

- 1) LEC "L1" exchange subscriber calls its spouse's wireless phone.
- 2) The wireless "W5" phone can actually be anywhere in the wireless service area, or even roaming.

L1-to-L36 = LEC rate centers / exchanges  
 W5, W14, W23 & W32 = Wireless exchanges



Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

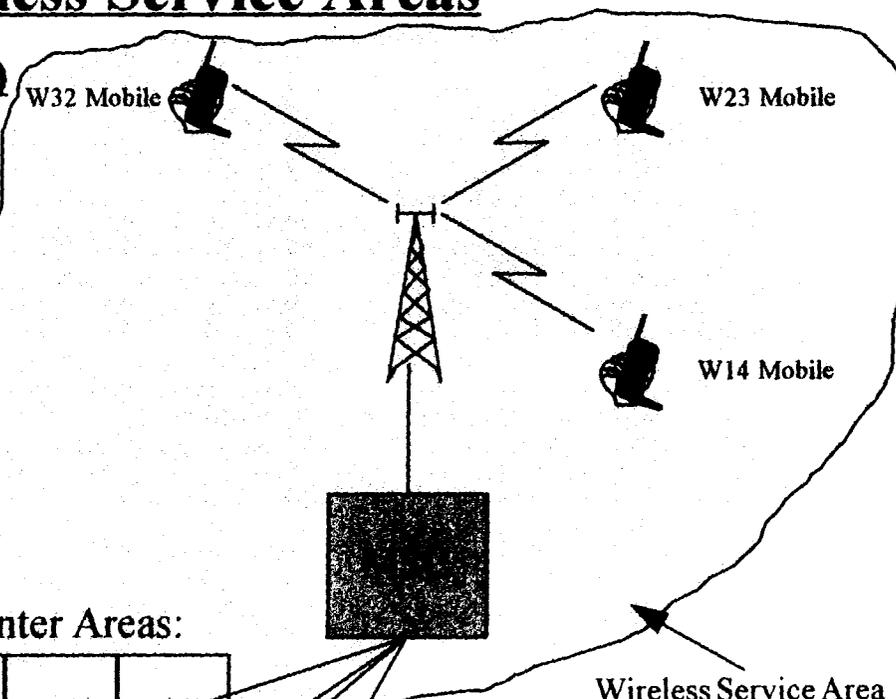
Likewise, exchanges L28-to-L36 have local calling to exchange L32...

# Rate Centers vs Wireless Service Areas

## Porting Scenario #1: (Wireless-to-Wireline)

- 1) Subscriber lives or has business in "L1" rate center area, and has wireless service with a "W5" number.
- 2) Can a wireless subscriber port their "W5" number to a wireline service provider for providing wireline service to their home/business address in the "L1" exchange?
- 3) NO, with service provider portability! This scenario results in location portability since a rate center "5" number would end up working in rate center "1".

L1-to-L36 = LEC rate centers / exchanges  
 W5, W14, W23 & W32 = Wireless exchanges



### LEC Geographic Rate Center Areas:

W5 L1	L2	L3	L10	L11	L12
L4	L5 W5	L6	L13	L14 W14	L15
L7	L8	L9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

Likewise, exchanges L28-to-L36 have local calling to exchange L32...

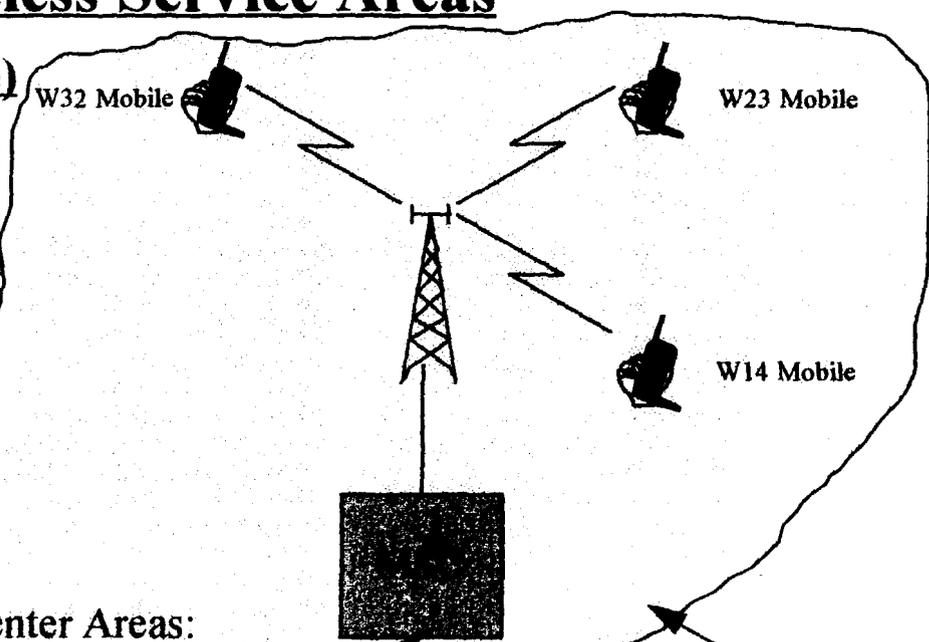
Wireless Service Area

# Rate Centers vs Wireless Service Areas

## Porting Scenario #2: (Wireless-to-Wireline)

- 1) Subscriber lives or has business in "L5" rate center area, and has wireless service with a "W5" number.
- 2) Can a wireless subscriber port their "W5" number to a wireline service provider for providing wireline service to their home/business address in the "L5" exchange?
- 3) YES!

L1-to-L36 = LEC rate centers / exchanges  
 W5, W14, W23 & W32 = Wireless exchanges



LEC Geographic Rate Center Areas:

L1	L2	L3	L10	L11	L12
L4	L5 W5	L6	L13	L14 W14	L15
L7	L8	L9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Wireless Service Area

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

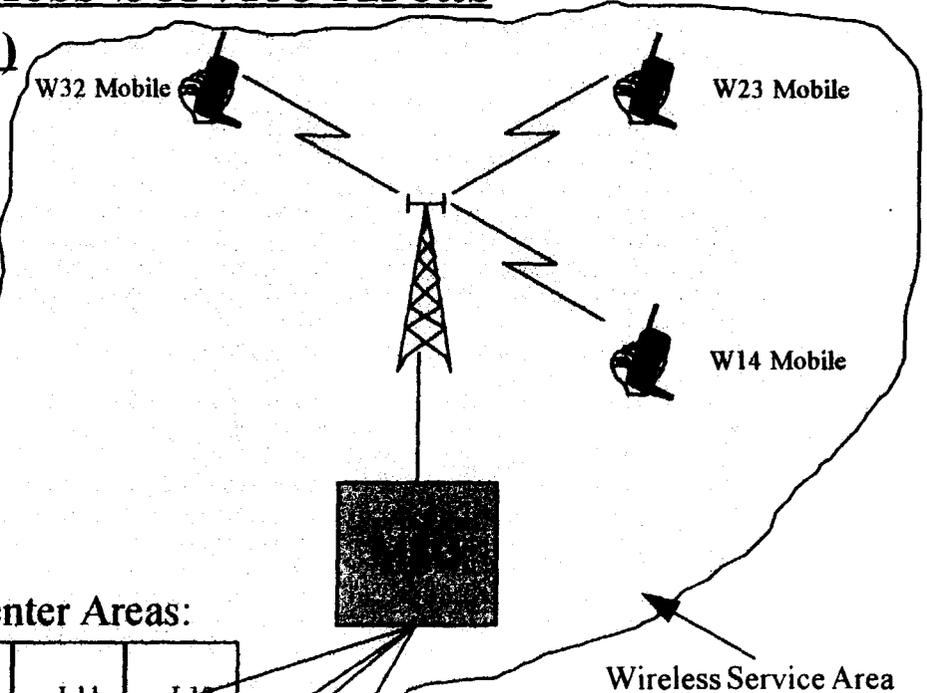
Likewise, exchanges L28-to-L36 have local calling to exchange L32...

# Rate Centers vs Wireless Service Areas

## Porting Scenario #3: (Wireline-to-Wireless)

- 1) Subscriber lives or has business in "L5" rate center area, and has wireline service with an "L5" number.
- 2) Can a wireline subscriber port their "L5" number to a wireless service provider for provision of wireless svc?
- 3) YES, as long as the wireless service area license covers geographic area of rate center "5", and the wireless service provider has or establishes an interconnect or business arrangement for calls to wireless numbers in rate center "5".

L1-to-L36 = LEC rate centers / exchanges  
 W5, W14, W23 & W32 = Wireless exchanges



**LEC Geographic Rate Center Areas:**

L1	L2	L3	L10	L11	L12
L4	L5 W5	L6	L13	L14 W14	L15
L7	L8	L9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

Likewise, exchanges L28-to-L36 have local calling to exchange L32...

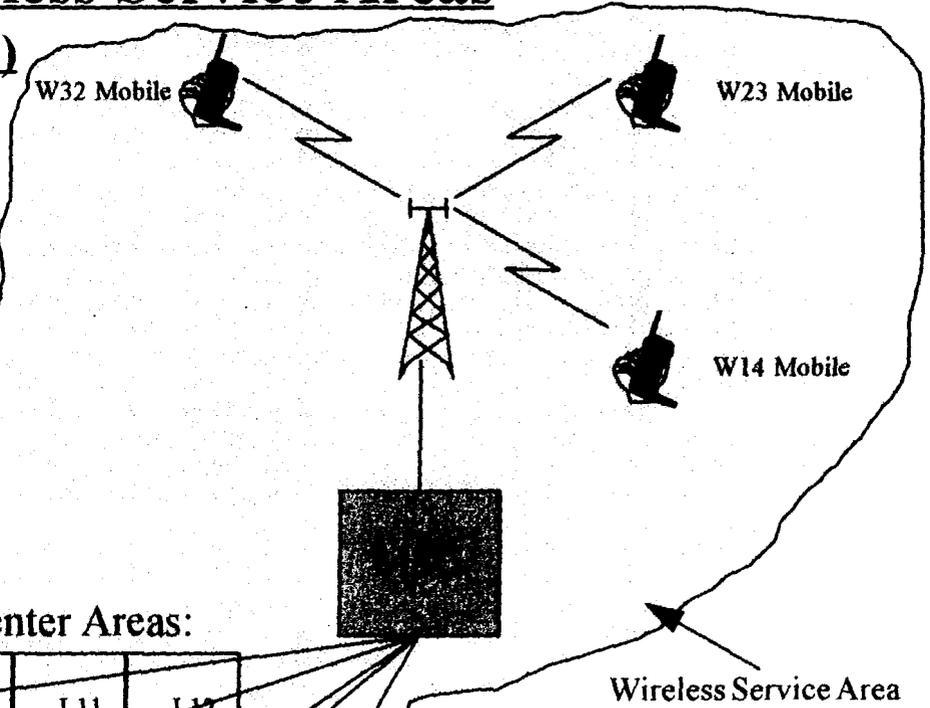
# Rate Centers vs Wireless Service Areas

## Porting Scenario #4: (Wireline-to-Wireless)

- 1) Subscriber lives or has business in "L1" rate center area, and has wireline service with an "L1" number.
- 2) Can a wireline subscriber port their "L1" number to a wireless service provider for provision of wireless svc?
- 3) YES, as long as the wireless service area license covers geographic area of rate center "1", and the wireless service provider establishes an interconnect or business arrangement for calls to wireless numbers in rate center "1".

L1-to-L36 = LEC rate centers / exchanges

W5, W14, W23 & W32 = Wireless exchanges



**LEC Geographic Rate Center Areas:**

L1 W1	L2	L3	L10	L11	L12
L4	L5 W5	L6	L13	L14 W14	L15
L7	L8	L9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

**Newly established by wireless service provider to support porting of L1 subscriber.**

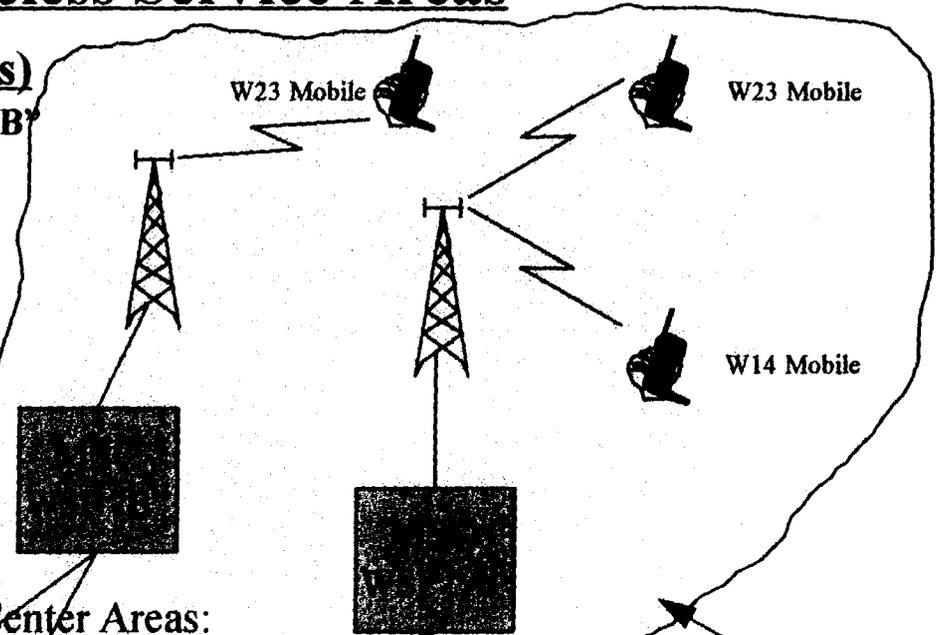
Likewise, exchanges L28-to-L36 have local calling to exchange L32...

# Rate Centers vs Wireless Service Areas

## Porting Scenario #5: (Wireless-to-Wireless)

- 1) Both wireless service provider (WSP) "A" and WSP "B" have interconnect or business arrangements for calls to wireless numbers in rate center "5".
- 2) Can a wireless subscriber port their "W5" number from WSP "A" to WSP "B"?
- 2) YES, also assuming that the wireless service area licenses for both WSP "A" and WSP "B" cover the geographic area of rate center "5".

L1-to-L36 = LEC rate centers / exchanges  
 W5, W14, W23 & W32 = Wireless exchanges



LEC Geographic Rate Center Areas:

L1	L2	L3	L10	L11	L12
L4	W5 L5 W5	L6	L13	L14 W14	L15
L7	L8	L9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	W23 L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

Wireless Service Area

Likewise, exchanges L10-to-L18 have local calling to exchange L14...

Likewise, exchanges L28-to-L36 have local calling to exchange L32...

# Rate Centers vs Wireless Service Areas

## Porting Scenario #6: (Wireless-to-Wireless)

- 1) Wireless service provider (WSP) "A" does not have an interconnect or business arrangement for calls to wireless numbers in rate center "9".
- 2) Can a wireless subscriber port their "W9" number from WSP "C" to WSP "A"?
- 3) YES, as long as the wireless service area license for WSP "A" covers the geographic area of rate center "9", and WSP "A" establishes an interconnect or business arrangement for calls to wireless numbers in rate center "9".

L1-to-L36 = LEC rate centers / exchanges  
 W5, W9, W12, W14, W23 & W32 = Wireless exchanges

Exchanges L1-to-L9 have local calling to exchange L5, therefore wireless carrier will typically select L5 to establish a wireless NPA-NXX (W5).

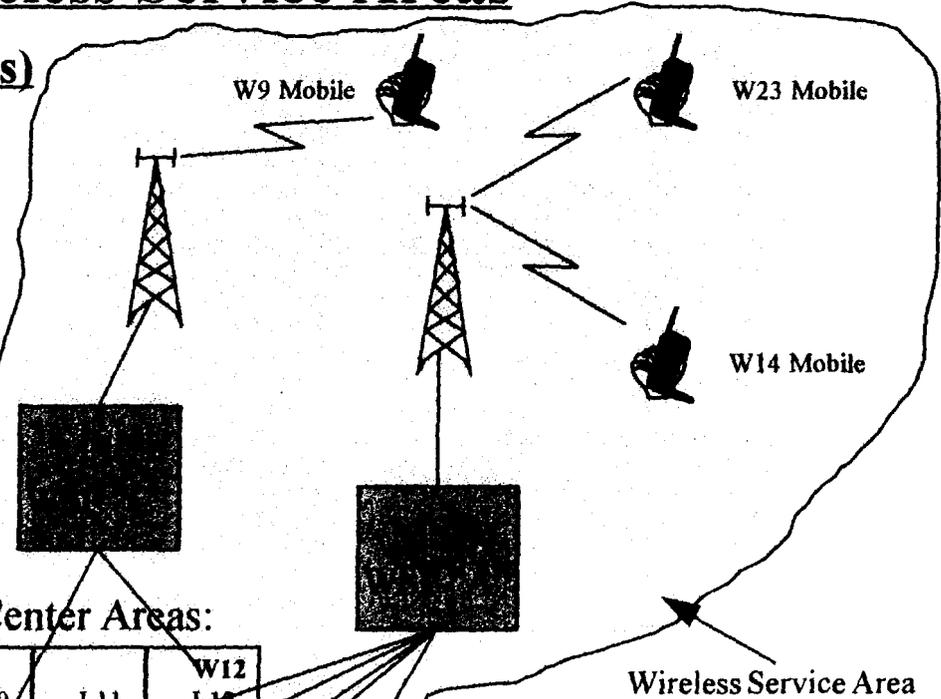
Anyone living in exchanges L1-to-L9, or having the majority of their calls coming in from exchanges L1-to-L9 would select "W5" as their wireless NPA-NXX.

Likewise, exchanges L19-to-L27 have local calling to exchange L23, therefore wireless carrier will typically select L23 to establish a wireless NPA-NXX (W23).

Anyone living in exchanges L19-to-L27, or having the majority of their calls coming in from exchanges L19-to-L27 would select "W23" as their wireless NPA-NXX.

LEC Geographic Rate Center Areas:

L1	L2	L3	L10	L11	W12 L12
L4	L5 W5	L6	L13	L14 W14	L15
L7	L8	L9 W9	L16	L17	L18
L19	L20	L21	L28	L29	L30
L22	L23 W23	L24	L31	L32 W32	L33
L25	L26	L27	L34	L35	L36



Likewise, exchanges L10-to-L18 have local calling to exchange L14...

**Newly established by WSP "A" to support porting of W9 subscriber.**

Likewise, exchanges L28-to-L36 have local calling to exchange L32...