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DESCRIPTION OF MODIFICATIONS

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3 Line sharing will be implemented in two phases. The first phase will address the
4 modifications necessary to accomplish line sharing in the central office - either in the CLEC's
5 collocation area or in the common area. The second phase will allow the splitter to placed
6 in a remote terminal.

7

8 To accommodate line sharing, systems and processes will have to be modified. It will also
9 be necessary to introduce new data elements that will have to be communicated between the
10 companies involved in sharing the line and will have to be stored in new or existing
11 databases. This document describes first, the additional data required to support line sharing.
12 Second, it describes the systems used for pre-order, order, and provisioning, the changes
13 needed to support line sharing. The document also includes a diagram depicting the
14 relationship between these systems. Further, this document describes the systems used for
15 repair, the changes needed to support line sharing, and displays a diagram depicting the
16 relationship between these systems. Finally, there is a description of the billing system and
17 the modifications needed to support line sharing.

18

19 NEW DATA ELEMENTS

20

21 Three new FIDs (field identifiers) will be introduced. The data needed consists of:

1 UNN = Data CLEC identifier (RSID, ZCID, DLEC equivalent)

2 UNE = Data CLEC circuit ID (currently, the end-user's telephone number)

3 UCP = Cable & pair equivalent comprised of the following fields (Type, Meet Point

4 (point of termination to the splitter), Central office or Field indicator, and Optional

5 (power spectrum density mask).

6

7 **PRE-ORDER**

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9 Data CLECs will use the current functionality in the IMA gateway, which is comprised of

10 GUI and an EDI components, to determine if the line is qualified for ADSL service. To

11 further support line sharing, particularly in regards to CLECs' acquisition of customer loop

12 information, U S WEST, beginning mid year 2000, will provide CLECs with electronic

13 batch files containing loop information on a per wire center basis. The batch files

14 U S WEST will provide to CLECs will contain listings of all active telephone numbers

15 within a particular wire center as well as additional loop information for each telephone

16 number listed. CLECs will be able to access these batch loop files through a CLEC-

17 accessible, U S WEST web site. The batch files will be refreshed on a rolling basis monthly.

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19 **ORDER**

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21 The IMA (GUI/EDI) gateway is comprised of two electronic interfaces used to provide

1 CLECs access to pre-ordering, ordering, provisioning, and repair functionality of resale and
2 unbundled network elements.

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4 To support line sharing, the IMA gateway will have to be modified to allow for additional
5 data elements, including, but are not limited to: 1) request type (a request for line
6 sharing); 2) TOS (type of service); 3) circuit ID (UNE FID); and 4) meet point (UCP
7 FID). This functionality will include edit functions for syntax and cross-edit
8 requirements for all of the new data elements. The LSR must be modified to allow for
9 the new data elements to be passed to U S WEST to support line sharing. The proposed
10 modifications were introduced to the Ordering and Billing Forum (OBF) in early
11 February 2000 by U S WEST with the concurrence of the data CLECs.

12

13 SONAR is the system used to create and submit service orders for nondesigned services for
14 residential and small business customers.

15

16 To support line sharing, SONAR must be modified to recognize that the account on which
17 an order is being issued has a shared line to ensure the voice products/services being
18 ordered are compatible with data services.

19

20 There are three service order processors, collectively called the SOPs. SOLAR (service order
21 logistics and reference) is the SOP in U S WEST's eastern region, SOPAD (service order

1 processor and distribution) is the SOP in U S WEST's central region, and RSOLAR

2 (Regional SOLAR) is the SOP in U S WEST's western region.

3

4 To support line sharing, these SOPs must also be modified to accept the new FIDs and to

5 exhibit specific behavior based on the presence of those FIDs. To support line sharing,

6 the SOPs must create and distribute one record to LMOS for repair purposes and two

7 records to CRIS for billing purposes.

8

9 SOAC controls the flow of service order activity from the SOPs to the downstream systems.

10 Based on the type of service order, SOAC determines which downstream systems need to

11 be involved in activating service, and provides instructions and sequencing to those systems.

12

13

14 To support line sharing, SOAC must recognize that this is an order to share the line, perform

15 proper telephone number treatment within CNUM, and create and distribute one record

16 to NSDB for repair. To perform this for line sharing is new functionality. In addition,

17 it must interpret the UCP FID information and determine if the splitter will be placed in

18 the central office or in a remote terminal. If the splitter will be placed in the central

19 office, SOAC will send the information to SWITCH for assignment. If the splitter will

20 be placed at a remote terminal, SOAC will send the information to LFACS for

21 assignment.

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2 **PROVISIONING**

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4 LFACS maintains a mechanized inventory of outside plant facilities and assigns the outside
5 plant facilities to assignment requests received from SOAC. It also provides cable & pair
6 information, addresses, and terminal locations to SOAC.

7

8 To support line sharing, LFACS will have to recognize and receive the meet point
9 information from the UCP FID and inventory it as a cable & pair assignment when a
10 remote line sharing request is made. LFACS must also recognize when the line sharing
11 request is to be a central office solution and ignore the connection information and allow
12 SWITCH to perform the assignment function. In addition, it will designate that the line
13 should not be line station transferred to ensure that the end-user's line is not replaced with
14 a loop that is not DSL-capable.

15

16 SWITCH is a central office inventory system. It takes the telephone number information and
17 the cable & pair information from LFACS and guides the information to the correct network
18 location. SWITCH supports line-side and trunk-side central office provisioning of digital,
19 analog, and packet switching facilities by providing connection information for central office
20 personnel.

21

1 To support line sharing, SWITCH will have to recognize and receive the meet point
2 information from the UCP FID and inventory it as a miscellaneous equipment. In
3 addition, there will be conversion activities associated with this new functionality.
4 U S WEST has supported line sharing in a quasi-manual mode and the original inventory
5 information has been input as free flow text behind a FID. To begin using the new
6 functionality in SWITCH, U S WEST must build the inventory by parsing the free flow
7 text, analyzing it and inputting it into the database.

8

9 MARCH / APRIL are systems that receive and review all orders for special service
10 activation.

11

12 To support line sharing on a finished voice service, APRIL must be able to pass the service
13 order without errors. In the event that a data CLEC wishes to share an unbundled loop
14 with a voice CLEC, these systems will have to remove the telephone number / office
15 equipment (voice switch location) relationship. In addition, two meet points will have
16 to be inventoried and assigned: one for the voice CLEC's unbundled loop and one for the
17 data CLEC's splitter port location.

18

19 WFA/DO automates the support of the dispatch function for outside plant installation, repair,
20 and routine work. WFA-DO provides screening, pricing, mapping, routing, scheduling, and
21 loading functions within a dispatch center.

1 To support line sharing, WFA/DO will have to recognize that this is a line sharing order
2 when dispatching for installation and repair. In addition, it will have to recognize a line
3 sharing order when performing the service order complete process.

4

5 WFA/DI automates the work assignments of the technicians working within the central
6 offices.

7

8 To support line sharing, WFA/DI must interface with FOMS, which is a dispatch-in system
9 for central office wiring instructions used by central office technicians. In addition,
10 WFA/DI will have to recognize that this is a line sharing order when performing the SOP
11 auto-complete process.

12

13 NSDB stores customer and circuit data for special service, message, carrier, and enhanced
14 nondesigned services. The NSDB line record must have indicators that are descriptive to a
15 technician that this line is shared. This is necessary because in the event that repair is
16 required, the technician understands the condition of the line.

17

18 To support line sharing, NSDB must be able to recognize that this is a shared line when it
19 stores the record for repair purposes.

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21 WFA/C mechanizes the administration of the installation and maintenance of designed and

1 nondesigned circuits. It also directs the flow of the work items to WFA/DO and WFA/DI.

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4 To support line sharing, WFA/C must be able to recognize that this is a shared line, be able
5 to accept the new data, and allow for auto-completion of line sharing orders.

6

7 LMOS is a repair system for POTS services that provide trouble entry, tracking and work
8 status.

9 To support line sharing, LMOS must be able to receive the completed service order and
10 record the line record as a shared line. Although this data is recorded similarly to the
11 way is recorded in NSDB, it is also necessary to record it in LMOS because the
12 additional skills required to repair a simple POTS line that has a more complex wiring
13 arrangement are typically found in a designed services technician. This allows both
14 technicians to have the knowledge of the condition of the line.

15

16 PAWS (Provisioning Analyst Workstation System) is a downstream system from SOAC and
17 LFACS. Service orders that contain errors (e.g. incorrectly entered loop data) sometimes
18 make their way partially through the downstream systems without the SOPS recognizing the
19 errors. A service order with this type of error can drop out of either SOAC or LFACS as a
20 request for manual assistance (RMA). The RMA is sent to PAWS. PAWS manages the

1 RMA work list and assigns them to the loop provisioning center (LPC) according to the type
2 of error as recognized by LFACS for correction. PAWS also serves a similar function for
3 errors that fall out as RMAs for SWITCH.

4

5 To support line sharing, PAWS must be updated to recognize incorrect splitter
6 location requests based on information contained in SWITCH or LFACS,
7 depending on the type of line sharing requested. In addition, PAWS must be
8 modified to be able to recognize the three FIDs associated with orders for line
9 sharing. PAWS must also be modified to recognize that this is a line shared
10 order to route the RMA to the appropriate technicians with the skills to remedy
11 errors specific to line sharing orders.

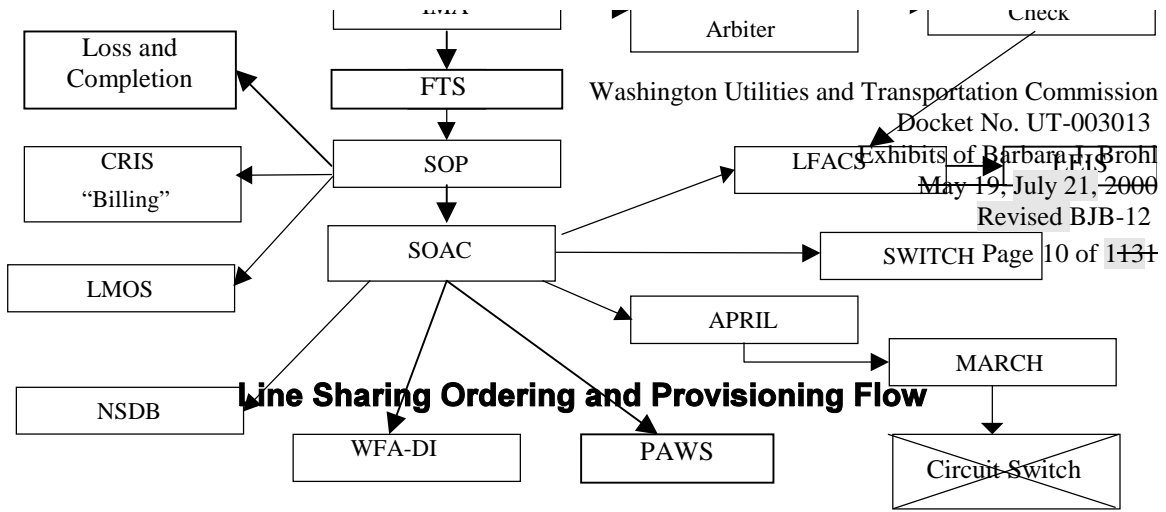
12

13 LEIS (Loop Engineering Information System) is a downstream system of LFACS, with
14 LFACS-equivalent data. The primary function of LEIS is to offload queries that would
15 normally go to LFACS so that LFACS may perform its primary functions.

16 To support line sharing, LEIS must be modified in the same way that LFACS must be
17 modified. Specifically, LEIS will have to recognize and receive the meet point
18 information from the field identifier (FID) and inventory it as a cable & pair assignment
19 when a remote line sharing request is made

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2 **REPAIR**

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4 VRU and FESR are collectively the voice response units that contain a script of the repair
5 scenarios that can occur. These scripts allow an end-user to walk through the VRU and
6 through associated button-tone responses by the end-user will direct the customer inquiry to
7 the appropriate repair function.

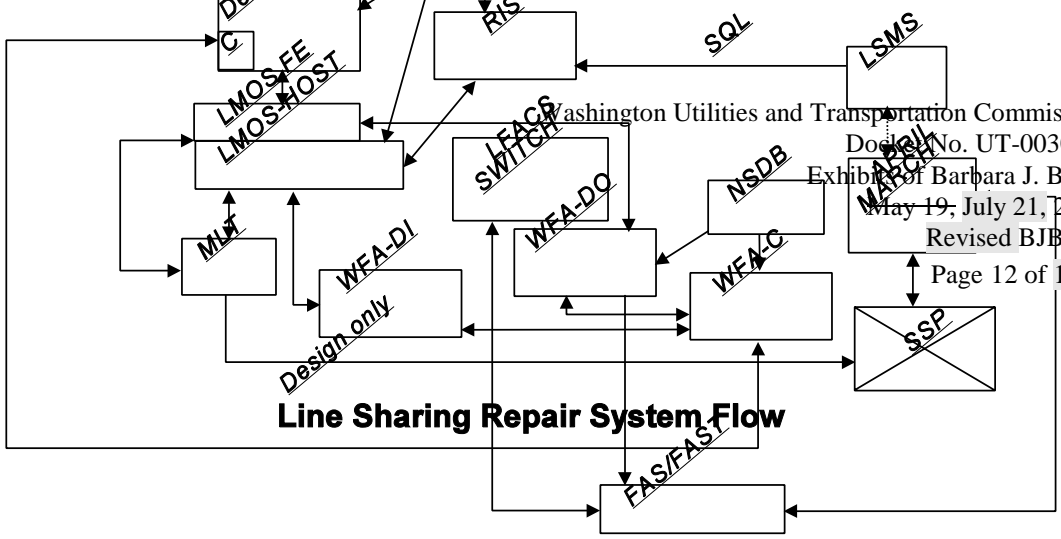
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9 To support line sharing, all of the scenarios must first be defined, the scripts be coded into
10 the VRU, and the systems modified to react appropriately to the button-tone responses
11 described in the script for the line sharing scenarios.

12 Repair for data issues is to be deferred to the data CLEC, while voice repair remains with
13 U S WEST. This is very different from the other resale and unbundled network elements
14 because those records are marked as belonging to one LEC - the CLEC. Line sharing
15 results in single records having two owners (U S WEST and the data CLEC).

16 Specialized markings and logic are required to support this condition in the VRU/FESR,
17 LMOS, and NSDB systems.

18 Test access must also be considered. The access must allow for voice testing and data testing
19 based on the location of the meet points. The records in LMOS and NSDB must provide
20 this information to the technician so that test access and responsibility is understood.



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3 **BILLING**

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5 CRIS is a billing system for the majority of residence and business account bills for exchange
6 services. It calculates, prints, and mails bills to individual retail end-user customers for retail
7 products, and CLECs for some interconnect (wholesale) products. After rating usage, CRIS
8 posts service order processing updates, provisioning information, rating data, tolls, cash
9 treatments, bills, payments, journal entries or adjustments, rate changes, message processing
10 and other billing related information to the CSRs.

11

12 To support line sharing, CRIS must be modified to create/modify two customer service
13 records (CSRs) for one product - line sharing. The end-user's account must be updated
14 to reflect that the line is now shared. A new summary bill for the CLEC must be created
15 to establish the relationship to the end-user's telephone number. In addition, CRIS must
16 bill the CLEC on a wholesale summary bill for any charges associated with line sharing.