1999 Bench Test of

Unbundled Elements

VERSION 1.0
JULY 21, 1999

SUBJECT:	**1999 BENCH TEST OF UNBUNDLED ELEMENTS**
STATES INVOLVED:	**ARIZONA & NEBRASKA**
AUTHOR:	
AUTHOR TELEPHONE NUMBER:	
ISSUE	**ONE** **7-21-99**

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1.0 GENERAL

1.01 In May and June of 1999, a bench test to support U S West's Section 271 filings was completed in Phoenix, Arizona and Omaha, Nebraska. The bench test was undertaken due to a lack of actual Co-Provider activity in the areas of unbundled switching and transport.

This test demonstrates and supports:

- U S West's advocacy on unbundled elements.
- That U S West processes and procedures allow for timely provisioning and maintenance of the following Section 271 Checklist items:
  - Number #5 (unbundled transport).
  - Number #6 (unbundled switching)
    - Including the feature Operator Services & Directory Assistance (OS/DA) call completion and branding
- Re-enforce results from the bench test conducted in a Lab-controlled test environment in June, 1998.

The purpose of this document is to provide test results and an assessment of our unbundled products, processes and systems.

1.02 Document issue number and date are found in the footer information of this document.

1.03 For information about this document, contact Jerry Shypulski at 612-798-2419.

2.0 DEFINITION AND SCOPE OF THE BENCH TEST

2.01 UNBUNDLED SWITCHING:

- Unbundled analog line ports were provisioned[1] and physically installed in the Phoenix, Arizona North East 5E switch.
- Unbundled analog line ports were provisioned[1] in the Omaha, Nebraska 84th Street DMS 100 switch.

See Figure one for diagram of Unbundled Element infrastructure.

The unbundled analog line ports required the establishment and deployment of a unique measured Line Class Code (LCC) with Shared Transport, blockage of 900 calls and Custom Routing to a dedicated trunk group for OS/DA traffic.

2.01.01 A dedicated combined OS/DA trunk group with branding was established between the Phoenix North East 5E switch and the Toll Operator Switch (TOPS) switch in the Phoenix Main central office.

This was accomplished using the following combination of unbundled elements:

- Unbundled switching DS1 trunk port and unbundled trunk group/members
- Unbundled interoffice transport.

[1] Provisioned is defined as Service Order creation from a "simulated" Co-Provider's Access Service Request (ASR) or Local Service Request (LSR) and processed down through all the Operational Support Systems (OSS).

The unbundled elements were terminated on designated Interconnection Distributing Frames (ICDF).

See Figure two for diagram of OS/DA infrastructure.

2.02 UNBUNDLED TRANSPORT

Unbundled interoffice transport (UDIT) orders were provisioned and physically installed between the Phoenix, Arizona North East central office and the Phoenix, Arizona Main central office. These were at the service levels of OC-n, DS3 and DS1. Orders were also provisioned and installed to test Unbundled Customer Control Reconfiguration Element (UCCRE).

Unbundled UDIT orders were provisioned between the Omaha 84th St central office and the Omaha Main central office.

2.03 The unbundled analog line ports were wired to a telephone within the central office in lieu of an unbundled loop to allow test calls. The test calls involved both local originating and terminating and OS/DA traffic.

2.04 Test calls were conducted which generated local minutes of use which were captured by Automatic Message Accounting (AMA).

Orders were completed and a summary bill created.

2.05 Test was completed by June 18, 1999. The billing results out of Customer Records Information System (CRIS) and Integrated Access Billing System (IABS) were available on the next billing cycle.

2.06 After provisioning was complete, trouble reports were processed to validate U S West's process and procedures for Repair/Maintenance.

Figure One
Section 271 Bench Test Diagram

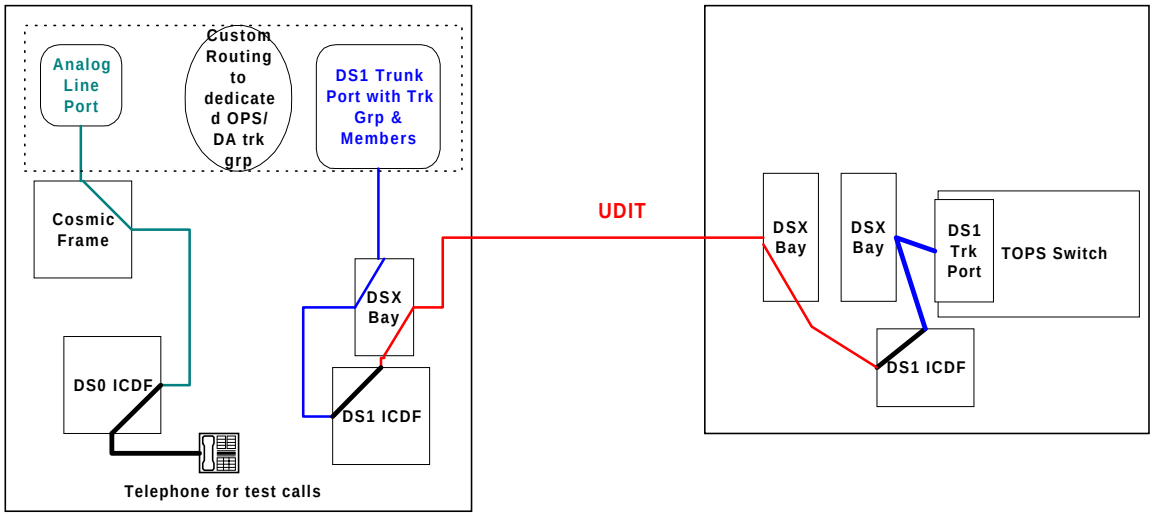
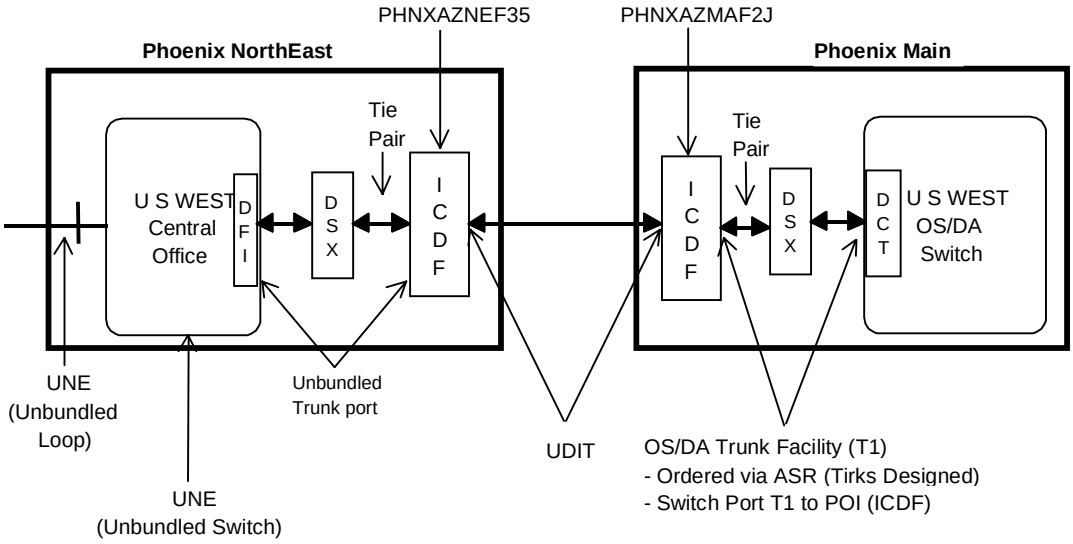


Figure Two

271 Bench Test - OS/DA Branding Network



4.0 Timeline

4.01 THE TIMELINE DISPLAYED IN APPENDIX A REFLECTS THE RECOMMENDED SEQUENTIAL FLOW OF ORDER ACTIVITY USED FOR BOTH THE ARIZONA AND NEBRASKA TRIALS. IT ALSO CONTAINS A TABLE TO REFLECT THE CORRESPONDING PROCESS FLOW TASKS (WHICH ARE FOUND IN CHAPTER 5) AND THE RESULTS FOR EACH OF THE SEQUENTIAL TASKS.

THE SEQUENCE USED WAS THE DOCUMENTED PROCESS TO BE FOLLOWED BY THE CO-PROVIDER. THE TEAM CONDUCTED A PRE-PLANNING MEETING WITH THE

"SIMULATED" CO-PROVIDER AND PROCESSED ALL STANDARD CUSTOMER AND CUSTOM ROUTING QUESTIONNAIRES.

4.02 The below table summarizes the individual unbundled element products. The Application (APP) date column indicates the date that the team started the Business Integrated Test (BIT). The Due Date and Completion columns reflects the comparison between order due date and actual test completion.

ARIZONA (BETA)

Product	APP/BIT Test Call	Due Date[2]	Completion
UDIT	4/14/99	4/21/99	4/21/99
UBSW Trk Port	4/16/99	4/29/99	4/29/99
UBSW Trk Grp	4/16/99	4/29/99	4/29/99
UBSW Line Port	4/26/99	5/3/99	5/3/99
Test Call Plan	5/5/99	5/5/99	5/5/99

Product	APP/BIT Test Call	Due Date[3]	Completed
CR established	4/12/99	4/13/99	4/13/99
CR deployed	4/14/99	4/30/99	4/30/99

ARIZONA (RE-TEST)

Product	APP/BIT Test Call	Due Date[4]	Completion
UDIT	6/2/99	6/7/99	6/7/99
UBSW Trk Port	6/2/99	6/7/99	6/7/99
UBSW Trk Grp	6/2/99	6/7/99	6/7/99
UBSW Line Port	6/2/99	6/4/99	6/4/99
Test Call Plan	6/7/99	6/18/99	6/18/99

NEBRASKA (RE-TEST)

Product	APP/BIT Test Call	Due Date	Completion
UDIT	6/14/99	6/18/99	6/18/99
UBSW Trk Port	6/14/99	6/18/99	6/18/99
UBSW Trk Grp	6/14/99	6/18/99	6/18/99
UBSW Line Port	6/14/99	6/18/99	6/18/99

[2] Represents the standard provisioning intervals for these unbundled products.
[3] Projected Custom Routing and Line Class Code establishment/deployment interval requirements were based on the bench test completion date and the due dates of the orders. Normal procedures include establishing an interval through the Individual Case Basis (ICB) process, which may extend the interval required for these items. The trial LCC was deployed once and used for all subsequent testing.

[4] Shortened intervals were used for the finalized tests to ensure the bench test results would be available for the pending Arizona and Nebraska Section 271 proceedings.

5.0 BENCH TEST BUSINESS INTEGRATION TEST (BIT) SUMMARY:

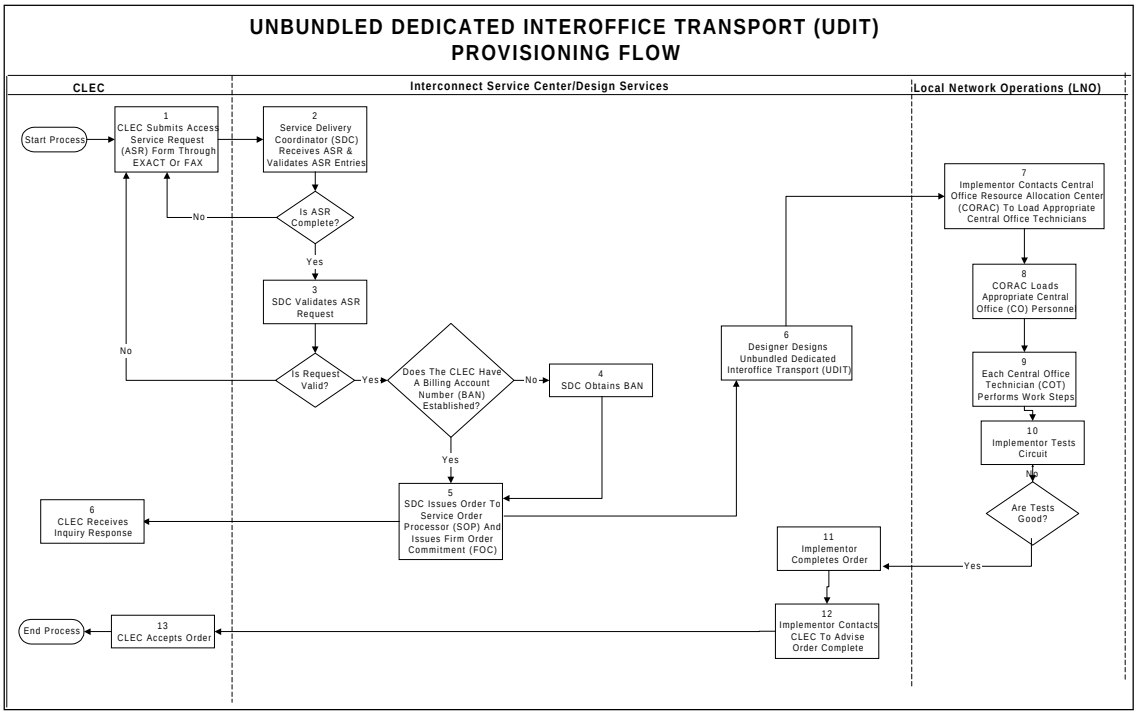
5.01 Testing took place in the Central and Eastern Region OSS Production environment. Complete detailed test scenarios, results and associated verifying OSS system screen prints can be found in the Business Integration Test (BIT) Bench Test binder.

Sub-chapter numbering will corresponding to the individual tasks contained within the documented unbundled element process flows.

Service Order Processor (SOP) is represented specifically as:
Central Region- Service Order Processing and Distribution (SOPAD)
Eastern Region- Service Order Local Administration and Request (SOLAR)

5.02 UNBUNDLED DEDICATED INTEROFFICE TRANSPORT (UDIT)

U S West's process and procedures for the provisioning of UDIT contains thirteen (13) process tasks. Each task was tested. The provisioning flow is described in the following table.



5.02.1 **Task 1: Co-Provider submits Access Service Request (ASR) form submitted through EXACT or FAX.**
UDIT order processing was initiated with a service order request received in EXACT via the Access Service Request (ASR) process. The orders passed the all system edit checks and proceeded to IABS and into the Service Order Processor (SOPAD for Central Region and SOLAR for Eastern Region).

5.02.2 **Task 2: Service Delivery Coordinator (SDC) receives ASR & validates ASR entries.**

The only process issue encountered was the configuration of the Access Customer Termination Location (ACTL) code. The ACTL is a 11 character Common Language Location Identification (CLLI) code. The Beta UDIT order was processed with an 11 character ACTL which included a "F" in the 9th character. The "F" specifies the ICDF frame where the UDIT will terminate. The problem occurs when Trunks Integrated Record Keeping System (TIRKS) takes the ACTL and automatically looks for a planning design to use in the design process. TIRKS is 'hard-coded' to default to an 8 character CLLI when it encounters a "F" in that specified 9th position. The 8 character-based planning design only processed the design to the USW frames and not all the way to the ICDF frames where the UDIT would be terminated. The result is the design required a manual intervention to complete.

The on-going solution is to designate unique ACTLs of 11 characters without the "F" character for any Co-Provider where their only "presence" will be ICDF Collocation. This already occurs where the Co-Provider has a Physical, Virtual or Cageless Collocations.

Method and Procedures were updated and subsequent testing using an acceptable "simulated" ACTL proved successful.

5.02.3 **Task 3: SDC validates ASR request.**
The ASR was validated and all required entries were present.

5.02.4 **Task 4: SDC obtains Billing Account Number (BAN)**
We obtained 303L04 & 303l08 for use as our BAN number for our "simulated" Co-Provider account.

5.02.5 **Task 5: SDC issues order to Service Order Processor (SOP) and issues Firm Order Commitment (FOC).**
The Beta UDIT order encountered an error for missing Class of Service in SOPAD. The Class of Service was missing due to the fact this was the first UDIT order provisioned in the central region. The new UDIT Class of Service of "UTL1N" was added to the appropriate SOPAD table. This order was successfully redistributed and went to Service Order Administration Control (SOAC). Subsequent UDIT orders processed error-free.

In SOAC, a Request for Manual Assistance (RMA) was received on the Beta UDIT order. This was due to a missing Universal Service Order Code (USOC). The new UDIT USOC "TUGSX" was added to the SOAC table. The USOC "TUGSX" information was only missing in the Western and Central Region where no actual UDIT orders had been previously processed. In the Eastern Region the USOC was contained in the appropriate tables. All subsequent tests were successful.

Before the order was able to proceed successfully to TIRKS, another intervention was needed to change the setup of the new UDIT class of service, in the Central Region, from "non-access service/CRIS billed" to "access service/IABS billed". The order then proceeded to TIRKS where SOAC flow-through messages 1, 2, and 3 were processed successfully.

5.02.6 **Task 6: Designer designs UDIT and sends Design Layout Record (DLR) to Co-Provider**.
The orders processed successfully through TIRKS to Work Flow Administration (WFA). The appropriate output documents were:

- Design Layout Records (DLRs) which was sent to the "simulated" Co-Provider.
- Work Order Record Document (WORD) document which was issued to the Central Office and Design Center implementation personnel.

5.02.7 **Task 7: Implementor contacts Central Office Resource Allocation Center (CORAC) to load appropriate central office technicians.**
This task was successfully completed and error-free.

5.02.8 **Task 8: CORAC loads appropriate Central Office Personnel**

This task was successfully completed and error-free.

5.02.9 **Task 9: Central Office Technician (COT) performs work steps**
This task was successfully completed and error-free.

5.02.10 **Task 10: Implementor tests circuit**
This task was successfully completed and error-free.

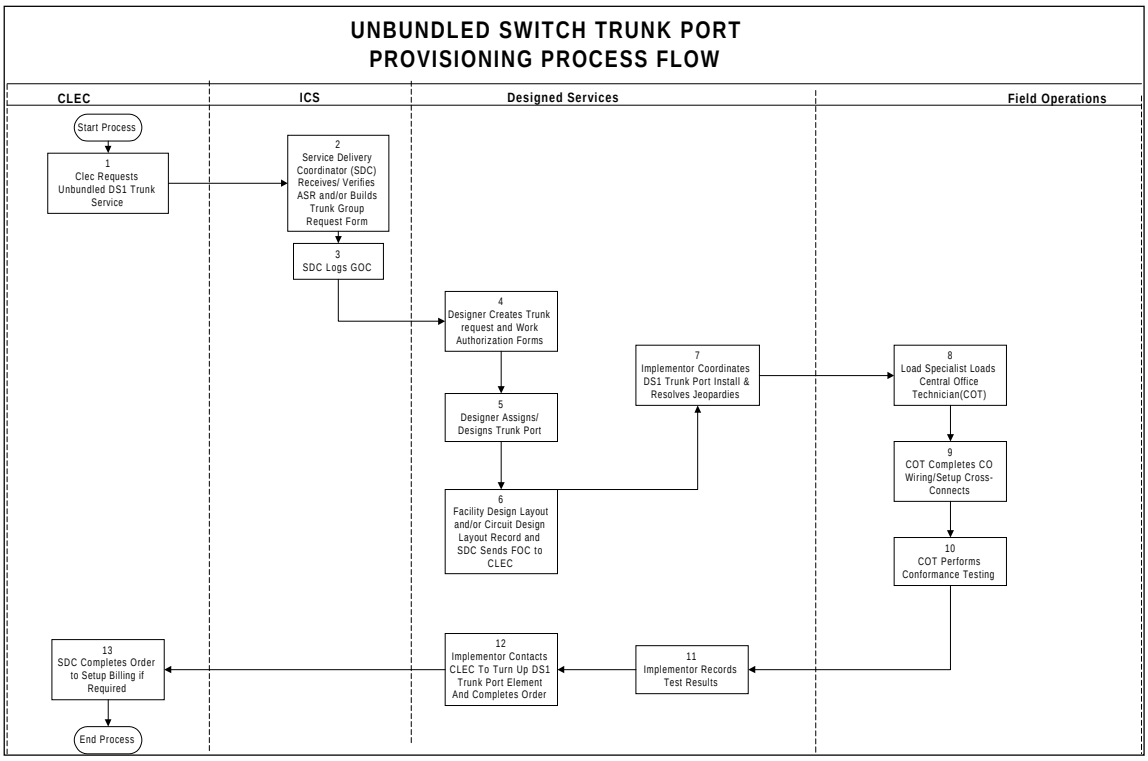
5.02.11 **Task 11: Order completed**
This task was successfully completed and error-free.

5.02.12 **Task 12: Co-Provider notified**
This task was successfully completed and error-free. The "simulated" Co-Provider accepted service.

5.02.13 **Task 13: Billing established**
IABS billing results indicated non-recurring and recurring billing information. Also the customer bill reflected the individual unbundled elements ordered and the rates elements entered for the test.

5.03 UNBUNDLED SWITCHING MESSAGE TRUNK PORT AND MESSAGE TRUNK GROUP AND MEMBERS

U S West process and procedures for the provisioning of Unbundled Switch Trunk Port contains thirteen (13) process tasks. Each task was tested. The provisioning flow is described in the following table.



5.03.1 **Task 1: Co-Provider requests unbundled DS1 Trunk Service (Includes DS1 Trunk Port and Associated Trunk Group/ Members.**
The Unbundled Switch Trunk Port and Group/Member orders were released through EXACT via ASR. There were some typographic errors, which were caught by EXACT, on the Beta orders. This allowed

for immediate correction and the orders re-released. Subsequent Trunk Port and Group/Member orders passed all formatting issues.

5.03.2 **Task 2: Service Delivery Coordinator (SDC) receives/verifies ASR and/or builds trunk group request form.**
This task was successfully completed and the trunk request form created.

5.03.3 **Task 3: SDC logs into TIRKS Generic Order Control (GOC).**
A process issue was encountered on the Beta orders when a USOC "TMECS" was present on the order and the Loop Facilities Assignment and Control Center (LFACS) system incorrectly assigned a local loop. "TMECS" is a line-assignable USOC that tells LFACS to assign a four-wire loop. TMECS should not have been on the orders and the Field Identifier (FID) "CTG" was substituted in its place. A check was made of the methods and the use of FID "CTG" was already documented.

The same issue from paragraph 5.02.2 around the ACTL information on UDIT, also surfaced on the Beta orders. The team used the "simulated" ACTL with an H in the 9th character and resolved the issue. There was an SOAC error with Message 1 on the Trunk Port orders (needed an allocation group assigned which occurs whenever a new ACTL is used for the first time). The Message 1 error was fixed and the order continued processing.

During the Trunk Group/Member Beta order release, it was determined that the traffic modifier in the circuit ID was not correct. The traffic modifier should be YY. The industry standard of YY traffic modifier identifies the trunk group as an unbundled element. Also the YY needed to be added in the EXACT tables because these were the first unbundled trunk group/member orders processed in "production" Central Region.

5.03.4 **Task 4: Designer creates trunk request and Work Authorization forms.**
The next orders to be processed were for the associated Unbundled Switch Trunk Group/Members. A key point to the overall order process is the timing for releasing these trunk group/member orders. The order will error out if it starts to go through the OSS systems before the trunk port order is in a pending "P"status (meaning design-processed through TIRKS).

5.03.5 **Task 5: Designer assigns/designs trunk port and trunk group/members.**
The Trunk Group/Member orders were released and were successfully loaded into TIRKS and appeared on the TIRKS list for processing. The orders continued, successfully, through TIRKS, a DLR was created and processed into WFA.

An issue arose concerning which internal design group would handle the request within the Des Moines Design Center. The Beta test orders went to two different groups, the trunk port orders went to the Unbundled Network Element design team in Des Moines and the trunk group/member orders went to the Feature Group/ LIS design team. After discussion with the appropriate design groups, it was decided that there is a functional synergy to have both orders designed in the same group.

Subsequent testing involved the single design group and processed smoothly through the Des Moines Design.

5.03.6 **Task 6: Facility Design Layout and/or Circuit Design Layout record is created and SDC sends FOC to Co-Provider.**
This task was successfully completed and error-free.

5.03.7 **Task 7: Implementor coordinates DS1 trunk port and Trunk group installation and resolves jeopardies.**
This task was successfully completed and error-free.

5.03.8 **Task 8: Load Specialist loads Central Office technician (COT) with work steps**
This task was successfully completed and error-free.

5.03.9 **Task 9: COT completes CO wiring cross-connects**
This task was successfully completed and error-free.

5.03.10 **Task 10: COT performs conformance testing**
This task was successfully completed and error-free.

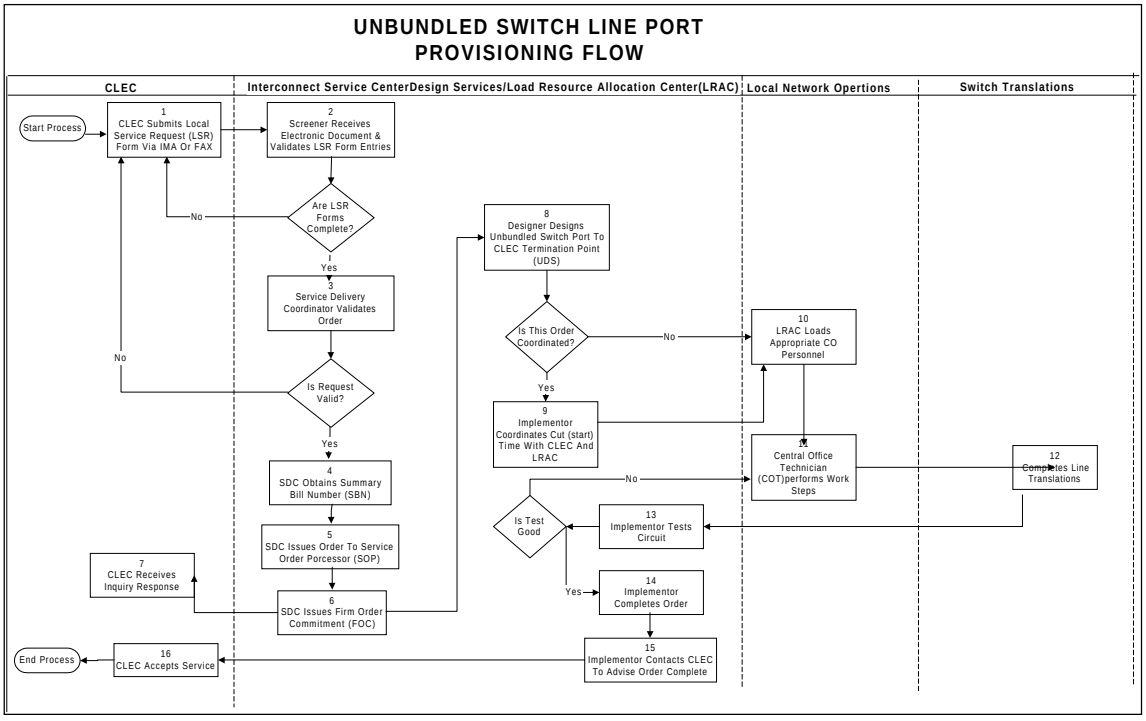
5.03.11 **Task 11: Implementor records test results and completes order.**
This task was successfully completed and error-free.

5.03.12 **Task 12: Co-provider notified**
This task was successfully completed and error-free.

5.03.13 **Task 13: Billing established**
IABS billing results indicated non-recurring and recurring billing information. Also the customer bill reflected the individual unbundled elements ordered and the rates elements entered for the test.

5.04 UNBUNDLED SWITCH ANALOG LINE PORT

U S West's process and procedures for the provisioning of Unbundled Line Port contains sixteen (16) process tasks. Each task was tested. The provisioning flow is described in the following table.



5.04.1 **Task 1: Co-Provider submits Local Service Request (LSR) form submitted via IMA or FAX.** Unbundled Switch Analog Line Port orders were processed in CRIS via the Local Service Request (LSR) and proceeded in SOPAD and SOLAR successfully.

5.04.2 **Task 2: Screener receives electronic document & validates LSR form entries.** This task was successfully completed and error-free.

5.04.3 **Task 3: Service Delivery Coorinator (SDC) validates order.** This task was successfully completed and error-free.

5.04.4 **Task 4: SDC obtains Summary Billing Number.** The summary billing number was the telephone numbers of our analog line ports.

5.04.5 **Task 5: SDC issues order to Service Order Processor (SOP).** This task was successfully completed and the order sent to SOPAD (central region) and SOLAR (eastern region).

5.04.6 **Task 6: SDC issues Firm Order Commitment (FOC)** This task was successfully completed and error-free.

5.04.7 **Task 7: Co-Provider receives inquiry response.** This task was successfully completed and error-free.

5.04.8 **Task 8: Designer designs unbundled switch port to Co-Provider termination point.**
The order processed successfully through LFACS, through the SOAC-TIRKS Interface and into TIRKS.

The only issue uncovered was, during the Nebraska test, the DMS-100 switch used required the SOAC USOC table field CONDUCTOR changed from 0 to 2. This allowed Office Equipment (OE) to be assigned. All tables within the three regions were updated for subsequent processing.

In the Order Automation process, the Beta Unbundled Switch Analog Line Port erred out because of a system issue around the tie pair inventory. A tie pair was located and assigned and the order was re-sent through the Order Automation process. The Order Automation process ended successfully. A DLR was produced and the order was distributed to the WFA Systems. Subsequent Analog Line Port orders processed were successful.

5.04.9 **Task 9: Implementor coordinates cut (start) time with Co-Provider and Local Resource Allocation Center (LRAC).**
This task was successfully completed and error-free.

5.04.10 **Task 10: LRAC loads Central Office work steps**
This task was successfully completed and error-free.

5.04.11 **Task 11: Central Office technician (COT) performs work**
This task was successfully completed and error-free.

5.04.12 **Task 12: COT completes Line Translations**
This task was successfully completed and error-free.

5.04.13 **Task 13: Circuit is tested**
This task was successfully completed and error-free.

5.04.14 **Task 14: Order completed**
This task was successfully completed and error-free.

5.04.15 **Task 15: Co-Provider notified**
This task was successfully completed and error-free.

5.04.16 **Task 16: Billing established**
CRIS billing results indicated non-recurring and recurring billing information. Also the customer bill reflected the individual unbundled elements ordered and the rates elements entered for the test.

The test successfully captured Minutes of Use (MOUs) in support of Shared Transport. However, there were system limitations preventing a billing separation of Intra-switch and Inter-switch MOUs. This will be available when a Change Request (CR) in CRIS is implemented in August of 1999.

5.05 CUSTOM ROUTING:

5.05.1 Pre-Planning questionnaires were filled out for the Custom Routing work required in both the 5E switch and the TOPS (DMS) switch. This work mirrored what would be required of the Co-Provider, up-front, which specifies the particular branding scenarios.

5.05.2 These questionnaires were sent to the appropriate internal work groups for the Translation work to begin. A request was made for an unique Line Class Code (LCC) to be established to direct OS/DA routing, Upon receipt of this new LCC, it was passed to the "simulated" Co-Provider for upcoming Local Service Requests (LSRs).

5.06 UNBUNDLED CUSTOMER CONTROL RECONFIGURATION ELEMENT (UCCRE):

Test orders for UCCRE were submitted successfully through the UDIT process flows with the following additional procedures:

-UCCRE requires a Co-Provider fill out a questionnaire specifying which network reconfiguration requirements are needed. This questionnaire asks whether a Co-Provider requires either Attendant (USW access) or Dial-Up (Co-Provider access) controller access options and was successfully processed by the team's "simulated" Co-Provider and sent to the appropriate internal work group.

-UCCRE process requires terminating one end of an UDIT in a U S West Digital Access Control System (DACS). Our test included successfully installing multiple UDITs in the DACS with designated ports that were programmed into the remote access system "Flex-Com".

-Remote reconfigurations of the multiple UDITs, through "Flex-Com", were successfully completed to test various port configurations. These were done both as Attendant option and "simulated" Co-Provider Dial-Up option.

6.0 TEST CALL PLAN

6.01 The test began with Dial Tone being verified and Automatic Number Identification (ANI) performed to validate installation of the Analog Line Port Translations. Terminating calls also were made to the telephone numbers of the unbundled line port to validate ability to call the port.

UNBUNDLED ANALOG LINE PORT (SAMPLE TEST CALL PLAN)
TELEPHONE # 602-956-9255
PHOENIX NORTH EAST CENTRAL OFFICE, PHOENIX, ARIZONA
SWITCH=5E
Custom Routing Unique Line Class Code=**XYZ**

Call Type Expectations

CALL TYPE	NP ROUTE TYPE	1+ ROUTE TYPE	O+ ROUTE TYPE
LOCAL 7DIG (602-955-1955)	**LOC_RTE**	**1+ACDE**	**0+ACDE**
LOCAL HNPA	**LOC_RTE**	**1+ACDE**	**CLEC_OPR**
LOCAL FNPA	**LOC_RTE**	**1+ACDE**	**CLEC_OPR**
ZERO MINUS	**CLEC_OPR**		
411	**CLEC_OPR**	**CLEC_OPR**	**0+ACDE**
555 7DIGIT	**CLEC_OPR**	**1+ACDE**	**0+ACDE**
911	**911_RTE**	**911_RTE**	**911_RTE**

(ACND= Access code not dialed recording ACDE= Access code dial in error recording)

(Call Type Results in **Bold Green**)

6.02 Mechanized front end branding of "simulated" Co-Provider XYZ was received for both Operator Assistance and Directory Assistance.

The operator's terminal screen was not initially displaying the ANI of our Analog Line Port but rather a default NPA-NNX. The problem was found to be an error in the TOPS BC (Billing Code) table. Our Line Port telephone number was added and the problem was resolved.

The operator's terminal screen also was not displaying the Co-Provider branding designation of XYZ. This problem was resolved by adding XYZ as Service Provider Identification (SPID) to the switch translations at the TOPS switch.

Back-end mechanized branding was received for Toll Operator Assistance.

The back-end mechanized branding for Direct Assistance was received as a generic brand and not our XYZ brand. This was due to the current IVS equipment limitations in the Phoenix TOPS switch. This limitation allows only two (2) mechanized branding; a generic and U S West specific. A retrofit to ISN NAV equipment to TOPS switches across the region is on-going and should be completed by 10-25-99. This retrofit will allow multiple branding.

Manual back end Co-Provider branding for both OS and DA were received whenever the operator was involved in a charge-type calls (ie; Credit Card).

6.03 Upon completion of the above test calls, the LCC was changed on our analog line port to a U S West customer and the same calls made to test consistency and parity.

******Change LCC on 602-956-9255 from XYZ to AW1******

CALL TYPE	NP ROUTE TYPE	1+ ROUTE TYPE	O+ ROUTE TYPE
LOCAL 7DIG	**LOC_RTE**	**1+ACDE**	**0+ACDE**
LOCAL HNPA	**LOC_RTE**	**1+ACDE**	**BOC_OPR**
LOCAL FNPA	**LOC_RTE**	**1+ACDE**	**BOC_OPR**
ZERO MINUS	**BOC_OPR**		
411	**BOC_OPR**	**BOC_OPR**	**0+ACDE**
555 7DIGIT	**BOC_OPR**	**1+ACDE**	**0+ACDE**
911	**911_RTE**	**911_RTE**	**911_RTE**

(Call Type Results in **Bold Green**)

6.03.01 All call type routing was received as expected, including routing calls to USW-branded Operator Services and Directory Assistance.

6.04 The Analog Line Port and its LCC was changed to one existing in the Phoenix North East to verify blockage of 900, 960 and 976 calls. The test was performed and the call results were blocked with a VACANT call announcement.

******Change LCC on 602-956-9255 from 1MB to AM4******
to verify 900 Blocking

CALL TYPE	NP ROUTE TYPE	1+ ROUTE TYPE	O+ ROUTE TYPE
LOCAL 7DIG	LOC_RTE	1+ACDE	0+ACDE
900	**VACANT**	**VACANT**	**VACANT**
960	**VACANT**	**VACANT**	**VACANT**
976	**VACANT**	**VACANT**	**VACANT**
ZERO MINUS	BOC_OPR		
411	BOC_OPR	BOC_OPR	0+ACDE

(Call Type Results in **Bold Green**)

6.05 Figure Five displays the captured Automatic Message Accounting (AMA) data reflecting the actual minutes of use incurred by the unbundled line port while making local calls. The Shared Transport MOUs would represent the billed entity for Shared Transport.

Figure Five
Line Class Code XYZ

Call #1

```
   S4AD-215744628 99-05-11 08:43:31 078678 AMA PHNXAZNEDC0
M  REPT AMATRC AMA RECORD ON REQUESTED DIRECTORY NUMBER

  ORIGINATING SM/PORT = 41/H'61B        TERMINATING SM/PORT = 2/H'7BA

------------------------------------------------------------------------
00 29 00 00 aa 00 50 2c 00 1c 90 51 1c 0c 00 0c 60 2c 95 69 25 5c 1c 00 60
2c 95 77 40 3c 08 42 05 4c 00 00 01 24 1c 00 2c
------------------------------------------------------------------------
     Field Name     Char.    Value          Meaning
RECORD DESCRIPTOR    1-8  00290000        RDW
RECORD HEADER        1-2  aa              No Fill Char Expected in This Record
STRUCTURE CODE       1-5  00502           Structure Code
CALL TYPE            1-3  001             Detailed Message Rate,Timed, With MBI
DATE                 1-5  90511           05/11/*9
CLD PARTY OFF-HK IND 1    0               Called party off-hook detected
SERVICE FEATURE      1-3  000             Other (All Sensors)
ORIGINATING NPA      1-3  602             NPA
ORIGINATING NUMBER   1-3  956             NXX
                     4-7  9255            Four Digit Number
OVERSEAS INDICATOR   1    1               Not Overseas Call (NPA not dialed)
TERMINATING NPA      1-2  00              Overseas Expander Position
                     3-5  602             NPA
TERMINATING NUMBER   1-3  957             NXX
                     4-7  7403            Four Digit Number
CONNECT/ANSWER TIME  1-7  0842054         08:42:05.4
ELAPSED TIME         1-9  000001241       00001:24.1          _______ Intra-
WATS BAND or MBI     1-3  002             WATS Band Or Type Indicator Switch
  End of Record----
```

Call #2

```
   S4AD-215744628 99-05-11 08:46:09 078785 AMA PHNXAZNEDC0
M  REPT AMATRC AMA RECORD ON REQUESTED DIRECTORY NUMBER

  ORIGINATING SM/PORT = 41/H'61B        TERMINATING SM/PORT = 63/H'675

--------------------------------------------------------------------------------
00 46 00 00 aa 40 50 2c 00 1c 90 51 1c 0c 00 0c 60 2c 95 69 25 5c 1c 00 60
2c 37 90 31 4c 08 44 05 6c 00 00 02 02 5c 00 2c 72 0c 00 2c ff ff ff ff ff
ff ff ff ff ff ff ff ff ff ff ff ff ff 10 10 00 0c 00 0c
--------------------------------------------------------------------------------
     Field Name     Char.    Value          Meaning
RECORD DESCRIPTOR    1-8  00460000        RDW
RECORD HEADER        1-2  aa              No Fill Char Expected in This Record
STRUCTURE CODE       1-5  40502           Structure Code
CALL TYPE            1-3  001             Detailed Message Rate,Timed, With MBI
DATE                 1-5  90511           05/11/*9
CLD PARTY OFF-HK IND 1    0               Called party off-hook detected
SERVICE FEATURE      1-3  000             Other (All Sensors)
ORIGINATING NPA      1-3  602             NPA
ORIGINATING NUMBER   1-3  956             NXX
                     4-7  9255            Four Digit Number
OVERSEAS INDICATOR   1    1               Not Overseas Call (NPA not dialed)
TERMINATING NPA      1-2  00              Overseas Expander Position
                     3-5  602             NPA
TERMINATING NUMBER   1-3  379             NXX
                     4-7  0314            Four Digit Number
CONNECT/ANSWER TIME  1-7  0844056         08:44:05.6
ELAPSED TIME         1-9  000002025       00002:02.5
WATS BAND or MBI     1-3  002             WATS Band Or Type Indicator
EBAF MODULE CODE     1-3  720             Local Number Portability Mo
PARTY IDENTIFIER     1-3  002             Terminating Party Data
```

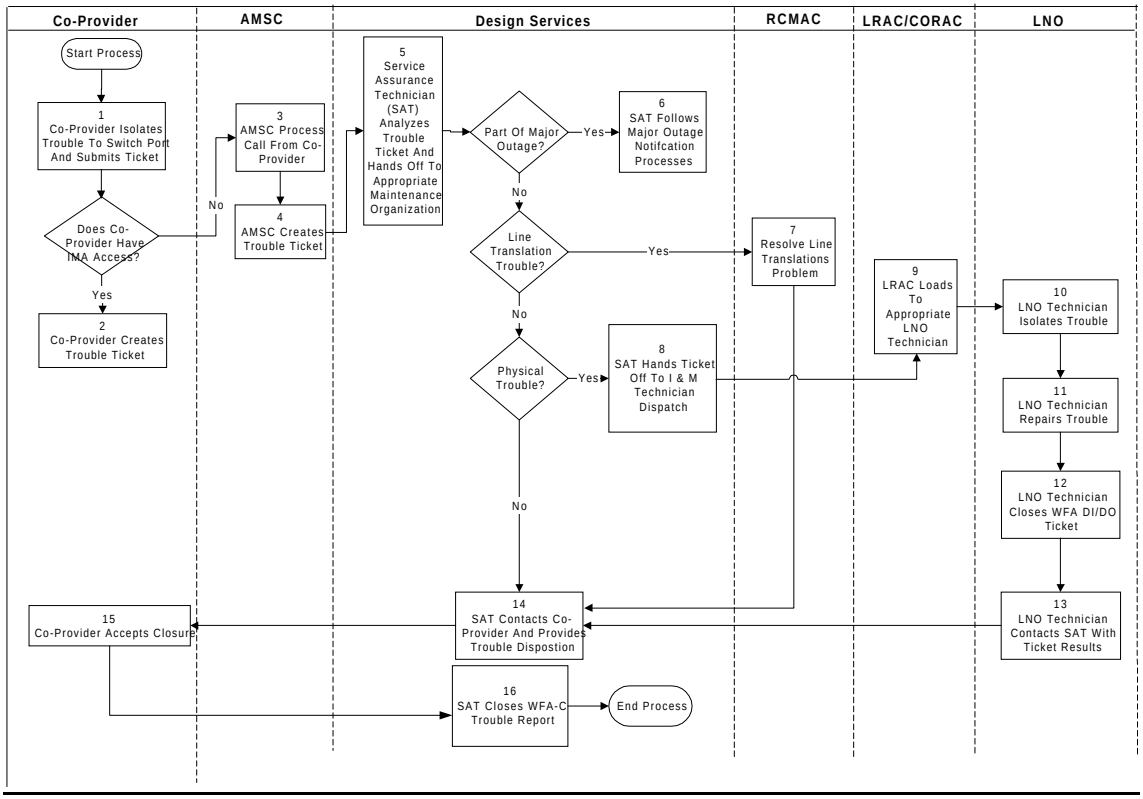
Shared Transp

7.0 REPAIR/MAINTENANCE

7.01 UNBUNDLED SWITCHING

U S West's process and procedures for the maintenance and repair of Unbundled Switching contains sixteen (16) process tasks. Each task was tested. The provisioning flow is described in the following table.

UNBUNDLED SWITCH MAINTENANCE FLOW



7.01.1 Task 1: Co-Provider isolates trouble to Switch Port and submits ticket.

The maintenance test involved reporting a trouble condition on one of the installed unbundled switch line ports from the provisioning section of the bench test.

The "simulated" Co-Provider submitted trouble tickets via:

-Interconnect Mediated Access (IMA) mechanized entry
-Manual telephone call to the Account Maintenance Service Center (AMSC)

The process identifies certain tasks based on whether the Co-Provider will send their trouble reports either via IMA or a direct call into the AMSC.

7.01.2 Task 2: Co-Provider creates trouble ticket.

The IMA mechanized process involved two scenarios where the "simulated" Co-Provider reported the unbundled line port as both a base telephone number format (602-956-9255) and as a complete designed services circuit identification format (19 SNNU 602-956-9255). The process differed slightly depending on the reporting format.

When the " simulated" Co-Provider reported the complete circuit identification and clicked on the "Design Ticket" button, IMA returned a designed services trouble ticket format and after completing the entries, IMA successfully sent the ticket automatically to WFA-C.

When the " simulated" Co-Provider reported an incomplete circuit identification with just the telephone number, IMA assumed it was a POTS trouble and automatically entered a non-design trouble ticket in LMOS. A flag was received in the AMSC and the trouble ticket dropped out to be manually screened. In the AMSC, it was found that the circuit was not POTS and did not reside in LMOS but as a Designed Service residing in WFA-C. The screener cancelled the LMOS ticket and manually entered a trouble ticket into WFA-C. The screener called the "simulated" Co-Provider with the new WFA-C trouble ticket number.

7.01.3 Task 3: AMSC process call from Co-Provider.

This task is required when the Co-Provider directly calls the AMSC to report trouble.

The call was successfully answered, within 1 to 3 rings each time, by a U S West Repair Service Attendant (RSA).

7.01.4 Task 4: AMSC creates trouble ticket.

The RSA took the trouble information from the "simulated" Co-Provider. This information included:

-Circuit Identification (CKT ID)
-Reported trouble condition
-Co-Provider name and call-back number
-Access hours
-Any special requirements (ie; test only between certain hours, etc)

The RSA successfully found the CKT ID in Work Flow Administration/ Control (WFA-C) and generated a trouble ticket with the "simulated" Co-Provider on the line.

The RSA provided the trouble ticket number to the Co-Provider.

7.01.5 Task 5: Service Assurance Technician (SAT) analyzes trouble ticket and hand-off to appropriate maintenance organization.

The trouble ticket appeared on the appropriate WFA-C work lists and was "picked up" by the Des Moines Designed Service Center and was handed off to the appropriate Central Office work lists in Work Flow Administration/Dispatch In (WFA-DI).

7.01.6 Task 6: SAT follows major outage notification processes.

Our test trouble reports did not involve any major outage.

7.01.7 Task 7: Resolve Line Translation problem.

Based upon the analysis of the trouble condition, the test simulated a hand-off to the Central Office work groups via their WFA-DI work lists. The step was successfully completed but the actual technician dispatch was not generated.

7.01.8 Task 8: SAT hands ticket off to I&M technician dispatch.

No outside dispatch is required for unbundled switching port trouble resolution.

7.01.9 Task 9: CORAC loads appropriate LNO technician.

Based upon the analysis of the trouble condition, the test simulated a hand-off to the Central Office work groups via their WFA/DI work lists. The step was successfully completed but the actual technician dispatch was not generated.

7.01.10 Task 10: LNO technician isolates trouble.

Based upon the analysis of the trouble condition, the test simulated a "pick-up" of the ticket by the Central Office work groups. The step was successfully completed but the actual technician dispatch was not generated.

7.01.11 Task 11: LNO technician repairs trouble.

Based upon the analysis of the trouble condition, the test simulated a trouble resolution by the Central Office work groups. The step was successfully completed but the actual technician dispatch was not generated.

7.01.12 Task 12: LNO technician closes their ticket.

Based upon the analysis of the trouble condition, the test simulated a ticket closure by the Central Office work groups. The step was successfully completed but the actual technician dispatch was not generated.

7.01.13 Task 13: LNO technician contacts SAT with ticket results.

Based upon the analysis of the trouble condition, the test simulated a call back to the SAT. The step was successfully completed but the actual technician dispatch was not generated.

7.01.14 Task 14: SAT contacts Co-Provider and provides trouble disposition.

The SAT contacted the "simulated" Co-Provider with successful trouble resolution.

7.01.15 Task 15: Co-Provider accepts closure.

Co-Provider accepted ticket resolution.

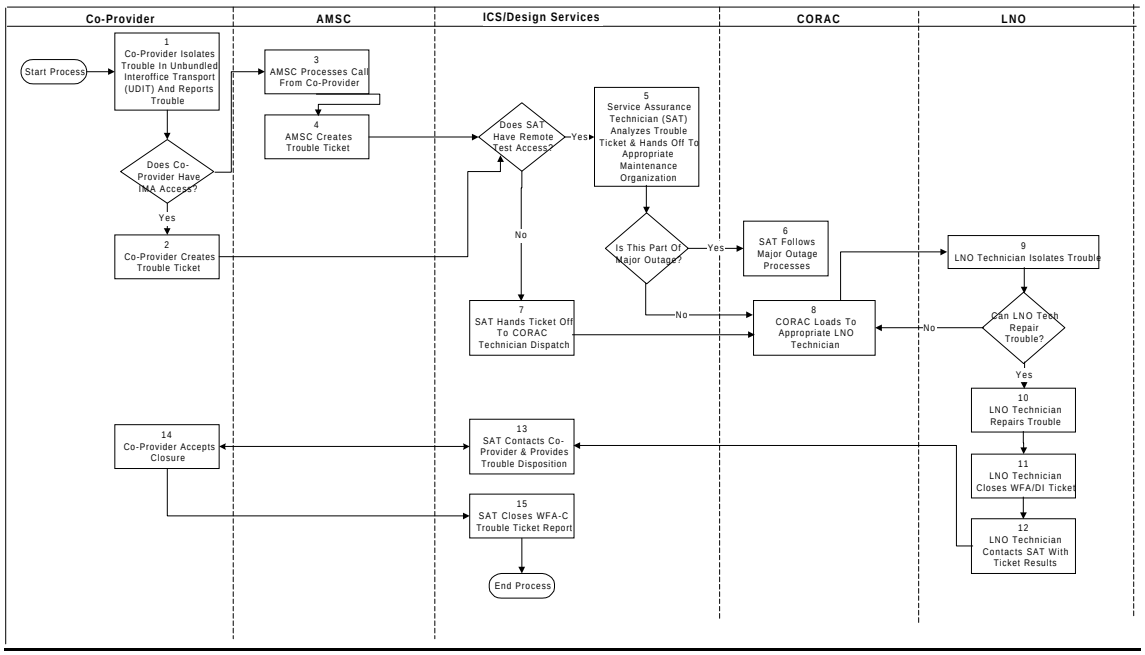
7.01.16 Task 16: SAT closes WFA-C trouble process.

SAT closed the trouble ticket in WFA-C upon Co-Provider acceptance.

7.02 UNBUNDLED TRANSPORT

U S West's process and procedures for the maintenance and repair of Unbundled Transport contains fifteen (15) process tasks. Each task was tested. The provisioning flow is described in the following table.

UNBUNDLED DEDICATED INTEROFFICE TRANSPORT (UDIT)
MAINTENANCE FLOW



7.02.1 Task 1: Co-Provider isolates trouble in unbundled interoffice transport (UDIT) and reports trouble.

The maintenance test involved reporting a trouble condition on one of the installed UDITs from the provisioning section of the bench test.

The "simulated" Co-Provider submitted trouble tickets via:

-IMA mechanized entry
-Manual telephone call to the Account Maintenance Service Center (AMSC)

The process indicates tasks based on whether the Co-Provider will send their trouble reports via IMA or a direct call into the AMSC.

7.02.2 Task 2: Co-Provider creates trouble ticket.

The IMA mechanized process involved the "simulated" Co-Provider reporting the UDIT as a complete designed services circuit identification format (14 HCFU 979430 MS).

When the Co-Provider reported the complete circuit identification and clicked on the "Design Ticket" button, IMA returned a design services trouble ticket format and after all entries were completed, IMA successfully sent the ticket automatically to WFA-C.

7.02.3 Task 3: AMSC process call from Co-Provider.

This task is required when the Co-Provider uses a manual telephone call to report trouble.

The call was successfully answered, within 1 to 3 rings each time, by a U S West Repair Service Attendant (RSA).

7.02.4 Task 4: AMSC creates trouble ticket.

The RSA took the trouble information from the "simulated" Co-Provider. This information included:

-Circuit Identification (CKT ID)
-Reported trouble condition
-Co-Provider name and call-back number
-Access hours
-Any special requirements (ie; test only between certain hours, etc)

The RSA successfully found the CKT ID in Work Flow Administration/ Control (WFA-C) and generated a trouble ticket with the "simulated" Co-Provider on the line.

The RSA provided the trouble ticket number to the Co-Provider.

7.02.5 Task 5: Service Assurance Technician (SAT) analyzes trouble ticket and hand-off to appropriate maintenance organization.

The trouble ticket appeared on the appropriate WFA-C work lists and was "picked up" by the Des Moines Designed Service Center and was handed off to the appropriate Central Office work lists in Work Flow Administration/ Dispatch In (WFA-DI).

7.02.6 Task 6: SAT follows major outage notification processes.

Our test trouble reports did not involve any major outage.

7.02.7 Task 7: SAT hands ticket off to CORAC technician dispatch.

Based upon the analysis of the trouble condition, the test simulated a hand-off to the CORAC work group via the WFA-DI work lists. The step was successfully completed but the actual technician dispatch was not generated.

7.02.8 Task 8: CORAC loads appropriate LNO technician.

Based upon the analysis of the trouble condition, the test simulated a hand-off to the Central Office work groups via their WFA-DI work lists. The step was successfully completed but the actual technician dispatch was not generated.

7.02.9 Task 9: LNO technician isolates trouble.

Based upon the analysis of the trouble condition, the test simulated a "pick-up" of the ticket by the Central Office work groups via their WFA/DI work lists. The step was successfully completed but the actual technician dispatch was not generated.

7.02.10 Task 10: LNO technician repairs trouble.

Based upon the analysis of the trouble condition, the test simulated a trouble resolution by the Central Office work groups. The step was successfully completed but the actual technician dispatch was not generated.

7.02.11 Task 11: LNO technician closes WFA/Dispatch In (WFA/DI) ticket.

Based upon the analysis of the trouble condition, the test simulated a ticket closure by the Central Office work groups. The step was successfully completed but the actual technician dispatch was not generated.

7.02.12 Task 12: LNO technician contacts SAT with ticket results.

Based upon the analysis of the trouble condition, the test simulated a call back to the SAT. The step was successfully completed but the actual technician dispatch was not generated.

7.02.13 Task 13: SAT contacts Co-Provider and provides trouble disposition.

The SAT contacted the "simulated" Co-Provider with successful trouble resolution.

7.02.14 Task 14: Co-Provider accepts closure.

Co-Provider accepted ticket resolution.

7.02.15 Task 15: SAT closes Work Flow Administration-Control (WFA-C) trouble ticket.

SAT closed the trouble ticket in WFA-C upon Co-Provider acceptance.

8.0 SUMMARY:

8.01 The ground rule of the Bench Test plan was to follow the current documented processes (see chapter 5 Summary of BIT test results) that support Unbundled Elements and Custom Routing. Within the process, whenever any functions were required of the Co-Provider, it was handled by the team's designated "simulated" Co-Provider.

8.02 The bench test format consisted of provisioning a series of Beta orders. The team identified any issues and made the necessary process and/or system changes. Then re-tested the process through an additional series of orders. This re-testing proved the validity of any process and/or system changes.

The issues encountered on the Beta orders were of the type to be anticipated and not unusual due to the fact this was the first time these particular unbundled products were processed in Arizona and Nebraska. All issues were resolved and subsequent re-testing was processed successfully.

8.03 All input/outputs documents identified in the UDIT, Unbundled Trunk Ports and Trunk group/members processes were issued. The orders were processed through U S West's Designed Services flow.

8.04 The ACTL code, an 11 character Common Language Location Identification (CLLI), will be required for ICDF Collocation for design flow-through to occur. This is similar to the current ACTL procedure for Physical, Virtual and Cageless Collocation,. The Methods &Procedures were updated to include this requirement and orders re-tested to verify completion.

8.05 UCCRE was successfully tested to include terminating multiple UDIT orders on a DACS and using "Flex-Com" to provide remote reconfigurations, testing both Attendant (USW control access) and Dial-Up (Co-Provider control access) options.

8.06 Orders were wired and tested per the Combination Point of Interconnection (POI) process instructions, which assumes the Co-Provider is responsible to perform the cross-connect functions. In the test, USW technicians "simulated" Co-Provider activity in combining unbundled elements.

If USW technicians are legally or contractually required to perform the cross-connect function for the Co-Provider, the current Connecting Facility Assignment (CFA) process, in place today, must be used to provide the technicians the related cross-connect information.

8.07 The test call plan, involving "live" calls, was conducted on 5-5-99 and also on 6-7-99. Using a standard USW test call type expectation grid, actual calls were placed and the results documented (see chapter 6).

8.08 In the area of Co-Provider OS/DA branding the following was found:

- ❖ Front end mechanized Co-Provider branding was received on all calls to Operator Services and Directory Assistance.
- ❖ At the actual Operator terminal positions, OS/DA translation-driven table entries were required to display the ANI of our analog line port telephone number and the specific Co-Provider brand. Table updates were performed and the ANI and brand were displayed on subsequent calls.
- ❖ There were equipment limitations in the TOPS switch which prevented multiple Co-Provider branding for Direct Assistance. This will be resolved with the current on-going ISN NAV switch retrofit.

- On test calls resulting in charges (ie; Credit Card) the operator completed the call process and manually gave a back end branding of "Thank you for using XYZ". Operator procedures specified any received calls that do not have a brand displayed on the terminal, indicate a USW customer and receive "Thank you for using USW". Any calls displaying a brand on the terminal (ie; Co-Providers, Independent Company) indicate a Co-Provider customer and receive the specific brand.

8.09 Repair/Maintenance tests were conducted and trouble tickets successfully submitted through both mechanized IMA or direct calls into the Account Maintenance Service Center (AMSC). The trouble tickets were successfully processed through the various trouble resolution hand-offs and were completed.

Unbundled transport trouble tickets were successfully submitted through IMA even though the UDIT circuits were provisioned through EXACT.

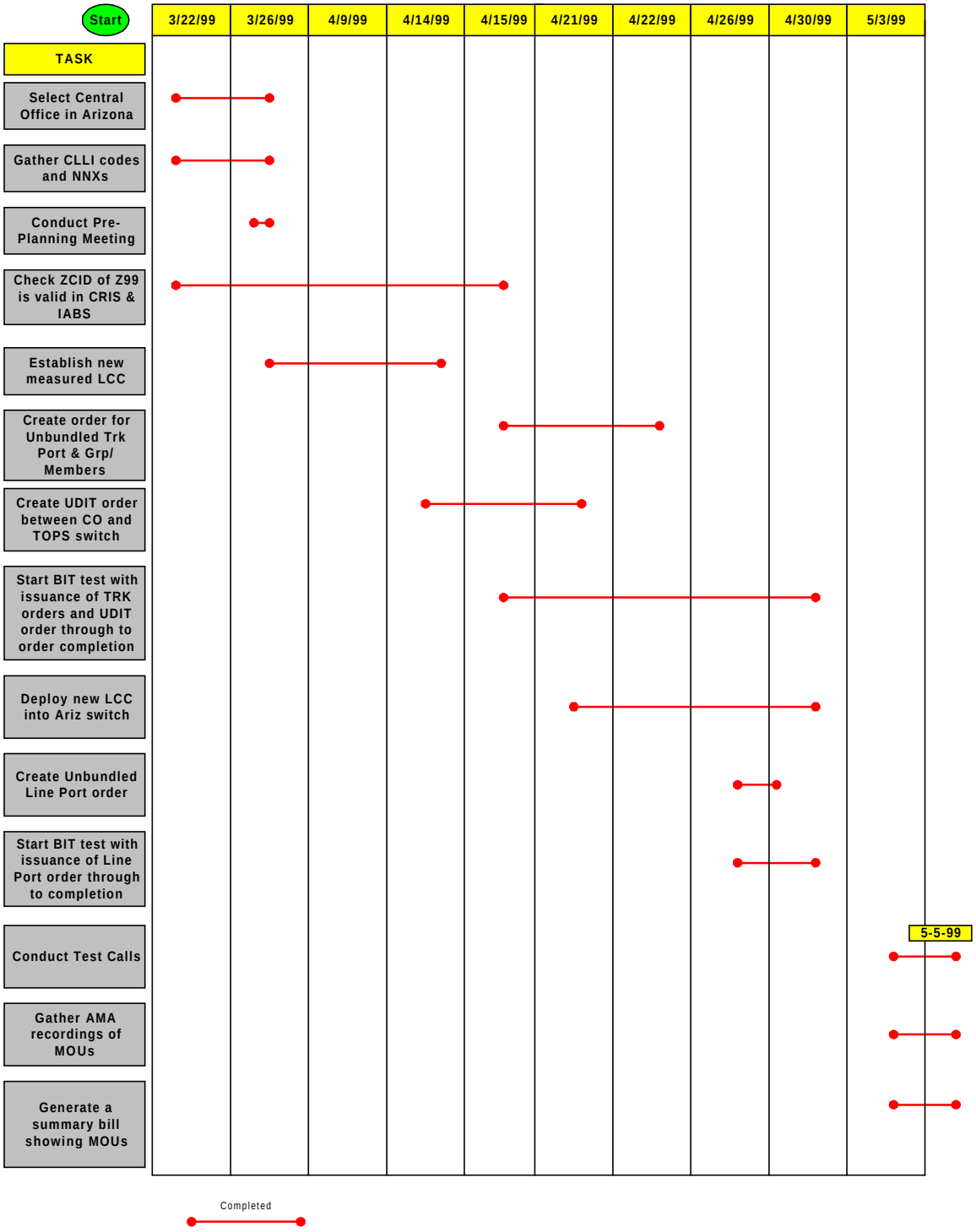
8.10 In summary, the 1999 Bench Test proved the validity of U S West's processes and systems and supported the advocacy on unbundled elements. It provides the validation required for Section 271 Checklist items #5 (unbundled transport) & #6 (unbundled switching).

The test also re-enforced the results from the 1998 Lab-controlled Bench Test by validating the tests in U S West's OSS Production environment in both Central and Eastern regions.

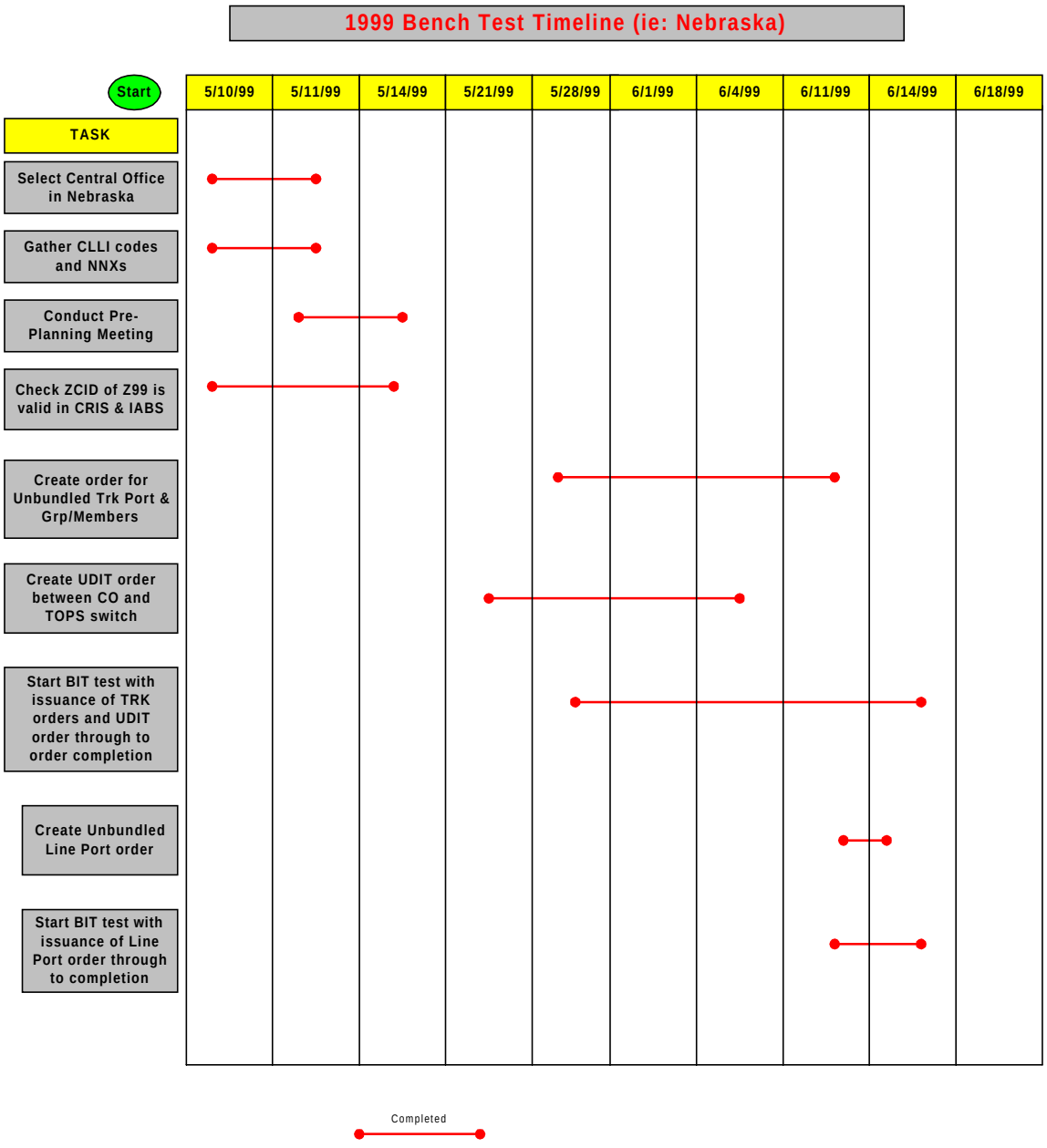
The additional Custom Routing test provided the opportunity to process complex translations within a TOPS switch to successfully route a Co-Provider dedicated OS/DA call completion and provide Co-Provider branding.

APPENDIX A

1999 Bench Test Timeline (ie: Arizona)



APPENDIX A (CONTINUED)



APPENDIX A (CONTINUED)

Issue/ Activity	Process Flow Reference	Status
Select Central Office in Arizona and Nebraska	Pre-Planning meeting with "simulated" Co-Provider and USW Account Team	**Completed** Phoenix NorthEast and Omaha, Nebraska central offices selected
Gather CLLI codes for switches, frames and NNXs involved	Pre-Planning meeting with "simulated" Co-Provider and USW Account Team	**Completed** CLLI were gathered and a 11 character ACTL created in CLONES to represent Co-Provider (PHNXAZNEHJ8)
Check ZCID of Z99 is valid in CRIS and IABS billing tables	Various Billing Account Number (BAN) tasks within Unbundled Switch & Transport	**Completed** This ZCID is for test purposes. Each Co-Provider has an unique ZCID
Conduct Pre-Order Mtg to fill out Customer Questionnaire and Custom Routing forms -Unbundled Line Port -OPS/DA switch port -Unbundled Trunk Port	Pre-Planning meeting with "simulated" Co-Provider and USW Account Team	**Completed** All M&Ps reflect the use of these questionnaires for on-going order activity
Establish new CLEC measured LCC based on Custom Routing forms	Custom Routing tasks	**Completed** Code=XYZ (test purposes)
Create Unbundled Switch DS1 Trunk Port Order and Trunk group/members orders	Unbundled Switch Trunk Port Tasks 3 & 4	**Completed** Orders submitted to BIT team for testing After test, all M&Ps updated to reflect test results. See Appendix A for detailed order sample
Create UDIT order between Wire Ctr and OPS/DA switch	Unbundled UDIT tasks 1-5	**Completed** Order submitted to BIT team for testing After test, all M&Ps updated to reflect test results. See Appendix A for detailed order sample
Deploy new CLEC LCC	Custom Routing tasks	**Completed** Deployed 4-29-99

into CO		
Start Bit Test of Issuance of DS1 trunk Port, Trk group/ members &UDIT orders	Unbundled Switch Trunk Port tasks 4-12 Unbundled UDIT tasks 6-13	**Completed** Orders were wired and completed per the Design Documents.
Create Unbundled analog line port order	Unbundled Switch Line Port Tasks 1-7	**Completed** Order submitted to BIT After test, all M&Ps updated to reflect test results. See Appendix A for detailed order sample
Start Bit Test of Issuance of unbundled line port order	Unbundled Switch Line Port Tasks 8-16	**Completed** Orders were wired and completed per the Design Documents.
Conduct Test Calls using Test Plan		**Completed** Test conducted on 5-5-99 and the results can be found in Test Plan section
Gather AMA records of Minutes of Use for Local calls		**Completed** Sample AMA record trace completed
Create a bill which shows MOUs & access charges suppressed	Unbundled Elements various billing tasks	**Completed** Sample CRIS and IABS billing records generated