

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

In the Matter of )  
 )  
Long-Term Telephone Number Portability ) CC Docket No. 99-35  
Tariff Filings of )  
 )  
U S WEST Communications, Inc. ) Transmittal Nos. 965 and 975

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OFFICE OF THE SECRETARY

**DIRECT CASE**

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## SUMMARY

U S WEST, Communications, Inc. ("U S WEST ") hereby files this Direct Case to clarify cost data submitted in its local number portability ("LNP") tariff filings, Transmittal Nos. 965 and 975, filed on January 26, 1999 and March 9, 1999, respectively. U S WEST is providing this information in response to the Common Carrier Bureau's Order Designating Issues for Investigation, released on March 25, 1999. With this Direct Case, U S WEST is filing amended workpapers that, at the request of Commission staff, recalculate query charges using actual and planned expenditures rather than the costs generated by the cost model used in U S WEST's earlier tariff filings.

U S WEST's tariff filings fully comply with the cost recovery rules set forth in the Bureau's Cost Classification Order. Because that Order precludes the recovery of large amounts of carrier-specific costs that U S WEST believes are recoverable under the Commission's Third Report and Order. U S WEST has filed an Application for Review of the Bureau's Cost Classification Order and expects to modify its tariff should the Commission act favorably on the application.

As the Bureau's Order requires, U S WEST's LNP tariffs allow U S WEST to recover only those LNP costs that are necessary for the provision of number portability functions. This Direct Case explains in greater detail how U S WEST developed its costs, the changes made as a result of using actual and planned expenditures in place of its SS7 model, and why U S WEST's inclusion of limited "administrative" or "overhead" costs associated with items such as service delivery

is fully justified under the Bureau's order. The Direct Case also provides a detailed explanation of the Operational Support Systems ("OSS") costs included in U S WEST's tariff and why those costs are necessary for the provision of LNP. The Direct Case further demonstrates that U S WEST reasonably allocated all of its LNP costs among number portability services according to the particular services supported by each cost. Finally, with respect to separations, the Direct Case explains that LNP costs have had de minimis effect on U S WEST's existing intrastate rates, that U S WEST will adjust those rates to reflect any recovery through federal mechanisms of costs previously assigned to the intrastate jurisdiction, and that, on a going-forward basis, U S WEST will treat LNP costs and revenues in a manner that ensures its LNP costs are not double recovered.

Regardless of whether U S WEST's overall LNP costs are higher or lower than those of other carriers, this Direct Case demonstrates that each item of U S WEST's claimed costs is recoverable under the Bureau's December 1998 Order. The Commission should therefore terminate its investigation and allow U S WEST's amended LNP tariff to remain in effect as filed.

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**DIRECT CASE**

U S WEST Communications (“U S WEST”) , through counsel and pursuant to the Federal Communications Commission’s (“Commission”) Order Designating Issues for Investigation (“Designation Order”),<sup>1</sup> hereby files its Direct Case on Transmittal Nos. 965 and 975, U S WEST’s Long-Term Number Portability (“LNP”) tariff filings.

I. **INTRODUCTION**

U S WEST filed Transmittal No. 965 to: 1) introduce its LNP End User Charge; 2) provide new cost support for its previously tariffed LNP query rate elements; 3) introduce two default query rate elements to replace the previously tariffed single default query rate element; and 4) introduce a new rate for its Data Base Query Service. Transmittal No. 975 was filed to correct errors in the cost support underlying both U S WEST’s LNP End User Charge and its LNP Query Rates as filed in Transmittal No. 965. As a result of these changes in costs,

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<sup>1</sup> In the Matter of Long-Term Telephone Number Portability tariff Filings of U S WEST Communications, Inc., CC Docket No. 99-35, Transmittal Nos. 965 and 975, Order Designating Issues for Investigation, DA 99-561, rel. Mar. 25, 1999.

Transmittal No. 975 included changes to all LNP rates, except the LNP Database Query Charge.

Transmittal No. 975 was filed in full compliance with the Common Carrier Bureau's ("Bureau") LNP Cost Classification Order ("Cost Classification Order").<sup>2</sup> In this Order, the Bureau adopted a restrictive two-part LNP cost recovery test that directly contradicted numerous Commission findings in its May LNP Cost Recovery Order.<sup>3</sup> As a result, numerous "but for" LNP costs are not included in Transmittal Nos. 965 and 975. U S WEST has filed an Application for Review of the Bureau's LNP Cost Classification Order and expects to modify Transmittal No. 975 if the Commission acts favorably on U S WEST's AFR.<sup>4</sup>

On February 9, 1999 and March 22, 1999, the Bureau suspended Transmittal Nos. 965 and 975, respectively, for one day and allowed these tariffs to take effect, subject to an accounting order.<sup>5</sup> On March 25, 1999, the Commission issued its Designation Order and designated numerous issues associated with U S WEST's LNP tariff for investigation. U S WEST was initially ordered to file this Direct

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<sup>2</sup> In the Matter of Telephone Number Portability Cost Classification Proceeding, CC Docket No. 95-116, RM 8535, DA 98-2534, rel. Dec. 14, 1998 ("Cost Classification Order").

<sup>3</sup> In the Matter of Telephone Number Portability, Third Report and Order, 13 FCC Rcd. 11701 (1998).

<sup>4</sup> U S WEST Application for Review, CC Docket No. 95-116, RM 8535, filed Jan. 13, 1999. ("AFR").

<sup>5</sup> In the Matter of Long-Term Telephone Number Portability Tariff Filings of U S WEST Communications, Inc., Transmittal No. 965, CC Docket No. 99-35, Memorandum Opinion and Order, DA 99-306, rel. Feb. 9, 1999; In the Matter of Long-Term Telephone Number Portability tariff Filings of U S WEST Telephone

Case by April 23, 1999. On April 12, 1999, the FCC issued a Public Notice, DA 99-697, extending the Direct Case filing date to April 26, 1999.

## II. ISSUES DESIGNATED FOR INVESTIGATION/INFORMATION REQUESTS

### Issue No. 1

U S WEST is required to provide a narrative explanation of how costs were developed in the confidential filing already filed, as well as in any other confidential filings made as part of the direct case. (¶ 5)

### Response

U S WEST's costs were developed based on actual costs incurred to implement LNP. These costs are itemized in Workpapers 3 through 10 in Transmittal Nos. 965 and 975, which in turn form the basis of the charts totaling the various costs incurred for the provision of LNP.

Workpaper 3 lists the costs for U S WEST's portion of the regional database administration centers on a year-by-year basis. These costs include the database administrator's nonrecurring, recurring, upload, and download costs. The database administrator allocates these costs to each carrier based on an end-user revenue methodology. U S WEST included known costs for the years 1998 through 2001 based on the Western Region Limited Liability Corporation ("LLC") agreement with Lockheed Martin. The forecasts for years 2002 through January of 2004 are based on the known costs for 1998 through 2001.

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Company, CC Docket No. 99-35, Transmittal No. 975, Memorandum Opinion and Order, DA 99-560, rel. Mar. 22, 1999, Erratum rel. Mar. 31, 1999.

Workpaper 4, page 1, details the costs for SMS links. The cost is for the lease of two mated pairs of T-1 facilities from U S WEST's SMS locations to the NPAC regional databases. Actual costs were used for 1998 and 1999, with subsequent years forecast at the same lease rate as 1999.

Workpaper 4 also details the actual and projected costs incurred in upgrading Operational Support Systems ("OSS") for the provision of LNP functions. The projected costs were based on the need for additional software upgrades to process the anticipated additional volume of queries and for continued maintenance of the new OSSs. These costs are explained further in the responses to Issues 9 and 10 in this Direct Case.

Workpaper 5 details the costs directly related to the provision of LNP for Service Control Points ("SCP"), SCP Links, Signal Transfer Points ("STP"), STP Links, and Service Switching Points ("SSP"), including End Office and Tandem Switches. All of the costs incurred were actual costs or forecasted costs based on actual costs. These costs were allocated between query charges and end-user charges as described in the response to Issue 14 in this Direct Case.

Workpaper 6 details the Service Delivery Costs. The 1998 costs were the actual costs for training and staffing of the centers in charge of LNP ordering. U S WEST costs for 1999 through January, 2004 were based on forecasted order volumes and of the corresponding staff required to handle those volumes. These costs are primarily for headcount and headcount-related functions (such as training) but also include a small amount of capital investment for computers.

Workpapers 7 through 10 set forth the costs for the three types of LNP queries. These costs were based largely on the actual costs detailed in Workpapers 3 through 6, but also included Total Service Long Run Incremental Investment associated with STPs and SS7 Links that were developed using U S WEST's SS7 Model (not its Switching Cost Model). At the request of the Commission staff, U S WEST has recalculated its query costs using actual and planned costs incurred for all three types of LNP queries rather than the costs developed using the SS7 Model. These recalculated costs for query services are detailed and explained in Attachment 1 (which includes revised Workpapers 7 through 10 and Charts 4A, 4B, 5A, 5B, 6A and 6B).

As a result of its recalculation of query costs, U S WEST does not detail here all of its previous calculations of those costs using the SS7 Model. In brief, total investments were converted to annual per unit LNP query investments by dividing the annual investments associated with each query type by the levelized forecast of demand for each query type. Unit investments were run through a Retail Cost Model, which applied appropriate Investment and Expense factors for such items as power, sales tax, land and buildings, and interest during construction. Additional factors were applied to determine depreciation, cost of money, and income taxes. In addition to the development of the capital expenses, factors were also applied to develop operating expenses such as maintenance, ad valorem taxes, administration, and business fees. These factors all fit within the new service cost requirements that U S WEST traditionally uses in developing the cost basis for a new service. U S WEST also included expenses unrelated to investment. Specifically, it included

direct expenses for developing and provisioning LNP query services, such as software fees and the cost of updating the system to bill LNP queries.

Appendix A to this Direct Case describes in detail the costs presented in Transmittal Nos. 965 and 975 and how the numbers in the workpapers and charts relate.

As required by the Commission's Cost Recovery Order, Chart 1 in Appendix A reflects all costs for providing LNP. This chart incorporates both costs that U S WEST interprets to be recoverable per the Bureau's Cost Classification Order, as well as additional costs that U S WEST must incur to provide LNP that do not meet the strict two-part test outlined by the Bureau in its Cost Classification Order and that U S WEST therefore does not seek to recover under Transmittal Nos. 965 and 975. These latter costs were further divided into two categories -- those U S WEST believes to be recoverable per the Commission's Cost Recovery Order but not the Cost Classification Order and those not recoverable per either Order.<sup>6</sup> This chart encompasses costs for both the end-user surcharge and direct costs associated with the Query Services. As described below, the information that formed the basis for this Chart are directly linked to the different Workpapers, with the exception of the line item costs classified as "Other Costs." In an effort to clarify those costs for the Commission, U S WEST has attached a supplemental Worksheet 1, which itemizes those costs.

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<sup>6</sup> As noted earlier, U S WEST has filed an AFR of the Cost Classification Order and intends to modify Transmittal No. 975 if the Commission acts favorably on that AFR.

Chart 2A in Appendix A identifies total costs incurred and classified as recoverable in the end-user charge per the Bureau's Cost Classification Order. These costs can be tied to their respective Workpapers by subtracting from the totals in the Workpapers any costs directly associated with Query Services. For example, in Workpaper 4 the costs for 1999 include roughly \$1.1 million dollars that are attributable to establishing the billing of Query Services. Accordingly, the total OSS costs attributable to the end-user surcharge for 1999 shown in Chart 2A are equal to the total of the itemized costs for 1999 in Workpaper 4 minus the \$1.1 million dollars for Query Services. Appendix A outlines how to reconcile these amounts.

Chart 2B details the calculations of the revenue requirements for recovery in the end user charge. The costs included in this Chart were taken directly from Chart 2A, with some supplemental information such as the number of access lines, which was taken directly from Chart 1. The basis for the calculations in Chart 2B is outlined in detail in Appendix A.

#### Issue No. 2

U S WEST must explain why the fifth SCP used in the provision of Message Relay Service ("MRS") is "for the provision of number portability" rather than for the provision of other services. (¶ 6)

#### Response

U S WEST purchased a fifth SCP pair solely to act as a Message Relay Point ("MRP") for LNP purposes. The term MRP refers to precisely the same function as Message Relay Service ("MRS"), the term used by the Commission in the Designation Order and by U S WEST in some of its previous filings.

The use of an MRP comports with the Illinois Commerce Commission LNP standards that were adopted during the Ameritech LNP trial.<sup>7</sup> These standards require the MRP to be located in a node (or multiple nodes) on the CCS/SS7 network. The MRP may either be an STP or an SCP.

The MRP was created for the specific purpose of ensuring that certain previously-existing services continue to be routed properly and to function as designed for end users whose numbers have been ported. These services include: LIDB Alternate Billing Service ("ABS"), Calling Name inquiries, certain CLASS services, and Interswitch Voice Messaging Service. The MRP is required because 6 digits (i.e., NPA-NXX), which were previously used to tell the SS7 network how to route queries for information retrieval, are no longer adequate in an LNP environment, where 10 digits (i.e., NPA-NXX-XXXX) are required to route queries for ported numbers.

For example, if a number is ported from U S WEST to another service provider and the owner of that number tries to make a collect call from a payphone, the switch serving that phone would launch an ABS query to the LIDB database that serves the number. Without an MRP, the SS7 network would automatically direct this query to U S WEST's LIDB database because the NPA-NXX is assigned to U S WEST. If the carrier to which the number had been ported chose to store its line information in a different LIDB, U S WEST would lack information about the number, the query would retrieve no information, and the call probably would not

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<sup>7</sup> See Attachment 2 for the ICC standards.

be completed. With MRP, on the other hand, the SS7 Network will first direct any query for a LNP-capable NPA-NXX to the MRP, which contains all ported numbers and the codes for their serving databases. As a result, the query for the ported number will be rerouted to the appropriate database. Thus, an MRP is essential for routing queries in an LNP environment if a competitive local exchange carrier is to have the ability to provide all line-based services and the freedom to store its line-based information in whatever LIDB it chooses. Moreover, the MRP does not provide any new capability for CLASS or other services. Accordingly, its costs are directly related to the provision of LNP.<sup>8</sup>

U S WEST chose to place MRP functionality in a single SCP pair rather than in a number of SCPs or STPs because that was the most efficient and cost-effective solution for U S WEST.

- The LIDB and Calling Name translations must be available from every switch in U S WEST's network. Therefore, if U S WEST had used STPs to support MRP, each of the 24 STP pairs in U S WEST's network would require translations appropriate for that STP pair to occur at about the same time; by contrast, a single set of translations is required for the SCP. Accordingly, establishing a single MRP at a regional SCP pair avoids unnecessary duplication and complexity.
- The most efficient approach to routing queries over U S WEST's existing signalling network is to route all queries associated with LNP-capable NPA-NXXs through a single regional SCP pair rather than to multiple STPs.<sup>9</sup>

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<sup>8</sup> While a second SCP pair may be needed at some time in the future to accommodate query demand growth, neither Transmittal No. 965 nor 975 includes any costs for a second SCP pair.

<sup>9</sup> Use of STPs to function as an MRP creates complex routing and translations requirements in the U S WEST network. For example, when a customer ports his/her number to an alternate provider, that means that the NPA-NXX is now portability capable and there are unique translations created in the SS7 network regarding where a query such as Calling Name should be routed and how to return

- U S WEST's existing Ericsson STPs do not have sufficient capacity to support the additional translations required by LNP. Adding the necessary capacity to these STPs would have been about 10 times more costly than purchasing another SCP pair and would have taken up to three years to implement.

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the response to the requesting switch. If the STP were to be used as the MRP, each of the 24 pairs of local STPs would need to be translated to accommodate both the ported NPA-NXX and each number as it becomes ported.

The current routing for Calling Name queries sends the information request to U S WEST's regional LIDB. For example, if a subscriber in Minneapolis calls a number in Boise whose subscriber has purchased Calling Name, the Boise switch launches a query directly to the U S WEST LIDB and the name is returned. When the NPA-NXX in Minneapolis becomes portability capable, the identity of the company serving the end-user customer is now in doubt. The same call now results in three different scenarios, each of which creates inefficiency and complexity if the STPs are used as the MRP:

**Scenario 1:** If the MRP is the local STP for the ported number, the Boise local STP must be translated to send the query to the Minneapolis local STP. The query then must be routed to the regional STP without creating a looping condition or directly to an interconnector if the number is ported. As a relay point the reply should return not through the local STP but directly to the Boise STP. Because the interconnector probably does not have any interconnection to Boise, the reply now must be sent back to the Minneapolis STP to return to Boise. This situation is replicated for every two city combination in U S WEST's region. The chances for looping and translation errors are very great.

**Scenario 2:** If the MRP is the local STP for the querying switch, the Boise local STP must now be translated to contain each 10-digit ported number as it is generated so that the STP may route the information query to the correct destination, even with no porting in Boise. This creates two problems. First, the local STPs lack the capacity to perform such a volume of translations. Second, updating 24 pairs of STPs to do the same translations at nearly the same point in time creates severe logistical problems. Neither problem can be resolved in a cost effective or timely manner.

**Scenario 3:** If the existing regional STP is used as the MRP, it will fail due to capacity limitations. As in Scenario 2, there is inadequate translation capacity on the Ericsson STP to place hundreds of thousands of 10-digit translations.

- Additional OSS interfaces would have been required to support MRP functionality at U S WEST's STPs. Using an SCP pair avoids this cost because SCPs already receive complete provisioning information for LNP and MRP.
- U S WEST's existing Ericsson STPs do not have the capability to detect circular routed messages,<sup>10</sup> which could result in serious degradation in the signaling network in some situations. Adding the ability to detect circular messages to U S WEST's STPs would have required a significant additional investment. Conversely, U S WEST's SCPs already have this capability.
- Using multiple STPs to implement LNP would have required U S WEST to use equipment from different manufacturers because Ericsson STPs do not have the capacity to support the required number of translations for these functions. Maintaining and supporting equipment from multiple manufacturers would increase complexity and create greater risks (such as lower network reliability) than using a single SCP pair, especially because U S WEST network personnel are very familiar with SCP capabilities.

Thus, while different solutions might be more appropriate for different network architectures, using a single SCP pair was the most efficient and cost effective choice for U S WEST.

### Issue No. 3

The Bureau questions whether U S WEST's use of its cost model to estimate its signalling costs of number portability results in the inclusion of some costs for which recovery already is provided through other mechanisms. U S WEST is directed to file actual expenditures, including expenditures to date and planned actual expenditures within the recovery period, for the number portability costs that it estimated using its switching cost model, including an explanation of the basis of each actual expenditure. (¶¶ 7-8)

### Response

Although U S WEST's cost model did not result in double recovery of costs (see response to Issue 13 below), U S WEST has, at the request of the Commission

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<sup>10</sup> Circular routing occurs when the switch sends a request to an STP, the STP attempts to re-route the request to an interconnecting STP, the interconnecting STP routes it back to the original STP, and the cycle repeats again and again.

staff, re-calculated its query costs using actual and planned costs incurred for LNP queries without use of its SS7 model. These re-calculated costs for query services are detailed and explained in Attachment 1.

#### Issue No. 4

If U S WEST intends to continue to rely on information produced by its cost model, it must explain how the use of its cost model produces more accurate estimates of the incremental costs generated by number portability than would be produced by an analysis of actual and planned expenditures. U S WEST must also demonstrate that the use of its cost model does not produce double recovery of costs already being recovered through other cost recovery mechanisms. This demonstration must include, at a minimum, a comparison of the model's calculation of average costs of number portability-type queries and the model's incremental costs of those queries. U S WEST must also demonstrate its total network switching and signalling costs with and without number portability. (¶ 9)

#### Response

As noted above, although U S WEST's cost model did not produce double recovery (see response to Issue 13), U S WEST has provided additional information on its incremental costs associated with the query charges.

#### Issue No. 5

With regard to both costs derived from cost models and costs produced from an analysis of actual expenditures, U S WEST is directed to identify all costs for land, buildings, administration, and maintenance expenses that are claimed as LNP costs. (¶ 10)

#### Response

##### End-User Surcharges

For end-user surcharges, U S WEST did not incorporate any incremental costs for land or buildings. As Attachment 3 shows, U S WEST did include certain costs for "administration" and "maintenance."

In terms of administration costs, U S WEST did not include any pre-existing or embedded overhead, it only included incremental costs related to LNP.

U S WEST included certain costs for both Service Delivery and Network that might be deemed administrative. For Service Delivery, U S WEST included costs incurred for the development of materials and methods and procedures needed to train service representatives who will be handling LNP requests from carriers and end users, as well as the costs of actually conducting such training. These LNP training costs were calculated using an average cost per employee of \$17.30/hour for service representatives, \$23.38/hour for repair service attendants, and \$37.36/hour for technical consultants. These are the standard employee costs for the service organization. The Network costs included by U S WEST, classified as "Miscellaneous Overhead," were costs for functions directly associated with implementing and providing LNP, including complex translations, special testing, planning, and project management. These costs were calculated using a weighted average cost per employee of \$59,000/year for occupational employees and \$85,000/year for management employees. These are the standard employee costs for the skill levels in network organizations that are needed for LNP functions.

U S WEST also included maintenance costs for both OSS and Network categories of costs since such ongoing maintenance is essential to the provision of LNP. The maintenance costs for OSS were calculated as 15% of the costs incurred for the development and modification of OSS that was required for LNP purposes. This is a standard percentage used both by U S WEST and in U S WEST's contracts with its vendors, including Telcordia (formerly Bellcore) and Lucent Technologies.

Moreover, the 15% figure has been validated by U S WEST's own prior experience in tracking its costs for ongoing maintenance and support of its internal systems.

U S WEST also included maintenance costs associated with the network equipment deployed in connection with LNP. These costs were equal to 2% of the capital expenditures for LNP-related network equipment incurred in the prior year. The total maintenance factor was calculated by dividing the adjusted levels of labor expense by the associated investment. Although the average maintenance factor across U S WEST's states is 2.63%, U S WEST conservatively used a factor of 2%.

#### Query Services Charge

In basing its query service charge in part on its Cost Model in Transmittal Nos. 965 and 975 and U S WEST included land, building, administrative, and maintenance per query costs as shown in Attachment 4:

Under the query costs as re-calculated at the Commission staff's request, U S WEST no longer includes any land, building, or administrative costs. As Attachment 4 reflects, the query service charge does include the same type of maintenance charges described above in connection with the end-user charge. In particular, the query service charge includes the pro-rated portion of those charges that are directly attributable to Default Tandem, Default End Office, and Database queries.

#### Issue No. 6

U S WEST is required to identify the end-office and tandem switch costs related to reprogramming switches to perform 10 digit translations and demonstrate that other services will not benefit from such reprogramming. In the alternative, U S WEST should show how these costs were allocated, using either a

cost model or actual expenditures, among the services that benefit from the reprogramming. (¶ 10)

### Response

U S WEST has not included any costs associated with 10-digit translations and 10-digit dialing for NPA overlays in Transmittal Nos. 965 and 975. No new 10-digit translations are performed in end-office or tandem switches as a result of LNP deployment.<sup>11</sup> Accordingly, U S WEST cannot identify any end-office or tandem switch costs in the above transmittals which are associated with reprogramming switches to perform 10-digit translations.

Issue No. 6 suggests that the Commission may have confused Transmittal No. 975's references to the costs of creating a new "10 digit unconditional trigger" -- which is necessary for LNP -- with the costs of 10-digit translations. The "10 digit unconditional trigger," which is also referred to as the "line side attribute trigger," the "LRN (Location Routing Number) unconditional trigger," or the "LRN unconditional 10 digit trigger," is a point in the switch or call processor that invokes an LNP query to obtain routing instructions. A 10 digit unconditional trigger is a temporary point in call processing that serves to identify the proper routing for calls to ported numbers when all orders affecting the porting of the number have not yet been worked. The trigger keeps calls from being routed to the line within the donor

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<sup>11</sup> LNP does not require a change in dialing plans or dialing patterns. If a dialing plan required 7 digits prior to the implementation of LNP, it will require 7 digits after implementation. Similarly, LNP has no effect on dialing plans in those areas that have 10-digit dialing.

switch that is to be disconnected -- that is, prior to completion of the service order disconnecting the line but after the new provider's line has been activated.<sup>12</sup>

The "10 digit unconditional trigger" is not a 10-digit translation of a telephone number as opposed to a six-digit translation. It also has nothing to do with NPA overlays or NPA splits. Rather, the trigger is used purely to ensure that calls are routed properly for numbers that will be ported in the near future or have been ported recently. Although this functionality is active only for a few days before and after the change in service provider, it is critical to the successful deployment of LNP.

#### Issue No. 7

U S WEST is directed to explain the method used to determine the additional costs of establishing and providing number portability that were filed in Transmittal No. 975, why these additional costs were not included in Transmittal No. 965 and why these costs should be recovered through the end user and query service charges. (¶ 13)

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<sup>12</sup> Normally, a call to a number still served by the donor switch is first routed to the line in the donor switch. If the line is a working number, the call completes. If the called number is a vacant number, an LNP query is launched to determine if the number is really vacant or if it has been ported to another provider. If the number is truly vacant, an appropriate intercept message is returned to the calling party. If the number has been ported to another provider, the query determines the appropriate route for the call to complete. In the period just before and after the change in local provider, the 10 digit unconditional trigger is the function that interrupts call processing and says, "Do an LNP query to see where this really should be routed." The LNP database downloaded from NPAC is the only truly up-to-date source during the transition period for determining the proper routing of a call to a ported number. If this "trigger" did not exist, the donor switch would continue to route calls to its own line (i.e., the line for which the disconnect order has yet to be worked but which no longer, in fact, serves the end user) rather than to the new local service provider's line.

## Response

U S WEST used exactly the same methodology to determine LNP costs in both Transmittal Nos. 965 and 975. The changes in the costs and rates from Transmittal No. 965 to No. 975 were made solely to correct four errors in the earlier transmittal.

The first correction fixed a mistake in U S WEST's tax calculations.<sup>13</sup> In Transmittal 965, U S WEST mistakenly grossed up its taxes on its entire return, rather than only on the equity component of its return. Correcting this calculation error in Transmittal 975 reduced U S WEST's revenue requirement (although this was offset by increases due to the other corrections).

The second correction was to include the ongoing Right to Use fees for the software upgrades necessary to provide LNP capability in previously-installed SCPs.<sup>14</sup> Although U S WEST had included the initial purchase fee for this software in its costs, it inadvertently failed to include the recurring costs for upgrades to this software that are needed for the provision of LNP. These additional software upgrades are necessary to eliminate manual intervention in the LNP provisioning process and to permit more timely processing of LNP orders. Including these right-to-use fees increased both the end-user charge and query charges.

The third correction was to assign the full costs of U S WEST's fifth SCP pair to porting numbers instead of splitting those costs between porting numbers and

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<sup>13</sup> See Transmittal No. 975, D&J at 2-3 and Chart 2b.

<sup>14</sup> Id. at 3-4 and Work Paper 5, lines 69, 69a, and 69b.

query service.<sup>15</sup> In its original filing, U S WEST uniformly allocated the cost of all five of its new SCP pairs between the end-user surcharge and the query charge, even though only four of these SCP pairs are used to perform actual queries. As described above, the fifth SCP pair is used for MRP functions, which are necessary in order to port numbers without impairment of “quality, reliability, or convenience.” Because this fifth SCP pair is dedicated to routing queries for ABS, Calling Name, certain CLASS services, and Interswitch Voice Messaging Service associated with LNP-capable NPA-NXXs, all of its costs should have been attributed to the end-user charge. This correction did not provide any new cost recovery -- rather, it shifted the allocation so that the entire cost of the of the fifth SCP pair is recovered from the end-user charge.

The fourth correction made in Transmittal No. 975 was to assign to the default query service the entire cost of two incremental items of AMA software that are used exclusively for billing default queries.<sup>16</sup> Transmittal No. 965 inadvertently assigned only 2.5 percent of these costs to default query service; the remaining costs were simply left out and not recovered elsewhere. Because this software is used exclusively for the provision of LNP, Transmittal No. 975 corrected this error, by allocating 100% of the costs to the query service, which in turn increased the default query charges.

These cost changes simply correct errors made in Transmittal No. 965. These costs are bona fide LNP costs and were derived in accordance with the Bureau’s

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<sup>15</sup> Id. at 3 and Work Paper 5, lines 68-70b.

LNP Cost Classification rules. As a result, U S WEST has a right to recover these costs through the LNP end-user charge and query charges.

Issue No. 8

U S WEST's tariff filings raise the issue of whether its costs of implementing number portability are substantially higher than those of other RBOCs because its network is less efficient. Where a LEC has failed to upgrade its network and recover the costs of those network upgrades through price cap or rate-of-return mechanisms, it may not be reasonable to allow recovery of higher number portability costs than the LEC would have recovered if the LEC had implemented number portability on an efficient, more modern network. U S WEST is directed to explain why it is reasonable to allow it to recover higher LNP implementation costs than those incurred and recovered by LECs with more modern networks. (¶¶ 12-14)

Response

The Commission seems to be operating from the premise that the costs to implement LNP are necessarily higher for older or less "modern" equipment. This premise is demonstrably false. Take, for example, the case of switches. U S WEST uses a variety of switches in its network, including Lucent 5ESS digital switches, Nortel DMS series digital switches, Ericsson AXE digital switches, and Lucent 1AESS analog switches. The Commission apparently is concerned that the costs of implementing LNP will be higher for 1AESS switches -- which are not "state of the art" digital switches. In fact, however, U S WEST's costs for upgrading its 1AESS switches are *less than or equal to* the cost to upgrade many of its digital switches. The cost of implementing LNP for one type of digital switch is almost 60% *higher* than the cost for 1AESS switches. And the cost for another digital switch is

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<sup>16</sup> Id. at 4, Work Paper 5, lines 28 and 32 and Work Papers 7 and 9.

essentially equal to the costs for 1AESS switches. Thus, the Commission's concern that LNP costs are higher for "less modern" equipment is unwarranted.

The Commission's concern that higher LNP costs somehow imply that U S WEST's network must be less "efficient" than those of other carriers is similarly misplaced. For example, while U S WEST's Ericsson STPs are unquestionably "modern" equipment, the Commission apparently believes they are less efficient than other vendors' STPs simply because the STP solution appropriate for U S WEST would be more costly than the SCP-based solution that U S WEST used. However, in making this assumption, the Commission ignores the many legitimate factors that may make an upgrade more costly than other alternatives, including equipment design and functionality, diversion of vendor resources from other products, and the number of carriers and systems across which vendor development costs would be spread. None of these necessarily mean the equipment is less efficient. And none of these factors has anything to do with the legitimacy of U S WEST's costs to implement LNP.

By designating this issue for investigation, the Commission erroneously implies that there is a "right way" for LECs to invest in their networks and fails to recognize the fact that a myriad of variables go into network investment decisions. Of particular importance is market demand for the services that network upgrades will accommodate. Individual RBOC networks have evolved differently over the last 15 years since the break-up of the Bell System precisely because of the numerous variables that determine whether a particular investment or upgrade is

economically rational.<sup>17</sup> For example, as U S WEST has noted elsewhere,<sup>18</sup> it has not purchased the latest generic software for central office switches where market demand for the new services made possible by particular upgrades was insufficient to justify these expenditures. But even in these cases, the fact that U S WEST does not have the “most modern” software has no effect on its charges for number portability. In those instances where it was necessary to step through a series of generic upgrades to reach the generic necessary for LNP, U S WEST has not included the cost of those generics in its LNP tariffs. In fact, U S WEST has not sought recovery of approximately \$82 million in costs that it incurred for such generic software and hardware, even though U S WEST believes that these costs are directly related to the deployment of LNP and have minimal, if any, benefit to other services.

Ultimately -- even if (contrary to fact) the Commission’s assumption about some type of correlation between LNP costs and the modernity of its network were correct -- the relative technological state of U S WEST’s network would simply be irrelevant to the costs which it is entitled to recover. Although carriers may not recover costs for general network upgrades (which U S WEST does not seek under its tariff), they are entitled to all of their costs directly related to providing number portability.<sup>19</sup> The Commission has recognized that those costs will vary by carrier.

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<sup>17</sup> Even prior to divestiture, Bell Operating Company (“BOC”) networks were not uniform. U S WEST itself is the result of a combination of three BOCs that had differing approaches to network deployment and different market needs.

<sup>18</sup> See, e.g., Comments of U S WEST, CC Docket No. 95-116, filed Aug. 3, 1998.

<sup>19</sup> Cost Recovery Order ¶ 135.