



*GE Global eXchange Services*

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# **Final Report**

## **Presented to**



**California Public Utilities Commission**

*for*

**Test Generation Services**  
**in relation to Pacific Bell's**  
**Operations Support System**

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## **1.0 FOREWARD**

### **1.1 Purpose**

The California Public Utilities Commission (CPUC) is currently investigating Pacific Bell's (Pacific) entry into the interLATA telecommunications market, pursuant to Section 271 of the 1996 Federal Telecommunications Act. This document is the Test Generator (TG) Final Report for the CPUC sanctioned test of Pacific's Operations Support Systems (OSS). The purpose of this test was to assess whether Pacific provides equal service to both the Competitive Local Exchange Carriers (CLECs) and their own retail customers.

In the context of the CPUC approved Master Test Plan (MTP) version 3.0, revised through version 4.0, GE Information Services, later known as Global eXchange Services (GXS), was selected in August 1999 by the CPUC to serve in the TG role, as defined in the MTP. The TG's role was to build OSS interfaces based upon documentation and support provided by Pacific and to process various inquiries and orders through this interface as identified by the CPUC or Test Administrator/Manager (TAM).

The activities associated with the role of TG were designed to appear to Pacific to be a normal CLEC entering Pacific's regions. Pacific was to be unaware that the TG was testing Pacific's OSSs. The TG was established as four Pseudo-Competitive Local Exchange Carriers (P-CLECs) doing business in the State of California. The TGs P-CLECs established interconnection, built OSS interfaces, and processed the TAM-determined volume of production orders with Pacific.

The objective of this MTP-defined test was to gather the information necessary, as directed by the TAM, to facilitate TAM evaluation of Pacific's OSS and related front-end and back-office processes. The TAM determined the volume of, and prepared for the TG to enter, both pre-order (using Verigate and DataGate) and Local Service Request (LSR) order transactions to be processed via FAX, LSR Exchange System (LEX), and Electronic Data Interchange (EDI) for the various products specified in the MTP. The results of this order entry activity, as entered by the TG Team, served as the primary basis for the TAM's evaluation of this OSS test.

This document is divided into five sections, Supporting Documentation, and a Glossary of Terms:

*Foreword* – describes the purpose of this document, the roles and responsibilities of the parties involved in the test effort, and the high level items involved in the effort since inception.

*Executive Summary* – a high level summary of the test scope and the test results based on the TG's experience as P-CLEC.

*Background* – provides an understanding of the CPUC 271 Test Effort performed for Pacific. The history of the project and the Telecommunications Act of 1996 is provided for those who have not been involved in the in-depth performance of the project. For those who are familiar with the project, this section may be bypassed.

*OSS Test Summary* – provides a summation of the detailed information included in the last section, the “OSS Test Project”. A brief description of each of the areas involved in the Test Effort and points of interest or concerns encountered during the project is included. Recommendations of the TG to Pacific and the CLECs are provided as well. Negative findings are discussed to sufficiently inform the reader.

*OSS Test Project* – provides details of the TG effort involved in the OSS testing. Initial CLEC start-up, establishing interconnection with Pacific, documentation, CLEC training, order entry experience, and use of Pacific’s OSS are included in this section.

*Appendices and Supporting Documentation* – Appendices to the Final Report and a description of OSS test supporting documents.

*Glossary* – Description of the terms and acronyms used in this document.

## **1.2 Roles and Responsibilities**

The following is a description of each group the TG was involved with in the California OSS Test Effort.

### **1.2.1 Pacific Bell**

In the position of Incumbent Local Exchange Carrier (ILEC), Pacific provides the CLEC options for electronic access to the Pacific OSSs and procedures for connecting to the Pacific Bell Remote Access Facility (PRAF). In this test effort, Pacific was tasked with proving that the same level of service support (i.e., processing of orders, resolution of problems, turn-around time) is provided to the CLECs as is provided to the Pacific retail customers.

The responsibilities of Pacific were:

- Provide the Pacific OSS environment to be used for the test (e.g., production environment).
- Support the MTP needs, as necessary.
- Provide a list of primary Subject Matter Experts (SMEs) and escalation contacts to all parties.
- Provide for preparation, setup, and access to the Pacific production components for the tests as necessary (primarily for monitoring by TAM).
- Provide system processing data necessary to understand the resource usage for the test workload.
- Extract data and compute the Performance Measures.
- Assign an account team to interface with the TG.
- Provide documentation to the TAM to enable scalability analysis of system interfaces and work center operations (Local Service Center (LSC) and Local Operations Center (LOC)).
- Provide training for the test participants on the OSS.

### **1.2.2 California Public Utilities Commission**

The CPUC was the overseer of the Test Effort. It was their responsibility to contract a company to develop MTP and oversee the development of the California OSS Test Request for Proposal (RFP). Once the RFP was issued and proposals received, the CPUC had the responsibility to select the contracting firm(s) to fill the three positions defined in the RFP. The three positions were:

- 1) Technical Advisor.
- 2) Test Administrator/Manager.
- 3) Test Generator.

The role of the Commission was to:

- Provide overall project management.
- Own the MTP.
- Create the testing implementation timeline.
- Provide support for the collaborative process in enhancing the MTP.
- Provide final approval of MTP.
- Appoint the Technical Advisor (TA) to act as liaison between the CPUC and the test entities.
- Appoint the TAM to manage the test activities.
- Appoint the TG to develop the testing interfaces and conduct related activities.
- Review and approve the Final Report prepared by the TAM.

### **1.2.3 Technical Advisor**

The TA is a three-person team with proven experience in the area of telecommunications, testing, and the regulatory environment under which this OSS testing functioned.

The duties of the TA were to:

- Advise the CPUC on telecommunications issues.
- Assist in development of the MTP.
- Review Test Cases.
- Evaluate documentation assessment and process analysis.
- Provide technical advice to Commission Staff.
- Provide on-site observing of actual test, as needed.
- Evaluate data and reports prepared by TAM.
- Analyze data and write the TAM Final Report.
- Assist TAM in validating Performance Measures Process/System.

### **1.2.4 Test Administrator/Manager**

The responsibilities of the TAM were to monitor the daily action of the TG. They acted as the administrator of the entire test effort and as intermediary between the parties involved.

The TAM's responsibility included:

- Define the MTP scope to assure coverage and the ability to test scenarios expected.
- Gather test data.
- Compile a detailed daily log of events capturing the details of its experiences in dealing with all participants.
- Prepare the test scripts and test scenarios.
- Provide oversight for TG.
- Ensure the execution of the tests and provide on-site observation of the test execution by the TG.
- Monitor the test results against the performance measurements set in the MTP.
- Validate the bills.
- Ensure that data and environment cleanup was accomplished successfully.
- Generate the project Final Report.
- Administer the test implementation timeline.
- Prepare reports.
- Submit test observations and test results attestation.
- Provide Documentation Assessment and Process Analysis (e.g., LSC/LOC scalability of appropriate systems).
- Develop test cases based on the test scenarios, including number of error scenarios.
- Assess the operation of the LSC for consistency, timeliness and accuracy.
- Assess the operation of the LOC for consistency, timeliness and accuracy.
- Ensure that the test scenario selection covers both access mechanisms, LEX and EDI.
- Assess the scalability of the OSS test interfaces using documentation provided by Pacific.
- Identify the end-user participants (80% Pacific locations, 20% test end).
- Assess the operations scalability (force management) of the LSC and LOC.
- Assure statistically valid approach to testing.
- Chair the Technical Advisory Board (TAB).
- Take the necessary steps to ensure the TG did not receive any information that a CLEC would not receive under the normal course of business.

Pacific, under the direction of the TAM, provided test accounts that were used to reconfigure, change, and disconnect services for the purpose of Third Party OSS Interface Testing. These test accounts were a combination of local exchange company facilities and database entries in Pacific's systems. Pacific created dummy accounts with Telephone Numbers (TNs) and Customer Service Records (CSRs) that were used in the testing process. Pacific input this data before the test began and established these test accounts as in-place lines of various types. The TAM was provided with the names, addresses and TNs created for the test.

### **1.2.5 Test Generator**

The role of the TG was to execute the test cases and scripts created by the TAM.

The TG day-to-day responsibilities were to:

- Receive the orders generated by the TAM.
- Create pre-orders, issue orders to Pacific.
- Monitor the orders, ensure their completion.
- Correct problems encountered in the order generation.
- Develop system interfaces.
- Install connectivity.
- Create LSRs.
- Input LSRs.
- Document results of interface development and order generation.
- Acquire appropriate documentation, attend training and assess quality and completeness of documentation, training, etc. to mirror CLEC activity to build an automated interface.
- Create and input pre-order queries.
- Compile a daily log of events capturing the details of its experiences in dealing with Pacific.
- Create the TG Final Report.

The TG developed and submitted orders against the created test accounts. These accounts were on Pacific's real production systems and set aside for the use of the TG. The TAM, based on the MTP, determined the test account requirements.

### **1.2.6 Competitive Local Exchange Carriers**

Under the administration of the TAM, selected CLECs collectively provided local switch, collocation cage and Digital Subscriber Line Access Multiplexer (DSLAM) facilities to support Loop and Local Number Portability (LNP) testing. The TAB was the forum for this participation.

### **1.2.7 Technical Advisory Board**

A TAB convened at the start of testing. Its membership consisted of the CPUC, the TAM, the TG, Pacific representation, and from three to five representatives for each participating CLEC. Its charter was to participate in the Test Effort in accordance with the procedures defined in the MTP and provide CLEC support as requested by the TAM.

In addition, TAB members (as determined by the TAM), the TAM and the CPUC reviewed periodic test results and offered advice, observations and input to the test process. This was done to enable the CLECs and Pacific to provide feedback on the testing as requested by the TAM.

### **1.3 Report Revision History**

| <u>Version</u> | <u>Revision Purpose</u>                      | <u>Date Released</u> |
|----------------|--|----------------------|
| 1.0            | Preliminary release to CPUC and TAM.         | November 21, 2000    |
| 1.1            | Updated preliminary release to CPUC and TAM. | December 8, 2000     |
| 1.2            | Formal release to CPUC.                      | December 12, 2000    |
| 1.3            | Clarify Appendices and Supporting Documents. | December 22, 2000    |

## **2.0 EXECUTIVE SUMMARY**

The CPUC is currently investigating Pacific's entry into the interLATA telecommunications market, pursuant to Section 271 of the 1996 Federal Telecommunications Act. The purpose of this test was to assess whether Pacific provides equal service to both the CLECs and their own retail customers.

In the context of the CPUC approved MTP version 3.0, revised through version 4.0, GXS was selected in August 1999 by the CPUC to serve in the TG role, as defined in the MTP. The TG role was to build OSS interfaces based upon documentation and support provided by Pacific, and to process various inquiries and orders through this interface as directed by the CPUC TAM.

The activities associated with the role of TG were designed to appear to Pacific to be those of a normal CLEC entering Pacific's regions. Pacific staff, with the exception of the assigned CLEC Account Management team, was to be unaware that the TG was testing Pacific's OSSs. The TG was established as four P-CLECs doing business in the State of California. The TGs P-CLECs established interconnection, built OSS interfaces, and processed the TAM-determined volume of production orders with Pacific.

### **2.1 Scope of Test**

The objective of this MTP-defined test was to gather the information necessary, as directed by the TAM, to facilitate TAM evaluation of Pacific's OSS and related front-end and back-office processes. The TAM determined the volume of, and prepared for the TG to enter, both pre-order (using Verigate and DataGate) and Local Service Request (LSR) order transactions to be processed via FAX, LSR Exchange System (LEX), and Electronic Data Interchange (EDI) for the various products specified in the MTP. The results of this pre-ordering and ordering activity served as the primary basis for the TAM's evaluation of this OSS test.

The TG role was to build OSS interfaces based upon documentation and support provided by Pacific and to process various inquiries and orders through this interface as directed by the CPUC or the TAM. The test focus that the TG performed consisted of:

- End-to-End/Functionality Test - testing end-to-end processes from pre-ordering through provisioning and billing, and maintenance and repair. Testing was performed with Pacific's production OSSs and processes. The test focused on Unbundled Network Element (UNE) Loop with Port, Basic and Assured Loops, DS1 Loops, and Asymmetric Digital Subscriber Line (xDSL) types of services and LNP. An additional test was completed for stand-alone Directory Listings.
- Capacity Test - testing the capacity of Pacific's pre-ordering and ordering processes for Resale, UNE Loop with Port, Basic Loop with and without Number Portability (NP), DS1 Loop, xDSL, and stand-alone LNP types of service. Testing was performed with Pacific's production systems and processes. Stand-alone Directory Listings were not included in the Capacity Test.

The experiences and testing that the TG encountered while doing business with Pacific as four P-CLECs were recorded, documented, and made available to the CPUC and the TAM. The record of the OSS test is the basis for this report. This record has also been provided to the TAM for the evaluation and analysis of Pacific's systems and capabilities, as they relate to service order processing, documentation, and training.

The following high level tasks were executed by the TG in support of the Pacific OSS test.

- Establishing the TG as a CLEC.
- Reviewing all relevant Pacific Documentation necessary to establish OSS interfaces with Pacific.
- Attending Pacific training classes.
- Establishing OSS Interconnections, both dial-up and direct connections.
- Building and implementing OSS interfaces, both GUI and application-to-application.
- Pre-production testing.
- Production testing.

The TG was responsible for entering LSRs from order data supplied by the TAM, using one of three order entry methods:

1. FAX submission.
2. The Pacific LEX system, an order entry system with a GUI front end.
3. EDI.

Table 2.1 is a summary of all the LSR orders that were completed during the Pacific OSS test.

Table 2.1

| <b>TG Order Summary Report</b>                    |                   |                       |                               |
|---|-------------------|-----------------------|-------------------------------|
| <b>Order Type with Abbreviation used for test</b> | <b>EDI Orders</b> | <b>GUI/FAX Orders</b> | <b>Total Orders Completed</b> |
| Two Wire Assured Loop (ASSL)                      | 360               | 5                     | 365                           |
| Two Wire Basic Loop (BASL)                        | 567               | 2                     | 569                           |
| Four Wire DS1 Loop (DS1L)                         | 43                |                       | 43                            |
| LNP with Two Wire Loop (LNPL)                     | 131               |                       | 131                           |
| LNP Stand Alone (LNPO)                            | 296               | 17                    | 313                           |
| Two Wire Loop with Port (LPWP)                    | 62                | 959                   | 1,021                         |
| Supplemental Orders (SUPP)                        |                   | 34                    | 34                            |
| Stand Alone Directory Listings (SDIR)             |                   | 142                   | 142                           |
| DSL Loop (XDSL)                                   | 312               | 2                     | 314                           |
| <b>Grand Total</b>                                | <b>1,771</b>      | <b>1,146</b>          | <b>2,917</b>                  |

For more detailed information on Functional Test results, please refer to the appropriate sub-section within section 3.0 OSS Test Summary, or 4.0 OSS Test Process.

In addition to the Functionality Test information included in this document, the TG also executed the Capacity Test, which focused on the ability of the Pacific OSSs to support a given mechanized workload. The Capacity Test was constructed of a repeatable, controlled, simulated test workload. The test requirements and specification plan for the Capacity Test were developed in coordination with the TAM and reviewed with the TG prior to conducting the Capacity Test.

The TG produced Capacity Test results including:

1. Test results, using criteria for success as described in the MTP.
2. Documentation of test inputs and outputs.
3. Documentation of the test environment.

The Capacity Test included tests for pre-ordering and ordering capacity. For each of these tests, data was captured by the TG for relevant Performance Measure (PM) analysis by the TAM.

Capacity Tests were performed on three different days:

- September 18, 2000 DataGate and Verigate (Pre-ordering Capacity Test) 7:00am PT – 5:00pm PT
- September 19, 2000 EDI and LEX (Ordering Capacity Test) ) 7:00am PT – 5:00pm PT
- October 3, 2000 EDI, LEX, and DataGate (Combined Ordering and Pre-ordering Stress Test) 8:00am PT – 2:00pm PT

The numbers of transactions that were sent during the three capacity tests are in Table 2.2:

Table 2.2

| <b>Date</b>             | <b>Pre-ordering Capacity Test</b> |                 | <b>Ordering Capacity Test</b> |            |
|-------------------------|-----------------------------------|-----------------|-------------------------------|------------|
|                         | <b>Verigate</b>                   | <b>DataGate</b> | <b>LEX</b>                    | <b>EDI</b> |
| Pre-order Sept 18, 2000 | 9299                              | 33463           |                               |            |
| Order Sept 19, 2000     |                                   |                 | 1125                          | 6215       |
| Stress Oct 3, 2000      |                                   | 12705           | 402                           | 11216      |

The Capacity Test results were combined into a single report document and presented to the Commission in the TAM’s Final Report as specified in MTP section 8.4.3, Capacity Testing Report Exit Criteria. Please refer to the TAM’s Final Report for this information.

## **2.2 Test Results**

The TG in their role as P-CLEC found Pacific’s OSSs to be robust and reliable during the execution of both the OSS functional and capacity tests. The TG found that Pacific’s Methods and Procedures (M&P) proved satisfactory, although at times hard to interpret from the

documents provided. The TG found our AM to be competent, responsive, and professional in helping the TG resolve any M&P issues. Pacific's training was satisfactory, although at times more detailed examples in hands on situations should be provided.

OSS interfaces supplied by Pacific generally functioned well. LEX and Verigate proved to be very easy to use and enabled our four P-CLECs to quickly move into production. Other new interfaces were not completely usable such as E911 TN Query, although this is not an interface that CLECs would normally use, because providing E911 information in the LSR and letting Pacific perform the update appears to be more efficient and practical.

Building OSS interfaces to Pacific's EDI order system was accomplished with a normal level of effort, considering the TG's experience with other ILEC interconnections. The documents that provided this information were good although somewhat incomplete, such as few examples of inbound EDI documents. Building OSS interfaces to DataGate was difficult, as the documentation was somewhat deficient.

Pacific's processes used to progress from test to production environments for the application-to-application OSS interfaces proved to be thorough, but were quite lengthy. This became evident in the TG's experience, moving four different CLECs from test to production.

Pacific's support was excellent especially during the pre-production joint test period and managed introduction for EDI. During production, when issues arose that required Pacific's support, there was a much greater variability in the level of support received.

It is clear that Pacific is focusing considerable effort to improve both the CLEC interconnection process and CLEC production support as well. Since the commencement of TG involvement in August 1999, changes in documentation, processes, and information dissemination have made it easier for the P-CLECs to do business with Pacific including:

- Improving quality and readability of EDI and DataGate documentation.
- Simplifying and standardizing access to the SBC web site [clec.sbc.com](http://clec.sbc.com).
- Software upgrades implementing additional functionality with associated documentation and training revisions.
- Changing SBC policy to allow communication line sharing by related CLECs.
- Restricting TN change in LNP orders to avoid TN's locked to previous Local Exchange Carrier (LEC) owner.

Based upon the TG's P-CLEC experience, there are several key areas that Pacific either must, should, or may choose to focus upon to further:

- Expedite CLEC interconnection.
- Facilitate CLEC production business.
- Minimize CLEC support calls.

The most critical need is to improve available CLEC documentation:

- In EDI documentation, Pacific needs to include comprehensive inbound matrices.
- In DataGate documentation, Pacific needs to include a complete description of Application Programming Interfaces (APIs).
- Pacific needs to publish and maintain CLEC Managed Introduction process documentation.
- Pacific needs to publish and maintain documentation better summarizing standard due date intervals, including typical post-SOC completion intervals, by product and activity type.
- Pacific needs to publish and maintain consolidated documentation describing how Pacific's business rules differ from EDI standards.

Additional recommendations include:

- On web site [clec.sbc.com](http://clec.sbc.com), Pacific should improve AL search capability by topic within state.
- On the web site, under the Useful Links tab, there is a current link to the FCC's web site [www.fcc.gov](http://www.fcc.gov). Pacific should establish an additional direct hot link to the Common Carrier Bureau (CCB) North American Numbering Council (NANC) at [www.fcc.gov/ccb/nanc](http://www.fcc.gov/ccb/nanc) for related due date interval standards.
- On the web site under the Useful Links tab, add an additional link to the Alliance for Telecommunications Industry Solutions (ATIS) at [www.atis.org](http://www.atis.org). This external site provides useful industry information, and enables ordering the Telecommunications Industry Forum (TCIF) EDI standards found on the ATIS Document Center, under the Ordering and Billing Forum (OBF), ordering and Provisioning committee, keyword LSOG (Local Service Ordering Guidelines).
- Pacific should bring up Verigate each day at least an hour earlier to coincide with, or to precede LEX availability.
- Pacific should provide separate training and/or test environments, similar to the EDI test environment, for each CLEC-accessible Pacific Operations Support System.
- Pacific may also consider making their OSSs available standard business hours across at least the three continental U.S. time zones (5am PDT until 5pm PDT).
- Pacific should consider ongoing usability testing of interfaces that they provide to CLECs such as LEX and Verigate. Specific items that TG test team encountered that could still be improved are:
  - Verigate address verification when sub-location is required (note: this has been improved in the May Verigate release)
  - Verigate TN Reservation required (note: this has been improved in the May Verigate release)
  - Short time interval before the Verigate client is automatically logged off the Pre-order application.
  - LEX has what seems to be a very long interval to start the LEX client application.
  - LEX error messages at times are not clear.

- Pacific's should improve outage notification since the current system via Voice Response Unit (VRU) or FAX is untimely and inconsistent. . Note: a new email notification system was introduced as this test was completing. Pacific should poll the CLECs on the systems effectiveness.

### **3.0 BACKGROUND**

On April 23, 1999, the Assigned Commissioner in the consolidated proceeding addressing Pacific's request for in-region interLATA authority issued a ruling containing two reports concerning the company's OSS test plan for comment. In these reports, recommendations were made that an independent third party be retained to develop and implement a test of Pacific's OSS. After a series of meetings, the parties in the proceeding generally agreed that the CPUC should retain a consultant(s) to assist it in planning and implementing an independent test of Pacific's OSS.

The Commission retained GXS as a consultant to assist in the construction and execution of a test transaction generator, TG.

This section summarizes the purposes of the CPUC 271 Test, and some background information as it relates to the TG.

#### **3.1 Description**

The Telecommunications Act of 1996 was passed in order to re-write the U.S. telecommunications laws and to open telecommunication markets to competition. The telephone industry had been regulated by the Telecom Act of 1934 with few changes since that date. The new act basically allowed any corporate entity to supply or order any and all telecommunications services. The act also ensured that the incumbent Bell companies (ILECS) provide equal service to the new companies, the CLECs. This meant unbundling specific network element pricing and provisioning, and providing access to all ILEC OSSs. Once an ILEC could satisfy these provisions, they would be allowed to enter the interLATA Long Distance Market.

The CPUC was charged with performing the investigation of Pacific's entry into the interLATA market, pursuant to Section 271 of the Federal Telecommunications Act of 1996. This required contracting third parties, as TA, TAM, and TG described in section 1.2, to administer and generate test orders in a production environment using selected Pacific OSSs. These third parties were to document all events and experiences associated with CLEC training, interconnection set up, Pacific's documentation, order entry, creating OSS interfaces, billing, maintenance and repair, and dealing with Pacific's support organizations.

GXS was awarded the contract to perform the Test Generator role.

#### **3.2 Contract Support**

Three contracts were awarded for the test effort. Below describes the TG portion.

The TG was contracted to execute the tests for the CPUC during the term of the Test Effort. The role of the TG was to act as four P-CLECs in the establishment of the requisite manual and automated interconnections with Pacific for pre-ordering and ordering of various retail Unbundled Network Element (UNE) products.

In this effort, the TG was responsible for recording their contacts and experiences with Pacific, and interface with the Pacific CLEC Account Management (AM) Team. The TG designed and built the technical interface applications and established the processing infrastructure, including communication links and platforms to support the P-CLEC interconnection.

The TG processed the orders provided by the TAM, using one of three order entry types, FAX, LEX, and EDI. In addition, the TG worked in conjunction with the TAM to create the required order tracking mechanisms to log all order activity. As a member of the TAB, the TG represented the test execution effort and interfaced with the participating CLECs, Pacific, the TAM, TA, and the CPUC.

### **3.3 General Constraints and Guidelines**

At the commencement of TG involvement in this project, the TG was given the following direction by CPUC:

- No resources with previous Pacific systems experience were allowed to participate on the TG team.
- Maintaining the ‘blindness’ of Pacific resources interfacing with TG resources was required.
- TG was required to execute OSS Agreements and Interconnection Agreements (ICAs) for each of the four P-CLECs.
- TG would to the fullest extent possible follow normal Pacific processes for establishing P-CLEC interconnection.

Additionally, in TG interaction with Pacific, CPUC explained that:

- Pacific was required to provide support to the P-CLECs as they would to any interconnecting CLEC.
- Pacific Account Management team would protect blindness on the Pacific side to the fullest extent possible, and would document who, when, and why others at Pacific were necessarily advised of the true nature of the P-CLECs’ role.

## 4.0 OSS TEST SUMMARY

The TG role was to build OSS interfaces based upon documentation and support provided by Pacific and to process various inquiries and orders through this interface as directed by the CPUC or the TAM. The test focus that the TG performed consisted of:

- End-to-End/Functionality Test - testing end-to-end processes from pre-ordering through provisioning and billing, and maintenance and repair. Testing was performed with Pacific's production OSSs and processes. The test focused on Unbundled Network Element (UNE) Loop with Port, Basic and Assured Loops, DS1 Loops, and Asymmetric Digital Subscriber Line (xDSL) types of services and LNP. An additional test was completed for stand-alone Directory Listings (SDIR).
- Capacity Test - testing the capacity of Pacific's pre-ordering and ordering processes for Resale, UNE Loop with Port, Basic Loop with and without Number Portability (NP), DS1 Loop, xDSL, and stand-alone LNP types of service. Testing was performed with Pacific's production systems and processes. SDIRs were not included in the Capacity Test.

The experiences and testing that the TG encountered while doing business with Pacific as four P-CLECs were recorded, documented, and made available to the CPUC and the TAM. The record of the OSS test is the basis for this report. This record has also been provided to the TAM for the evaluation and analysis of Pacific's systems and capabilities, as they relate to service order processing, documentation, and training.

The intent of this document is to chronicle the CLEC experience of the TG team. During this Functional Test of Pacific's OSSs the TG acted as four designated P-CLECs:

1. Blackhawk Communications.
2. Camino Communications.
3. Discovery Communications.
4. Napa Communications.

For more detailed information on Functional Test results, please refer to the appropriate subsection within section 5.0, OSS Test Process, listed in the same sequential order as presented in this section.

In addition to the Functional Test information included in this document, the TG also executed the Capacity Test that focused on the ability of the Pacific OSSs to support a given mechanized workload. The Capacity Test was constructed of a repeatable, controlled, simulated test workload. The test requirements and specification plan for the Capacity Test were developed in coordination with the TAM and reviewed with the TG prior to conducting the Capacity Test.

The TG produced Capacity Test results including:

1. Test results, using criteria for success as described in the MTP.
2. Documentation of test inputs and outputs.
3. Documentation of the test environment.

The Capacity Test results are combined into a single report document and presented to the Commission in the TAM's Final Report as specified in MTP section 8.4.3, Capacity Testing Report Exit Criteria. Please refer to the TAM's Final Report for this information.

## **4.1 Relationship Set-Up**

A CLEC that wishes to do business with Pacific must enter into a formal and legal relationship with them. This relationship includes interactions with a Pacific Account Management Team, entering into contractual agreements with Pacific, and proceeding with CLEC Start-up activities.

### **4.1.1 Pacific Account Management Team**

In the TG experience, the Pacific AM team proved knowledgeable, responsive, and professional. When the TG had difficulty locating information, or required clarification on Pacific CLEC processes, the Pacific AM team was the most reliable resource. They served as a major factor contributing to TG development to full production status as a P-CLEC.

### **4.1.2 Pacific P-CLEC Agreements and Documents**

The process of filling out and/or signing documents to establish a legal working relationship with Pacific for the purpose of interconnecting as a CLEC proceeded without incident.

### **4.1.3 Related P-CLEC Start-up Activities**

One significant issue during the P-CLEC Start-up was a Billing Account Number (BAN) tabling problem (Vantive ticket #2386934), which delayed LEX order entry for one week.

Start-up activities, while requiring much interaction with the Pacific AM team, otherwise proceeded without serious incident.

## **4.2 Pacific Documentation**

Documentation is available from a variety of sources in various media to assist in the education of CLECs in the Pacific processes and systems required to conduct business with Pacific. It is intended for accessibility and use by all CLEC's who have an executed ICA with Pacific. Pacific has various types of documentation, which can be summarized in five major categories.

### **4.2.1 Web Site**

The web site (<https://clec.sbc.com>), including the *CLEC Handbook*, contains both general information available to the public, and secure information restricted to CLECs registered to do business in specific states within Southwestern Bell Company's (SBC) thirteen-state service domain.

During the course of the project, TG staff frequently accessed the *CLEC Handbook* and Information Services (IS) Call Center Job Aids. The information was found to be helpful for a specific knowledge

area. However, navigation throughout the web site proved somewhat unwieldy and cumbersome. By the close of the functional testing phase of the project, the web site had evolved considerably in appearance, and ease of use was enhanced.

#### **4.2.2 Other Pacific Documents**

There are relatively few documents that are not available to a CLEC through the web site. These documents are provided to a CLEC through their AM team. The document used to establish the Interconnection with Pacific is titled *Competitive Local Exchange Carrier (CLEC) Operations Support System Interconnection Procedures*, Version 2.5, November 23, 1999.

This document was clear and easy to understand by the TG's team responsible for establishing the Interconnection with Pacific

#### **4.2.3 Accessible Letters**

Another form of documentation used by Pacific is the AL. By definition, these are designed to communicate upcoming system releases, product promotions, events, procedural changes and similar information. They are regularly sent to all interested CLECs doing business with Pacific and are categorized by state.

In the course of the OSS test, starting September 23, 1999 through October 31, 2000, the TG received over 740 ALs via automated E-mail distribution from Pacific. A full reference library of ALs is maintained on the [clec.sbc.com](http://clec.sbc.com) web site, categorized by type, state, and month.

Unfortunately, searching for all ALs on a certain topic requires searching through each month's ALs separately, which is both cumbersome and time consuming. The best alternative and more expedient approach proved to be querying the AM for a list of all relevant ALs.

#### **4.2.4 Training Related Documentation**

TG comments are focused on issues involving Pacific EDI and DataGate documentation.

There were two key issues with the EDI documentation initially provided:

1. While the Pacific Local Service Ordering Requirements (LSOR) document did explain EDI requirements in reasonable detail, the TG could find no single-source reference to all Pacific exceptions to EDI Local Service Ordering Guidelines (LSOG) standards.
2. While the Pacific EDI Outbound Mapping Matrix appeared comprehensive, there was limited documentation provided on Inbound transactions.

The DataGate documentation that was provided in DataGate class September 1, 1999 was incomplete. The "*DataGate Client/Server User Guide*", a technical 'how-to' manual for developers writing DataGate clients and services, was not provided until several weeks later, after queries to the AM team.

The TG team found the DataGate documentation to be confusing and incomplete. There was no succinct 'How To' installation checklist provided which slowed TG application-to-application development.

#### **4.2.5 Outage Notification**

Outage notification was neither timely nor consistent. Typically the TG became aware of outages and estimated restoration of service via direct contact with the LSC. The recorded status messages (an option from the LSC voice response system) were not always updated in a timely fashion. The TG often found the message associated with a given outage to be two or three days out of date. Outage notification via fax was likewise inconsistent.

### **4.3 Pacific Training Classes**

Pacific's training classes were conducted in a formal classroom setting, and were all instructor led. They were highly interactive and resulted in excellent dialogue between the instructors and the CLEC students. The actual training included a combination of lecture, discussion and hands-on exercises in the given subject area.

In each class provided by the Industry Markets and Training staff of Pacific, every student was provided with a "Student Workbook" and an "Instructor's Guide" which were used to guide the classroom activities.

The Pacific instructors were consistently professional and courteous in their dealings with the CLECs. Regardless of an instructor's experience level in a particular subject area, each made every attempt to resolve questions before the completion of the class.

The DataGate classes met the objectives of introducing DataGate, but did not cover the related OSS applications at all which was a disappointment. The instructor claimed no knowledge even of the due date application the P-CLEC students were testing in the class exercises.

The DataGate classes formal training finished in less than one day, rather than the two days indicated in the available course information. The second day was spent experimenting independently based on the documentation available. The P-CLEC students encountered a problem with the API which was not resolved before the end of the class.

In general all P-CLEC students who attended the Pacific training were satisfied with the overall content and presentation of the courses.

### **4.4 OSS Interconnection**

#### **4.4.1 OSS's and Pacific Remote Access Facility**

Pacific document Competitive Local Exchange Carrier (CLEC) Operations Support System Interconnection Procedures provides information on the options available to CLECs for establishing electronic interfaces to Pacific's OSSs and procedures for connecting to the PRAF.

The PRAF is the entry point for CLEC access to Pacific's OSSs. A CLEC may only access those OSSs that are specified in their Interconnection Agreement OSS Appendix.

#### **4.4.2 Establishing Connectivity to Pacific's OSS Functions**

This test of Pacific's OSS functions included the TG building both application-to-application interfaces via a direct connection, and by using Pacific provided CLEC interfaces over a dial-up connection. The direct connection was implemented for DataGate pre-ordering and EDI ordering. A dial-up connection was used for Verigate pre-ordering, LEX ordering, Pacific Bell Service Manager (PBSM) trouble and maintenance, and E911 access.

#### **4.4.3 Direct Connection with Pacific**

The order for the direct connection with Pacific was placed on September 10, 1999 to connect the TG Super-Center in Ohio with the Pacific PRAF in California. The original due date for the circuit activation was October 29, 1999. On February 4, 2000, the TG completed the direct connection with Pacific.

For the TG's direct connection with Pacific there were pre-existing conditions that required a much more technically challenging solution in order to implement the direct connection with Pacific. Most CLEC's would not encounter these hurdles that are described in section 5.4, OSS Interconnection.

### **4.5 Pacific OSS Interfaces**

#### **4.5.1 Toolbar**

The Toolbar is a server-based gateway application that affords secure selective access to Pacific's wholesale customer support applications. Toolbar may be accessed via either dedicated or dial-up connection. The Toolbar provides a convenient means to access Pacific's wholesale support products and establishes a pseudo integration point for using compatible but different applications.

Apart from the system limitations and the failed release of Toolbar 6.0.0, the application provided the functionality expected, and was easy to understand and use.

#### **4.5.2 Verigate**

The Verification Gateway (Verigate) is an on-line windows-based application developed by Pacific to support pre-order functions to enable Pacific wholesale customers to submit accurate LSRs. It was developed using PowerBuilder and provides a graphic user interface (GUI) to access multiple pre-order functions. Verigate is launched from PRAF gateway.

In general, Verigate provides the required pre-ordering functionality. It enables verification of customer and address information and provides the means to query the service and order entry information needed to process the customer's request.

### **4.5.3 LEX**

The LSR Exchange System (LEX) is a client-server application developed by Pacific to support order entry for competitive local exchange carriers. LEX operates over MS Windows or NT and utilizes a GUI. The entry screens are modeled after the Local Service Ordering Guidelines (LSOG) standard forms.

In the TG experience, LEX proved to be a workable service order entry application. It provides a user-friendly interface that for the most part adheres to LSOG standard formats as well as serving as a viable means for error identification and correction. The systems ease of use allows for minimal order entry training. The integrated on-line Help provided good self training support.

### **4.5.4 Pacific Bell Service Manager (PBSM)**

The PBSM is a Pacific developed character based stand-alone system that provides access to Pacific's maintenance and repair functionality.

For the majority of test cases, the TG found the PBSM easy to use. The LOC personnel contacted were very helpful resolving issues. There were instances when TG cancelled trouble tickets and the Pacific employees would, as a courtesy, call to inform the P-CLEC there was trouble on the line and question whether to actually cancel the report.

Although accounts are generally not accessible to PBSM for approximately 12 hours after a service order is completed, trouble tickets may be initiated via a work-around called a "partial ticket". The partial ticket enables Pacific to generate a trouble ticket in PBSM on the CLEC's behalf utilizing information not yet resident in the system. Typically the LOC calls the CLEC to verify the information used to generate a trouble ticket initiated in this manner.

### **4.5.5 E911**

The E911 (Emergency 911 system) is a database system that tracks phone numbers with addresses in order to provide Public Safety Answering Points (PSAPs) with detailed information about the location of a 911 caller. When an account is migrated from Pacific, the E911 database is updated to reflect the OCN (Operating Company Number) of the new CLEC service provider. This update is accomplished by sending a transaction to the Pacific E9-1-1 Management System via the Management System Gateway (MS Gateway). This update may be performed by either Pacific or the CLEC. For the OSS test, the TAM planned a small number of orders for the TG to perform the E911 update.

The three major parts associated with CLEC E911 processing:

1. Establishing access to the E911 system via MS Gateway.
2. Entering an E911 transaction into the database.
3. Using the TN Query function to check status of the TN in the database.

#### Establishing Access via E911 Gateway:

Pacific provided the TG with the Users Ids, passwords, and SecurIDs that were required to gain system access. All initial attempts to access the system by the TG failed, and it was only following drawn out discussions with the IS Call Center that successful access was attained.

#### Entering an E911 transaction into the database:

E911 transactions were entered for two of the CLECs. The TG successfully sent and completed Napa transactions, however Blackhawk encountered problems. This CLEC's transactions returned truncated batch Ids, and while Pacific at first contacted the TG about the problem, asking that the transaction be re-entered, the support failed when the problem persisted. A number of calls to E911 support were unanswered, and finally the effort was abandoned.

It is important to note that feedback from Pacific on E911 stated that there is no 911 step by step checklist for UNE Port providers who chose to use the 911 gateway rather than the LSR to enter 911 information into the 911 Gateway for their end users.

#### Setting up and using the TN Query function for E911:

The E911 TN Query functionality was first announced to the CLECs via AL number CLECC99-346, dated October 28, 1999. This system provided "view only" access to CLEC's individual subscriber records. The TG initially called the service center and was told for both Napa and Blackhawk that the associated ID's were not valid. Calls to the help desk and various Pacific staff involved went in circles for weeks, receiving often inconsistent information regarding corrective action. The TG test team was never successful in their attempts to use the TN Query function for E911.

While entering E911 transactions to test this OSS was a part of the test, it is recognized that the majority of CLECs are not interested in using the 911 Gateway and prefer to let Pacific perform the update via the LSR. The TG found establishing initial access to the system to be frustrating and time consuming, but once in, transactions were easy to enter. However E911 support was well short of expectations as failure to resolve the Blackhawk truncated transactions, and inability to set up TN Query illustrate.

#### **4.5.6 DataGate**

Datagate provides an inter-application bridge for accessing pre-order data. It was initially developed by SBC to provide a pre-order interface for it's own applications. Currently it provides meta-services to support interconnection of CLEC operations support applications in a similar fashion.

In general, TG Order Entry team found the Datagate interface less efficient and less reliable than Pacific's Verigate application for support of the pre-ordering functions tested.

## **4.6 Application Development**

### **4.6.1 Interconnection Matrices**

These documents are support tools developed by and for the exclusive use of GXS. The intent of these tools is to serve as an aid in the architectural design and build of several support tools necessary to successfully transmit CLEC EDI transactions to/from the Pacific OSS platforms. Interconnection matrices are a tool that GXS always generates for their clients whether they are ILECs or CLECs.

As with all GXS telecommunication/information technology projects, several Critical Success Factors (CSFs) were identified early in the project management plans. CSFs pertaining to the Interconnection Matrices were:

1. Map to correct LSOG.
2. Identify Pacific Business Rules.
3. Identify Pacific EDI Rules.
4. Identify discrepancies.

At the conclusion of the project all CSFs were met. However, the TG did experience some difficulty in areas 1 and 3.

Area 1: When the TG queried Pacific as to which version of the LSOG was supported in day-to-day operations, the response was LSOG 2+. When this stage of the analysis was completed the ILEC was much closer to LSOG V3, then the published LSOG V2.

Area 3: EDI rules governing out-bound transactions mapped to the published documents in a straightforward manner. However, EDI rules governing the in-bound transactions were very difficult to obtain. The Local Service Order Request (LSOR) document was very vague on the content a CLEC would receive in areas such as Jeopardies, cancellations, confirmations, completions, etc.

### **4.6.2 Mapping**

There were three stages to the mapping development process:

- Interface File Definition.
- Logical Mapping.
- Physical Mapping.

Interface File (IF) definitions enable transformation and transportation of data between the pseudo-CLEC mini-OSS and Pacific's applications. These files are designed to allow easy extraction from and insertion into databases, as well as manipulation by the translation (or mapping) process which converts between the IF and EDI formats.

Logical mapping is the process of preparing the EDI specifications that define how information is to be taken from either an EDI document or an application interface file and processed (i.e. translated) so that the other is created. The resulting document is the design document that is given to the physical mapper.

The physical map developer takes the rules and instructions from the logical map and applies them using an EDI mapping tool like AI which was used in this project. The end result of the physical mapping process is a computer program referred to as a physical map that will perform the actual desired translation.

### **4.6.3 DataGate Pre-order Interface Development**

To employ DataGate routines, CLECs must construct a “C” language client front-end. With DataGate, CLECs have the ability to customize pre-ordering, with returned data available for populating orders, database storage, reporting, or other activities.

Based on GXS’ general industry knowledge and the MTP and DataGate test case documentation available at the time, certain DataGate functions (as documented in the “*LSP West Developers Reference Guide*” (DRG)) deemed relevant to the testing exercise were selected for implementation.

The primary DataGate function (as documented in the DRG) required was Address Validation (AV). Successful AV was a prerequisite for subsequent functions, which used the AV data (in particular the Exchange/Central Office code (EXCO)) as an input parameter. Several DataGate functions allow specification of the EXCO, a Common Language Location Identifier (CLLI) code or NPA/NXX (area code and first three digits of TN). Since AV was a prerequisite, GXS implemented only the EXCO option and derived the EXCO from a previous valid AV result.

Selected fields (primarily name, address, and TN information) from DataGate pre-order responses were extracted and stored for subsequent automatic population of the analogous order fields.

In all cases, DataGate responses were converted from complex structures and stored in a formatted text file for subsequent retrieval and inspection. Query and response transactions were automatically associated and time stamped to allow later calculation of response times.

Problems experienced during DataGate application development include:

- DataGate compiler errors – Received work-around instructions from IS Call Center explaining the expected compiler errors, and how to work around them.
- Undocumented DataGate argument definitions - Argument definitions were provided by IS Call Center via Pacific’s AM’s.
- DataGate run time errors due to incomplete libraries provided by Pacific.
- DataGate test cases did not return the documented expected results. Pacific implemented a revised test bed, documentation, and software in response to TG’s problems encountered in testing DataGate in the DataGate Test Bed.

DataGate issues resulted in an eight week delay in application-to-application development.

#### **4.6.4 Mini-OSS and EDI Order Interface Development**

Based on the MTP documentation available at the time and on discussions between the TG and the TAM team, GXS designed and implemented a “mini-OSS” (MOSS) to exercise selected functions that might be required by a typical CLEC. Only those functions relevant to the testing exercise were implemented. Other functions, such as marketing and billing, were not implemented.

A custom software application was developed, using Web browser-based data entry screens to allow GXS staff to specify and execute both DataGate pre-order transactions and subsequently EDI order transactions, incorporating certain fields from the pre-order responses.

Additional effort was required due to the absence of a comprehensive source of EDI inbound responses, and lack of a single source document of Pacific’s exceptions from EDI standards. Otherwise, no significant problems were encountered in EDI application-to-application development.

#### **4.7 Joint EDI Testing and Managed Introduction**

##### **4.7.1 Joint EDI Testing**

For each of the required order types, as determined by the TAM, for each of the four P-CLECs, Pacific required an EDI joint test. This EDI test was designed to demonstrate to the Pacific AM and the LSC Supervisor that the P-CLEC was capable of sending EDI transactions without a significant number of errors, which would require manual processing.

Before Pacific will allow a CLEC to send production EDI transactions, a joint test must be performed to demonstrate to Pacific that the CLEC is knowledgeable about EDI, and can successfully transmit EDI.

Overall the EDI joint test process worked well. The initial conference call included exchange of all relevant documents, and review of documented entrance and exit criteria, which provided clearly defined “tollgates” for the test. The Pacific EDI test team was very helpful both in providing technical advice and establishing test accounts.

Questions and problems were addressed in a timely and accurate manner. The Pacific EDI test team members were also very competent in their areas of expertise. The main issue from the TG perspective was performing similar EDI tests for four P-CLECs, and the associated risk to “blindness” as the Pacific EDI test team consisted of the same few people. To address this concern, at the Pacific AM’s suggestion, the TG conducted EDI testing sequentially (one P-CLEC at a time).

## **4.7.2 Managed Introduction**

Managed Introduction (MI) is a Pacific process that is initiated when a CLEC intends to start entering LSRs for a new order type/request type combination, in a new order entry medium. For example before a CLEC can enter full production for Conversion Loop with Port orders via the GUI front end, the process of MI must be completed, with official sign off from Pacific .

The purpose of MI is to ensure that the CLEC understands all the business rules associated with submitting the LSR as stated in the LSOR, and is able to complete all fields correctly, knowing which are mandatory and which are optional. This is to ensure a high success rate of flow through orders, and to minimize exceptions to the LSC. All exception orders are worked manually by Pacific employees in the LSC, and a high number of order exceptions results in an increased workload for the LSC. MI is intended to minimize this impact to the LSC. There are no mechanized restrictions on a CLEC to submit orders during MI, only an agreement between AM and CLECs on the order quantities and type that a CLEC will send during MI.

The main concern regarding MI is that there is no Pacific documentation available for CLECs specifically mentioning this process by name. Apparently MI is an undocumented process that is dependent on the CLEC's Pacific AM to suggest to obtain a CLEC's participation.

While the requirements and documentation associated with the process of MI are unclear, its purpose became well understood by the TG test team.. Overall the experience was satisfactory, and the support provided was helpful.

## **4.8 Doing Production Business as a CLEC with Pacific**

### **4.8.1 Ramping up (FAX, GUI, Application-to-application)**

CLECs entering Pacific's market must decide which of the available Pacific OSS's with which to interface. A CLEC entering Pacific's regions might choose FAX, GUI interfaces provided by Pacific, or to build their own application-to-application interfaces to Pacific's order and pre-order OSS's.

A CLEC would choose an approach that made business sense to them and matched the markets they wished to enter and the timelines that they require. An approach to building interfaces to Pacific's OSSs for one CLEC would not necessarily match another CLEC's approach.

The approach chosen by the TG and agreed to by the TAM was to begin production as a P-CLEC in the GUI environment, and then move into the application-to-application environment. There were also a relatively few FAX orders processed during the OSS testing. A real CLEC is likely to follow the same approach since it offers a number of advantages to the CLEC.

1. A CLEC may move into Managed Introduction within the GUI environment as soon as they have completed training on LEX and Verigate, installed the required Toolbar software, and established data communications.

2. A CLEC is not likely to be ready for processing in the application-to-application environment for several to many weeks, since this requires a large application development and system integration effort. Not only does the CLEC have to build the application interfaces to Pacific's OSS's, but the CLEC will also have to integrate these interfaces into the CLEC's own applications. Starting with the GUI environment helps the CLEC learn the business rules necessary to do business with Pacific and would likely speed the development of the application-to-application interfaces.

#### 4.8.2 LSR Order Processing

The TG was responsible for entering LSRs, from order data supplied by the TAM, using one of three order entry methods:

1. FAX submission.
2. The Pacific LEX system, an order entry system with a GUI front end.
3. EDI.

The TG sent the first successful LSR to Pacific via LEX on December 8, 1999. The last SOC was received via EDI from Pacific on October 13, 2000.

The following types of orders were processed by the TG via FAX, LEX, or EDI:

- Two-wire loop with port.
- Stand alone directory listing.
- Two-wire basic loop.
- Two-wire assured loop.
- Four-wire DS1 loop.
- DSL loop.
- LNP stand-alone.
- LNP with two-wire loop.

The progress of each order was tracked through Pacific's OSS systems, ensuring correct Firm Order Completions (FOCs) and SOCs were issued.

##### 4.8.2.1 Two-Wire Loop with Port (LPWP)

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 15         | 944        | 62         | 1,021        |

The TG encountered intermittent problems with this order type when performing change orders to add or delete features. After completing a conversion order for a Pacific account, TG would have a copy of the original Customer Service Record (CSR) that listed the customer's features. TAM would subsequently issue a change order to add (or remove) a feature and the order would sometimes be rejected because it was attempting to add a feature that already existed, although the CSR did not show the feature on the account. TG records could not explain this discrepancy and calls to Pacific's LSC did not provide adequate explanations.

There were four orders entered where a specific class of service was entered for the customer (either business or residence), but Pacific incorrectly worked the orders with wrong class of service, but the orders FOCd.

4.8.2.2 *Stand Alone Directory Listings (SDIR)*

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 142        | 0          | 142          |

Directory Listing LSRs cannot be entered as FAX orders. Pacific only allows this order type to be entered via LEX or EDI. This requirement is documented in the CLEC Handbook, Section 4.5.2 Listings.

- There were four Napa directory-listing orders entered via LEX without caption, which FOC'd but did not SOC. The issue was reported to the IS Call Center on or about August 24, 2000 (Vantive #3736231).
- Two sets of three additional SDIR orders each were subsequently submitted to test revised Pacific Methods and Procedures (M&Ps) and to address the above issue.
  1. The first set was verified as correct on September 12, 2000 via the web listings interface.
  2. The second set was submitted October 6, 2000 and was verified as correct via the web-listing interface.
- Although a new M&P was implemented by Pacific to call a CLEC for post-FOC error with SDIR orders, the TG did not receive the expected calls from Pacific when post-FOC errors were induced.

4.8.2.3 *Two Wire Basic Loop (BASL)*

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 2          | 567        | 569          |

Loop testing was performed for several BASL orders with the help of the CLECs. This testing was performed by the TG Control Tracking Team. For details of this process refer to TAM document Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.1.

From time to time the TG experienced Exchange Carrier Circuit ID (ECCKT) problems with disconnect orders for basic loop services (not directly related to the order type). When TG attempted to issue a disconnect order, Pacific returned an error "ECCKT not found message", despite TG/TAM verification that proper ECCKTs received from Pacific on service installations were used for these disconnects. TG was forced to cancel these orders and re-submit on a different account.

#### 4.8.2.4 Two Wire Assured Loop (ASSL)

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 5          | 360        | 365          |

Loop testing was performed for several ASSL orders with the help of the CLECs. This testing was performed by the TG Control Tracking Team. For details of this process refer to TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.1.*

The TG experienced an issue with this order type relating to the Class of Service. Pacific stated that assured loop orders could only be entered as a business Class of Service. Nevertheless, an ASSL order was submitted for a residential customer, and Pacific returned a FOC. Verbal explanation received from Pacific that this was a “training Issue” and the order should have been rejected.

#### 4.8.2.5 Four-wire DS1 loop (DS1L)

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 0          | 43         | 43           |

Note that DS1 orders were not SOCd by Pacific until loop testing was completed.

Loop testing was performed for DS1 orders with the help of the CLECs. This testing was performed by the TG Control Tracking Team. For details of this process refer to TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.2*

During the test there was a issue between WorldCom, a real CLEC providing co-location facilities, and Pacific over access to a WorldCom facility to install a circuit for a DS1 order. Neither side resolved the issue, and the order was subsequently cancelled.

Another problem experienced on a DS1 order, was where Pacific initially rejected the order because the CO (Central Office) Location area had fiber belonging to another company. Pacific technician devised a workaround, and subsequently completed the order.

#### 4.8.2.6 DSL loop (xDSL)

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 0          | 312        | 312          |

Early in testing xDSL order types, the TG experienced a problem with the Pacific Acceptance Testing functionality. Acceptance testing would be requested by order entry, but Pacific did not follow up with the request.

On occasion, orders were returned by Pacific with message “Customer refused service”. The orders subsequently SOCd while the TG and TAM were investigating as the Pacific technician had made another visit and was given access by the end user to complete the order. To eliminate

this problem, TAM initiated “friendly” reminder calls to the end user coordinated at order entry time.

#### 4.8.2.7 LNP Stand Alone (LNPO)

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 3          | 17         | 296        | 316          |

LNPO orders, were processed in one of three ways:

1. If no Frame Due Time (FDT) specified, and no CHC (Coordinated Hot Cut), these orders were cut at the default frame due time of 10:00pm PST.
2. If a FDT was specified, with no CHC, these orders were cut at the default Frame Due Time of 10:00pm PST by Pacific , but porting of the TN was asked for at the specified time.
3. If a FDT was specified, with a CHC, Pacific ported the TN at the specified time.

For details of above processes see TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test , Section 5.4*

Due Date Intervals caused initial problems with this order type. It was not immediately apparent for this order type only that Saturday counted as a business day when calculating the standard due date interval.

There was some question over whether these order types were included in the X-coded order count. X-coded means that the order could not be counted in the performance measures as due date was outside the standard due date (DD) interval.

#### 4.8.2.8 LNP with 2 wire loop (LNPL)

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 0          | 131        | 131          |

For this order type, there were a number of unique steps that were performed by the TG Control Tracking Team. For details of this process see TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test , Section 5.4*

If Pacific reported NDT (No Dial Tone), the TG verified that the technician tested from the Point of Termination (POT) bay and not from the Main Distribution Frame (MDF). If the Pacific technician said the test was from the POT bay, the TG contacted the supporting CLEC to check the facility. If this situation could not be resolved, the TG instructed the Pacific technician to build the customer back into the Pacific switch.

#### 4.8.2.9 *Other Issues Not Order Type Specific*

- BAN errors – In mid-June timeframe, TG received a number of manual rejects for disconnect orders, stating that the BAN, was invalid. (Manual Reject code MR0009). This occurred for different order types, in different P-CLECs.
- ACTL rejects – A number of different order types were rejected due to the ACTL being invalid (not an error directly connected to the specific order type), even though the ACTL appeared in the assignment spreadsheet as valid. The problem was referred to contact in the LSC and the Pacific AM, and problem was found to be a failure on the Pacific side to update table information.

### **4.9 Pacific Support**

#### **4.9.1 IS Call Center**

The IS Call Center is the CLEC's primary point of contact for information systems (IS) issues related to OSS access. Their goal is to provide a level of technical support to all CLECs who access Pacific's OSS, that is in parity with the level of support that is offered to their internal employees.

The IS Call Center provided outage information and an estimated time of restoration for service. They assisted in many instances by providing work-arounds until major outages were restored.

The IS Call Center was the point of contact for resolving User ID and password issues. Support in this area was inconsistent, varying from immediate to drawn out, such as the four weeks taken for SecurID replacement (Vantive ticket# 3431000).

#### **4.9.2 Local Service Center (LSC)**

The LSC provided CLEC support for all orders prior to order due date. Pacific has LSCs in two locations; one in Anaheim for the south, and one in San Francisco for the north.

Pacific LSC employees were cooperative in addressing the problems that the P-CLECs referred to them for resolution. In most cases they were able to handle the problem or query directly. In other cases they were generally diligent in pursuing the correct path to deal effectively with the case at hand.

All Pacific employees that were contacted exhibited appropriate professionalism and courtesy.

#### **4.9.3 Local Operations Center (LOC)**

The Pacific LOC provided CLEC support for all orders after the order due date. Then the LOC was the contact for all order completion activities such as Coordinated Hot Cuts.

The *Escalation and Expedite Guidelines and Contacts* document issued by Pacific laid out the interface procedures for expedites, inquires, and provided escalation contact names for each P-CLEC. Like the LSC, there is a Pacific published LOC escalation procedure, describing expediting, escalation, and providing contact numbers.

#### **4.9.4 Listings Help Desk (LHD)**

The Listings Help Desk (LHD) is a Pacific support function, specifically for Directory Listings. Any problems or questions that a CLEC encounters with Directory Listing orders, RECTYP J, may be directed to this support group. While the LHD was generally responsive, the information conveyed was often misleading, resulting in considerable TG confusion.

### **4.10 Billing and Daily Usage Data**

The TG served as a transfer point in receiving a variety of billing data from Pacific in several media formats, and passing the raw data to the TAM team for analysis.

#### **4.10.1 CABS Tapes and NDM**

While the ultimate objective was to receive the billing data electronically via NDM, it proved expedient to accept the P-CLEC UNE retail bills via standard Carrier Access Billing System (CABS) format tapes in the interim, until Network Data Mover (NDM) communication was possible over the TG T1 connection, once installed and functional.

##### *4.10.1.1 CABS Tapes*

The first set of four CABS retail Billing Output Specification (BOS) format billing data tapes (one per P-CLEC) arrived at the TG Tampa office via overnight courier service on November 3, 1999.

While it took ten business days for the TG team to accomplish the above process for the first set of four tapes, the second set took only three days

In December, at TG request, the Pacific AM arranged for the CABS data to be delivered via NDM, anticipating this mode would be available by December 20, 1999 (prior to the Year 2000 freeze) in time to receive the December CABS data. As the NDM communications were not available until February 4, 2000, TG received the first NDM CABS feed on February 21, 2000.

With the successful conversion to NDM transmission of the CABS UNE retail billing data, significant time (approximately three days per set of tapes) and the associated extra manual effort were eliminated.

##### *4.10.1.2 CABS Data via NDM*

In December, at TG request, the Pacific AM arranged for the CABS data to be delivered via NDM. A Y2K freeze and T1 installation issues delayed this function until February 2000.

The first test CABS retail billing files arrived at the TG server via NDM File Transfer on February 9, 2000. After the completion of CABS file transfer testing on February 9, CABS files were sent to the TGs server for each bill round using NDM over the direct connection between TG and Pacific.

NDM proved to be an effective way to receive an electronic CABS bill. A CLEC would then need the means to parse billing information from an electronic CABS bill. Parsing of the CABS bill was not part of the TG's requirements.

#### **4.10.2 Daily Usage via Data Exchange, Tapes and NDM**

The Pacific AM strongly recommended that TG start receiving Daily Usage data via tape rather than NDM. The reason was that starting with NDM would make it difficult to determine whether encountered problems resulted from the data or from the NDM transmission.

Following AM advice, the TG began receiving Data Exchange daily usage tapes on January 24, 2000. Soon after the NDM communications were established, on February 21, 2000 the TG formally requested the switch from tape to NDM. Pacific AM said it normally takes about two months to get converted to NDM (only possible once per month during Pacific scheduled maintenance). On March 21, 2000 TG were quoted a target date of April 14, 2000. The first NDM transmission actually occurred on April 20, 2000. The TG team verified this the following day.

##### *4.10.2.1 Daily Usage via Data Exchange Tapes*

The first two Data Exchange Daily Usage data tapes arrived at the TG Tampa office via overnight courier service on January 24, 2000. They were 575' 3M Royal Guard 3480 cartridge tapes of previously arranged format, including 2476 character variable length records and 2472 character logical record length. The tapes were accompanied by paper hard copies of assumed duplicate data.

Initially it took six business days for the first two Data Exchange tapes to be processed. After a revised and streamlined process was implemented, the subsequent tapes took only three to four days to read and transmit.

After conversion to NDM transmission of the daily usage data, significant time and the associated extra manual effort were eliminated.

##### *4.10.2.2 Daily Usage via NDM*

The first set of DataExchange usage file arrived at the TG server via NDM file transfer on April 20, 2000. Pacific sent one file per CLEC each week and a monthly CLEC summary for each CLEC.

NDM proved to be an effective way to receive an electronic DataExchange usage file. A CLEC would need the means to parse the usage file to retrieve information from an electronic DataExchange usage file. Parsing of the DataExchange usage file was not part of the TG's requirements.

### 4.10.3 Paper Bills

The TG received the following types of hard copy billing information associated with the four P-CLECs:

1. Resale bills via U.S. Mail.
2. CABS retail bills. Receipt of these hard copy bills accompanying the CABS tapes delivered via overnight courier ceased when NDM transmission of CABS data commenced.
3. Daily usage data. Receipt of these hard copy bills accompanying the daily usage tapes delivered via overnight courier ceased when NDM transmission of daily usage data commenced.

The TG team received a large number of paper bills over the course of the test. The evaluation and analysis of this information are TAM responsibilities.

### 4.10.4 Checks Received from Pacific

Five checks were received by the TG from Pacific addressed to P-CLEC Discovery Communications for two separate accounts:

| Date Received | Check Date | Check Number | Check Amount | Comment                             |
|---------------|------------|--------------|--------------|-------------------------------------|
| 12/14/99      | 12/8/99    | 0001925134   | \$81.37      | Credit balance on bill              |
| 12/21/99      | 12/14/99   | 0001936320   | \$81.39      | Credit balance on bill              |
| 12/28/99      | 12/16/99   | 0001941495   | \$81.56      | Refund of overpayment on final bill |
| 12/28/99      | 12/17/99   | 0001943905   | \$ 2.91      | Refund of overpayment on final bill |
| 01/15/00      | 1/4/00     | 0004964002   | \$69.13      | Credit balance on bill              |

All checks were returned to the Pacific AM as requested.

## 4.11 Other Issues

### 4.11.1 External Support and Other Issues

As an integral part of the TG P-CLEC experience, the TG established a toll-free support number on September 13, 1999 that was published as the customer contact number for all four P-CLECs. This number was forwarded to a telephone in the TG P-CLEC Manager's office in Tampa, Florida. An appropriate message greeted callers, indicating they had reached "Telco customer support", that "all representatives are currently busy", and requesting they leave a message.

Various types of calls were received:

- Solicitations from numerous vendors.
- Queries by potential investors seeking P-CLEC business information.
- Queries by end users seeking information, usually whether the P-CLECs provide service in their geographic area.
- Misdirected calls by end users seeking another CLEC.
- Calls by end users who had been signed up as “friendly” accounts for the test.
- Calls by end users whose service had been mistakenly converted to one of the P-CLECs.

The TG recognizes that the majority of end user calls resulted from the unique P-CLEC relationship with both real CLECs and Pacific necessary to complete the OSS test.

#### **4.11.2 Misdirected Calls to TG CLEC Support Toll-free Number**

Twenty calls were received from January 15, 2000 through October 17, 2000 from end users seeking to contact one of two real CLECs. There were ten calls for each of the two real CLECs. The Pacific AM determined that the prime cause was that the P-CLECs of necessity shared SPIDs with these two CLECs, enabling the TAM to prepare and the TG to process orders requiring real volunteered co-located CLEC facilities.

#### **4.11.3 Calls by or Related to ‘friendly’ Accounts**

Eight calls were received between February 7, 2000 through July 24, 2000 from end users who had been signed up by the TAM to participate in this test (‘friendlies’), who had forgotten or were not aware of this arrangement. Please see the TAM’s final report for further information on ‘friendly’ accounts.

In some cases, a family member had signed up without informing other family members who were home when the field technician arrived to hook up the test line. In other cases, due to the considerable intervening interval from ‘friendly’ sign-up to installation, the individual simply forgot. The TAM promptly responded by initiating reminder calls to the ‘friendlies’ when orders were placed involving field work at their homes.

#### **4.11.4 Calls by End Users whose Service had been Mistakenly Converted**

Two calls were received on Friday June 2, 2000 regarding the same out-of-service TN. One at 3:39pm EDT was from the end user who stated her phone was not working, and as an expectant mother living alone she was therefore very concerned as she could not use her phone to access 911. The other at 5:40pm EDT was from her sister, who claimed the impacted number had been taken over from Pacific without authorization.

The problem was identified by the end user when no dial tone was present, due to the Basic Loop order type (BASL, REQTYP=A, Act=V). If the order had been a loop with port conversion (LPWP, REQTYP=M, Act=V), dial tone would have remained on the line. Therefore, the inadvertent conversion may not have been noticed until the final Pacific bill was received by the end user. The final bill indicates (as informed by the Pacific AM) which CLEC now provides service, along with the CLEC contact number.

If the end user did not see this message on the final Pacific bill, then the arrival of a bill from the new CLEC would indicate the problem. However, the P-CLECs did not generate bills. Therefore, unless the end user noticed the comment on the final Pacific bill, it is possible they might never notice or report the problem, especially if they found themselves receiving phone service without receiving any bills, until the P-CLEC lines were disconnected.

With this awareness, the TAM reviewed and audited their records to identify any other potential errors of this sort. The TG is aware of no other inadvertent conversions.

#### **4.12 Recommendations for Pacific**

Based upon the TG's P-CLEC experience, there are several key areas that Pacific either must, should, or may choose to focus upon to further:

- Expedite CLEC interconnection.
- Facilitate CLEC production business.
- Minimize CLEC support calls.

The most critical need is to improve available CLEC documentation:

- In EDI documentation, Pacific needs to include comprehensive inbound matrices.
- In DataGate documentation, Pacific needs to include a complete description of APIs.
- Pacific needs to publish and maintain CLEC Managed Introduction process documentation.
- Pacific needs to publish and maintain documentation better summarizing DD intervals, including typical post-SOC completion intervals, by product and activity type.
- Pacific needs to publish and maintain consolidated documentation describing how Pacific's business rules differ from EDI standards.
- Pacific should ensure that clearer instructions and process for CLEC access to E911 MS Gateway are developed and implemented.
- Pacific should ensure that the E911 TN Query function works.

Additional recommendations include:

- On web site [clec.sbc.com](http://clec.sbc.com), Pacific should improve AL search capability by topic within state.
- On the web site, under the Useful Links tab, there is a current link to the FCC's web site [www.fcc.gov](http://www.fcc.gov). Pacific should establish an additional direct hot link to the CCB North American Numbering Council at [www.fcc.gov/ccb/nanc](http://www.fcc.gov/ccb/nanc) for related due date interval standards.
- On the web site under the Useful Links tab, add an additional link to ATIS at [www.atis.org](http://www.atis.org). This external site provides useful industry information, and enables ordering the TCIF EDI standards found on the ATIS Document Center, under the OBF, ordering and Provisioning committee, keyword LSOG .

- Pacific should bring up Verigate each day at least an hour earlier to coincide with, or to precede LEX availability.
- Pacific should provide separate training and/or test environments, similar to the EDI test environment, for each CLEC-accessible Pacific Operations Support System.
- Pacific may also consider making their OSSs available standard business hours across at least the three continental U.S. time zones (5am PDT until 5pm PDT).
- Pacific should consider ongoing usability testing of interfaces that they provide to CLECs such as LEX and Verigate. Specific items that TG test team encountered that could still be improved are:
  - Verigate address verification when sub-location is required (note: this has been improved in the May Verigate release)
  - Verigate TN Reservation required (note: this has been improved in the May Verigate release)
  - Short time interval before the Verigate client is automatically logged off the Pre-order application.
  - LEX has what seems to be a very long interval to start the LEX client application.
  - LEX error messages at times are not clear.
- Pacific's should improve outage notification since the current system via voice response unit (VRU) or FAX is untimely and inconsistent. Note: a new email notification system was introduced as this test was completing. Pacific should poll the CLECs on the systems effectiveness

#### **4.13 Recommendations for CLECs**

TG recommendations for CLECs interconnecting with Pacific in California include:

- Use open standards EDI or Common Object Request Broker Architecture (CORBA) for pre-order rather than the proprietary Pacific DataGate service, for application-to-application processing of pre-order transactions.
- Order, and test, any planned high-speed data links (T1 or as appropriate) as early in the interconnection process as possible.
- When using EDI for ordering obtain a good understanding of when TCIF guidelines supersede Pacific's LSOR.

#### **4.14 Summary**

The TG in their role as P-CLEC found Pacific's OSSs to be robust and reliable during the execution of both the OSS functional and capacity tests. The TG found that Pacific's Methods and Procedures (M&P) proved satisfactory, although at times hard to interpret from the documents provided. The TG found our AM to be competent, responsive, and professional in helping the TG resolve any M&P issues. Pacific's training was satisfactory, although at times more detailed examples in hands on situations should be provided.

OSS interfaces supplied by Pacific generally functioned well. LEX and Verigate proved to be very easy to use and enabled our four P-CLECs to quickly move into production. Other new

interfaces were not completely usable such as E911 TN Query, although this is not an interface that CLECs would normally use, because providing E911 information in the LSR and letting Pacific perform the update appears to be more efficient and practical.

Building OSS interfaces to Pacific's EDI order system was accomplished with a normal level of effort, considering the TG's experience with other ILEC interconnections. The documents that provided this information were good although somewhat incomplete, such as few examples of inbound EDI documents. Building OSS interfaces to DataGate was difficult, as the documentation was somewhat deficient.

Pacific's processes used to progress from test to production environments for the application-to-application OSS interfaces proved to be thorough, but were quite lengthy. This became evident in the TG's experience, moving four different CLECs from test to production.

Pacific's support was excellent especially during the pre-production joint test period and managed introduction for EDI. During production, when issues arose that required Pacific's support, there was a much greater variability in the level of support received.

It is clear that Pacific is focusing considerable effort to improve both the CLEC interconnection process and CLEC production support as well. Since the commencement of TG involvement in August 1999, changes in documentation, processes, and information dissemination have made it easier for the P-CLECs to do business with Pacific including:

- Improving quality and readability of EDI and DataGate documentation.
- Simplifying and standardizing access to the SBC web site [clec.sbc.com](http://clec.sbc.com).
- Software upgrades implementing additional functionality with associated documentation and training revisions.
- Changing SBC policy to allow communication line sharing by related CLECs.
- Restricting TN change in LNP orders to avoid TN's locked to previous Local Exchange Carrier (LEC) owner.

## 5.0 OSS TEST PROCESS

### 5.1 Relationship Set-Up

#### 5.1.1 Account Management Team

The TG's initial contact with the Incumbent Local Exchange Carrier (ILEC) Pacific in its role of representing four designated P-CLEC's, was the introductory meeting with the assigned Account Manager (AM), and a representative from the Commission. Over the life of this test, Pacific provided AM backup to ensure uninterrupted support for the TG.

At this first meeting, the AM explained comprehensively their role and the basic requirements and processes associated with establishing an interconnection with Pacific. The attendees discussed the role of TG and the unique challenges faced to conduct a successful blind test. Also reviewed and discussed a variety of hard-copy documents, including OSS and ICAs, the CLEC profile, User ID request forms, the current training schedule, appropriate classes, and possible timing to expedite the essential education process.

In the TG experience, the Pacific AM team proved knowledgeable, responsive, and professional. When the TG had difficulty locating information or required clarification on Pacific CLEC processes, the Pacific AM team was the most reliable resource. They served as a major factor contributing to the TG development to full production status as a P-CLEC.

#### 5.1.2 Pacific Bell P-CLEC Agreements and Documents

##### 5.1.2.1 Overview

The necessary activities to establish a formal relationship between the four P-CLECs and Pacific, with associated dates, were as follows:

| <b>Activity</b>                     | <b>Start</b> | <b>Complete</b> |
|-------------------------------------|--------------|-----------------|
| Build First P-CLEC Profile (Napa)   | 8/16/99      | 9/1/99          |
| Training Memo of Agreement (MOA)    | 8/17/99      | 8/18/99         |
| Submit First Training Registrations | 8/18/99      | 8/18/99         |
| OSS Agreements                      | 8/19/99      | 8/27/99         |
| Interconnection Agreements          | 9/2/99       | 10/22/99        |
| Request First Pacific OSS UIDs      | 9/8/99       | 9/22/99         |
| P-CLEC Interconnect Request         | 9/29/99      | 9/30/99         |
| OANAD Addendum                      | 12/13/99     | 12/14/99        |

##### 5.1.2.2 Function

For each of the referenced documents, the basic process was as follows:

- a) P-CLEC Profile (one per P-CLEC, owned and updated by the Pacific AM)

1. The Pacific AM provided the TGP-CLEC Manager appropriate blank forms.
2. The Pacific AM helped the TG fill out the majority of entries in a series of meetings and calls
3. Subsequent additions and clarifications were handled by the Pacific AM on an as needed basis.

b) Training MOA:

1. The Pacific AM provided an example soft-copy document to the TG P-CLEC Manager.
2. The TG P-CLEC Manager reviewed the document with the GXS Legal Counsel.
3. The Pacific AM answered any related questions.
4. The authorized TG representatives signed the document.
5. The TG faxed the document to Pacific.

c) Training Registration (one or more per student)

1. The Pacific AM provided the TG P-CLEC Manager the appropriate blank soft copy form.
2. The TG filled out the appropriate entries on the form.
3. The TG returned the completed soft copy forms

d) OSS Agreements (one set per P-CLEC)

1. The Pacific AM provided an example set of soft-copy documents to the TG P-CLEC Manager.
2. The TG P-CLEC Manager reviewed the documents with the GXS Legal Counsel.
3. The Pacific AM answered any related questions.
4. The authorized TG representatives signed the documents.
5. The TG returned the documents by overnight courier service to Pacific.

e) Interconnection Agreements (one set per P-CLEC)

1. The Pacific AM provided an example set of soft-copy documents to TG P-CLEC Manager.
2. The TG P-CLEC Manager reviewed the documents with the GXS Legal Counsel.
3. The Pacific AM answered any related questions.
4. The authorized TG representatives signed the documents.
5. The TG returned the documents by overnight courier to Pacific.

f) User ID Requests (one of more per P-CLEC)

1. The Pacific AM provided the TG P-CLEC Manager the appropriate blank soft copy form.
2. The TG filed out the appropriate entries on the form.
3. The TG returned the completed soft copy forms, one per P-CLEC.
4. Additional users were occasionally added on separate copies of these P-CLEC specific forms.

g) Interconnect Request Letters (one per P-CLEC)

1. The Pacific AM provided basic requirements in a conference call on September 29, 1999 recommending a simple request letter on unique letterhead for each P-CLEC, with different dates and wording for each, in the interest of blindness.
2. The TG designed unique letterhead and drafted text as required.
3. The TG sent the proposed letters in soft-copy to Pacific AM and GXS Legal Counsel for review.
4. As no objections were raised, the authorized TG representatives signed the letters.
5. The TG sent the letters by overnight courier service to the Pacific AM on September 30, 1999.

h) OANAD Addendum (one set for each P-CLEC)

1. The Pacific AM provided an example set of soft-copy documents to TG P-CLEC Manager.
2. The TG P-CLEC Manager reviewed the documents with the GXS Legal Counsel.
3. The Pacific AM answered any related questions.
4. The authorized TG representatives signed the documents.
5. The TG returned the documents by overnight courier service to Pacific.

*5.1.2.3 Experience*

Other than taking considerable time to review lengthy legal documents, which the TG expects is an unavoidable element in the real CLEC experience, the only issues involved the nature of our P-CLECs and associated blindness concerns.

One blindness concern is noted in the Interconnect Request Letter process above. Another was the importance of keeping P-CLEC information separate, never including more than one in any communication likely to be seen by anyone in Pacific other than our Pacific AM team.

The other concern regarding our P-CLECs related to potential liability associated with Pacific OSS test activities. To address this concern, the TG Legal Counsel worked with the Pacific AM to craft a letter outlining the nature of the test and the role of the P-CLECs. This letter (see [\*PBContactLog.xls\*](#) October 11, 1999 15:03 EDT entry) was attached to and distributed with the signed Interconnection Agreements.

*5.1.2.4 Summary*

Other than the above noted P-CLEC issues, the process of filling out and/or signing documents to establish a legal working relationship with Pacific for the purpose of interconnecting as a CLEC proceeded without incident.

### 5.1.3 Related P-CLEC Start-up Activities

#### 5.1.3.1 Overview

Additional activities to establish a formal relationship between the four P-CLECs and Pacific with associated dates, were as follows:

| <b>Activity</b>   | <b>Start</b> | <b>Complete</b> |
|---|--------------|-----------------|
| Obtain UID for <a href="http://clec.sbc.com">clec.sbc.com</a> | 8/6/99       | 8/9/99          |
| Receive Pacific Training.                                     | 8/19/99      | 12/29/99        |
| Obtain first set Pacific OSS UIDs                             | 9/8/99       | 9/22/99         |
| Establish P-CLEC support number.                              |              | 9/13/99         |
| Receive/Install Toolbar software                              | 9/22/99      | 10/22/99        |
| Receive first AL via e-mail.                                  |              | 9/23/99         |
| Order/establish T1 communications                             | 9/10/99      | 1/18/00         |
| Pacific set-up BAN tables                                     | 11/22/99     | 12/9/99         |
| Receive first FAX orders to process                           |              | 12/8/99         |
| Receive first LEX orders to process                           |              | 12/8/99         |
| Receive first FAX outage notification                         |              | 12/13/99        |
| Receive ACTLs; Pacific load in tables.                        | 12/29/99     | 1/5/00          |

Subsequent sections address the following key activities in greater detail:

- Obtain training (section 5.3).
- Establish OSS interconnection with Pacific (section 5.4).
- Install and use Toolbar, including Verigate and LEX (section 5.5).
- Implement DataGate application-to-application pre-ordering (section 5.6.3).
- Attain EDI production status (section 5.7).
- Obtain appropriate billing and usage data (section 5.10).

#### 5.1.3.2 Function

For each of the referenced activities, the basic process was as follows:

a). Obtain User ID for access to [clec.sbc.com](http://clec.sbc.com):

1. Pacific AM requests on behalf of P-CLECs.
2. Pacific AM provides web site User ID and password to P-CLEC Manager.

b). Receive Pacific Training:

1. Sign Memorandum of Understanding.
2. Obtain registration forms from Pacific AM.
3. Review available classes on [clec.sbc.com](http://clec.sbc.com).
4. Determine appropriate classes with Pacific AM.

5. Fill out and submit registration forms for each student.
  6. Receive confirmation from Pacific AM.
  7. Attend training.
- c). Obtain Pacific OSS User ID's:
1. Complete CLEC Profile.
  2. Obtain User ID request forms from Pacific AM.
  3. Fill out and submit one request form per CLEC (for multiple users).
  4. Receive User ID's via E-mail from Pacific AM.
  5. Receive SecurID's from ISC (for E911 system access).
- d). Establish P-CLEC support number:
1. P-CLEC orders toll-free number from local service provider.
  2. P-CLEC obtains functional toll-free number.
  3. P-CLEC establishes voice mail with appropriate message.
  4. P-CLEC provides toll-free number to Pacific and CPUC.
  5. Pacific and CPUC post P-CLEC toll-free number as appropriate.
- e). Receive/Install Toolbar software:
- See Toolbar section 5.5.1.
- f). Receive first AL via E-mail:
- Established by Pacific per CLEC Profile.
- g). Order/ establish T1 communications:
- See OSS Interconnection section 5.4.
- h). Pacific set-up BAN tables:
1. TG provides separate billing address for each P-CLEC to TAM.
  2. TAM request BANs through CPUC.
  3. TAM provides BANs to Pacific.
  4. Pacific loads BANs for the four P-CLECs in Pacific BAN tables.
- i). Process first FAX orders:
1. Update CLEC profile to include FAX processing (not included in original test requirements).
  2. Obtain dial-up FAX number at Pacific from Pacific AM.
  3. Receive FAX test orders from TAM.
  4. Submit FAX orders.
  5. Inform Pacific AM that FAX orders are on the way.
  6. Pacific AM ensures LSC is prepared to receive and process.

j). Process first LEX orders:

1. Obtain LEX training.
2. Review LSOR and LSR requirements.
3. Install Toolbar.
4. Obtain User ID's for Toolbar access.
5. Obtain dial-up access number from Pacific or install and set-up dedicated line access to Toolbar applications.
6. Receive LEX test orders from TAM.
7. Submit LEX orders.
8. Inform Pacific AM to alert LSC to review first several orders of each REQ TYP and Activity type in Managed Introduction (see section 5.7.2).

k). Receive first FAX outage notification:

1. Established by Pacific per CLEC Profile.

l). Obtain co-location ACTLs for Pacific to load in tables:

1. TAM determines ACTLs to be used.
2. TAM provides ACTLs to TG.
3. TG provides ACTLs to Pacific AM.
4. Pacific loads ACTLs for the four P-CLECs in internal Pacific tables.

### *5.1.3.3 Experience*

There were two related start-up issues, other than those discussed in the subsequent sections noted above. These issues primarily involved the unique nature of the P-CLECs. Both BAN establishment and determining which real participating CLEC co-location ACTLs to use required involvement and coordination with the TAM team.

Once Pacific had entered the designated BANs, the TG attempted to enter the first LEX order using an apparently correct BAN. When the orders failed, the TG called the ISCC on December 2, 1999 (Vantive ticket #2386934). The cause was identified as an incorrect BAN table entry on the Pacific side. The problem was corrected and the ticket was closed on December 9, 1999, when the first P-CLEC LEX order successfully processed.

Due to perceived challenges associated with determining which real participating CLEC co-location facilities were available, and appropriately aligned with available accounts, the first ACTLs were received from the TAM on December 29, 1999 with all provided by January 5, 2000. These were passed by the TG to the Pacific AM, and were loaded in the appropriate Pacific tables.

#### 5.1.3.4 Summary

Other than start-up issues documented in the additional sections noted above, the only significant issue was the BAN tabling problem (Vantive ticket #2386934), which delayed LEX order entry for one week.

Start-up activities, while requiring much interaction with the Pacific AM team, otherwise proceeded without serious incident.

### **5.2 Pacific Documentation**

Documentation is available from a variety of sources in various media to assist in the education of CLECs in the Pacific processes and systems required to conduct business with Pacific. It is intended for accessibility and use by all CLEC's who have an executed Interconnection Agreement (ICA) with Pacific. Pacific has various types of documentation, which can be summarized in five major categories. These are:

1. The CLEC Handbook and related documentation available on the SBC CLEC web site.
2. Other Pacific Documents.
3. Accessible Letters distributed via E-mail (also available on the web site).
4. Training oriented documentation.
5. Outage notification.

#### **5.2.1 Web Site**

The web site (<https://clec.sbc.com>), including the CLEC Handbook, contains both general information available to the public, and secure information restricted to CLECs registered to do business in specific states within SBC's thirteen-state service domain. In order to access the secure information, the CLEC must have obtained a unique User ID and password.

During the course of the project, TG staff frequently accessed the CLEC Handbook and IS Call Center Job Aids. The information was found to be helpful for a specific knowledge area. However, navigation throughout the web site proved somewhat unwieldy and cumbersome. For example, when searching for information on ordering, would need to search Handbook for LSOR information, then would have to search the IS Call Center Job Aids for LEX documentation to determine how to input the required data. When our Pacific AM would on occasion reference a section of the handbook, we would often spend an unreasonable amount of time navigating to the quoted section.

By the close of the functional testing phase of the project, the web site had evolved considerably to make access more standard for SBC's thirteen-state area. While the look has changed a bit, the areas most frequently visited, such as checking the LSOR or seeking the latest Job Aids from the IS Call Center, remained fundamentally the same.

## 5.2.2 Other Pacific Documents

### 5.2.2.1 CLEC OSS Interconnection Procedures

Pacific provides documentation on the options available to CLEC's for establishing electronic interfaces to Pacific's OSS's and procedures for connecting to the PRAF. The PRAF is a CLEC's entry point to access the functions of Pacific's OSS's.

The document used to establish the Interconnection with Pacific is titled Competitive Local Exchange Carrier (CLEC) Operations Support System Interconnection Procedures, Version 2.5, November 23, 1999. This document is available to CLEC's from the CLEC's Pacific Account Manager.

This document describes the various options available to a CLEC for these connections including direct connections over dedicated circuit or dial-up access over digital or analog circuits. The OSS's available to a CLEC which are dependent on the type of connection that a CLEC wishes to implement are also described in this document.

This document was clear and easy to understand by the TG's team responsible for establishing the Interconnection with Pacific. For our implementation of a direct connection with Pacific there were pre-existing conditions that provided a much more technically challenging solution in order to implement the direct connection with Pacific. Most CLEC's would not encounter these hurdles that are described elsewhere in the document.

## 5.2.3 Accessible Letters

Another form of documentation used by Pacific is the AL. By definition, these are designed to communicate upcoming system releases, product promotions, events, procedural changes and similar information. They are regularly sent to all interested CLECs doing business with Pacific and are categorized by state.

ALs are categorized into three types.

1. IS Call Center ALs are directed toward OSS access and issues (such as system releases and documentation updates) and are identified by the naming convention (CLECCS\_yy-nnn).
2. CLEC ALs are focused toward products and features, administrative procedures, and meetings (CLECC\_yy-nnn).
3. The third provides information of NPA changes, switch realignments, billing changes, and similar issues (SW\_Ayy-nnn).

In the course of the OSS test, starting September 23, 1999, through October 31, 2000, the TG received over 740 ALs via automated E-mail distribution from Pacific. A full reference library of ALs is maintained on the [clec.sbc.com](http://clec.sbc.com) web site, categorized by type, state, and month.

Unfortunately, searching for all ALs on a certain topic requires searching through each month's ALs separately, which is both cumbersome and time consuming. Another approach was to

perform an E-mail search of an AL folder. The best alternative and more expedient approach proved to be querying our AM for a list of all relevant ALs. This was done, for example, when searching for Pacific specific implementation of EDI, when a deviation occurred from EDI LSOG standards.

#### 5.2.4 Training Related Documentation

TG comments are focused on issues involving Pacific EDI and DataGate documentation.

There were two key issues with the EDI documentation initially provided:

1. While the Pacific LSOR did explain EDI requirements in reasonable detail, the TG could find no single-source reference to all Pacific exceptions to EDI LSOG standards. The Pacific AM suggested the TG search the published ALs. Later, *CLECCS99\_125.doc* distributed on November 23, 1999 indicated a consolidated list of EDI exceptions was now available in Section 7.0 of the *CLEC Handbook*.
2. While the Pacific EDI Outbound Mapping Matrix appeared comprehensive, there was limited documentation provided on Inbound transactions. Outbound transactions are those that are sent from the CLEC to the ILEC (850, 860), while inbound transactions are those sent from the ILEC to the CLEC (855, 865).

Updated EDI documentation was provided in July 2000. The Pacific EDI Mapping Matrix includes all fields for the LSR:

- EU End User.
- LS Loop Service.
- NP Number Portability.
- LNP Local Number Portability.
- PS Port Service.
- RESALE Resale Orders.
- HGI Hunt Group Information.
- DSR Directory Service Request.
- DL Directory Listings.
- DSCR Directory Service Caption Request.

All these forms are used for outbound transactions. The only forms included for inbound transactions are the CNF (Confirmation) and the DSCN (Directory Service Confirmation). There is no mention of how the Errors, Jeopardies or Completions are handled.

While Pacific has included some of the TCIF documentation on the 855/865 sections, the TG team recommends all inbound transactions be included in the Pacific EDI Mapping Matrix.

The DataGate documentation initially provided in class September 1, 1999 was incomplete. The “*CLEC Access Developers Reference Guide*” referred to the “*DataGate Client/Server User Guide*” as “a technical ‘how-to’ manual for developers writing DataGate clients and services. This document is provided to CLEC developers upon the completion of the DataGate training class.”

The document “CLEC Access to SBC Systems with DataGate” refers to the “DataGate Client/Service User Guide” stating “this document is a programmer how-to guide for DataGate. It is only provided to CLEC programmers at the completion of the DataGate programming class after a CLEC has signed the OSS Appendix. Refer to How to Create a DataGate Client for more information on this class.”

The TG students did not receive the “DataGate Client/Service User Guide (DG C/SUG)” in the class. After several queries, the TG received it two weeks later (September 15, 1999) from our Pacific AM team. While this document was somewhat helpful, it was still difficult to determine specific argument attributes for key DataGate routines. The DG C/SUG refers to an “Installation Guide” and a “Developer Reference Guide”. Three weeks later, on October 8, 1999, the TG learned through our Pacific AM’s that these documents were not available to CLEC’s.

In summary, the TG team found the information provided at the end of class (September 1, 1999) and shortly thereafter (XDR files distributed September 9, 1999 to correct a problem encountered in class) very confusing and incomplete. There was no succinct ‘How To’ installation checklist provided, nor indication that the DataGate for HPUX 10.1 version is compatible with TG’s HPUX 10.20. Furthermore, the TG believes it was reasonable for us to expect that additional documents referenced in the provided documents would be available, and would contain important detailed information as mentioned above.

In summary, DataGate documentation deficiencies outlined here caused a ten week application-to-application development delay (15 work days searching for documentation, plus 26 in the above-documented Vantive tickets).

### **5.2.5 Outage Notification**

Outage notification was neither timely nor consistent. Typically the TG became aware of outages and estimated restoration of service via direct contact with the LSC. The recorded status messages (an option from the LSC voice response system) were not always updated in a timely fashion. The TG often found the message associated with a given outage to be two or three days out of date. Outage notification via fax was likewise inconsistent.

AL CLECC00-088 sent April 3, 2000 indicated E-mail outage notification would be implemented by May 1, 2000. This did not happen as expected. While the TG requested four different individuals (one per P-CLEC) be placed on E-mail outage distribution, which the Pacific AM acknowledged via E-mail on April 7, 2000, only one individual received E-mail notifications commencing in July 2000. On September 21, 2000, two additional ALs (CLECC00-239 and CLECC00-240) reiterated the intent to distribute both interface and network outage notification via E-mail commencing November 1, 2000.

Please reference TG Outage.XLS listed in the appendix, and the PBCcontact Log.

## **5.3 Pacific Training**

### **5.3.1 Classes Attended**

During the nine-day period from August 19-27, 1999, members of the TG Order Entry team attended five of the CLEC classes provided by the Industry Markets and Training staff of Pacific. Classes were divided between the Torrance and Oakland Pacific sites as follows:

| <b><u>Date</u></b> | <b><u>Location</u></b> | <b><u>Class</u></b> |
|--------------------|------------------------|---------------------|
| August 19          | Torrance               | PC CLEC Toolbar     |
| August 20          | Torrance               | Resale Workshop I   |
| August 23          | Oakland                | Manual LSR          |
| August 24          | Oakland                | CLEC LEX Resale     |
| August 25-27       | Torrance               | CLEC-UNE            |

Several additional classes were attended in 1999 by the TG Order Entry team:

| <b><u>Date</u></b> | <b><u>Location</u></b> | <b><u>Class</u></b>          |
|--------------------|------------------------|------------------------------|
| August 12          | San Francisco          | CLEC OSS Demonstration       |
| August 31          | St. Louis              | DataGate 'C'                 |
| September 27-29    | Oakland                | CLEC-UNE                     |
| September 30       | Oakland                | CLEC-LNP                     |
| October 1          | Oakland                | CLEC-LEX                     |
| October 20-21      | Torrance               | Directory Listings           |
| November 3         | San Francisco          | EDI                          |
| November 18        | St. Louis              | DataGate 'C'                 |
| December 29        | Oakland                | Pacific SM (Service Manager) |

These classes are periodically scheduled by Pacific, and are open to any participating CLEC. DataGate classes are scheduled upon CLEC request due to generally low participation, but are open to all participating CLEC'-s. While all above sessions were published on the web site some, for instance DataGate 'C' on November 18, 1999, had no other CLECs in attendance.

### **5.3.2 Class environment**

These classes were each conducted in a formal classroom setting, and were all instructor led. They were highly interactive and resulted in excellent dialogue between the instructors and the CLEC students. The actual training included a combination of lecture, discussion and hands-on exercises in the given subject area.

### **5.3.3 Course material**

In each class provided by the "Industry Markets and Training" staff of Pacific, every student was provided with a "*Student Workbook*" and an "*Instructor's Guide*" which were used to guide the classroom activities. The Pacific courses were also designed to be "Train-the-Trainer" sessions.

To facilitate this, each company represented also received a second, hard copy and a soft copy (provided on a diskette) of both manuals. Those materials provided each CLEC the means of customizing / duplicating the entire package for presentation within their respective companies. The training and material supplied was enough for a CLEC to establish their own internal training.

#### **5.3.4 Instructors**

The Pacific instructors were consistently professional and courteous in their dealings with the CLECs. Regardless of an instructor's experience level in a particular subject area, each made every attempt to resolve questions before the completion of the class. There does not, however, appear to be a pre-determined method of responding to a student's unresolved questions once the training session is completed. This would mean that at a later date a CLEC would need to follow up with their AM or the Pacific LSC to address unresolved issues.

#### **5.3.5 Training Effectiveness**

The Pacific training was generally satisfactory. The two primary GUI systems covered in class (LSR Exchange [LEX] and Verification Gateway [Verigate]) are windows-based, extremely user-friendly and easy to learn.

The training given to the Order Entry team did not specifically focus on what fields on the LSR to complete for each product type. (Pacific presumably assume that a new CLEC will hire that type of experience). The training focused on how to access and use Pacific's OSSs, with a walk through of some order types given by way of example. The feedback from those that attended the training was that it was thorough and met their expectations.

The functional operation of these systems was covered in-depth, with sufficient hands-on time, but the training transactions were created in their production environment. The instructor indicated that they did not have access to a "development or test" system. To avoid training orders actually appearing in the production system, an order number was used that would force the order to error out. This methodology prevented us from actually seeing the complete life cycle process of an order.

The "Manual LSR" training focused on the preparation of the paper LSR forms, primarily for Fax order submission. While several class exercises were completed, each student was provided a list of all required fields and their values. This resulted in the actual training being the simple ability to write the supplied data on the forms, without understanding the actual requirements. More in-depth training on this subject providing a better understanding of fields and values would have been a great benefit to the CLEC when creating order entry forms.

The DataGate classes met the objectives of introducing DataGate, but did not cover the related OSS applications at all which was a disappointment. The instructor claimed no knowledge even of the Due Date (DD) application the P-CLEC students were testing in the class exercises.

The DataGate classes formal training finished in less than one day, rather than the two days indicated in the available course information. The second day was spent experimenting

independently based on the documentation available. The P-CLEC students encountered a problem with the API which was not resolved before the end of the class.

### **5.3.6 Recommendations**

All P-CLEC students who attended the Pacific training were generally satisfied with the overall content and presentation of the courses.

With the introduction of the new LEX test environment in July 2000, it is recommended that this test environment, or a similar training environment, be available for related LEX training. This would provide students with a more comprehensive view of functions involved in the entire order process without undue risk of impact to the production environment. Similar CLEC test/training environments are highly recommended for all CLEC accessible Pacific Operations Support Systems where they currently do not exist.

The DataGate classes should spend more time (such as the unused second day) to delve into the related OSS applications, with more examples and hands-on exercises provided.

## **5.4 OSS Interconnection**

### **5.4.1 OSSs and PRAF**

Pacific provides documentation describing the options available to CLECs for establishing electronic interfaces to Pacific's OSSs and procedures for connecting to PRAF. The PRAF is the entry point for CLEC access to Pacific's OSSs. A CLEC may only access those OSSs that are specified in their Interconnection Agreement OSS Appendix.

Pacific provides access to Pacific's OSS functions for either unbundled network elements or resale services for:

- Pre-ordering.
- Ordering/Provisioning.
- Repair and Maintenance.
- Billing.

All of the OSS functions listed were included in this test of Pacific's OSS systems. Both dial-up and direct connection access methods were implemented to provide our P-CLECs access to the Pacific OSS functions.

The document used to establish the interconnection with Pacific is titled *Competitive Local Exchange Carrier (CLEC) Operations Support System Interconnection Procedures, Version 2.5*, November 23, 1999. This document is available to CLECs from their Pacific Account Manager.

## 5.4.2 Establishing Connectivity to Pacific's OSS Functions

This test of Pacific's OSS functions included the Test Generator building both application-to-application interfaces via a direct connection, and by using Pacific provided CLEC interfaces over a dial-up connection. The direct connection was implemented for DataGate pre-ordering and EDI ordering. A dial-up connection was used for Verigate pre-ordering, LEX ordering, PBSM trouble and maintenance, and E911 access.

The TG ordered the direct connection to Pacific's network as a partial frame relay circuit initially sized at 64/128. This initial size was adequate for the functional testing phase of the project. The direct connection circuit was increased to full T1 capacity on July 18, 2000 to support the capacity test. See Figure 5.4.

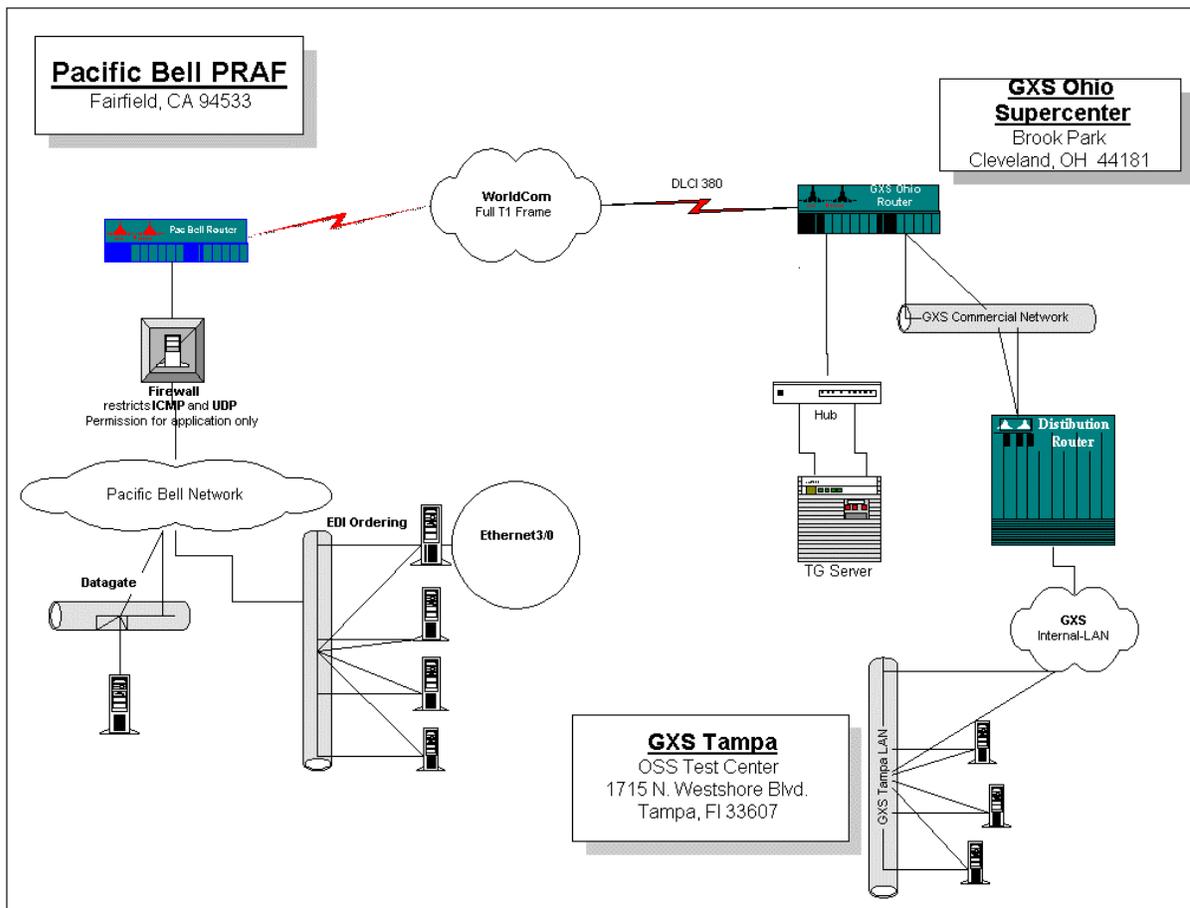


Figure 5.4

A dial-up analog connection from the TG's test machines and Pacific was implemented using standard Windows 95 features available on the TG's test machines. This included using Windows 95 Dial-up adapter and Windows 95 TCP/IP Communication software. Access to Pacific's OSSs supported by dial-up was established with the User IDs and passwords assigned

by Pacific to the TG test team, as requested using normal CLEC User ID request forms provided by and submitted to the Pacific AM.

### **5.4.3 Direct Connection With Pacific**

The order for the frame relay circuit was placed on September 10, 1999 to connect the TG Super-Center in Ohio with the Pacific PRAF in California. The original due date for the circuit activation was October 29, 1999. When the circuit was in the process of activation on September 29, it was discovered that the portion of the circuit between the circuit carrier and Pacific PRAF had not been installed. It appeared that the termination address for the PRAF had been incorrectly entered in the work order by the circuit carrier. Once the circuit termination address was corrected a new due date of November 19, 1999 was established.

On November 19, 1999, the circuit was completed between the TG Ohio Super-Center and the Pacific PRAF. After the circuit was connected the Pacific and GXS network engineers began to link the two networks. This connection requires entry of the GXS network router and server network address information into Pacific's firewall router tables and entry of Pacific's firewall address and application address information into GXS router tables.

As the GXS network engineer was working with Pacific's network engineer on November 19, 1999 to connect the network, they discovered that there was a pre-existing network connection between the GXS Super-Center in Ohio and Pacific PRAF in California. This network connection was for an unrelated project that GXS had implemented prior to the connection that was being attempted on November 19, 1999.

The connection that the network engineers were attempting was to the same Pacific firewall IP (Internet Protocol) address previously used in the unrelated GXS-Pacific network connection. This connection could not be completed the way it had been intended since it violated Competitive Local Exchange Carrier (CLEC) Operations Support System Interconnection Procedures. Version 2.5, November 23, 1999 Appendix 1, Private Line and Frame Relay Standards and Requirements number 21 states, "Multiple connecting partners will not enter Pacific Bell network over the same physical Frame Relay termination." This connection would have allowed multiple connecting partners to use the same circuit since the network routers could route data to flow over either circuit to the same IP address.

### **5.4.4 Alternative Direct Connection**

The TG asked for an alternative IP address to route the applications to, but we were informed that there are no other IP addresses available that a connecting partner could connect with to Pacific's network. This limitation on the availability of additional IP addresses was a major roadblock in establishing interconnection with Pacific's OSSs for this project. This would not in general be a problem for other CLECs since they would normally only have one direct connection with Pacific.

#### **5.4.5 Implementation of NAT Routing**

GXS implemented the TG direct connection circuit using Network Address Translation (NAT) on GXS routers to route EDI and DataGate traffic to Pacific. NAT is a technology that allows the GXS applications to communicate to Pacific's applications using dummy IP addresses that are then converted to the real Pacific IP addresses at the GXS router. NAT was required on this circuit to prevent TG data from traveling on a pre-existing Service Provider circuit between GXS and Pacific.

The circuit between GXS and Pacific with NAT implementation was completed on January 18, 2000. On January 19, 2000 GXS began the EDI pre-test with Pacific's EDI test system. GXS and Pacific were able to exchange EDI documents according to a previously established test plan as discussed in section 5.7.1.

The Test Generator's plan was to complete the EDI pre-test by Feb 7, 2000 so that production of EDI could be started before the February 14, 2000 bill run. This plan was designed to allow for timely completion of EDI testing and collection of billing data for 2 bill cycles.

On January 19, 2000 GXS attempted to connect to Pacific's DataGate application but were unable to establish that connection. Vantive ticket #2569223 was entered with the IS Call Center on January 20, 2000 and was worked by the GXS development team and Pacific's DataGate support team.

As the DataGate connection was being monitored, GXS noticed that our DataGate client connects to Pacific's directory services (firewall) and then tries to log on to Pacific's DataGate server. When the GXS DataGate application connects to Pacific firewall, the Pacific firewall sent the real IP address back to the GXS client DataGate in order for that client to sign on to Pacific's DataGate server.

With NAT in place on the GXS router, the GXS client for DataGate was blocked by the NAT router from signing on to the DataGate application server. The TG explored alternatives, but there were none for the current configuration. Vantive ticket # 2599374 was entered with the IS Call Center on January 26, 2000 due to DataGate LSP West access denial, and was worked by the GXS development team and Pacific's DataGate support team.

On January 27, 2000 during a call with the IS Call Center, some new information was learned about the pre-existing circuit. The IS Call Center representative stated that the existing service provider circuit between GXS and Pacific indicated it was not used for DataGate since the interconnected parties used EDI for pre-order.

#### **5.4.6 Final Resolution for Direct Connection**

The final resolution of the direct connection between GXS and Pacific required three more changes:

1. Removal of NAT functionality from our router, and revert to normal IP routing.

2. Revert to original IP addressing within the EDI and DataGate interfaces.
3. Reconfiguration of the GXS side of this network to remove the TG network identification of the GXS commercial LAN environment. This change was a non-standard network implementation for GXS network operations. This non-standard change for the TG network with Pacific was required to isolate the TG's direct connection with Pacific from the pre-existing GXS connection with Pacific.

On January 31, 2000 the TG initiated the changes listed above. On February 4, 2000, the TG completed these three steps and completed the direct connection with Pacific .

On February 8, 2000 Accessible Letter CLEC C00-032 was received by the TG that announced support of connectivity sharing arrangements with service bureau providers for CLECs doing business with Pacific. This had no impact on the direct connection between TG and Pacific for the OSS test, since the connection was already implemented on a separate connection with Pacific from the previously implemented connection between GXS and Pacific.

This functionality might have reduced the time to implement the direct connection if it had been available earlier in the project. For CLECs considering a direct connection with Pacific they might look into the feasibility of using a service provider's services when planning to enter Pacific's local exchange regions.

## **5.5 Pacific OSS Interfaces**

### **5.5.1 Toolbar**

#### *5.5.1.1 Overview*

The Toolbar is a server-based gateway application that affords secure selective access to Pacific 's wholesale customer support applications. Toolbar may be accessed via either dedicated or dial-up connection. In the dial-up environment the TG employed, it establishes the secondary layer of security behind the PRAF – basically a modem bank associated with a communications server. Both applications require a separate logon ID, and both Ids must be associated with the same company (i.e. CLEC). They do not however have to be the same User ID.

#### *5.5.1.2 Function*

The Toolbar provides a convenient means to access Pacific's wholesale support products and establishes a pseudo integration point for using compatible but different applications.

#### *5.5.1.3 Experience*

At the time Toolbar was installed, it was not compatible with the MS Windows 98 operating system. Its use was limited to Windows 95 and Windows NT environments. It could not be used with the more recent versions of Windows. This limitation presented a problem in workstation configuration. It was necessary to install Windows 95 on all TG order entry work stations.

Release management and application change management resulted in one significant related issue. This was the failed release of MS Windows 98 compatible Toolbar 6.0.0 on the August 20, 2000. This required manual intervention to revert to Toolbar 5.6 (Vantive #3717808) due to .dll files apparently missing after the automatic download of the new release (see AL CLECCS00-152 dated September 8, 2000). As a result, Toolbar and associated applications were down all day Monday August 21, 2000 and Tuesday August 22, 2000 until 3:30pm EDT.

The revised re-release date for Toolbar 6.0.0 is December 16, 1999 per AL CLECCS00\_164 on September 27, 2000. There is no published target date for Windows 2000 support. Operating system compatibility will likely continue to be an issue.

There was one Toolbar outage that impacted the TG Order Entry team. This occurred on February 2, 2000 at 1:30pm with a server time out problem. The IS Call Center was contacted, and Vantive Ticket # 2628986 was entered. Problem turned out to be a global problem. The outage lasted five hours. No related FAX outage notification was received.

#### *5.5.1.4 Summary*

Apart from the system limitations and the failed release of Toolbar 6.0.0, the application provided the functionality expected, and was easy to understand and use.

### **5.5.2 Verigate**

#### *5.5.2.1 Overview*

The Verification Gateway (Verigate) is an on-line windows-based application developed by Pacific to support pre-order functions to enable Pacific wholesale customers to submit accurate LSRs. It was developed using PowerBuilder and provides a GUI to access multiple pre-order functions. Verigate is launched from the PRAF gateway.

Applications available from the gateway are represented on a Toolbar menu (see 5.5.1 above). The client workstation may be configured to access the server via a dial-up or dedicated facility. The TG employed dial-up connections. Verigate is available Monday through Saturday from 7:00am to 7:00pm Pacific Time. Pacific System Support for Verigate is provided by the IS Call Center.

#### *5.5.2.2 Function*

The Verigate pre-ordering functions used in the course of the test are as follows:

- Address Verification.
- Telephone Number Reservation.
- Service Availability.
- Loop Qualification.
- Inter and IntraLATA pre-subscription Carrier Lists.
- Dispatch Requirement.

- Due Date.
- Customer Service Record (CSR).
- Network Channel/Network Channel Interface (NC/NCI) Allowable combinations.
- Common Language Location Identifier (CLLI) Retrieval.

For functional test cases designated as GUI (rather than EDI), after completion of the Verigate pre-order qualification appropriate to each order type, the order was entered in LEX.

### 5.5.2.3 *Experience*

Verigate is one of several applications that are started from the Toolbar gateway application. Depending on individual processor and network configuration, Verigate start-up usually requires less than two minutes for the client software to be downloaded from the server.

Although Verigate startup is uncomplicated and relatively fast, the application times out in five minutes if it is not used, and requires that the user login again. Since the timeout and presentation of the Verigate login screen involves a system-level interrupt, it interferes with other applications that may be running at the same time (e.g. LEX).

Despite the diversity of functions accommodated in Verigate, the user interface was consistent and accommodated the requisite P-CLEC pre-order activities.

Verigate release information was defined and distributed in Pacific ALs several weeks in advance of the scheduled release date. The timing and content of the Accessible Letters was appropriate. However, since ALs encompassed a very broad range of topics, when searching for pertinent previously distributed ALs, it was sometimes difficult to focus on Verigate-specific information.

While release management and application change management appeared to be efficient and orderly, the lack of versioning provides no choice whether to receive the new releases. The first time a PC signs-on after a new release is available, the new release downloads and the older version is immediately replaced with the new release.

Verigate is available 12 hours per day Monday through Saturday beginning at 7:00am PT. Expanded daily availability is recommended to effectively support a wholesale customer engaged in multi-state operations traversing multiple time zones, with twenty-four hour availability preferred. Since the TG team was operating in the Eastern time zone, Verigate was not available until 10:00am ET. CLECs operating in the Eastern Time zone would therefore be unable to process until 10:00am local time.

There were two Verigate outages in the course of the test totaling 97 minutes downtime:

1. Occurred January 28, 2000 at 11:02am EST. All work stations attempting to access the system received a server down message. A corrupted file, error code 18 was received. TG spoke with IS Call Center during the outage, which lasted one hour and seven minutes, but no cause was determined. No related FAX outage notification was received.

2. Occurred February 9, 2000 at 11:00am EST, and lasted 30 minutes. Received a broadcast message advising that the server was down. Refreshed Verigate and problem cleared. No related FAX outage notification was received.

Outage notification was not timely or consistent. The recorded status messages (an option from the LSC voice response system) were not updated in a timely manner. Outage notification via FAX was likewise inconsistent. Please see section 5.2.5 for additional comments.

Verigate operated similar to other on-line systems in the TG's experience. Perceived slower response time during peak processing period, but not to the extent of impacting order volumes or productivity.

All of the Verigate options are accessed from a common "open" menu, and separate screens are presented for each of the Verigate functions. Typically several screens are open at the same time and different Verigate activities are invoked by selecting the screen that governs that function.

Although all of the Verigate capabilities were used from time to time in the course of the Pacific OSS test, pre-order processing focused primarily on the performance of four functions:

1. Customer Service Record (CSR) Retrieval.
2. CLLI Retrieval.
3. Address Verification.
4. Telephone Number Reservation.

The Customer Service Record pre-order function was used to support conversion orders for all service types – loop with port, all loop services, and loop with local number portability. The content of the record was reviewed to ensure the accuracy of service attributes to be converted from the incumbent to the alternative local exchange carrier. The Customer Service Record is maintained by Pacific until the customer is converted.

Retrieval of the CLLI was used to support loop with port (REQTYP M) ordering requirements. The CLLI code was a required entry for this order type, and it was retrieved by telephone number query for each REQTYP M service order. The retrieval process was simple and uniformly accurate.

Address maintenance and validation have always presented a significant challenge to telecommunications operation support services and systems. In that context, the TG found the address verification process in pre-ordering the most difficult of the Verigate applications to work with.

Address validation has two modes of access – one by telephone number and zip code, and the second by service address and zip code. Since the most common requirement for address validation in the pre-ordering process is to support installation of new service, inquiry by service address and zip code was the most typical transaction.

The service address entry template does not provide separate fielding for address components (i.e. directional prefix, street name, street thoroughfare, etc.) but logic has been incorporated in the application to parse the input data for verification lookup purposes.

The most granular element of data division in the application is the Service Address Grid Area (SAGA) and there can be multiple SAGAs per zip code. If a given address and zip code combination does not provide sufficient resolution to match a single address in the system, the multiple SAGAs and address ranges are presented for the user to resolve the ambiguity.

If there are multiple sub-locations (e.g. apartments, floors, buildings, etc.) associated with a given address, the established sub-locations are also presented to the user for unique selection. If the sub-location being verified for service is not in the list, the user has the option to “ignore” the established sub-locations in deference to the sub-location associated with the order.

Although this may be “as good as it gets” because of the recognized complexity of address management in any system, it is a cumbersome process, and often appears to lead the user through a maze of recursive logic. With experience, however, the TG learned to weave their way through the process by iterative trial and error selection and entry techniques. A recommendation would be to make address negotiation was flexible by offering choice list on “sound a-likes”.

Telephone number assignment/reservation is a corollary to the address verification process. When address verification is finally completed, most inward movement orders will require assignment/reservation of a telephone number. Prior to the May 28, 2000 AL, Verigate release, the application was not consistent in satisfying this requirement. The prescribed work-around (calling the Local Service Center) was also ineffective and time-consuming. Recent telephone number reservations have improved significantly with the introduction of the May update.

#### *5.5.2.4 Summary*

In general, Verigate provides the required pre-ordering functionality. It enables verification of customer and address information and provides the means to query the service and order entry information needed to process the customer’s request.

The application’s strengths include:

- Broad-based functionality.
- Ease of use.
- Screen design.
- Query efficiency.

Areas that could be improved upon include:

- Very brief timeout threshold, not user definable.
- Convoluted address verification.
- Telephone number reservation (improved with May release).

### **5.5.3 LEX**

#### *5.5.3.1 Overview*

The LSR Exchange System (LEX) is a client-server application developed by Pacific to support order entry for CLECs. LEX operates over MS Windows or NT and utilizes a graphic user interface (GUI). The entry screens are modeled after the Local Service Ordering Guidelines (LSOG) standard forms.

LEX is launched from the PRAF gateway located in Fairfield, California. Applications available from the gateway are represented on a toolbar-type menu (a gateway application). The client workstation may be configured to access the server via a dial-up or dedicated facility.

LEX is available Monday through Saturday from 6:00am to 11:30pm Pacific Time, and from 9:00am to 6:00pm Sunday, with Pacific system support provided by the IS Call Center.

The process flow for entering orders via Verigate and LEX:

The TAM was responsible for supplying daily orders for the TG to enter, supplying the product type, account name and address, and other relevant fields to complete an error free order. These orders were passed to the TG each morning, one sheet of paper per order. The TG tracker entered these orders into the tracking system, and assigned a Purchase Order Number (PON) to each order. The orders were then placed in a hard copy folder and put in the In-basket in the order entry area. The order entry team worked the orders throughout the day. Order Entry first of all accessed the Verigate system and performed address verification, and any other pre-order function that was relevant to the order they were working. If any orders failed in pre-order, such as invalid address or incorrect customer name, the order was returned to the TAM with appropriate message. Next, Order Entry accessed Pacific's LEX system to create and send the LSR to the ILEC. For the most part the E911 update portion was set for Pacific to perform. Once an order was sent, a FOC was expected within a 20 minute timeframe for a flow through order. All FOCs were sent back to the user who entered the order. Once a FOC was received, the FOC was printed, placed in the order hard copy folder, and returned to tracking. Tracking noted the FOC date and Order Due Date, and filed the folder. When the SOC was sent back to the original user, the SOC was printed, and the hard copy folder sent to tracking for wrap up. Each day tracking checked the spreadsheet to look for any orders that were passed the Due Date without receiving the SOC. These orders were then followed up on with the Pacific LSC. Any orders that missed the due date were noted. If an order comes back with a Jeopardy instead of a SOC, the Jeopardy was noted and the order sent back to the TAM.

#### 5.5.3.2 *Function*

The LEX order entry test cases provided by the TAM team encompassed a wide variety of unbundled network elements (UNE) associated with various order functions for both business and residential customers.

The products addressed in the test included (with Pacific Request Type):

- Local Number Portability REQTYP=C
- 2-wire Loop with Number Portability REQTYP=B
- 2-wire Unbundled Loop with Port REQTYP=M
- Basic 2-wire Loop REQTYP=A

- Assured 2-wire Loop REQTYP=A
- Digital Subscriber Line (xDSL) 2-wire Loops REQTYP=A
- DS1 4-wire Loops REQTYP=A
- Stand-alone Directory Listings REQTYP=J

The activity types addressed in the test included:

- New Installations Act=N
- Conversions as specified Act=V
- Changes Act=C
- Outside Moves Act=T
- Disconnects Act=D
- Service suspension Act=S
- Service restoration Act=R
- Conversion as is Act=W

Supplemental orders and order cancellations were also included throughout this test.

The TG Order Entry Team, entered initial orders via the LEX GUI front-end, and where necessary corrected order entry errors and re-submitted order. Once an order was successfully submitted to Pacific, the order was tracked by each order entry person, checking for either an error or a FOC returned from Pacific. While it was not possible for the TG to tell from looking at an order whether it was a flow-through or manually processed order, general guideline was that a FOC would be received within twenty minutes for flow-through orders. After the FOC, the order would then be tracked for either a jeopardy, or a SOC. Note that order related messages for a particular order in LEX was only returned to the workstation that originated the order. The documentation associated with each test case was provided to the Test Administrator for compilation and analysis.

### 5.5.3.3 Experience

LEX is started from within the Toolbar gateway application. In the TG's experience, LEX start-up may require five minutes or more, as the client software is downloaded from the server. As this is usually a once per day occurrence, this did not impact TG productivity. If this delay proved to be unacceptable in a true CLEC environment, the alternative would be to establish direct connect access.

In general, the user interface for LEX was well-designed and easy to use. The initial login information restricts pull-down menu selection to one or more Access Carrier Name Abbreviations (ACNA) and Carrier Codes as appropriate for that specific User ID. The selected product and order type determines which forms will be displayed to perform the intended function.

Input fields and data entry criteria are typically aligned with the LSOG standard formats. Data fields that are common among the forms that comprise the order are automatically populated from initial entry where applicable. The on-screen edits provided in LEX were generally straightforward and appropriate to avoid common entry errors. Navigation between forms and form sections was convenient and user friendly.

In some cases it was found, however, that Pacific's implementation deviated from the LSOG standard (such as different LNA values on the LSR and DSR forms, as well as proprietary data elements and values in the LSR Remarks area). For instance:

1. The Pacific LSR Form (V3 dated March 1998) has a 4 character value for field "Type of Service (TOS)". Question sent to Pacific by TG on September 29, 1999 relating to this. Reply from Pacific on October 14, 1999 stated the Pacific form was incorrect. The TOS field length is 1 –3 characters.
2. On October 14, 1999 TG asked Pacific about Desired Due Date (DDD) as defined in section 5.3 of the Pacific LSOR. It shows as a valid field for the Completion Notification, however LSOG 2 and 3 did not list the DDD field for confirmation. Pacific indicated on November 23, 1999 that they were reviewing the next release of their LSOR document. The next LSOR revision will indicate which fields are not returned via EDI. DDD is displayed on FOC in LEX except for ACT=R and a FOC of a Supplement to cancel. However, for EDI the EDI mapping rules will always take precedence over the LSOR.

Application update information was defined and distributed in Pacific's Accessible Letters. While the timing and content of the Accessible Letters was appropriate, the large number and frequency of ALs contributed to lengthy search times when seeking specific pertinent information.

LEX is available 17.5 hours per day Monday through Saturday beginning at 6:00am PT, and for nine hours on Sunday starting at 9:00am PT. There were three LEX outages during the course of the test encompassing totaling fifteen hours and two minutes downtime:

1. The first occurred on December 13, 1999 at 1:00pm EST and lasted one hour. The reason for the outage remained unknown but a system re-boot cleared the problem. A FAX outage notification was received from Pacific at 1:30pm EST.
2. The second outage occurred on December 21, 1999 at 11:23am EST and lasted 2 minutes. The system went down, and a reboot fixed the problem. The reason remained unknown and no related outage notification was received from Pacific.
3. The third outage experienced occurred on August 21, 2000 and lasted for fourteen business hours. Vantive ticket #3717808 was entered August 22, 2000 for this problem. When Pacific attempted to upgrade from Release 5.6 to 6.0, three PCs failed to initiate the download. Pacific rolled back to V5.6, but the Toolbar application management files had been corrupted on the three machines that attempted the download, and as a result there was no access to the server to re-establish V5.6 capability. The prescribed fix for the problem was deletion of all application-related files, reload from the Toolbar CD (Version 5.5), and application upgrade back to V5.6 from the Pacific Server. There were two calls to the IS Call Center associated with the ticket. The first attempt to fix the problem didn't work because St. Louis had been specified as the download site. Since each of the five download sites is associated with a specific IP address that extends access from the modem to a port on the server, the Internet Protocol (IP) address associated with St Louis was incompatible with TG dial access to California. The second call provided sufficient explanation for TG to select

the correct download site (Fairfield, CA) and to initiate contact with the appropriate server. Toolbar access from all three machines was restored in the 2:00pm to 3:00pm timeframe on August 22, 2000 . No related Pacific FAX or E-mail outage notification was received. On September 8, 2000 AL CLECCS00- 152 acknowledged the problem, but did not specify anticipated resolution date. On September 27, 2000, AL CLECCS00\_164 announced the revised re-release date for Toolbar 6.0.0 is December 16, 2000. TG still operating with V5.6 at the end of the test.

Outage notifications neither timely nor consistent. Typically the TG became aware of LEX outages and estimated restoration of service via direct contact with the LSC. The recorded status messages (an option from the LSC voice response system) were not always updated in a timely fashion. The message associated with a given outage was often found to be two or three days out of date.

Outage notification via FAX was likewise inconsistent. Please see section 5.2.5 for additional comments.

LEX operated similar to other on-line systems in the TG's experience. Perceived slower response time during peak processing period, but not to the extent of impacting order volumes or productivity.

Orders entered via LEX progress through several processing stages, with status updates displayed to the user in real time (i.e., "new", "issued", "processed" "FOC", "SOC", "Jeopardy", and "Fatal Error"). The interval of time between changes in status varied considerably from order to order and from day to day. Sometimes an order would remain in a "processed" state for several hours before transitioning to an FOC or fatal error status while the status of similar orders entered at the same time would change almost immediately. This was attributed to the difference between flow through orders (processing almost immediately) and non-flow through orders, requiring manual review by Pacific of varying duration to determine whether the order is acceptable, such that a FOC is returned, or in error.

Error identification in LEX occurs in two modes – mechanized via Pacific's LASR application (flow through, therefore quicker response) and manually based on review by a Pacific employee (non-flow through).

In general, the error messages generated by LASR were straightforward and provided an adequate means to analyze and correct the order for re-entry. As with most automated editors, however, an entry error associated with the high-order of the edit hierarchy can result in a "cascade" of subordinate errors that obscure the fundamental cause of the problem. For example, an order with an incorrect BAN would reject with other address related error messages, which were irrelevant to fixing the error.

Errors that are identified manually rely not only on the level of training of the employee screening the order, but also on their ability to select an error message that is appropriate to describe the error to the end-user.

In many cases, an oblique/obscure error message would require a telephone call to the LSC to clarify the actual reason for rejecting the order. Aside from insufficient or misleading content in manual-reject error messages, LEX provided an effective means to identify and correct errors.

#### *5.5.3.4 Summary*

In the TG experience, LEX proved to be a workable service order entry application. It provides a user-friendly interface that for the most part adheres to LSOG standard formats as well as serving as a viable means for error identification and correction. The systems ease of use allows for minimal order entry training. The integrated on-line Help provided good self training support.

The application's strengths include:

- Ease of use.
- Screen design.
- Entry efficiency.
- Appropriate on-line edits.
- Real-time update of order status.

Areas that provided some difficulty in our experience include:

- Start-up (download) time.
- Variable intervals for status updates.
- Error messages (content and clarity).
- Response time in peak processing hours.

### **5.5.4 Pacific Bell Service Manager (PBSM)**

#### *5.5.4.1 Overview*

The PBSM is a Pacific developed character based stand-alone system that provides access to Pacific's Maintenance and Repair (M&R) functionality.

#### *5.5.4.2 Function*

The TG was responsible for accessing PBSM to:

- Enter test case information from trouble ticket.
- Perform Mechanized Loop Test (MLT) on planned troubles when trouble reported was No Dial Tone or Noise.
- Record PBSM output on trouble ticket (i.e.: Date/Time reported, Date/Time Committed, Date/Time Cleared, trouble ticket number (TTN), trouble found).
- Report any communication required between TG and Pacific LOC or LSC, including date/time, name of Pacific employee, and nature and resolution of contact.
- When MLT was performed, report on trouble ticket with condition.
- Return completed trouble ticket to TAM.

- Post results of tests on non-induced MLT and non-induced post-SOC troubles to the spreadsheet maintained by the TAM team.
- Produce screen prints of MLT, trouble ticket issuance, and trouble history after completion, as well as any other screen prints considered appropriate.

#### 5.5.4.3 Experience

PBSM was tested for the capability of initiating a (MLT) and submitting trouble reports for products including: UNE Loops, Assured and Basic Loops, LNP, xDSL and DS1. Both planned and unplanned maintenance and repair test cases were processed. The TG entered trouble ticket data at the direction of the TAM, with results returned back to TAM for recording and analysis. Two types of tests were performed:

1. *Planned or induced trouble:* LSR orders were submitted to Pacific from a list of orders assigned for maintenance and repair test cases. Once LSR orders were generated via either LEX or EDI, and a SOC was received, the TG entered a trouble report every two (2) hours from the time of the SOC until the PBSM would accept a ticket, to measure Pacific response time and ability for P-CLEC to create a ticket. Most were accepted within twelve (12) hours of the SOC.
2. *Unplanned trouble:* Non-induced M&R situations, occasionally reported on end users accounts as they occurred, as processing proceeded. To test OSS validity of the migrated accounts, unplanned troubles were reported to collect the point in time when Pacific internal systems returned a valid response. This type of unplanned testing was done for non-induced trouble reporting and as an MLT.

The tests were performed to attempt generation of a PBSM trouble report starting within 2 hours of notification of a SOC from Pacific. Trouble reports were issued every 2 hours until PBSM recognized the account and generated a TTN. The Pacific back-end systems did not update immediately to reflect new status of migrated account once an order SOCd. Results showed that timeframes varied from 12 to 48 hours. For specific data please refer to TAM document.

Additional tests were performed to determine the amount of time required between notification of service order completion and the ability to generate an MLT. These were also recorded.

#### 5.5.4.4 Summary

For the majority of test cases, the TG found the PBSM easy to use and the LOC personnel helpful. There were instances when TG cancelled trouble tickets and the Pacific employees would, as a courtesy, call to inform the P-CLEC there was trouble on the line and question whether to cancel the report.

Although accounts are generally not accessible to PBSM for approximately 12 hours after a service order is completed, trouble tickets may be initiated via a work-around called a “partial ticket”. The partial ticket enables Pacific to generate a trouble ticket in PBSM on the CLEC’s

behalf utilizing information not yet resident in the system. Typically the LOC calls the CLEC to verify the information used to generate a trouble ticket initiated in this manner.

## **5.5.5 E911**

### *5.5.5.1 Overview*

The E911 (Emergency 911 system) is a database that tracks phone numbers with addresses for the emergency services. When an account is migrated from Pacific, the E911 database is updated to reflect the Operating Company Number (OCN) of the new service provider. This update can either be performed by Pacific using information supplied to Pacific in the LSR, or the CLEC may add a step to their ordering process and do the update directly.

For the OSS test, the TAM planned a small number of orders where the TG would perform the E911 update. E911 updates can be entered either in “on-line” or “batch” mode. The TG used the “on-line” mode, as this is the method recommended by Pacific for small numbers of updates.

The Pacific AM noted that key Pacific people in the E911 group were “probably” aware of the test, because of the sensitive nature of E911 processing.

### *5.5.5.2 Function*

The TG was responsible for accessing Pacific ’s E911 system to:

- Enter test case data from service orders for migrations.
- Perform unlock transactions for Service Provider Location Number Portability (SPLNP).

The LSR form has a remarks field that indicates whether Pacific or the CLEC will be responsible for entering the E911 transaction. If “EUC=Y” is entered in the remarks field then Pacific will perform the update; if “EUC= N” is entered then the CLEC will be responsible for the update.

The CLECs access the E911 system via the MS Gateway. This requires a specific User ID, password, and SecurID.

There are two methods of entering data via the 911 gateway; batch and on-line. Batch requires the CLEC to prepare a file, using header/trailer and format information provided in the *911 Reference and Training manual*. On-line update capability is more like GUI, with the CLEC entering data into formatted screens. On-line is recommended when the CLEC has only a few updates at a time. (Note there is a daily system limit).

After an update has been entered into the system, each TN can be inquired on via the TN Query system to check the status of the update. The Pacific AM informed the TG that this was the best checking tool.

Pacific do not provide a 911 checklist for UNE Port providers who choose to use the 911 gateway rather than the LSR to provide 911 information for their end users. The Pacific AM

stated that the CLECs were vocal and active participants when Pacific developed the LSR capability so they would not have to use the gateway at all. For that reason it is not surprising that there are no UNE Port CLEC that wants to perform the update.

Steps TG followed to access and use the E911 system:

1. TG established CLEC access to MS Gateway. This required a User ID, password, and SecurID. The logon procedures are described in the *E911 Handbook*.
2. Establish CLEC access to TN Query. This is separate from MS Gateway and needs a different User ID and password.
3. Ensure TG can log onto the main menu in E911 system.
4. TAM provide some accounts where the CLEC will enter the E911 data rather than Pacific. It was decided that TG would enter E911 data in the on-line mode.
5. When an order is entered the first time, each CLEC will need a Customer ID. TG entered a generic 3 digit number the first order for each CLEC. This number became the default for each CLEC.
6. When the order is entered the batch ID was noted. The next day the TG re-entered the E911 system to ensure the batch had been processed.
7. A check through TN query system would confirm the transaction completed successfully.

#### 5.5.5.3 Experience

The TG experienced a number of drawn out support issues with E911 as detailed below:

- Attempts to successfully log into the E911 System:
  - Week of 12/13/99: TG tried signing into E911 as Napa but logon failed.
  - Week of 12/19/99: TG worked with IS Call Center to gain access. Found out ID had expired. The IS call center assigned another on 12/21, but TG continued having problems.
  - December 28, 1999: With help of IS Call Center, TG gained access to E911 System for Napa.
  - January 20, 2000: Working with IS Call Center to get E911 access to Blackhawk.
  - January 21, 2000: TG called IS Call center and was told they were going to lunch, will call back in an hour. Vantive ticket #2577189.
  - January 21, 2000: Pacific failed to return call, so TG followed up again. After about an hour and a half of failed efforts and different experts brought in by Pacific, TG finally gained E911 access for Blackhawk.
  - Week of 1/24/00: Checked access for Camino and it worked. Still to do Discovery
  - February 7, 2000: Access achieved for Discovery. This took Pacific IS call Center about 2 hours.
- Attempts to run a pre-test with Pacific E911 Support:
  - January 3, 2000: TG tried a test run with Pacific personal. It turned out TG did not have all required data. To put through a transaction, need a telephone number, an address

(valid in MSAG), and Customer code (always the same). There was confusion as to why TG was entering transaction in on-line mode. Appeared that Pacific people thought the test was for batch mode. After conferring with AM, re-set up for another test with Pacific.

- January 10, 2000: Called Pacific and left message saying TG were ready for re-test.
- January 12, 2000: Re-called Pacific who told TG that for on-line batch entry probably do not need to run any type of pre-test. Pacific told TG to go ahead with the orders and see what happens.
- January 12, 2000: TG entered two orders as planned.
- January 13, 2000: TG checked batch and looked correct.. Pacific AM told TG that best way to check these entries is by TN. To do this need TN query access. TG started looking on finding out UIDs/Passwords needed to do this. (See issue below).

- Partial Batch ID Problem with Blackhawk:

- January 28, 2000: TG entered 7 Blackhawk E911 transactions. PON#s BHPOG103, BHPOG105, BHPOF5, BHPOG104, BHPOG106, BHPOG112, and BHPOG113.
- January 31, 2000: Received notice from Pacific that the batch of Blackhawk transactions was rejected with truncated batch ID C22. Pacific let TG know with a phone call. TG re-entered the batch but it still failed. Followed up with call to Pacific E911 support, left a message. Left another message later in the day.
- February 1, 2000: Followed up again and left VMX for Pacific E911 support. Call not returned.
- February 4, 2000: Another call to Pacific E911 support person, left VMX, call not returned.
- The batch ID issue was abandoned as it appeared to be specific to Blackhawk, and similar Napa transactions had been successful.

- Setting up and using the TN Query function for E911:

The E911 TN Query system was made available to CLECs via AL number CLECC99-346, issued October 28, 1999. This provided direct inquiry access to the E911 database. CLECs had view only access to their individual subscriber records via TN Query.

All of the setup on the TG side appeared complete, but TG could not get into the system. The TG initially called the service center and were told for both Napa and Blackhawk that the ID's were not valid. Calls to the help desk and various Pacific people involved went in circles for weeks, in that the first person said it wasn't set up right and that the person who set up the accounts should be called.

History of this issue:

- January 24, 2000: Attempts to access TN Query with E911 User ID/password failed. Asked Pacific AM if different combinations were required.
- January 27, 2000: Pacific AM replied saying TG needed different User ID/password, and provided an E911 contact name.

- January 28, 2000: TG followed up with Pacific E911 contact and was given information to proceed.
- February: Access would not work, worked back and forth with Pacific to gain access. The E911 contact person failed to return phone calls.
- February 23, 2000: Asked Pacific AM for help with issue and informed that some new function needed to be added and it would be taken care of for four TG team members.
- March 7, 2000: TG still testing internally trying to gain access. Still failing.
- March 7, 2000: E-mail to Pacific AM supplying different TG names to be set up with E911 access.
- October 1, 2000: Issue re-visited to tie up loose ends on the test. Still not working. Called IS call center and had a Vantive ticket issued (ticket #4016293).
- October 5, 2000: TG still waiting for IS Call Center to call TG back with resolution. Issue forwarded onto Pacific AM.
- October 6, 2000: TG continuing to work with IS Call Center to resolve.
- October 19, 2000: TG E-mail to Pacific AM requesting resolution to issue.
- October 23, 2000: Pacific supplied new passwords. TG retried, still failed.
- October 23, 2000: TG received approval from TAM and CPUC to no longer pursue the issue.

Unlock transactions were sent on TNs previously owned by the P-CLEC to make the TN available for the ILEC/CLEC which next activated the TN. All related transactions processed correctly with no problems encountered. The Pacific Data Integrity Unit personnel were very helpful. There were instances when TG SecurID had expired or was broken, and the Pacific employees would, as a courtesy, process TG unlock transactions.

#### *5.5.5.4 Summary*

Gaining access to the E911 system proved to be a little troublesome, and required extensive contact with the IS Call Center to have access issues resolved. Once access was available, the E911 system was easy and straightforward to use and worked as expected. The support provided for the partial batch problem was disappointing, as well as the long drawn out fruitless efforts to establish access to the TN Query System.

It is important to note that feedback from Pacific on E911 stated that there is no 911 step by step checklist for UNE Port providers who chose to use the 911 gateway rather than the LSR to enter 911 information into the 911 Gateway for their end users. A CLEC would not normally use this method to update E911 database since supplying this information in the LSR and letting Pacific update this information appears to be more efficient and practical.

### **5.5.6 DataGate**

#### *5.5.6.1 Overview*

Datagate provides an inter-application bridge for accessing pre-order data. It was initially developed by SBC to provide a pre-order interface for it's own applications. Currently it provides meta-services to support interconnection of CLEC operations support applications in a similar fashion.

| <b>Datagate Development Timetable</b> | <b>Start</b> | <b>End</b> |
|---------------------------------------|--------------|------------|
| Obtain DataGate Documentation         | 9/7/99       | 10/8/99    |
| Install/Compile DataGate Software     | 9/7/99       | 11/2/99    |
| Build DataGate routines               | 11/2/99      | 1/18/00    |
| Verify T1 for NDM and DataGate        | 2/4/00       | 2/4/00     |
| Attempt Datagate Test Scenarios       | 2/4/00       | 3/17/00    |
| Use Datagate in production            | 3/20/00      | 10/13/00   |

### 5.5.6.2 Function

The DataGate pre-ordering functions used in the course of the OSS test (using customer address unless otherwise specified) are as follows:

- Address Verification by zip code, TN, or numbered street address.
- Telephone Number Reservation.
- Product Feature Availability.
- Carrier ID Code Availability.
- Dispatch Requirement.
- Flexible Due Date.
- Customer Service Record (CSR) retrieval and display.

In functional test cases designated as EDI (rather than GUI), where accounts were still owned by Pacific, after completion of the DataGate pre-order qualification appropriate for each order type, the order was entered through the TG developed EDI front-end.

### 5.5.6.3 Experience

For each of the DataGate functions employed, the TG encountered the following issues:

- Address Verification by zip code, TN, or numbered street address:

For address validation by zip code, where zip code extends across multiple Service Address Geographic Areas (SAGAs), a SAGA choice list is returned. The order entry clerk must select from this list, even if by trial and error, until the proper SAGA is selected. In Verigate, a query by zip code uses information more commonly available (postal zip code).

Vantive ticket 2755471, opened March 2, 2000, reported that DataGate documentation states that either a zip code or SAGA can be used for DataGate address validation. The TG uses zip code only, which returned an invalid result (transaction 1300 sent, expected transaction 1301 returned, but received transaction 1303 – SAGA menu response). Pacific corrected DG software and documentation (DataGate revision 3.5 issued March 16, 2000). Update included how to handle zip code when 2 SAGAs exist for one zip code (see page 18 in Revision 3.9),

and new examples for several different types of addresses. The TG verified proper test results, and the ticket closed March 17, 2000.

- **Telephone Number Reservation:**  
The TG reported on August 22, 2000 that DataGate TN reservations for one P-CLEC failed (Vantive #3719174). On August 24, 2000, TG reported finding and correcting problem, so two of four TN reservations succeeded. TG speculated they were sending bad data to Pacific, and asked ISC on August 29, 2000 if they could help isolate which data elements may be causing the problem. On September 12, 2000, ISCC called back, asking if they could further assist. As TG was then winding down new order entry, no additional help was requested. While this Vantive ticket was closed September 15, 2000, no cause (specific offending data elements) was reported by the ISCC back to the TG.
- **Product Feature Availability:**  
Other than the test verification problems noted in section 5.6.3.3 (Vantive #2712935), no known issues regarding Product Feature Availability were encountered.
- **Carrier ID Code (CIC) Availability:**  
Vantive ticket 2658856 opened February 9, 2000 documented TG receipt of a repeating CIC list when performing one of the documented DataGate test cases. Resolution required Pacific software correction, which was made, and the ticket closed February 14, 2000. No change was made to Pacific documentation.
- **Dispatch Requirement:**  
On March 15, 2000, in response to TG request for a Dispatch test case, Pacific forwarded an E-mail with proposed DataGate documentation for the Dispatch function, including a test case example, which Pacific stated would be added to the official document that day. On March 20, 2000, the TG called the ISCC to report the new Dispatch test case did not work as documented (Vantive #2829402). Pacific reported fixing the test case on March 28, 2000. The TG verified and requested the Vantive ticket be closed on April 13, 2000.
- **Flexible Due Date:**  
Vantive ticket 3586569, opened August 1, 2000 reported intermittent errors returned by DataGate that the TG encountered when sending Due Date transactions in rapid succession. Pacific corrected the software, the TG re-tested successfully, and the ticket was closed on August 28, 2000.
- **Customer Service Record (CSR) retrieval and display:**  
In DataGate class August 31, 1999, a TG student attempted a CSR retrieval, and received six valid fields, but the remaining 200+ fields were garbled. Problem was rectified by an updated XDR file, received from Pacific on September 9, 1999.

Another observation raised by the TG to the Pacific AM was that the returned length of the CSR from DataGate is less than the sum of the maximum lengths of the individual elements.

See sections 5.2.4, 5.3.5, 5.6.3, and 5.8.3 for additional discussion of other aspects of the TG DataGate experience.

#### *5.5.6.4 Summary*

In general, the TG Order Entry team found the DataGate interface as a tool more cumbersome and less reliable than Pacific's Verigate application for support of the pre-ordering functions tested. In particular, address validation by zip code, which worked well in Verigate, required additional selection of a SAGA when a zip code covered multiple SAGAs. The six Vantive tickets referenced above are an indication of the reliability issues encountered. The Vantive ticket log (reference #61) in the appendix (section 6.0) provides additional related details.

Please also see section 5.2.4 for DataGate documentation deficiencies, which resulted in considerable DataGate interface development delay, and section 5.3.5 for DataGate Training Effectiveness, where disappointments included no discussion of related OSS applications, nor adequate hands-on exercises.

### **5.6 Application Development**

GXS (then GEIS) was appointed as TG prior to the appointment of the TAM. The TG immediately began researching Pacific's requirements for DataGate and Verigate pre-ordering and LEX and EDI ordering, as well as additional requirements defined in the MTP.

GXS' implementation of interfaces to Pacific's OSS applications was based solely upon information provided by Pacific and GXS' staff general industry knowledge. No member of the GXS team had any significant exposure to Pacific or its OSS applications prior to this project.

The information from Pacific was obtained from:

- Documents in the public domain.
- Pacific's CLEC web site.
- Training classes and workshops attended by GXS staff acting as consultants to one of the P-CLECs.
- Follow-up interaction with Pacific's AM and technical support teams (including face-to-face, phone, and email interactions), as documented in the TG Pacific Contact Log.

GXS deployed a dedicated UNIX server at its facility in Brook Park, Ohio, with 24-hour operations support and backup facilities available at short notice. Access to the applications running on this server is available only within GXS' internal network and is secured by passwords and other access restrictions. Development and testing are performed on separate, non-dedicated facilities at other GXS locations prior to deployment of software to the production platform.

The interfaces to DataGate and EDI utilize a communications circuit established between GXS' server in Brook Park, Ohio and Pacific's facility in Fairfield, CA. Testing from other GXS

locations utilizes the same circuit via GXS' internal network. See section 5.4 OSS Interconnection for further details.

To realistically simulate the effort required for a typical CLEC to develop an EDI interconnection, an internal interface file format for EDI transactions was developed, based on the LSOG4 industry standards (see section 5.6.2.1 Interface File Definition). This strategy was also used to avoid any bias toward a particular CLEC's implementation and to force some differences between the GXS applications and Pacific's EDI format which appeared most closely aligned with LSOG3.

Translation between Pacific's EDI format and the internal interface file format was performed using custom developed "maps" automatically executed under GXS' Application Integrator software (see section 5.6.2.3 Physical Map).

## **5.6.1 Interconnection Matrices**

### *5.6.1.1 Overview*

These documents are support tools developed by and for the exclusive use of GXS. The intent of these tools is as an aid in the architectural design and build of several support tools necessary to successfully transmit CLEC EDI transactions to/from the Pacific OSS platforms. Interconnection matrices are a tool that GXS always generate for their clients whether they be ILECs or CLECs.

Major Categories:

- Incumbent Local Exchange Carrier (ILEC) Business Rules.
- EDI Transaction Sets.
- Outbound Interconnection Matrix.
- Inbound Interconnection Matrix .

After a number of requests to AM team, the Pacific EDI team provided a condensed list of the differences, but as recommended Pacific should attempt to regularly publish and maintain areas where the LSOR deviates from LSOG and vice verse.

### *5.6.1.2 Development Background*

GXS business consultants reviewed and decomposed the Pacific LSOR (Local Service Order Requirements) documentation, the Pacific CLEC Handbook and published Accessible Letters to determine the business rule mapping of fields necessary to support pre-order and order processing. At the conclusion of this analysis, several detailed matrices were created to identify industry standards, as well as, mapping of Pacific proprietary data elements.

These support tools were then distributed to the EDI architectural team where they were encompassed in the EDI applications.

By nature of the deregulated telecommunication industry, these tools are evergreen and are updated on a regular basis as the industry and/or the local exchange carrier publish new rules/guidelines.

### *5.6.1.3 Critical Success Factors*

As with all telecommunication/information technology projects, several Critical Success Factors (CSFs) were identified early in the project management plans. CSFs pertaining to the Interconnection Matrices were:

- Map to correct Local Service Order Guide (LSOG).
- Identify Pacific Business Rules.
- Identify Pacific EDI Rules.
- Identify discrepancies.

At the conclusion of the project all CSFs were met. However, the TG did experience some difficulty in areas 1 and 3.

Area 1: When the TG queried Pacific as to which version of the LSOG was supported in day-to-day operations, the response was LSOG 2+. When this stage of the analysis was completed the ILEC was much closer to LSOG V3, then the published LSOG V2.

Area 3: EDI rules governing out-bound transactions mapped to the published documents in a straightforward manner. However, EDI rules governing the in-bound transactions were very difficult to obtain. The Local Service Order Request (LSOR) document was very vague on the content a CLEC would receive in areas such as Jeopardies, cancellations, confirmations, completions, etc..

Pacific was contacted and asked to provide examples of in-bound transactions and documentation (Accessible Letters) that provided information on the content and EDI mapping for the in-bound transactions. The creation of the in-bound Matrix would have been much easier if the documentation for in-bound transactions had been as straightforward as the out-bound transaction documentation.

As Pacific was on LSOG 2+ and does not publish an EDI guide, the only document the TG had for reference was the Service Order Sub-Committee matrix. They only provide EDI data if there is a form in the LSOG for the transaction. Neither LSOG 2 nor 3 has forms for cancellations, completions, or Jeopardies – only one for confirmations. TG recommends that Pacific should publish complete EDI guides.

### **5.6.2 Mapping**

There were three stages to the mapping development process:

- User Defined File Definition.
- Logical Mapping.

- Physical Mapping.

#### *5.6.2.1 Interface File Definition*

Transformation and transportation of data between the pseudo-CLEC mini-OSS and Pacific's applications was facilitated by the use of "Interface Files" (Ifs). These files are designed to allow easy extraction from and insertion into databases and manipulation by the translation (or mapping) process which convert between the IF and EDI formats.

The IF formats (one each for Outbound (to Pacific) and Inbound (from Pacific) data) were based on the ELMS4 industry guidelines. Each IF consisted of a series of records, each containing a fixed number of variable-length fields delimited by a certain character. Fields not required were omitted but the delimiter character was retained to preserve positioning of subsequent fields in a record. The records and the fields within each record corresponded to the sections and the entries within each section of the ELMS4 specifications. Only those records representing sections relevant to a transaction were included.

#### *5.6.2.2 Logical Mapping*

Logical mapping is the process of preparing the EDI specifications that define how information is to be taken from either an EDI document or an application interface file and processed (i.e. translated) so that the other is created. The resulting document is the design document that is given to the physical mapper.

The logical map designer had to familiarize themselves with any non-standard EDI formatting and/or fields and the business rules for Pacific in order to provide accurate specifications to the physical EDI map developers. The Interconnection Matrix, the User Defined File and the Business Consultant's expertise were used to gain a sufficient understanding of the business processes to ensure the development of accurate logical map design.

#### *5.6.2.3 Physical Map*

The physical map developer takes the rules and instructions from the logical map and applies them using an EDI mapping tool like AI, which was used in this project. The end result of the physical mapping process is a computer program referred to as a physical map that will perform the desired translation.

### **5.6.3 DataGate Pre-order Interface Development**

#### *5.6.3.1 Overview*

To employ DataGate routines, CLECs must construct a "C" language client front-end. With DataGate, CLECs have the ability to customize pre-ordering, with returned data available for populating orders, database storage, reporting, or other activities.

Based on GXS' general industry knowledge and the MTP and DataGate test case documentation available at the time, certain DataGate functions (as documented in the "LSP West Developers Reference Guide" (DRG)) deemed relevant to the testing exercise were selected for implementation.

#### *5.6.3.2 Function*

The primary DataGate function (as documented in the DRG) required was Address Validation (AV). Successful AV was a prerequisite for subsequent functions, which used the AV data (in particular the Exchange/Central Office code (EXCO)) as an input parameter. Several DataGate functions allow specification of the EXCO, a CLLI code or NPA/NXX. Since AV was a prerequisite, GXS implemented only the EXCO option and derived the EXCO from a previous valid AV result.

Selected fields (primarily name, address, and TN information) from DataGate pre-order responses were extracted and stored for subsequent automatic population of the analogous order fields. For more information on specific pre-populated fields, see TG Mini-OSS Application Design Document sections 59-69 (pages 61-93), where the default values listed are derived and pre-populated from DataGate CSR responses.

In all cases, DataGate responses were converted from complex structures and stored in a formatted text file for subsequent retrieval and inspection. Query and response transactions were automatically associated and time stamped to allow later calculation of response times.

The high-level process to develop a DataGate pre-order client is as follows:

1. Request, register for, and attend SBC DataGate training (sections 5.1 and 5.3).
2. Obtain and review pertinent DataGate documentation (section 5.2).
3. Obtain and install DataGate software appropriate for the CLEC platform (section 5.1).
4. Write required 'C' software employing DataGate access routines.
5. Compile and load 'C' software.
6. Unit test 'C' software in local test environment.
7. Establish connectivity with Pacific DataGate host (section 5.4).
8. Test DataGate 'C' software in Pacific test environment using documented examples (section 5.5.6 and this section 5.6.3).
9. Verify all test results (section 5.5.6 and this section 5.6.3).
10. Gain Pacific approval for move to DataGate production.
11. Modify communications software to access DataGate production.
12. Verify production results.

#### *5.6.3.3 Experience*

Problems experienced during DataGate application development include:

Vantive ticket 2186772, opened October 14, 1999 and closed November 6, 1999, addressed build problems associated with DataGate compiler errors. Received work-around instructions from IS Call Center explaining the expected compiler errors, and how to work around them, which were not documented elsewhere.

Vantive ticket 2392256, opened December 3, 1999 and closed December 7, 1999, addressed specific undocumented DataGate argument definitions. Information was provided from IS Call Center via Pacific AM's.

Vantive ticket 2547442, opened January 13, 2000 and closed January 18, 2000, addressed DataGate run time errors due to incomplete libraries provided by Pacific.

Another significant deficiency encountered in testing DataGate routines was that many of the test cases provided in the available documentation did not return the documented expected results. Vantive ticket 2712935 was opened February 22, 2000 and was resolved March 2, 2000, with revised test bed, documentation, and software. Pacific reported that DataGate revision 3.4 issued 3/6/00 updated the address validation test (p. 28 in Revision 3.9). The TG verified the corrections on March 10, 2000.

#### *5.6.3.4 Summary*

In summary, DataGate documentation deficiencies outlined here and in earlier sections caused an eight week application-to-application development delay. 15 development work days were lost searching for documentation (see section 5.2.4 above), and 26 days were lost awaiting resolution of the above-documented Vantive tickets.

### **5.6.4 Mini-OSS and EDI Order Interface Development**

#### *5.6.4.1 Overview*

Based on the MTP documentation available at the time and on discussions between the TG and the TAM team, GXS designed and implemented a "mini-OSS" (MOSS) to exercise selected functions that might be required by a typical CLEC. Only those functions relevant to the testing exercise were implemented. Other functions, such as marketing and billing, were not implemented.

A custom software application was developed, using Web browser-based data entry screens to allow GXS staff to specify and execute both DataGate pre-order transactions and subsequently EDI order transactions, incorporating certain fields from the pre-order responses (see DataGate Pre-order Interface Development section 5.6.3 above).

#### *5.6.4.2 Function*

To facilitate the conduct of the tests and the interaction between the TG and the TAM, the "mini-OSS" was developed under a custom application to enable both automated and manual tracking of test activities.

To simulate four CLECs, the mini-OSS database was partitioned at the highest level (under the tracking superstructure) by a pseudo-CLEC identifier. Identical data structures and applications were used for each of the pseudo-CLECs.

To simulate the discrepancies a typical CLEC might encounter in dealing with multiple ILECs (each with certain proprietary variations as is the case with Pacific), the EDI order screens were based entirely on the LSOG4 industry guidelines.

GXS' EDI solution was based upon its Enterprise System application, which formed a messaging gateway between the four P-CLECs' custom software application and Pacific's EDI gateway. File transfer between the gateways used Network Data Mover (NDM) over the communications circuit described in section 5.4 above. Both test and production processes were established for each of the four pseudo-CLECs.

#### 5.6.4.3 Experience

Each of the EDI order types defined in the MTP was implemented based upon documentation available from Pacific and industry standard guidelines. As EDI responses were not documented by Pacific (other than as samples – see *TGIssue.doc* #19), the TG business consultants and EDI consultants worked with their technical colleagues during the development and test phases to determine the requirements for EDI response transactions primarily by observation.

As noted in section 5.2.4 Training Related Documentation, there was no single source of Pacific EDI exceptions to LSOG industry standards, requiring additional research and programming effort. See *TGIssues.doc* referenced in the appendix for these and other issues associated with EDI development (issues 20-32, 35, 37a, 39, 40, and 46).

#### 5.6.4.4 Summary

Additional effort was required due to the absence of a comprehensive source of EDI inbound responses, and lack of a single source document of Pacific exceptions from EDI standards. Otherwise, no significant problems were encountered in EDI application-to-application development.

### **5.7 Joint EDI Testing and Managed Introduction**

The sequence of required activities preparing the P-CLECs for full EDI production follows. In the interest of maintaining the blindness of the Pacific EDI test team, the four P-CLECs conducted EDI testing sequentially (Napa, Blackhawk, Camino, then Discovery).

| <b>Activity</b>                  | <b>Start</b> | <b>Complete</b> |
|----------------------------------|--------------|-----------------|
| Develop Napa EDI Joint Test Plan | 9/27/99      | 10/21/99        |
| Submit Napa EDI Test Scenarios   | 10/21/99     | 10/26/99        |
| Verify T1 for EDI                | 1/19/00      | 1/19/00         |
| Conduct EDI Joint Test – Napa    | 1/19/00      | 2/10/00         |

|                                   |         |          |
|-----------------------------------|---------|----------|
| EDI Joint Test – Other 3 P-CLECSs | 2/21/00 | 4/24/00  |
| Conduct EDI Managed Intro – Napa  | 3/21/00 | 4/20/00  |
| EDI MI – Other 3 P-CLECs          | 3/29/00 | 5/8/00   |
| Process EDI in Full Production    | 4/20/00 | 10/13/00 |

## 5.7.1 Joint EDI Testing

### 5.7.1.1 Overview

For each of the required order types, as determined by the TAM, for each of the four P-CLECs, Pacific required an EDI joint test. This EDI test was designed to demonstrate to the Pacific AM and the LSC Supervisor that the P-CLEC was capable of sending EDI transactions without a significant number of errors, which would require manual processing.

Before Pacific will allow a CLEC to send production EDI transactions, a joint test must be performed to demonstrate to Pacific that the CLEC is knowledgeable about EDI, and can successfully transmit EDI.

### 5.7.1.2 Function

The TG P-CLECs followed these steps to complete Joint EDI Testing:

- P-CLEC manager notifies Pacific AM of intention to start sending order entry transaction via EDI.
- Pacific AM sends CLEC four documents that must be completed and returned. These documents are:
  1. Comprehensive Test Plan for EDI Transactions.
  2. EDI Transactions examples.
  3. Work Sheet Summarizing orders to be tested.
  4. Spreadsheet containing contact numbers of key Pacific employees.
- The work sheet and the spreadsheet are completed and returned to Pacific, and a conference call is scheduled.
- At the conference call the detailed test plan is stepped through. This plan lays out the action items for both Pacific and the P-CLEC. Dates are committed to for these action items by both sides. The main item is to finalize the list of orders that will be tested and agreeing on the test data requirements.
- Pacific is responsible for creating the test accounts and providing the data. When this has been completed the P-CLEC can start sending its EDI transactions.
- There are daily conference calls between the two EDI teams to track the progress of the transactions, although Pacific provided one primary contact person to work with on an on-going basis to get errors corrected, and track the EDI through the network.

- Pacific will sign off Joint EDI Testing for this product type when the P-CLEC demonstrates that it can successfully send the EDI transactions to Pacific and receive FOCs back. The P-CLEC can then move into Managed Introduction for this order type.

### *5.7.1.3 Experience*

*Pacific EDI Team:* The TG found this team to be very knowledgeable, helpful and supportive during the Joint EDI testing. During the testing for Napa all members of the team were “Blind” to the test, however for the remaining CLECs the main contact was informed about the test, as the same TG people would be involved for four P-CLECs there was a blindness concern. This was approved after consultation with CPUC and the TAM. The main contact person responded quickly to all TG questions, and was always available, whether supporting Napa or the other three P-CLECs.

*The Process:* The four initial documents laid out everything that was required to get the P-CLEC started and provide an understanding of what needed to be done. Once the first conference call was complete, Pacific quickly had the test bed available for testing. The daily conference call and the on-going support helped the P-CLEC through initial EDI problems with little delay.

### *5.7.1.4 Summary*

Overall the EDI joint test process worked very well. The initial conference call included exchange of all relevant documents, and review of documented entrance and exit criteria, which provided clearly defined “tollgates” for the test. The Pacific EDI test team was very helpful both in providing technical advice and establishing test accounts.

During the daily calls questions and problems were addressed in a timely and accurate manner. The Pacific EDI test team members were also very competent in their areas of expertise. The main issue from the TG perspective was performing similar EDI tests for four P-CLECs, and the associated risk to “blindness” as the Pacific EDI test team consisted of the same few people. To address this concern, at the Pacific AM’s suggestion, the TG conduct EDI testing sequentially (one P-CLEC at a time).

A side benefit to the P-CLEC was that the EDI joint test afforded an opportunity to ensure that the P-CLEC processes were in place to manage this aspect of doing business. Pacific requested a mixture of activity types (such as new, conversion, and disconnect) be tested for each product and order type.

## **5.7.2 Managed Introduction**

### *5.7.2.1 Overview*

Managed Introduction (MI) is a Pacific process that is initiated when a CLEC intends to start entering LSRs for a new order type/request type combination, in a new order entry medium. For

example before a CLEC can enter full production for Conversion Loop with Port orders via the GUI front end, the process of MI must be completed, with official sign off from Pacific .

The purpose of MI is to ensure that the CLEC understands all the business rules associated with submitting the LSR as stated in the LSOR, and is able to complete all fields correctly, knowing which are mandatory and which are optional. This is to ensure a high success rate of flow through orders, and to minimize exceptions to the LSC. All exception orders are worked manually by Pacific employees in the LSC, and a high number of order exceptions results in an increased workload for the LSC. MI is intended to minimize this impact to the LSC.

Specific description of MI as supplied by Pacific AM via e-mail dated January 19, 2000:

- CLEC tells Pacific AM when they will send first order (fax or LEX).
- CLEC Provides a list of PONs daily to Pacific AM.
- Pacific AM provides the list of PONs to the LSC MI manager.
- Once LSC/MI Manager sees that order are relatively error free, Pacific AM notifies CLEC that MI is successfully completed.

#### *5.7.2.2 Function*

The process requires sending a small number of production orders, with on-going interaction between the CLEC and Pacific to follow order progress through the system. All orders subject to this process are logged in a spreadsheet, passed daily between Pacific's MI team, consisting of Pacific AM and LSC supervisor, and the CLEC. All rejects are discussed on a daily conference call. When Pacific is satisfied with the results, they will sign off, and the CLEC may enter full production. The criteria for exiting MI is orders attaining FOC status without errors on a regular basis.

For the four P-CLECs that were part of the OSS test, MI was completed for each P-CLEC for all product types that were planned for each of the three order entry types, FAX, LEX (GUI), and EDI. For each order entry type, MI was performed once per P-CLEC, the test encompassing all intended product types. These are the steps that were followed:

- P-CLEC manager notified the Pacific AM that the P-CLEC was planning on issuing LSRs for a new order/request combination(s). (If the order entry medium was EDI, there was an extra process called "Joint EDI Testing" which is covered in more detail above).
- As agreed with Pacific, the P-CLEC would send a representative sample of orders, between 5 to 10, that contained a mix of business and residence class of services, with some variety of features.
- After the LSRs were issued, the P-CLEC provided an order summary spreadsheet to Pacific so that AM and LSC supervisor could check on the progress of the orders through their systems.
- Daily conference call between Pacific and the P-CLEC discussed the order progress and any errors encountered.
- Order summary spreadsheet was updated daily by both Pacific and the P-CLEC.
- When all orders had successfully passed through Pacific's system, and they were satisfied with results, MI was signed off, and full production ensued.

### 5.7.2.3 Experience

*Documentation:* The main concern with the MI process is that the requirement came as a surprise to the TAM and the TG as the practice is not documented anywhere. Requests for documentation were made to the AM, but no CLEC accessible document was provided that accurately described the process encountered.

*AM Support:* The Pacific AM was very supportive and responsive to each P-CLEC's efforts to get MI completed. All questions and issues were followed up on promptly in order to quickly resolve order entry errors.

*LSC Support:* As mentioned, the LSC supervisor was aware of the OSS test, and like the AM, was very supportive and helpful in getting us to understand order problems and resolving errors quickly.

*The Process:* Due to the lack of supporting documentation, once the TG understood what MI involved, the process generally went smoothly. The daily conference calls with key support people helped push the orders through in a timely manner, although the passing back and forward of the order summary spreadsheet was at times cumbersome.

*Other Aspects:* Pacific worked with the P-CLECs to make the process as simple and straight forward as possible. Napa Telecommunications was the first P-CLEC to enter orders, and the TG was obliged to process the recommended number of orders (several for each product/activity) through MI. However with subsequent P-CLECs, Pacific was less strict on order volumes for those LSRs that had already been completed for Napa.

Disconnect orders were dealt with less strictly than other request types, due to their simplicity and low risk of failure.

The official sign off process for some transaction types was a little chaotic. Following up after the event on a number of order types, TG was unable to find any official sign off documentation on Stand-alone Directory orders (REQTYP=J), although Pacific AM was able to confirm full production status for all orders no longer in MI.

### 5.7.2.4 Summary

The main concern regarding MI is that no Pacific documentation for CLECs specifically mentioning this process by name or has ever been located or provided by Pacific .

While the requirements and documentation associated with the process of MI are unclear, its purpose became well understood by the TG Test Team.. Overall the experience was satisfactory, and the support provided was helpful.

While Pacific requested a limited number of orders of each type during MI, which may have restricted a real CLEC marketing a new product, the TG learned through experience that orders not reported and monitored during MI were not prevented from processing, and indeed completed successfully.

While from time to time the ownership of the spreadsheet got lost in the process, and was not always up to date, overall the Pacific team was very helpful in resolving order issues and guiding the CLEC through errors and understanding requirements.

## **5.8 Doing Production Business as a CLEC with Pacific**

### **5.8.1 Ramping up (FAX, GUI, Application-to-application)**

CLECs entering Pacific's market must decide which of the available Pacific OSS's with which to interface. A CLEC entering Pacific's regions might choose FAX, GUI interfaces provided by Pacific, or build their own application-to-application interfaces to Pacific's order and pre-order OSSs.

A CLEC would choose an approach that made business sense to them and matched the markets they wished to enter and the timelines that they require. An approach to building interfaces to Pacific's OSSs for one CLEC would not necessarily match another CLEC's approach.

The approach chosen by the TG and agreed to by the TAM was to begin production as a P-CLEC in the GUI environment, and then move into the application-to-application environment. A real CLEC is likely to follow the same approach since it offers a number of advantages to the CLEC.

A CLEC may move into MI with the GUI environment as soon as they have completed training on LEX and Verigate, installed the required Toolbar software, and established data communications.

A CLEC is not likely to be ready for application-to-application environments for several to many weeks, since this requires a large application development and system integration effort. Not only does the CLEC have to build the application interfaces to Pacific's OSS's, but the CLEC will also have to integrate these interfaces into the CLEC own applications. Starting with the GUI environment helps the CLEC learn the business rules necessary to do business with Pacific and would likely speed the development of the application-to-application interfaces.

### **5.8.2 LSR Order Processing**

The TG was responsible for entering LSRs, from order data supplied by the TAM, using one of three order entry types:

1. FAX submission.
2. The Pacific LEX system, an order entry system with a GUI front end.
3. EDI, application to application.

The TG sent the first successful LSR to Pacific via LEX on December 8, 1999. The last SOC was received via EDI from Pacific on October 13, 2000.

#### *5.8.2.1 Overview*

This section describes the order processing activity that occurred between the TG, acting as four pseudo-CLECs, and Pacific, to accomplish completion of each order types listed below. For a

complete description of order processing, regarding CLEC support, see the *Participating CLEC/TG Interface Process for Pacific OSS Test* published by the TAM.

The following types of orders were processed by the TG via FAX, LEX, or EDI:

- Two-wire loop with port.
- Stand alone directory listing.
- Two-wire basic loop.
- Two-wire assured loop.
- Four-wire DS1 loop.
- DSL loop.
- LNP stand-alone.
- LNP with two-wire loop.

The progress of each order was tracked through Pacific's OSS systems, ensuring correct and timely FOCs and SOCd were received from Pacific.

#### *5.8.2.2 Function*

The basic flow of orders from TAM to TG through Pacific and back to TAM was the same regardless of order type.

The high level process for executing all order types:

- TAM issued the order to TG.
- TG Tracking logged new order in tracking spreadsheet.
- TG Order Entry Team entered LSR.
- LEX Orders, order entry track order progress as all Pacific messages returned to originating workstation.
- GUI Orders, order folder passed to TG Control Tracking Team, who could track all order activity from a remote tool.
- The TG Control Tracking Team ensured the order FOCd. (Within 20 minutes if flow through).
- If an error was received, the order was returned to order entry for re-submission and resolution with the Pacific LSC. Depending on the error, the order was re-entered successfully, or returned to the Test Administrator for their attention.
- If no FOC (or error) was received within a day, the TG Control Tracking Team followed up with Pacific's LSC to establish order status.
- Once the FOC was received and testing status determined, the order was put in a 1-31 bin for follow up with Pacific on the appropriate date. If testing was required, the process was to ensure that Pacific followed their published procedures for testing, and to document all events that occurred with Pacific, and to ensure the order was SOCd on due date or day after.

- If SOC was not received as expected, a follow up call was made to Pacific’s LSC and results documented.
- When an order was completed, all appropriate documentation was copied and placed in the test case folder and returned to the TG tracking team for filing.

### 5.8.2.3 Two-Wire Loop with Port (LPWP)

#### 5.8.2.3.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 15         | 944        | 62         | 1,021        |

#### 5.8.2.3.2 Experience

The majority of LPWP orders were entered via LEX, while a few were sent via EDI. Issues raised by TG while processing this order type:

- There were intermittent problems with change activity where orders were entered to add or delete features. After completing a conversion order for a Pacific account, transferring the account to one of the P-CLECs, TG would print a copy of the original Pacific CSR that listed the customer’s features. TAM would subsequently issue a change order against the account to add (or remove) a feature, and the order would be rejected because it was attempting to add a feature that already existed, although CSR did not show the feature on the account. The TG and TAM records could not explain the discrepancy, and calls to Pacific’s LSC did not provide adequate explanations. Specific examples:
  - PON# PO9174695P, issued January 20, 2000. This was a LPWP Change order to remove 900/976 Block, but it failed and according to the LSC the customer did not have this feature. CLEC original order, PON# PO947695P, added this feature, and there was no other order issued in between for this customer to remove it.
  - PON# PO9185695E, issued January 24, 2000. This was a LPWP Change order to remove 900.976 Block, but it failed, and LSC stated that the customer did not have the feature. Original order, PON# PO934695P had added the feature, and no other order had been issued for the customer to remove it.
  - Other PONs with similar problem were PO9182695P, entered January 24, 2000; PO9287695P, entered February 9, 2000; PO9270695P, entered February 3, 2000.
- The TG encountered a problem on a small number of LPWP Move order, where customer was being moved from one region to another:
  - PON# PO9326695P, issued February 16, 2000. Order rejected by Pacific because customer was being moved from north region to south region. These regions have different BANs, but there is only room on the LSR to enter one BAN, so Pacific does not allow this type of activity. This was not adequately documented in the *CLEC handbook*. Pacific AM explained the scenario to the TG and stated that *CLEC handbook* would have improved explanation in next release. AM explained the process to achieve our order

objective as, “In all cases, you can accomplish the same objective (moving an End User’s service, with or without a TN change) by issuing an ACT=N (New) and Related Purchase Order Number (RPON) to ACT=D (Disconnect)”.

- Other PON#s with similar problem were PO9319695P, issued February 15, 2000; PO9321695P, entered February 15, 2000; PO9328695P, entered February 16, 2000; PO9329695P, entered February 16, 2000.
- There were four LPWP orders entered where a specific class of service was entered for the customer (either business or residence), but Pacific incorrectly worked the orders with wrong class of service, and the orders FOCd:
  - PON# BHPOG631, issued March 17, 2000. This order was sent as a business class of service, but Pacific worked it as a residence. The customer was in fact a business customer, but earlier orders against the customer had been incorrectly processed as a residence by Pacific, according to a call the LSC.
  - PON# BHPOG519, issued March 16, 2000. This order was entered as a residence but worked by Pacific as a business. The LSC stated the customer was a business account, and three previous orders that had been entered as residence should have been rejected by Pacific, but were not.
  - PON# PO9511695P, issued March 23, 2000. Another example of orders sent as a residence class of service, but Pacific worked as business.
  - PON# BHPOG326, issued February 15, 2000. This was a conversion order entered as a residential customer which SOCd. Subsequent change PON# BHPOG425, entered as a residential, SOCd. Another change order, still being entered as a residential class of service, was rejected by Pacific because the customer was business not residential.

The Pacific LSC was called on all these four orders, and they stated that the orders had been incorrectly processed by Pacific.

- An early LPWP order experienced an address issue which took a significant amount of time to resolve.
  - PON# PO937695P, originally submitted December 9, 1999. This was a conversion order entered via LEX, which was rejected with error message indicating that the service address provided on the order was different from current records. Data cross-checks indicated that all information entered on the order matched the information in Pacific’s CSR. A number of re-tries resulted in same error. On December 15, 1999, the LSC were contacted, who in turn asked the TG to contact the IS Call Center. Vantive ticket #2441421 was created to track this issue. A number of suggestions were made by the ISCC, all which rejected. The issue was also referred to the Pacific AM. After a number of failed re-tries, TG was instructed to refer the problem to Pacific’s system group, as it appeared to be a database problem. This order was finally re-entered via FAX on January 21, 2000, as PON# PO88695P, and completed. Why the order could not be entered via LEX was never resolved, the failure being described as a problem with data resident in the Pacific OSS.

### 5.8.2.3.3 Summary

This order type was the first entered for the OSS test. Most of the orders were entered via the LEX interface, and done in the first few months of the test. Very few of these orders were entered either as a FAX order submission, or as an EDI transaction. Once the requirements of the LSR forms were fully understood, the orders were relatively easy to enter. The main problems encountered were the features issues that Pacific were unable to help resolve, and the orders processed with the incorrect class of service. Given the large number of orders entered, issues raised by this order type were relatively minor.

### 5.8.2.4 Stand Alone Directory Listings (SDIR)

#### 5.8.2.4.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 142        | 0          | 142          |

Directory Listing LSRs cannot be entered as FAX orders. Pacific only allows this order type to be entered as LEX or EDI Orders. This requirement is documented in the CLEC Handbook, Section 3.5.2 Listings.

#### 5.8.2.4.2 Experience

The TG were issued with 142 Stand-alone Directory Orders to enter, all of them entered through the LEX GUI application. Issues encountered with this order type:

- There were four Napa SDIR orders entered without caption which FOC'd but did not SOC. The problem was reported to the IS Call Center on or about August 24, 2000 (Vantive #3736231). The IS Call Center called back saying that the LSC could complete the orders so that they could be printed. LSC found PON# PO9618695P (FOC'd July 5, 2000), PON# PO9640695P (FOC'd August 9, 2000), and PON# PO9637695P (FOC'd August 1, 2000), but could not find PON# PO9617695P (FOC'd July 3, 2000).

As of morning of August 29, 2000, these orders were still in FOC status. Pacific's IS Call Center suggested that the TG call the LSC. Pacific AM requested instead they be allowed to pursue the investigation, rather than calling the LSC, to eliminate confusion from multiple parties querying aspects of the same issue.

On September 6, 2000, the Pacific AM reported the results of the research. For PON's PO9617695P and PO9618695P, there were errors in the PON's found after the FOC was sent to the TG, preventing a SOC in LEX. The manual workaround at that time (early July) was for Pacific to resolve the problem and post the listing.

Assuming the problem was not something that required CLEC assistance to resolve, the Pacific Methods and Practices (M&P) did not include contacting the CLEC. The Pacific M&P has been modified as announced by Pacific on September 12, 2000, so that now Pacific will contact the CLEC, usually the same day, but before the SOC would otherwise be expected (next day).

For PON# PO9640695P (FOC'd August 9, 2000), the Pacific AM reported that an error in feed from Local Access Service Request (LASR) to downstream systems masked a problem with this PON. Similar to PON# PO9617695P and PON# PO9618695P, Pacific M&P did not require CLEC notification.

Finally, for PON# PO9637695P (FOC'd August 1, 2000), the Pacific AM reported an error found after FOC was sent to the TG, but the Pacific process did not alert Listings error correction team to contact the CLEC. Similar to the issue above, the Pacific M&P has been upgraded so that Pacific will now contact the CLEC.

TG was able to verify that these four listings were all properly posted in the listings gateway.

- Two sets of three additional SDIR orders each were subsequently submitted to test the revised Pacific M&P's, in an attempt to verify that Pacific does call the CLEC if post-FOC errors are encountered on stand-alone directory listing orders.

The first set, intended to generate post-FOC error calls from Pacific, was initially submitted September 12, 2000. After several attempts, including delays while capacity testing was conducted, the orders completed (SOC'd) by September 27, 2000 without evidence of post-FOC error. Listings were verified via the web listings interface.

The second set was submitted October 6, 2000, after attempting to verify with the Pacific AM which conditions cause SDIR post-FOC errors. These additional orders, containing planned post-FOC errors, all completed by October 11, 2000, with each SOC returned on time as if no errors were encountered. Listings were verified via the web listings interface.

Of the three orders in the second set with planned post-FOC errors, the first two did not result in post-FOC errors (PON# BHPOG724 and PON# PO9665695P, which both SOC'd October 11, 2000 12:17pm PDT). The TG determined this by calling the Pacific Listings Help Desk.

On October 17, 2000 at 1:00pm PDT the TG was informed that Pacific had not fixed any errors on these two orders, and had pushed the orders to SOC. The first order had SOC'd because the Listings Telephone Numbers (LTN) was in the Billing Telephone Number (BTN) number field and not the listed number field, so it was considered a new listing. This scenario of all capitals in the caption that was intended to produce a post-FOC error did not do so.

On October 17, 2000 at 5:03pm PDT the TG learned the second order with caption and indent SOC'd without error, so again the all-capital caption and indent did not cause the expected post-FOC error.

The third order, PON# PO9656695P, SOC'd October 10, 2000 at 12:11pm PDT. On October 17, 2000 at 5:03pm PDT the TG learned that due to the presence of the Place Listings As (PLA) entry, the indent is not allowed. This order did FOC and SOC, but the TG never received a call from Pacific, but rather had to call and question them to determine if any errors were encountered. Had the TG not called Pacific, it would not have known of the specified error. With the result obtained in this last scenario, it appears the Pacific Listings Help Desk does not have their new procedure for post-FOC errors yet consistently in place.

#### 5.8.2.4.3 Summary

The TG entered a number of this order type via the LEX interface. Generally these orders processed as expected, except for the handful that failed to SOC, that highlighted a weakness in Pacific's M&P where order problems were not referred back to the CLEC. Subsequent tests of the Pacific changes to the M&P indicated that the Listings Support Desk was still not fully trained on the new process.

#### 5.8.2.5 Two Wire Basic Loop (BASL)

##### 5.8.2.5.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 2          | 567        | 569          |

For a number of BASL orders, loop testing was performed with the help of the CLECs. This testing was performed by the TG Control Tracking Team. For details of this process refer to TAM document Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.1.

##### 5.8.2.5.2 Experience

- TG experienced Exchange Carrier Circuit ID (ECCKT) problems with BASL Disconnect orders (not directly related to the order type). When TG issued a Disconnect order against a migrated account, Pacific returned an "ECCKT not found" error message, despite TG/TAM verification that proper ECCKTs received from Pacific on service installations were used for these disconnects. TG was forced to cancel these orders and re-submit on a different account. Specific example:
  - PON# PO000118695E. The predecessor order which assigned the ECCKT to this account was PON# PO000058695E. The disconnect order failed with an invalid ECCKT. Inquires to the LSC would only confirm the error message, but could provide no explanation when presented with the evidence. A second follow call to the LSC was initiated and the TG was told that the ECCKT was disconnected and they were unable to provide either PON or "C" Order numbers ("C" Order# is an internal number assigned to the order by Pacific and is returned on the FOC). In the end the order was abandoned due to lack of information.
  - Other PONs with similar problem were PO000138695E, issued August 31, 2000; BH817021PE001255, issued July 21, 2000.

- TG had a long-running problem with a BASL New order, that started out with a problem with NDT at the Co-Location Cage, and ended up with a mileage issue:
  - PON# PO000117695E, issued July 27, 2000. On August 9, 2000 TG followed up the Pacific LOC on this order to find out status and were told that the order was in Jeopardy as there was NDT at the co-location cage. TG worked with CLEC to get this resolved and were informed via E-mail from CLEC on August 15, 2000 that dial tone existed on the circuit. The order was “SUPPd” to establish a new due date. On August 23, 2000 TG called Pacific LOC to establish order status, and were told that the order was never put into jeopardy, but that it needed “mileage”. Again on August 28, 2000 the TG called the Facilities Local Service Center (FLSC) to verify whether the order had been put in jeopardy. The contact at the FLSC said the order needed “mileage”, and TG should send a cancel, which is what happened.
- TG was forced to cancel a BASL New order due to lack of Pacific facilities:
  - PON# PO000120695E, issued July 27, 2000. This order initially failed with an invalid BAN, which was fixed and order re-submitted. Pacific issued a FOC on July 28, 2000, but subsequently on August 2, 2000 issued a Jeopardy which stated “Facility Shortage”. TG called Pacific LOC on August 3, 2000 and were told to cancel the order as there were no facilities available at Pacific. The order was cancelled.

#### 5.8.2.5.3 Summary

The ECCKT issue experienced with this order type, and others, raised the most concern as the TG presented to Pacific LSC all the evidence that an account had been migrated from Pacific and an ECCKT issued, and were not able to explain why Pacific had no record of the ECCKT. On these types of issues the TG made follow up calls to the LSC, but was not able to obtain any more information to help resolve the problem. Given the volume of BASL orders entered, this issue , and the others encountered, were a small percentage of the total orders.

#### 5.8.2.6 Two Wire Assured loop (ASSL)

##### 5.8.2.6.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 5          | 360        | 365          |

For a number of this order type, loop testing was performed with the help of the CLECs. This testing was performed by the TG Control Tracking Team. For details of this process refer to TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.1.*

##### 5.8.2.6.2 Experience

Most Assured Loop orders were entered via the EDI interface. Documented issues encountered by the TG for ASSLs:

- Assured Loop order types cannot be entered as a residential Class of Service, they are only valid for business. TG entered an ASSL order as residential which FOCd:
  - PON# PO000114695E, submitted May 5, 2000, was submitted as a residential customer. First attempt was rejected by Pacific with a “Company Code “ error, which was fixed and order re-submitted. Pacific returned a FOC. The order was then later placed in a Jeopardy status due to “No access to end user premises”. The order was finally cancelled. However the question was asked of Pacific LOC as to why the order was not rejected due to Class of Service issue. Explanation received from Pacific that this was a “training Issue” and order should have been rejected.
- There were some issue with Assured Loops where orders were rejected by Pacific due to busy Channel pairs, and the TG would be involved in a drawn out effort to determine the cause of the problem:
  - PON# PO000078695E, issued April 19, 2000. Order rejected by Pacific with a manual error message “Busy Channel Pair”. Order returned to TAM for resolution. On May 3, 2000 TG called Pacific LSC to find out which pairs were busy, and were told by Pacific that all three were in use. This was followed by another call to Pacific LSC on May 9, 2000 to confirm that all facilities were in use. The TG requested assistance from the CLEC providing the facilities. The CLEC replied that the facilities referred to by Pacific were on the list provided by Pacific for the test. The order was finally cancelled on May 30, 2000.

5.8.2.6.3 Summary

In the experience of the TG entering Assured Loop orders via the EDI application, only a handful used LEX, there were relatively few OSS issued raised. The main problems encountered by these orders involved issues caused by the end users, and were outside Pacific’s sphere of control.

5.8.2.7 Four-wire DS1 loop (DS1L)

5.8.2.7.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 0          | 43         | 43           |

- DS1 orders were not SOCd by Pacific until testing was completed.
- For a number of this order type, loop testing was performed with the help of the CLECs. This testing was performed by the TG Control Tracking Team. For details of this process refer to TAM document Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.2

#### 5.8.2.7.2 Experience

- A significant problem raised by this order type was the co-mingling issue. TG became aware of this when the Pacific AM sent an E-Mail on May 25, 2000 following up on inquiries made to the AM by the Pacific LSC. There were three orders, PON#s BH27821PE000441, BH30221PE000440, and BH28021PE000438, which the LSC was unable to fully understand what the TG was trying to do. The AM stated that the CLEC contract did not allow the ability to terminate UNE DS1s on Special Access DS3 service, which was apparently what these orders were trying to do. This issue was raised to the TAB for resolution, but it became clear that this was a Pacific policy that was not going to be adjusted for the purposes of the test. Some of the supporting CLECs provided DS3 facilities that the TG needed to process the DS1 orders and these were provisioned as Special Access. One of the CLECs agreed to provision T3s not as Special Access, but after discussion it was decided that that this effort would be too time-consuming. CPUC said that whatever order count could be completed by using the facilities of the other CLECs would suffice.
- DS1 order had an issue when a dispute arose between Pacific and CLEC over access:
  - PON# BH30921PE000477, there was a dispute between WorldCom, a real CLEC providing co-location facilities, and Pacific over access to a building to install a circuit for a DS1 order. According to WorldCom the Pacific technician should have gone to the leasing office to gain access to the MPOE and for some reason had failed to do this. A call to the Pacific LSC by the TG could only confirm that the technician had been denied access to the building. There was no further information available. Pacific placed the order in jeopardy with a request to supplement to cancel the order. Order was finally cancelled.
- DS1 order problem when Pacific found facilities owned by another company:
  - PON# PO000238695E. Another problem experienced on a DS1 order, was where Pacific rejected the order because “The CO Location area belongs to Infonet”. The Pacific technician called the TG with this information. Issue referred to WorldCom who said they could not understand why Pacific would reject order as the building has a large WorldCom presence. Infonet is a WorldCom customer.

TG investigated order with Pacific as follows::

- a) TG placed a call to Pacific LSC asking them what information they had on the order. Pacific said the order did not show a Missed Appointment Code (MAC) open, nor was there any other indication that the order had been stopped. They also said it showed “ready for TNA” but could not say what “TNA” meant. The assumption was that it meant testing. LSC said the order looked good on the LSC side but TG should talk to the Pacific LOC for more information.

- b) TG called the Pacific LOC. They said they could not help as this was a HI-CAP (High Capacity) order and needed to speak to the group who supported those orders.
- c) TG called the Pacific HI-CAP support group. Pacific inquired on the order, and said it showed that a Jeopardy was sent July 28, 2000, and that TG should talk to the tester assigned to the order who would have more specific information.
- d) TG was put in contact with the tester. The tester explained what happened. The Pacific system had shown that the address was on fiber at the end location. The Pacific technician went to the premises and found that the fiber was for Infonet, so could not tie down a Napa order on this equipment. The technician re-designed the Network Interface (NI) so that it would be able to perform a tie down for Napa.(apparently this meant installing some kind of copper to tie the connection down to). Tester said that normally a TLINK terminates at an Main Point of Entry (MPOE), but in this case it terminated at the fiber. The technician originally had a problem selecting a cable pair for the re-design, so the tester was going to contact the technician for the current status and get back to TG.
- e) Pacific Tester returned call a couple of hours later. Pacific were ready for Acceptance testing, and have tested clean to the NI at the premises.

5.8.2.7.3 *Summary*

There were only a small number of DS1 order types processed by the TG, and due to their nature and complexity caused some unique experiences as documented above. The co-mingling issue caused a big impact to processing DS1 orders.

5.8.2.8 *DSL Loops (xDSL)*

5.8.2.8.1 *Overview*

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 0          | 312        | 312          |

For details on how testing was performed for this order type, refer to TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.3.*

5.8.2.8.2 *Experience*

- TG experienced a problem with the Acceptance Testing functionality. Acceptance testing would be requested by order entry, but Pacific did not follow up with the request. Referred issue and discussed with Pacific AM. Pacific stated that the orders did not indicate that Acceptance Testing had been requested. The problem was caused by the sequence of entries in the LSR Admin Remarks field on the order entry form. For this to work “/RMK” must be the first entry in the LSR Admin Remarks field if Acceptance Testing is required, even if there are no free-flowing remarks. Two examples:

/RMK=/LUC=Y/ATR05551212

/RMK=ACCEPT TESTING REQUIRED/LUC=Y/ATR05551212

The Pacific AM stated that CLECs who are ordering xDSL with Acceptance Testing but don't already put /RMK first are being contacted by their FLSC and/or AMs to make sure they are aware of this as soon as possible. There will probably be an AL shortly.

- TG encountered some orders which were rejected by Pacific with message of "Customer refused service", then while the TG and TAM were investigating, the orders completed. Specific examples:
  - PON #E258252000040. Referred to Pacific AM for resolution. What happened is that Pacific technician called TG, and said that the end user had denied access to premises. Another Pacific technician returned to premises May 12, 2000, and end user allowed access. The order was completed and SOC sent to TG. Looks as though TAM had talked to end user about the order, as end user subsequently allowed access to NID for work completion.
  - PON #E258252000064. Also referred to Pacific AM. Pacific technician went to premises May 10, 2000, and was denied access. Technician returned on May 13, 2000 and was able to test. Pacific notes show the technician on premises and the continuity tested as required. Pacific would only not have sent technician if TG cancelled the order, but there was no record of a cancel. It is not unusual for a technician to go out and try a second time to do an installation.
  - PON #E258252000040. On May 9, 2000 Pacific LOC has called TG Order entry and informed them that end user had denied Pacific technician entry to the premises. Subsequently the order completed. Referred to Pacific AM. Research showed that another Pacific technician went to the end user premises on May 12, 2000 and was allowed access to the Network Interface Device (NID). The order was completed and a SOC issued. The TAM had been following up on these type of order rejects by calling the end user to find out why access was denied. Once the situation was explained to the end user, access was then usually granted.
  - PON #E258252000064. The Pacific technician went to the end user premises on May 10, 2000 and was denied access. The technician returned on May 13, 2000 and was able to test. The Pacific LOC notes for this order showed that visit was complete and the Continuity test worked. The Pacific AM stated that it was not unusual for a technician to go out to a premises a second time to attempt to complete an installation.

To rectify this problem the TAM initiated "Friendly" reminder calls to the end user coordinated at order entry time, which may have impacted issue resolution as noted above.

- Another issue that was raised with DSL order processing was where Pacific would issue a verbal jeopardy to the TG on an order, then while the TG and TAM were investigating the order, it would receive a SOC. Specific examples:

- PON# E25825200073, issued May 12, 2000. The Pacific technician reported a verbal jeopardy on this order due to access to premises problems while trying to install the service. During TG/TAM issue resolution the order SOCd. Pacific AM explained that access was denied due to a “dog in the yard”. Pacific technician was re-routed and was unable to tag the service, but did complete the work. Once the work was complete, then the order was SOCd.
- PON# E258252000067, issued May 16, 2000. Another verbal jeopardy from Pacific due to premises access problem. Pacific AM investigated and discovered that when technician arrived, there was a fire truck at the premises, and was unable to complete the order. The technician was re-routed and completed the work later. Once complete, the SOC was issued.

#### 5.8.2.8.3 Summary

All xDSL orders were entered as EDI transactions. Order entry had a problem flagging orders for Acceptance Testing, as the rules for LSR syntax were a little unclear. The Pacific AM helped clear up this misunderstanding. The other significant area of confusion surrounded the initial Jeopardy status of an order, followed by a SOC while TG/TAM investigated problem. In most cases the order was completed as Pacific’s processes called for the technician to follow up and make a second attempt to complete the order.

#### 5.8.2.9 Local Number Portability, stand-alone (LNPO)

##### 5.8.2.9.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 3          | 17         | 296        | 316          |

- LNPO orders were processed in one of three ways:
  1. If no Frame Due Time (FDT) specified, and no CHC (Coordinated Hot Cut), these orders were cut at the default FDT of 10:00pm PST.
  2. If a FDT specified, but no CHC, these orders were cut at the default FDT of 10:00pm PST by Pacific , but porting of the TN was asked for at the specified time.
  3. If a FDT specified, with a CHC, Pacific ported the TN at the specified time.
- For further information on processing of this order type, refer to TAM document Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.5.

##### 5.8.2.9.2 Experience

LNP orders, both Stand-alone and with a loop, raised a number of issues and discussions. TG experiences as they related to LNPO Orders:

- Saturday Due Dates: For order entry for all orders, the TG had to enter the Desired Due Date (DDD) on the LSR, calculating the date from standard Due Date Intervals. For LNPO orders there were initial difficulties with this calculation as it was not immediately apparent that for this order type only Saturday counted as a business day. On May 16, 2000 Pacific AM confirmed that Saturday does count as a business day. This created a challenge for scheduling LNPO orders, as the supporting CLEC was not available to work these orders on a Saturday, so TG/TAM had to ensure that no LNPO orders were assigned a Saturday DD.
- The Frame Due Time (FDT). TG initially found Pacific documentation confusing on how FDT was handled for LNPO orders. On April 17, 2000 the Pacific AM indicated the documentation in the *CLEC Handbook*, Section 3.2.3, that stated that a Desired Frame Due Time had to be submitted on the LSR. A further issue with FDT was raised over the actual cut time during the day. The LSOR appeared to indicate that the cut over time was restricted to 10.00pm PDT to midnight. Pacific AM explained on July 18, 2000 that there was no restriction on the FDT for LNP orders. This was because of the ten-digit trigger technology that Pacific offered on nearly all their products., which allows the CLEC to control the time of the cut. Pacific actually perform the disconnect at 10:00pm PT, but ten digit trigger already has the TN set up to point to the new CLEC, so the CLEC can cut at any time on the due date.
- X-Coded Orders. There was some question over whether LNPO orders were included in the X-coded order count. X-coded means that the order could not be counted in the performance measures as DD was outside DD interval. Pacific stated verbally that LNP stand alone orders could not be X-coded, but yet these orders appeared on the weekly X-Coded report. To ensure there would be no issue, TG put a process in place to always enter the correct DDD on the order.
- NPAC Concurrence Issue. For LNPO order testing, the TG was responsible for coordinating the completion of the testing and trying to determine the source of a problem when the orders did not complete as published in the procedures. Problems with NPAC concurrence is one example of this:
  - PON #BH781021PE001524., issued July 31, 2000 with a Desired Frame Due Date (DFDT) of August 3, 2000 at 14:00 PDT. E-Mail with testing details sent to supporting CLEC August 1, 2000. Reply from supporting CLEC same day saying “This TN has not been concurred in NPAC . Please let Pac Bell know this again”. Another message received from supporting CLEC the next day with the same message. On August 3, 2000 at correct time, TG notified supporting CLEC that order was ready to be activated. Supporting CLEC replied on that date that NPAC had not been concurred by Pac Bell, but due to 18 hour rule , the order was activated. As a result of this, TG raised the issue that they were not able to independently query NPAC as they did not have a SPID and could not register as a CLEC for this function. Some inquires were made to see if TG could have third party make inquiries on their behalf, but request was abandoned due to the complexity of the situation.

### 5.8.2.9.3 Summary

The LNP orders raised a number of issues to be resolved. Some of these could have been avoided by more precise Pacific documentation, such as the issues calculating Due Dates, and what counted as an X-coded order. There were difficulties over TNs being concurred at the correct time, but here the TG was at a disadvantage in determining the true source of the problem as they did not have access to NPAC data, and could only try to resolve the issue with Pacific's and the CLECs support groups. In that regard Pacific's LOC did not always provide quick resolution, as some personnel were helpful, while others did not appear very knowledgeable.

### 5.8.2.10 Local Number Portability, P with two-wire loop (LNPL)

#### 5.8.2.10.1 Overview

| FAX Orders | GUI Orders | EDI Orders | Total Orders |
|------------|------------|------------|--------------|
| 0          | 0          | 131        | 131          |

For this order type, there were a number of unique steps that were performed by the TG Control Tracking Team. For details of this process see TAM document *Participating CLEC/TG Interface Process for Pacific OSS Test, Section 5.4*

If Pacific reported NDT (No Dial Tone), the TG verified that the technician tested from the Point of Termination (POT) bay and not from the MDF. If the Pacific technician said the test was from the POT bay, the TG contacted the supporting CLEC to check the facility. Also the TG instructed the Pacific technician to build the customer back into the Pacific switch.

#### 5.8.2.10.2 Experience

- There was some activity and confusion on this order type concerning FDTs and CHCs. A batch of LNPL orders were issued without FDT or CHC information. Pacific LSC called questioning these orders. Referred the problem to Pacific AM. It was explained that in the real world these order types would not be done without a CHC because the customer would lose service during the cut over. A Pacific rep would probably question why no CHC was flagged for the order.
- There were some orders issued in the early July timeframe that caused confusion when the TG set the CHC flag, but did not follow up with Pacific to perform the cut. The TG received no notification from Pacific for these orders, although for some orders the Pacific LOC called asking about the order status. The Pacific AM was contacted about these orders and the response was that Pacific do not generally follow up on a situation such as this as a CLEC failure to follow up on a CHC is not a Pacific problem. Further feedback supplied via e-mail, "I talked to a few other people about whether a jeopardy should follow CHC orders that are never called cut. It sounds as if you are getting a courtesy call from the LOC on the due date or day after, following up to see what happened. The LOC will change the order to "open" awaiting your supplement or cancel. Consensus is that you should eventually get a jeopardy but it won't be right away. This is again highly unusual (to have a CLEC not call on the day

of the cut) so I don't see a Jeopardy code that fits – I suspect you may get some variation as different Service Reps try to figure out which Jeopardy code to use. Again, I don't think this is a "real life" scenario." Examples of some of the PONs involved with this problem:

- PON# BH12421PE000622, issued June 28, 2000.  
PON# BH34521PE000749, issued June 28, 2000.  
PON# BH33921PE000758, issued June 28, 2000.  
PON# BH11821PE000612, issued June 28, 2000.  
PON# BH20121PE000591, issued June 28, 2000.
- Another area of confusion related to the FDT and CHC times, was how Pacific utilized the 10 digit trigger technology. This was not adequately documented which resulted in some TAM and TG misunderstanding. However the Pacific AM did verbally provide a good explanation of how 10 digit technology works for LNP order types, which once understood allowed better processing of these orders.
- Order where the Pacific LOC has a problem porting the TN.
  - PON# BH514021PE001060, issued July 12, 2000. An issue arose with this order because the Pacific LOC had a problem porting the TN. The TG Investigated the problem. The actual cutting from the Pacific cable to the supporting CLEC cable worked correctly as per the CHC. The problem arose because the TN was somehow cancelled in the Service Manager System (SMS). The supporting CLEC could not put the intercept message on while the TN was in this state, so they asked TG to work with Pacific to re-release the TN. The person that TG worked with at Pacific appeared not to be knowledgeable in this area, as the TG was constantly put on hold while discussions took place. TG made about four calls to Pacific to get this resolved. Although Pacific said that they could not re-release the TN to the current date (they initially said TG had to change the due date, then they released it to July 18, 2000 instead of July 17, 2000). It must have been corrected eventually because supporting CLEC was able to put the intercept message on. Main problem here seemed to be lack of knowledge in the Pacific LOC.
- Due Date Interval caused a little confusion on NP with Loop orders. The Pacific documentation on their web site was not sufficient to answer all the questions. Working with the AM it required accessing the NANC portion of the FCC (Federal Communications Commission) web site to find the answers. The TG was stymied somewhat by the rule that when the first number TN in a NPA-NXX group is ported, the interval was 5 days, while with all subsequent TNs it was only three. The TG was unable to determine if the first TN had been ported as they did not have access to the NPAC. In the real CLEC world this would not have been a problem.
- TG order issue, instructing Pacific to perform a cut with NDT:
  - PON# BH536021PE001145, issued July 14, 2000. A problem arose with this order as Pacific apparently performed the cut without checking for Dial Tone. This issue was raised by supporting CLEC. They claimed that Pacific never tests LNPL CHC correctly,

and the TG need to be more specific as to where Pacific are located when they are performing the cut. Pacific said they were at the collocation cage, but apparently it is necessary to be more specific. The question CLEC raised was that sometimes there is no connectivity between the MDF and the collocation. The collocation side is referred to as the POT (point of termination) bay. Therefore the Pacific technician needs to be at the POT bay to detect dial tone from the CLEC. If Pacific are having problems, they must be asked if they are testing from the POT BAY or the MDF. The answer has to be POT BAY, else they are testing from the wrong place. If they say POT BAY, then ask order entry to SUPP the order out for a due date five days out. The bottom line on this issue was that the TG believe Pacific did check for dial tone, and the TG told Pacific to complete the order anyway (which was probably the incorrect approach).

### 5.8.2.10.3 Summary

In the real CLEC order processing world, these order types would always be flagged as CHC due to potential for a customer to lose service. Some orders entered by the TG were not flagged as CHC, which triggered the LOC to call questioning the status. Conversely, a number of orders were entered with CHC flag set, the TG did not contact the LOC to perform the test, and LOC questioned some of these but not all. At some point Pacific would “probably” sent a Jeopardy, but as this is a highly unusual situation in the real world there may not be a standard jeopardy code for this. Pacific do not appear to have a standard policy on how to handle these situations; seems to be more dependent on judgement of individual support personnel. As stated above with LNPO orders, the quality of support for this order type ranged from knowledgeable to lack of experience.

### 5.8.2.11 Other Issues Not Order Type Specific

#### 5.8.2.11.1 BAN Errors

In mid-June timeframe, TG received a number of manual rejects for disconnect orders, stating that the BAN, was invalid. (Manual Reject code MR0009). This occurred for different order types, in different P-CLECs. TG initial research indicated the correct BAN had been entered on the order. The issue was raised to a contact in the LSC, and the Pacific AM. It turned out that Pacific’s front end systems (EDI or LEX) do not perform cross-validation among Type of Service (TOS), NCNCI codes, and BAN’s. That means a CLEC can submit a new Assured Loop – Business with a BAN for DS1 – Business, and it may be accepted. When the CLEC attempts to disconnect the same service and this time uses the proper BAN, it is rejected. The same BAN (that is the incorrect one) must be used to disconnect the service.

Summary of Orders impacted by this error:

| <b>CLEC</b> | <b>PON#</b>  | <b>Service</b>    |
|-------------|--------------|-------------------|
| Napa        | PO000210695E | Bus. Assured Loop |
| Napa        | PO000213695E | Res Basic Loop    |
| Napa        | PO000207695E | Bus. Assured Loop |

|           |                 |                   |
|-----------|-----------------|-------------------|
| Napa      | PO000243695E    | Res. Basic Loop   |
| Napa      | PO000236695E    | Bus. Assured Loop |
| Blackhawk | BH38221PE000529 | Bus. Basic Loop   |
| Blackhawk | BH29821PE000587 | Res Basic Loop    |
| Blackhawk | BH33621PE000566 | Bus. Assured Loop |
| Blackhawk | BH33321PE000539 | Bus. Assured Loop |
| Blackhawk | BH33021PE000677 | Res Basic Loop    |
| Camino    | E258252000174   | Res SDSL Loop     |
| Camino    | E258252000166   | Bus ADSL Loop     |
| Camino    | E258252000170   | Bus. XDSL Loop    |

### 5.8.2.11.2 ACTL Rejects

A number of different order types were rejected due to the Access Control Terminal Location (ACTL) being invalid (not an error directly connected to the specific order type), even though the ACTL appeared in the assignment spreadsheet as valid. The problem was referred to contact in the LSC and the Pacific AM. Transpired that the Pacific ACTLs tables had not been updated with the information. . AM followed up and quickly had the updates applied.

Summary of orders impacted by this error:

| CLEC      | PON#            | Order Type |
|-----------|-----------------|------------|
| Napa      | PO000135695E    | ASSL       |
| Napa      | PO000164695E    | ASSL       |
| Camino    | E258252000131   | XDSL       |
| Camino    | E258252000132   | xDSL       |
| Blackhawk | BH16321PE000283 | LNPL       |

## 5.8.3 Other Production Issues

### 5.8.3.1 DataGate Outages

There were five DataGate outages, totaling fourteen hours and thirty-four minutes downtime.

1. The first occurred on March 8, 2000, at 11:00am EST and lasted one half hour. The cause was a DataGate router problem. No related Pacific FAX outage notification was received.
2. The second occurred on July 25, 2000, 1:14pm EST and lasted forty-six minutes. TG reported problem to IS Call Center, Vantive ticket #3539791 was issued. The reason for the outage remained unknown, but system was re-booted and returned to normal operation. No related Pacific FAX outage notification was received.
3. The next outage occurred on July 25, 2000, at 4:40pm EST and lasted twenty minutes. Reason remained unknown, but system re-boot fixed problem. TG called IS Call Center as the 16091 port was down. The Firewall/DataGate Support person at pacific restarted it and

checked logs for indication of why port went down. No log entries were found. No related Pacific FAX outage notification was received.

4. The fourth incident occurred on August 8, 2000, and lasted all day. The reason remained unknown. No related Pacific FAX outage notification was received
5. The last incident occurred on August 14, 2000, at 11:00am EST, and lasted five hours. The reason remained unknown, and a system re-boot fixed the problem. No related Pacific FAX outage notification was received

#### *5.8.3.2 DataGate Service Not Registered*

Vantive #3638326 was entered August 9, 2000 for Blackhawk Service Not Registered problem, similar to Napa's problem earlier reported. It was determined that Pacific had a start-up script misspelling for Blackhawk, while the TG observed the other three P-CLECs were not properly directed to DataGate production IP addresses. Once Pacific corrected their scripts, and the TG requested and received from Pacific the necessary production IP addresses to access DataGate production, and adjusted the TG scripts accordingly, the other three P-CLECs were able to successfully access DataGate.

## **5.9 Pacific Support**

### **5.9.1 IS Call Center**

#### *5.9.1.1 Overview*

The IS Call Center is the CLEC's primary point of contact for information systems (IS) issues related to OSS access. Their goal is to provide a level of technical support to all CLECs who access Pacific's OSS, that is in parity with the level of support that is offered to their internal employees.

Hours of Operation are 7:00am to 9:00pm Central, Monday through Friday, and 8:00am to 5:00pm Central Saturdays. All off shift hours are covered via on-call pager.

#### *5.9.1.2 Function*

The IS Call Center provided support for system outage and password and ID when they either expired or appeared not to function. They also provided a 2<sup>nd</sup> level support for operational questions.

#### *5.9.1.3 Experience*

The IS Call Center was the point of contact for resolving User ID and password issues. The level of support for expired passwords and Ids was good for LEX but below average for other system such as E911 and PBSM. They seemed to lack knowledge of these other systems and several

calls were necessary to obtain re-sets for E911 and PBSM. SecurID replacement took up to four weeks (Vantive Ticket# 3431000).

Second Level Support which was also helpful but seemed not well versed in user input requirements.

Hold time was not that often, but when placed in queue longer than 10 minutes, Automatic Call Distribution (ACD) would route the call back to the beginning. The longest wait for a password reset was 22 minutes. Several instances of hold time longer than 20 minutes have been documented.

The IS Call Center provided us with outage information and an estimated time of restoration for service. They were extremely helpful in many instances by providing work-arounds until major outages were restored. Following is an example of a contact with the ISCC for a LEX outage which took two days to resolve. A work-around was provided or TG would have been completely down for that time. Vantive ticket# 3717808 was issued on August 22, 2000. When Pacific attempted to upgrade from Release 5.6 to 6.0, three PCs initiated the download without success. Pacific rolled back to V5.6, but the Toolbar application management files had been corrupted on the three machines that attempted the download, and as a result there was no access to the server to re-establish V5.6 capability. The prescribed fix for the problem was deletion of all application-related files, reload from the Toolbar CD (Version 5.5), and application upgrade back to V5.6 from the Pacific Server. There were two calls to the IS Call Center associated with the ticket. The first attempt to fix the problem didn't work because St. Louis had been specified as the download site. Since each of the five download sites is associated with a specific IP address that extends access from the modem to a port on the server, the IP address associated with St Louis was incompatible with TG dial access to California. The second call provided sufficient explanation for us to select the correct download site (Fairfield, CA) and to initiate contact with the appropriate server. Toolbar access from all three machines was restored in the 2:00pm to 3:00pm timeframe on August 22, 2000. We're still operating with V5.6, and to the TGs knowledge there is not an estimated date for the 6.0 upgrade.

The recorded messages (an option from their voice response system) were not always updated in a timely fashion and seemed to be a few days out of date at times.

The Vantive ticket number process was inconsistent; most time the TG had to request a ticket number for anything other than password re-sets.

#### *5.9.1.4 Summary*

The IS Call Center was responsive and the information conveyed was very useful in isolating trouble issues thus resulting in generally quick resolution of open Vantive tickets. As the first level of support the IS Call center was also key in resolving issues that required second level support such as DataGate software support.

## 5.9.2 Local Service Center (LSC)

### 5.9.2.1 Overview

The LSC provided CLEC support for all orders prior to order due date. Pacific has LSCs in two locations; one in Anaheim for the south, and one in San Francisco for the north.

### 5.9.2.2 Function

The P-CLEC staff would contact the LSC for order entry, order reject issues, or inquires about orders in progress. A CLEC escalation document issued by Pacific laid out the interface procedures for expedites and escalations, providing escalation contact names for each P-CLEC. Expedites and escalations are defined as:

Expedites are orders that fall into one of the following categories:

- Medical Emergencies.
- Out-of-Service (not a repair problem).
- Interconnect Trunks  $\geq$  85% capacity or blocked (*For additional information refer to the CLEC Handbook*).

Escalations are issues, problems, and service requests that are not meeting CLEC expectations in problem resolution at the service representative level.

Hours of operation for the LSC are 8:00am to 5:00pm PST Monday to Friday excluding holidays. In case of emergencies or expedites, a 1-800 number for the LOC is available.

### 5.9.2.3 Experience

Pacific employees were cooperative in addressing the problems that the P-CLECs referred to them for resolution. In most cases they were able to handle the problem or query directly. In other cases they were generally diligent in pursuing the correct path to deal effectively with the case at hand.

All Pacific employees that were contacted exhibited professionalism and courtesy in the course of conversations with them.

LSC contact employees have generally been knowledgeable in the area in which they are involved. The one recurring problem the P-CLEC encountered was LSC confusion over whether the North or South LSC should be called. The P-CLECs had specific instructions on which desk to call, so it often took persistence on the part of P-CLEC staff to convince the LSC contact that the correct desk had been called. The breadth of knowledge exhibited by the individuals that were contacted, however, tended to be focused on a specific activity or functional discipline within the organization. Although some specialization is typical of technology-based businesses,

level one support personnel should be equipped with sufficient training to deal with enterprise-level support at least to the extent of case referral and follow-up. The occasional lack of knowledge or dissemination of incorrect information was usually explained as a “training issue”, and the TG recognizes that as with all support desk organizations there is going to be differing levels of support provided, depending on the experience of the individual reached.

The majority of contacts were completed in a timely fashion. Hold time was not an issue for the LSC. The organization appears to have enough staff to handle the volume of calls.

There was an occasional inconsistency in applying of internal business practices to customers. In the July 26/27<sup>th</sup> timeframe, TG was following up with LSC on a Customer Not Ready issue on PONs over thirty days old. There were four PONs to make inquiries on, however the LSC service representative said that only three orders could be worked per one call. The TG had to hang up, and call the LSC again to get information on the fourth PON. On many other occasions the TG inquired on more than three PONs per call. The four PONs impacted by this incident were PON# PO000179695E, PON# PO000346695E, PON# PO000348695E, and PON# PO000395695E.

#### *5.9.2.4 Summary*

The LSC was responsive and the information conveyed was very useful in isolating trouble issues with the ordering process. As the first level of support for the ordering process, the LSC was usually able to respond quickly to LSR issues. Pacific’s employees in the LSC responded to question by the TG team in a courteous and professional manner and were essential in trouble shooting problems with LSR orders.

### **5.9.3 Local Operations Center (LOC)**

#### *5.9.3.1 Overview*

The Pacific LOC provided CLEC support for all orders after the order due date, and were the contact for all order completion activities such as Coordinated Hot Cuts.

A document issued by Pacific laid out the interface procedures for expedites and inquires, and provided escalation contact names for each P-CLEC. Like the LSC, there is a Pacific published LOC escalation procedure, describing expediting, escalation, and providing contact numbers.

#### *5.9.3.2 Function*

Pacific’s LOC were the main contact point for orders that had passed their due date. This is the organization that works the order. For all activities, such as the CHCs, the CLECs worked with testers within the LOC.

### 5.9.3.3 Experience

As far as Co-operation, courtesy, knowledge and timeliness go, the same general comments made about the LSC can also be applied to the LOC.

Specific comments as they relate to the P-CLEC experience with the LOC:

- Unlike the LSC, hold time was a major issue with the LOC. There was consistently a long hold time when calling into their “800” number before talking to a customer service representative.
- There appears to be inconsistent organizational rules surrounding how many orders a contact will handle on one call. This number varied depending on the individual.
- There was an inconsistency in terminology among the LOC staff, which often resulted in confusion. This was especially true when dealing with LNP orders.
- The activity that was called into the LOC was more complex than the calls to the LSC, and required a higher degree of support. The P-CLEC staff generally found LOC personnel to be very helpful, even in cases where they were requested to “undo” completed work.

### 5.9.3.4 Summary

The LOC was responsive and the information conveyed was very useful in isolating trouble issues with the ordering process, although at times it was a lengthy process to obtain the information requested. As the first level of support for the ordering process, the LOC was usually able to respond quickly to issues, but at times there was inconsistent information due to inconsistent terminology used among the LOCs, such as for LNPs noted above. Pacific’s employees in the LOC responded to question by the TG team in a courteous and professional manner and were essential in trouble shooting problems with LSR orders.

## 5.9.4 Listings Help Desk (LHD)

### 5.9.4.1 Overview

The Listings Help Desk (LHD) is a Pacific support function, specifically for Directory Listings.

### 5.9.4.2 Function

Any problems or questions that a CLEC encounters with Directory Listing orders, REQTYP J, may be directed to this support group with their own “1-800” contact number.

### 5.9.4.3 Experience

The TG experience with the Listings Help Desk (LHD) can best be characterized by reviewing attempts to comprehend a series of directory listing order completion problems using LEX, documented in an

August 29, 2000 conversation between the TG order entry team and the Pacific AM (see *PBContactLog.xls*).

The most common scenario was removal of primary listing, and adding a caption listing with indent. TG order entry contact said the LHD informed TG that this could not be done as a single order. LHD instructed TG to first delete the primary listing, then wait three days after completion before entering the caption.

Of eight orders retried, four worked, while another four did not (the primary listings did not get deleted). LHD told TG the orders may have crossed (primary listing delete still not complete before add caption entered), and that TG should try once again. TG tried again, and was still unsuccessful.

TG explained Blackhawk PON's BHPOG708 and BHPOG713 were both stand-alone directory listings to remove the primary listing, which both SOC'd on August 14, 2000. TG waited until August 16, 2000 to enter the caption listings for the orders above, BHPOG719 and BHPOG720, but in each case received fatal error CR001 (Another main listing already received).

TG tried again on subsequent days, but received the same results. Napa PON# PO9633695P entered to remove primary listing, SOC'd on August 10, 2000, with PON# PO9641695P entered to add caption listing to same account entered on August 12, 2000 failing with same CR001 error. Napa PON# PO9638695P to remove primary listing SOC'd on August 10, 2000, with PON# PO9642695P to add caption listing to same account entered on August 14, 2000 failing with same CR001 error. TG released this order, and tried entering again on August 16, 2000, with same error returned.

There are four other Napa listing orders without caption which also FOC'd but did not SOC. TG then reported the problem to the IS Call Center on or about August 24, 2000 (Vantive #3736231). IS Call Center reported LHD said EDI listing orders do not return completions. TG explained LEX was being used. IS Call Center called back saying the LSC could complete these orders so TG could print them. LSC found PON# PO9618695P (FOC'd July 5, 2000), PON# PO9640695P (FOC'd August 9, 2000), and PON# PO9637695P (FOC'd August 1, 2000), but could not find PON# PO9617695P (FOC'd July 3, 2000).

As of August 29, 2000 am, these orders were still in FOC status. IS Call Center suggested TG call the LSC. Pacific AM requested permission to lead the investigation. AM asked that TG not call the LSC as yet, to eliminate confusion from multiple parties querying the same issue.

Additional follow-up from an E-mail from the Pacific AM on September 6, 2000 at 7:33pm EDT: (Direct quote)

The TG "was able to get BHPOG720 to FOC this afternoon, thanks to help from... the Listings Help Desk in Anaheim. Hopefully by the time you read this, you will have gotten the SOC.

"Since (LHD) and (Pacific AM) can't see the original PON, it is difficult to know exactly what was causing the fatal reject for 720 but (Pacific AM) hunch is that (TG) was sending RTY=LML for the new caption line and another RTY=LML for the line of text. The second RTY needs to be LXL for an extra line of information. Sending 2 RTY=LML at the same time fits with the error message that "another main listing already received". Pacific AM had focused at first on the PON

that removed the original straight line listing (BHPOG713), which would be a case of another main listing already existing.

(TG and Pacific AM) “suspect that the other inward caption LSR had a similar problem (BHPOG719). TG was going to try it next. Again, (Pacific AM is) optimistic that TG will have positive feedback tomorrow morning. (Pacific AM) was sorry Pacific didn’t get (TG test team) to walk through the LSRs with the Listings Help Desk last week. (Pacific AM) had left a message with the “Order Entry Center” August 29, asking TG test team to re-send the faxed version of the PONS, but when (Pacific AM) spoke with the Listings Help Desk today, this information had not arrived.”

*5.9.4.4 Summary*

While the LHD was generally responsive, the information conveyed was often misleading, failing to rapidly pinpoint the cause of encountered problems, as documented above. This resulted in considerable TG confusion, requiring the assistance of the Pacific AM to determine the actual source of the problem and recommend a reasonable solution..

**5.10 Billing and Daily Usage Data (Data Process Description)**

The TG served as a transfer point in receiving a variety of billing data from Pacific in several media formats, and passing the raw data to the TAM team for analysis. The sequence of major events associated with establishing P-CLEC billing data flow from Pacific follows:

| <b>Event</b>   | <b>Start</b> | <b>Complete</b> |
|--|--------------|-----------------|
| Receive first paper resale bills                                 |              | 11/3/99         |
| Receive first four CABS billing tapes & hard copy dated 10/31/99 |              | 11/3/99         |
| Read/transfer first CABS tape data                               | 11/4/99      | 11/17/99        |
| Receive first two Data Exchange daily usage tapes dated 1/20/00  |              | 1/24/00         |
| Read/transfer first Data Exchange tape data                      | 1/25/00      | 1/31/00         |
| Verify T1 for NDN & DataGate                                     |              | 2/4/00          |
| Receive first test CABS data via NDM                             |              | 2/9/00          |
| Receive first CABS data via NDM                                  |              | 2/21/00         |
| Request/receive first Data Exchange data via NDM                 | 2/21/00      | 4/20/00         |

**5.10.1 CABS Tapes and NDM**

While the ultimate objective was to receive TG billing data electronically via NDM, it proved expedient to accept TG P-CLEC UNE retail bills via standard Carrier Access Billing System (CABS) format tapes in the interim, until Network Data Mover (NDM) communication was possible over the TG T1 connection, once installed and functional.

### *5.10.1.1 CABS Data Tapes*

#### *5.10.1.1.1 Overview*

The first set of four CABS retail Billing Output Specification (BOS) format billing data tapes (one per P-CLEC) arrived at the TG Tampa office via overnight courier service on November 3, 1999. They were reel-to-reel tapes, appearing to be standard IBM nine track tapes. Record length, blocking, and character set were not immediately apparent. The tapes were accompanied by paper hard copies of assumed duplicate data.

#### *5.10.1.1.2 Function*

The process was as follows for the first set of CABS tapes:

1. TG administrator in Tampa shipped the tapes overnight to the TG network communications specialist at TG Gaithersburg, Maryland headquarters. Also copied the associated hard copy bills, and mailed the originals to the TAM billing team.
2. The TG network communications specialist determined that the only readily accessible IBM reel-to-reel tape drives were at the TG Ohio Super-center.
3. An appropriate Remote Media Services (RMS) work order was entered..
4. Tapes were shipped overnight to the Super-center, and RMS work order status was periodically checked..
5. Upon receiving the tapes, the Super-center operations personnel updated the status of the RMS work order (from awaiting receipt to in progress), then proceeded to attempt reading the tapes using standard IBM utilities.
6. When the tapes were successfully read, the Super-center operator updated the status of the RMS work order as complete.
7. When the TG network communications specialist saw the work order had been completed, the resulting data was remotely downloaded from the IBM mainframe at the Super-center to a local workstation.
8. The TG network communications specialist compressed the data into .zip format, and E-mailed to the TG P-CLEC Manager.
9. The TG P-CLEC Manager then E-mailed the data to the TAM billing team for review and analysis.

#### *5.10.1.1.3 Experience*

While it took ten business days for the TG team to accomplish the above process for the first set of four tapes, the second set took only three days. November 30, 1999 data was received by TG Tampa on December 3, 1999. The tapes were shipped, dumped, and results reported to the TAM billing team on December 9, 1999.

In December, at TG request, TG Pacific AM arranged for our CABS data to be delivered via NDM, anticipating this mode would be available by December 20, 1999 (prior to the Year 2000 freeze) in time to receive our December CABS data. As TG NDM communications were not available until February 4, 2000, TG received the first NDM CABS feed on February 21, 2000.

#### 5.10.1.1.4 Summary

With the successful conversion to NDM transmission of the CABS UNE retail billing data, significant time (approximately three days per set of tapes) and the associated extra manual effort were eliminated.

#### 5.10.1.2 CABS Data via NDM

##### 5.10.1.2.1 Overview

The first test CABS retail billing files arrived at the TG server via NDM File Transfer on February 9, 2000. After the completion of CABS file transfer testing on February 9, CABS files were sent to the TGs server for each bill round using NDM over the direct connection between TG and Pacific.

Pacific sent one file per region (North/South) for each applicable bill round, sorted by BAN, including both CLEC's for that bill round. This breaks down as --

- 14<sup>th</sup> Bill Round – one North file & one South file for Napa & Camino.
- 26<sup>th</sup> Bill Round – one North file & one South file for Blackhawk & Discovery.

The naming convention specified by the TG for Pacific to use during CABS files transfers included the region and date sent. The names were of the format nap\_n.cabsbill.MMDDYY for North and nap\_s.cabsbill.MMDDYY for South. The first files received for the February 26, 2000 bill round were incorrectly named:

nap.cabsbill.022900 and  
nap.cabsbill.030100.

TG worked with the account team and this was corrected in time for the next bill round on March 14, 2000. All subsequent CABS files had the correct file names.

##### 5.10.1.2.2 Function

The process for the receiving CABS files through NDM was as follows:

1. At the end of each bill round, the TG network communications specialist would monitor and verify when that the CABS file had been delivered to the TG server.
2. When the TG network communications specialist saw the CABS file on the TG server, the resulting data was remotely downloaded from the TG server at the Super-center to a local workstation.
3. The TG network communications specialist compressed the data into .zip format, and E-mailed to the TG P-CLEC Manager.

4. The TG P-CLEC Manager then E-mailed the data to the TAM billing team for review and analysis.

#### *5.10.1.2.3 Experience*

In December, at TG request, the Pacific AM arranged for TG CABS data to be delivered via NDM, anticipating this mode would be available by December 20, 1999 (prior to the Year 2000 freeze) in time to receive TG December CABS data. Delivery of the CABS data via NDM is only available through a direct connection. The direct connection between TG and Pacific was not completed until February 4, 2000. TG received the first test NDM CABS feed on February 9, 2000.

After completion of the CABS NDM test and correction of the file name sent by Pacific, this process there were no unusual or unexpected incidents related to this process.

#### *5.10.1.2.4 Summary*

NDM proved to be an effective way to receive an electronic CABS bill. A CLEC would then need the means to parse billing information from an electronic CABS bill. Parsing of the CABS bill was not part of the TG's requirements.

### **5.10.2 Daily Usage via Data Exchange and NDM**

TG Pacific AM strongly recommended that we start receiving Daily Usage data via tape rather than NDM. The reason was that starting with NDM would make it difficult to determine whether encountered problems resulted from the data or from the NDM transmission.

Following AM advice, the TG began receiving Data Exchange daily usage tapes on January 24, 2000. Soon after the NDM communications were established, on February 21, 2000 the TG formally requested the switch from tape to NDM. Pacific AM said it normally takes about two months to get converted to NDM (only possible once per month during Pacific scheduled maintenance). On March 21, 2000 we were quoted a target date of April 14, 2000. The first NDM transmission actually occurred on April 20, 2000. The TG team verified this the following day.

#### *5.10.2.1 Daily Usage Data Exchange Tapes*

##### *5.10.2.1.1 Overview*

The first two Data Exchange Daily Usage data tapes arrived at the TG Tampa office via overnight courier service on January 24, 2000. They were 575' 3M Royal Guard 3480 cartridge tapes of previously arranged format, including 2476 character variable length records and 2472 character logical record length. The tapes were accompanied by paper hard copies of assumed duplicate data.

##### *5.10.2.1.2 Function*

The process for the first set of Data Exchange Daily Usage tapes was as follows:

1. TG administrator in Tampa shipped the tapes overnight to TG network communications specialist at Gaithersburg, Maryland headquarters. Also copied the associated hard copy bills, and mailed the originals to the TAM billing team.
2. The TG network communications specialist determined that the best way to read these was at the TG Ohio Super-center.
3. An appropriate Remote Media Services (RMS) work order was entered.
4. The tapes were shipped overnight to the Super-center, and RMS work order status was periodically checked.
5. Upon receiving the tapes, the Super-center operations personnel updated the status of the RMS work order (from awaiting receipt to in progress), then proceeded to read the tapes using standard IBM utilities.
6. When the tapes were successfully read, the Super-center operator updated the status of the RMS work order as complete.
7. When the TG CLEC Manager saw the work order had been completed, the resulting data was remotely downloaded from the IBM mainframe at the Super-center to a local workstation, with real time guidance by the TG network communications specialist.
8. The TG P-CLEC Manager then E-mailed the data to the TAM billing team for review and analysis.

#### *5.10.2.1.3 Experience*

While it took six business days for the TG team to accomplish the above for the first two Data Exchange tapes, the subsequent tapes (more than forty) took only three to four days to read and transmit. This is because the TG network communications specialist trained the TG CLEC Manager to perform steps three and four, eliminating steps one and two, and the extra physical shipment to the TG network communications specialist.

#### *5.10.2.1.4 Summary*

With the successful conversion to NDM transmission of the daily usage data, significant time (three to four days per set of tapes) and the associated extra manual effort were eliminated.

#### *5.10.2.2 Daily Usage Data via NDM*

##### *5.10.2.2.1 Overview*

The first set of DataExchange usage file arrived at the TG server via NDM file transfer on April 20, 2000. Pacific sent one file per CLEC each week and a monthly CLEC summary for each CLEC.

The naming convention specified by the TG for Pacific to use during DataExchange usage file transfers included the CLEC name and date sent. The names were of the format:

- NAP.DE.USAGE.MMDDYY for Napa
- BLK.DE.USAGE.MMDDYY for Blackhawk

- CAM.DE.USAGE.MMDDYY for Camino
- DIS.DE.USEAGE.MMDDYY for Discovery

#### *5.10.2.2.2 Function*

The process for the receiving DataExchange usage file through NDM was as follows:

1. At the end of each week, the TG network communications specialist would monitor and verify when that the DataExchange usage file had been delivered to the TG server.
2. When the TG network communications specialist saw the DataExchange usage file on the TG server, the resulting data was remotely downloaded from the TG server at the Supercenter to a local workstation.
3. The TG network communications specialist compressed the data into .zip format, and E-mailed to the TG P-CLEC Manager.
4. The TG P-CLEC Manager then E-mailed the data file to the TAM billing team for review and analysis.

#### *5.10.2.2.3 Experience*

On about February 20, 2000, the TG made a request to TG Pacific AM to have the DataExchange usage file delivered via NDM. Delivery of the DataExchange usage file via NDM is only available through a direct connection. The normal time frame for delivery of DataExchange files via NDM is 30-60 days. We received the first test NDM DataExchange usage file on April 20, 2000.

There were no unusual or unexpected incidents related to receiving DataExchange usage files via NDM.

#### *5.10.2.2.4 Summary*

NDM proved to be an effective way to receive an electronic DataExchange usage file. A CLEC would need the means to parse the usage file to retrieve information from an electronic DataExchange usage file. Parsing of the DataExchange usage file was not part of the TG's requirements.

### **5.10.3 Paper Bills**

#### *5.10.3.1 Overview*

The TG received the following types of hard copy billing information associated with the four P-CLECs:

- Resale bills via U.S. Mail.

- CABS retail bills (assumed duplicate data included on CABS billing tapes). Receipt of these hard copy bills accompanying the CABS tapes delivered via overnight courier ceased when NDM transmission of CABS data commenced.
- Daily usage data (assumed duplicate of Data Exchange daily usage tapes). Receipt of these hard copy bills accompanying the daily usage tapes delivered via overnight courier ceased when NDM transmission of daily usage data commenced.

### 5.10.3.2 Function

The process was basically the same for each type of hard copy bill:

1. Upon receipt, the TG administrator recorded the identifying information in the TG Pacific contact log.
2. The TG administrator produced one photocopy for TG records.
3. If the hard copy accompanied either a CABS billing tape or a Data Exchange daily usage tape, the TG administrator made a second photocopy to accompany the tape, recording the tape identification number, associated GXS RMS work order number, and date received on the photocopy. The only exception was that the RMS work order was omitted from the photocopy when the tapes were forwarded to the TG network communications specialist, who later created the RMS work order.
4. The original paper hard copy was sent to the TAM billing team.

### 5.10.3.3 Experience

The TG experience was limited to the above activities, receiving, logging, copying, and forwarding paper bills. Please refer to the TG Pacific Bell Contact Log for specifics regarding frequency and content of these bills and associated information.

### 5.10.3.4 Summary

The TG team received a large number of paper bills over the course of the test. The evaluation and analysis of this information are TAM responsibilities.

## 5.10.4 Checks Received from Pacific

### 5.10.4.1 Overview

Five checks were received by the TG from Pacific addressed to P-CLEC Discovery Communications for two separate accounts:

| Date Received | Check Date | Check Number | Check Amount | Comment                             |
|---------------|------------|--------------|--------------|-------------------------------------|
| 12/14/99      | 12/8/99    | 0001925134   | \$81.37      | Credit balance on bill              |
| 12/21/99      | 12/14/99   | 0001936320   | \$81.39      | Credit balance on bill              |
| 12/28/99      | 12/16/99   | 0001941495   | \$81.56      | Refund of overpayment on final bill |

|          |          |            |         |                                     |
|----------|----------|------------|---------|-------------------------------------|
| 12/28/99 | 12/17/99 | 0001943905 | \$ 2.91 | Refund of overpayment on final bill |
| 01/15/00 | 1/4/00   | 0004964002 | \$69.13 | Credit balance on bill              |

#### 5.10.4.2 Function

The process was as follows:

1. Inform Pacific, TAM, and CPUC that a check had been received.
2. The TG administrator recorded the identifying information in the TG Pacific contact log.
3. The TG administrator produced one photocopy for TG records.
4. The TG administrator made a second photocopy that was sent to the TAM billing team.
5. The original check was sent to the Pacific AM.

#### 5.10.4.3 Experience

These checks were not expected. When the first arrived, the TG immediately asked the Pacific AM what they were for. The AM replied via E-mail that they have to be issued in order to maintain “blindness” of the test accounts, but since the TG was not actually paying bills on behalf of the P-CLECs, that the TG should not cash these checks.

The Pacific AM requested return of the checks, so that the AM could pass the checks back to an LSC billing person who was aware of the test for appropriate disposition.

#### 5.10.4.4 Summary

All checks were returned to the Pacific AM as requested.

### **5.11 Other Issues**

#### **5.11.1 External Support and Other Issues**

##### *5.11.1.1 Overview*

As an integral part of TG P-CLEC experience, the TG established a toll-free support number on September 13, 1999 that was published as the customer contact number for all four P-CLECs. This number was forwarded to a telephone in the TG P-CLEC Manager’s office in Tampa, Florida. An appropriate message greeted callers, indicating they had reached “Telco customer support”, that “all representatives are currently busy”, and requesting they leave a message.

Various types of calls were received:

- Solicitations from numerous vendors.
- Queries by potential investors seeking CLEC business information.
- Queries by end users seeking information, usually whether the CLECs provide service in their geographic area.

- Misdirected calls by end users seeking another CLEC.
- Calls by end users who had been signed up as “friendly” accounts for the test.
- Calls by end users whose service had been mistakenly converted to one of P-CLECs.

#### *5.11.1.2 Function*

The high-level process was as follows:

1. All incoming calls were directed to voice mail.
2. All messages were reviewed in a timely fashion by the TG CLEC Manager or assigned designee, regularly the same or next business day.

The first three types of calls were not returned in order to retain public blindness and because they were not deemed to be significant to the outcome of the test. The balance of the calls, by end users, were handled as high priority activities. Please see the Appendix for a list of these critical P-CLEC Support Calls.

For end user calls of undetermined cause, the following decision tree developed June 21, 2000 guided call routing by the TG:

- Inform TAM team to see if end user is a ‘friendly’ account.
- If an inadvertent conversion, will direct to Pacific End User Return Group (if before noon Pacific time the business day following conversion) and inform Pacific AM.
- If a real ‘friendly’, TAM will resolve.
- If not on friendly list, and want to return to Pacific, will route to Pacific EURG.
- If not on friendly list and trying to reach another CLEC, will refer to Pacific 800-310-2355.
- If any doubt, or special circumstances, refer to Pacific AM.

#### *5.11.1.3 Experience*

The TG team gained heightened sensitivity and appreciation for end users, who often appeared unsure of circumstances surrounding their experienced problems.

#### *5.11.1.4 Summary*

The TG recognizes that the majority of end user calls resulted from the unique P-CLEC relationship with both real CLECs and Pacific necessary to complete the OSS test.

### **5.11.2 Misdirected Calls to P-CLEC Support Toll-free Number**

#### *5.11.2.1 Overview*

Twenty calls were received from January 15, 2000 through October 17, 2000 from end users seeking to contact one of two real CLECs. There were ten calls for each of the two real CLECs. TG Pacific AM determined that the prime cause was that the P-CLECs of necessity shared SPIDs with these two

CLECs, enabling the TAM to prepare and the TG to process orders requiring real co-located CLEC facilities.

#### *5.11.2.2 Function*

The process guideline was as follows:

1. TG CLEC Manager documents the call in an E-mail to Pacific AM, with a copy to TAM and TA.
2. TG contacts end user to gain additional details pinpointing the source of the problem, especially their chosen local service provider.
3. If one of the two sharing SPIDs with the P-CLECs (always was), the TG explained there had been an administrative mix-up at Pacific, and provided the appropriate support number.
4. If additional questions remained, TG informs Pacific AM and TAM/TA, requesting guidance.

When actual testing was completed, these calls were referred to Pacific AM, and with TAM approval, a formal request was made for Pacific to remove the shared SPIDs. Pacific AM confirmed this was complete October 17, 2000.

#### *5.11.2.3 Experience*

The circumstances differed between calls intended for the two real CLEC's. With the ten calls for CLEC 'A', three calls in October 2000 appeared to related to a promotional effort. (See Appendix for specifics of these P-CLEC Support Calls).

The only issue encountered here was that the Pacific End User Return Group (EURG) did not provide the anticipated assistance in restoring an end user who left a message on the P-CLEC support line on Saturday October 7, 2000, at 4:40pm EDT. In this case, the TG P-CLEC Manager called the Pacific End User Return Group on Monday October 9, 2000 at 11:44am EDT, identifying himself as Blackhawk customer service, explaining the nature of the support call received on Saturday from a woman who had her Pacific service cut without authorization. The TG explained that Blackhawk has no record of this customer.

Without even taking the end user information (name, address, impacted TN, CBR TN), the Pacific EURG referred Blackhawk to the LSC, explaining they would be able to ID the PON which did this. As blindness precluded an explanation why knowing the PON would not help in this case, the TG chose to refer this and subsequent like support calls to the Pacific AM to expedite restoration of end user service.

Scenario for the ten calls for CLEC 'B' is where end user had requested a change from Pacific to CLEC 'B'. When their final Pacific bill arrived, it stated they were now served by Discovery Communications rather than CLEC 'B'. The bill also listed Discovery's toll free support number (the TG P-CLEC support number).

The CLEC 'B' end user would naturally call us to see what happened, and ensure they are served by their local service provider of choice. TG explained Discovery appeared on the bill due to an internal Pacific administrative error, but their service is provided by CLEC 'B' if they are also getting bills from CLEC 'B'. TG also offered the customer service number for CLEC 'B'.

#### *5.11.2.4 Summary*

The TG CLEC Manager queried regarding the likelihood of misdirected calls such as these resulting from shared common identifiers in the real world. These TG questions, and answers from the Pacific AM, follow (text from an E-mail sent October 19, 2000 by Pacific AM):

“Q: Are there any real CLEC’s which ever share Service Provider Identifiers (SPID)?

A: I don’t know of any which are truly separate but there are CLECs that operate in separate markets as separate entities but point to the same SPID.

Q: Has there ever been a reason to share SPID’s other than this test?

A: See above. Mergers and acquisitions are the cause of the shared SPIDs of which I am aware.

Q: How does Pacific handle SPID’s for merging CLEC’s or splitting CLEC’s?

A: I haven’t had any experience with splitting CLECs – but we certainly have with mergers and acquisitions. Once the TN is ported, it doesn’t make any difference to TG (Pacific) internal systems who has the TN – if we ever need to know (i.e., to respond to 611 repair calls), we rely on a “shadow copy” of the NPAC database. So if a CLEC wants to split their embedded base between two SPIDs, they would have to do a conversion in the NPAC database – and I don’t think the industry has addressed this process at all.

With regard to mergers where the CLEC wants to move from 2 SPIDs to one, we would distribute a new CLEC Profile internally for the existing OCN which is being changed from the old to new SPID. That will trigger a change in our tables so that the new SPID will be associated with an existing OCN. Again, it would be up to the CLEC to do a conversion in the NPAC database if they wanted us to know that the already converted TNs have the new SPID.

Q: Is there a way for consolidating/merging CLEC’s to maintain separate SPIDs to drive to different referral numbers (seems this may be the case with CLEC ‘A’)?

A: Remember that (CLEC ‘A’) and your CLECs did have different referral numbers when the service was still in our systems (i.e., UNE Port with Loop) because we refer based on the OCN or Company Code. It was only when a number was porting/ported that we had the confusion between you and (CLEC ‘A’).

Most merging CLECs I am familiar with have kept their OCNs and SPIDs, so this is not a problem. Once we implement the LSOG SPID field (fall of 2001?), we may be able to handle the same CLEC (OCN) sending us some LSRs with one SPID and some LSRs with another SPID. NOTE: NO PROMISES!

Q: If, for a period of time, multiple CLEC's must share a SPID for whatever reason, is there a way to alert the rep to question the end user to determine which company they are trying to reach when different support numbers exist (which is exactly our case)?

A: I'm not very optimistic about this one. We are really committed to following the NPAC/industry standards and they only support 1 CLEC identifier per record. Plus, we rely on a lot of Interactive Voice Response (IVR) systems (i.e., with 611 Repair) that only have one CLEC identifier field. "

### **5.11.3 Calls by or Related to 'Friendly' Accounts**

#### *5.11.3.1 Overview*

Eight calls were received between February 7, 2000 through July 24, 2000 from end users who had been signed up by the TAM to participate in this test ('friendlies'), who had forgotten or were not aware of this arrangement. Please see the TAM's final report for further information on 'friendly' accounts.

In some cases, a family member had signed up without informing other family members who were home when the field technician arrived to hook up the test line. In other cases, due to the considerable intervening interval from 'friendly' sign-up to installation, the individual simply forgot. The TAM promptly responded by initiating reminder calls to the 'friendlies' when orders were placed involving field work at their homes.

#### *5.11.3.2 Function*

The process involving 'friendly' support calls was as follows:

1. Provide support call contact information to TAM team to see if end user is a 'friendly' account.
2. If a real 'friendly', TAM will resolve.

#### *5.11.3.3 Experience*

As TG served only to forward information left in end user voice mail messages to the TAM, the TG experience was limited to fielding messages. Early in the test, 'friendly' callers appeared quite concerned and confused by 'unexpected' telephone line installation. However, once the TAM initiated 'friendly' reminder calls coordinated at order entry time, these calls proved infrequent.

#### *5.11.3.4 Summary*

(Please see the TAM's final report for further information on "friendly" accounts.)

### **5.11.4 Calls by End Users whose Service had been Mistakenly Converted**

#### *5.11.4.1 Overview*

Two calls were received on Friday June 2, 2000 regarding the same out-of-service TN. One at 3:39pm EDT was from the end user who stated her phone was not working, and as an expectant mother living alone she was therefore very concerned as she could not use her phone to access 911. The other at 5:40pm EDT was from her sister, who claimed the impacted number had been taken over from Pacific without authorization.

#### *5.11.4.2 Function*

The process for this unique event proceeded as follows:

1. The TG alerted the TAM via E-mail and in person, as per the high level process described in section 4.11.
2. The TAM contacted the end user.
3. The TG also alerted the Pacific AM.
4. The TG worked in close cooperation with the TAM and Pacific to restore service to the end user. (See details under CLEC Experience below, and reference the *PBContactLog.xls*.)

#### *5.11.4.3 Experience*

When these two messages were received Monday June 5, 2000 at 8:30am EDT, the TG immediately alerted the TAM via E-mail and in person, as per the high level process described in section 4.11.

The TG also alerted the Pacific AM at 11:07am June 5, 2000 via E-mail.

The TAM attempted to contact the end user, and spoke at about 10am EDT June 5, 2000 with her sister who had also called in the problem. At that time, the TAM learned the impacted phone number, which was not mentioned in the two messages left Friday afternoon. The end user's sister said Blackhawk took their service, as she learned speaking with Pacific repair Friday June 2, 2000, but service was not restored to Pacific. The TAM also learned a TG resource had entered the request.

Using the impacted phone number to identify the order, further research by the TAM team indicated the TAM order preparation team had inadvertently transposed digits on the Basic Loop order request presented to the TG data entry team to process. The order (Blackhawk PON# BH71721PE000433) was entered May 24, 2000. When the order completed on June 2, 2000, the end user lost dial tone.

The TG worked in close cooperation with Pacific to restore service to the end user, though a series of seven conversations on June 5, 2000 (see *PBContactLog.xls* entries starting 11:10am EDT). Earlier Monday morning June 5, 2000, the TG order entry team submitted a disconnect order (PON# CAM013) at the TAM's direction.

The Pacific AM suggested canceling the disconnect so it can be synched with the win-back Inward order from Pacific. As the disconnect order was still marked 'In progress', TG order entry cancelled it at 11:54am EDT. At this point we agreed we would await a call-back from Pacific AM when their team (LSC) was ready to go.

At 1:10pm EDT, the LSC called the TG's P-CLEC order entry team, requesting and receiving the original PON information. The LSC said they would handle the rest from their end.

At 12:52pm June 6, 2000, the TG left a VMX for the Pacific AM to verify the end user was back in service. At 2:38pm, the Pacific AM left a VMX for the TG that problem was continuing to be worked, but having difficulty as conflicting loop disconnect orders were entered, as multiple parties were trying to resolve.

At 3:31pm June 6, 2000, the TG left a VMX for the Pacific AM requesting a PON number to track restoration of the end user's service, and also paged the Pacific AM. Pacific AM returned the call in response to TG's page at 3:38pm EDT. AM indicated the LSC reports that the end user's service should be restored momentarily. Delay was due to conflicting Disconnect orders in SORD, as multiple parties sought to rectify the problem.

Pacific AM asked if TG had an address on the order along with the end user's TN. TG replied it would be checked. TG also asked for recommendations for how to present ourselves if speaking to the end user or her sister. Pacific AM suggested TG mention working with Pacific to develop processes to prevent problems like this.

Pacific AM called TG at 4:49pm EDT. TG said he had spoken with the end user's sister, who conveyed that while service was not yet restored, the Pacific EURG (name also provided) was working to get service restored ASAP. TG relayed the EURG contact name to Pacific AM. Pacific AM said her LSC escalation conflicted with the EURG activity. AM planned to call the EURG contact, and inform them of the LOC problem where they have two sets of conflicting orders. AM will let TG know how to track, indicating the LOC is the best status source.

At 5:58pm EDT on June 6, 2000, the Pacific AM left the TG P-CLEC Manager a VMX indicating the Pacific EURG is the best source for status information. AM also provided the Pacific EURG phone number.

At 7:27pm EDT on June 6, 2000, the TG called the Pacific EURG, using identity of Blackhawk Customer Service, querying whether the end user's service had been restored by Pacific. The Pacific EURG said the end user was connected. The TG asked if the Pacific EURG could say when the end user's service was restored, but was told the Pacific EURG could not release that information.

At 7:31pm EDT, the TG called the Pacific AM, and received confirmed the end user service was restored by 6:30pm EDT on June 6, 2000.

#### *5.11.4.4 Summary*

The problem was identified by the end user when no dial tone was present, due to the Basic Loop order type (BASL, REQTYP=A, Act=V). If the order had been a loop with port conversion (LPWP, REQTYP=M, Act=V), dial tone would have remained on the line. Therefore, the inadvertent conversion may not have been noticed until the final Pacific bill was received by the end user. The final

bill indicates (as informed by the Pacific AM) which CLEC now provides service, along with the CLEC contact number (see section 4.11.1 above).

If the end user did not see this message on the final Pacific bill, then the arrival of a bill from the new CLEC would indicate the problem. However, the P-CLECs did not generate bills. Therefore, unless the end user noticed the comment on the final Pacific bill, it is possible they might never notice or report the problem, especially if they found themselves receiving phone service without receiving any bills, until the P-CLEC lines were disconnected.

With this awareness, the TAM reviewed and audited their records to identify any other potential errors of this sort. The TG is aware of no other inadvertent conversions.

## 6.0 APPENDICES AND SUPPORTING DOCUMENTATION

This is a list of the Pacific OSS Test supporting documents that have been produced by the TG. The supporting documents will be released separately by the TAM after redaction rules that were developed by the TAB have been applied. All documents will be made available to interested parties through the CPUC.

The reference numbers listed here (Ref#) are the supporting document numbers from the TAM list of supporting documentation. A complete list of all supporting documents is available in the TAM Final Report.

| Ref # | Document Name                                | Access Location   | Type         | Brief Description   |
|-------|--|---|--------------|---|
| 7     | TG Daily Report – Daily Log                  | Delivered daily to TAM. Redacted by TAM.  | .xls         | Daily reports of PB system status   |
| 8     | TG Daily Report – Activity Log               | Delivered daily to TAM. Redacted by TAM.  | .xls         | Daily reports of order activity   |
| 9     | TG Daily Report – Status                     | Delivered daily to TAM. Redacted by TAM.  | .xls         | Daily reports of order status   |
| 44    | Pseudo CLEC Data Exchange Usage Files        | Held by CPUC for secure review.   | .txt         | <i>Usage files</i>  |
| 45    | Pseudo CLEC CABS bills                       | Held by CPUC for secure review.   | .txt         | Billing files   |
| 55    | <a href="#">TG/PB Contact Log</a>            | Redacted by TAM. Available as an appendix to this report.   | .xls         | References to E-mails, phone calls, meetings, faxes, and physical mail      |
| 56    | PB E-mail                                    | Held by CPUC for secure review.   | .pst         | OSS test associated E-mails to or from PB and attached documents            |
| 57    | PB Mail and Faxes                            | Held by CPUC for secure review.   | Paper        | Physical mail and faxes to or from PB                                       |
| 59a   | TG Order Archives Abandoned Orders – EDI/GUI | Paper files held by CPUC for secure review. Summary spreadsheets redacted by TAM. Available in TG supporting documents. | Paper & .xls | Spreadsheet created listing all abandoned orders, taken from order folders. |
| 59b   | TG Order Archives Folder Contents –          | Paper files held by CPUC for secure   | Paper & .xls | Order folder for each test case processed – spreadsheet                     |

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|    | EDI/GUI  | review. Summary spreadsheets redacted by TAM. Available in TG supporting documents. |          | created with info from the folders. Sample of paper folder will also be provided. |
| 60 | EDI Archives   | Requires Oracle 8.0 and GXS query software to view.                                 | UNI<br>X | Outbound and inbound transactions of various types in EDI format                  |
| 61 | <a href="#">Vantive Ticket Log</a>   | Redacted by TAM. Available as an appendix to this report.                           | .xls     | Log of all vantive problem activity   |
| 62 | Error List and Causes  | Redacted by TAM. Available in TG supporting documents.                              | .xls     | List of common errors and likely associated causes                                |
| 63 | <a href="#">Accessible Letter List – 1999</a><br><br><a href="#">Accessible Letter List – 2000</a> | Redacted by TAM. Available as an appendix to this report.                           | .doc     | List of PB Accessible Letters received  |
| 64 | <a href="#">TG Training List</a>   | Redacted by TAM. Available as an appendix to this report.                           | .xls     | List of all training classes attended by TG resources                             |
| 65 | TG Test Plan   | Redacted by TAM. Available in TG supporting documents.                              | .doc     | Test Generator test plan and specifications                                       |
| 66 | <a href="#">PB EDI Joint Test Plans</a>  | Redacted by TAM. Napa plan available as an appendix to this report.                 | .doc     | EDI test plans  |

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| 67 | Managed Introduction Order Spreadsheets:<br><br><a href="#">Blackhawk</a><br><br><a href="#">Camino</a><br><br><a href="#">Discovery</a><br><br><a href="#">Napa</a> | Redacted by TAM. Available as appendices to this report.                                     | .xls | Spreadsheets detailing managed introduction processing                       |
| 68 | EDI PB/CLEC Joint Test Scenarios:<br><br><a href="#">Blackhawk</a><br><br><a href="#">Camino</a><br><br><a href="#">Discovery</a><br><br><a href="#">Napa</a>        | Redacted by TAM. Available as appendices to this report.                                     | .xls | Test scenarios utilized in EDI   |
| 69 | Interconnect Matrices  | GXS proprietary. Held by CPUC for secure review. Requires NDA between viewing party and GXS. | .doc | PB data elements within LSOG industry standard formats                       |
| 70 | User Defined File Format   | GXS proprietary. Held by CPUC for secure review. Requires NDA between viewing party and GXS. | .doc | Pseudo-CLEC LSOG 4 based file format   |
| 71 | EDI Logical Maps   | Redacted by TAM. Available in TG supporting documents.                                       | .rtf | Logical specification relating PB data elements to Pseudo-CLEC data elements |
| 72 | EDI Physical Maps<br>- Source<br>- Target  | GXS proprietary. Held by CPUC for secure review. Requires NDA between viewing party and GXS. | .doc | Physical relationship of PB data elements to Pseudo-CLEC data elements       |
| 73 | MOSS DB Schema   | GXS proprietary. Held by CPUC for  | .doc | Pseudo-CLEC data element relationship  |

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|    |  | secure review.<br>Requires NDA<br>between viewing<br>party and GXS.   |               |  |
| 74 | MOSS Application<br>Design Document  | GXS proprietary.<br>Held by CPUC for<br>secure review.<br>Requires NDA<br>between viewing<br>party and GXS. | .doc          | MOSS application software<br>design  |
| 80 | <a href="#">TG Issue Log</a>   | Redacted by TAM.<br>Available as an<br>appendix to this<br>report.  | .doc          | Log containing TG issues<br>prior to creation of Vantive<br>Log                                    |
| 81 | <a href="#">TG Outage Log</a>  | Redacted by TAM.<br>Available as an<br>appendix to this<br>report.  | .xls          | TG log of PB outages   |
| 82 | TG PB Training<br>Evaluations:<br><a href="#">CLEC-W-UNE</a><br><a href="#">LEX Resale</a><br><a href="#">Manual LSR</a><br><a href="#">Resale 1</a><br><a href="#">DataGate 'C' Training</a><br><a href="#">Summary</a><br><a href="#">UNE Training</a><br><a href="#">Summary</a><br><a href="#">Toolbar</a> | Redacted by TAM.<br>Available as<br>appendices to this<br>report.   | .ppt,<br>.doc | TG Student evaluations of<br>PB training.  |
| 83 | <a href="#">P-CLEC Experience</a><br><a href="#">Timeline</a> (.mpp format)<br><a href="#">Timeline in PDF Format</a>  | Redacted by TAM.<br>Available as an<br>appendix to this<br>report.  | .mpp<br>.pdf  | TG timeline of P-CLEC<br>experience establishing<br>interconnection and doing<br>business with PB. |
| 84 | P-CLEC Support Call<br>Log   | Redacted by TAM.<br>Available in TG<br>supporting<br>documents.   | .xls          | TG P-CLEC end user<br>support call log.  |
| 85 | P-CLEC Product<br>Schedule   | Redacted by TAM.<br>Available in TG<br>supporting<br>documents.   | .xls          | Provides history of P-CLEC<br>product introduction.  |
| 86 | P-CLEC OSS and<br>Interconnect Agreements  | Available in TG<br>supporting<br>documents.   | .doc          | Actual P-CLEC agreements<br>with PB.   |

## 7.0 GLOSSARY

| Acronym | Term  | Definition   |
|---------|---|--|
| ACD     | Automatic Call Distributor                        |  |
| ACNA    | Access Carrier Name Abbreviation                  | CLEC Identifier  |
| AI      | Application Integrator                            |  |
| AL      | Accessible Letter                                 | Documents sent to CLECs doing business with Pacific, designed to communicate upcoming system releases, product promotions, events etc... |
| AM      | Account Manager                                   | As it relates to Pacific   |
| API     | Application Programming Interface                 |  |
| ASSL    | Assured Loop, 2-wire                              |  |
| ATIS    | Alliance for Telecommunication Industry Solutions |  |
| ATR     | Acceptance Test Request                           |  |
| AV      | Address Validation                                |  |
| BAN     | Billing Account Number                            | Pacific ordering entity  |
| BASL    | Basic Loop, 2-wire                                |  |
| BOS     | Billing Output Specification                      |  |
| BTN     | Billing Telephone Number                          |  |
| CABS    | Carrier Access Billing System                     |  |
| CBR     | Can Be Reached                                    |  |
| CCB     | Common Carrier Bureau                             |  |
| CFA     | Connecting Facility Assignment                    |  |
| CHC     | Coordinated Hot Cut                               |  |
| CIC     | Carrier Identification Code                       |  |
| CLEC    | Competitive Local Exchange Carrier                | Communications company which sells/re-sells communication services in direct competition with an ILEC                                    |
| CLLI    | Common Language Location Identifier               | An 11 digit alphanumeric code used as a method of identifying physical locations and equipment.  |
| CNF     | Confirmation                                      |  |
| CO      | Central Office                                    |  |
| CORBA   | Common Object Request Broker Architecture         |  |
| CPUC    | California Public Utilities Commission            |  |
| CSF     | Critical Success Factors                          |  |
| CSR     | Customer Service Record                           |  |
| DB      | Database  |  |
| DD      | Due Date  |  |
| DDD     | Desired Due Date                                  |  |

|       |  |  |
|-------|--|--|
| DFDT  | Desired Frame Due Time                     |  |
| DRG   | Developers Reference Guide                 |  |
| DS1   | DS1 4-wire Loop                            |  |
| DSCN  | Directory Service Confirmation             |  |
| DSCR  | Directory Service Caption Request          |  |
| DSLAM | Digital Subscriber Line Access Multiplexer | Network Multiplexing equipment needed to support xDSL testing.   |
| DSR   | Directory Service Request                  |  |
| ECCKT | Exchange Carrier Circuit ID                |  |
| EDI   | Electronic Data Interchange                | Interface protocol that provides for mechanized order processing between CLEC and ILEC.  |
| EDT   | Eastern Daylight Time                      |  |
| EST   | Eastern Standard Time                      |  |
| EURG  | End User Return Group                      | Pacific Work Group   |
| EXCO  | Exchange Central Office                    |  |
| FAX   | Facsimile                                  |  |
| FCC   | Federal Communications Commission          |  |
| FDT   | Frame Due Time                             |  |
| FLSC  | Facilities Local Service Center            |  |
| FOC   | Firm Order Completion                      | Response from the service order processor that acknowledges successful receipt of a CLEC order.  |
| GUI   | Graphical User Interface                   |  |
| GXS   | Global Exchange Services (GE)              | Test Generator for this project.   |
| ICA   | Interconnection Agreement                  |  |
| ILEC  | Incumbent Local Exchange Carrier           |  |
| IS    | Information Services                       |  |
| LASR  | Local Access Service Request               | Pacific data system which receives Local Service Requests.   |
| LATA  | Local Access and Transport Area            | As defined in 47 U.S.C Section 3 (25)  |
| LEC   | Local Exchange Carrier                     |  |
| LEX   | Local Service Request Exchange             | Pacific's Ordering Interface   |
| LNP   | Local Number Portability                   |  |
| LNPL  | Local Number Portability with Loop         |  |
| LNPO  | Local Number Portability Only              |  |
| LOC   | Local Operations Center                    | Pacific group that supports provisioning and maintenance.  |
| LPWP  | Loop with Port                             |  |
| LSC   | Local Service Center                       | Pacific Support Group  |
| LSOG  | Local Service Ordering Guidelines          |  |
| LSOR  | Local Service Ordering Requirements        | Document that defines the service order detailed requirements that aid the CLEC in requesting Resale and UNE service from pacific. This document is based on |

|        |   |  |
|--------|---|--|
|        |   | OBF Local Service Ordering Guidelines and Pacific usage definitions and rules of application.  |
| LSR    | Local Service Request                     | Form prepared by the CLEC to request Pacific to provide the services as specified in tariffs/contract agreement  |
| LTN    | Listings Telephone Number                 |  |
| M&P    | Methods and Procedures                    | Current methods and procedures defined to support operations required. These tasks are thoroughly planned out, explained and typically are outlined in detailed steps. |
| MAC    | Missed Appointment Code                   | Pacific order processing term  |
| MDF    | Main Distribution Frame                   |  |
| MI     | Managed Introduction                      | Pacific process  |
| MLT    | Mechanized Loop Test                      |  |
| MOSS   | Mini-OSS                                  |  |
| MPOE   | Main Point of Entry                       |  |
| MTP    | Master Test Plan                          |  |
| NANC   | North American Numbering Council          |  |
| NDA    | Non Disclosure Agreement                  |  |
| NDM    | Network Data Mover                        | File transfer between GXS and Pacific servers. Product – Direct: Connect   |
| NDT    | No Dial Tone                              |  |
| NNX    | Telephone 1000s Group                     |  |
| NID    | Network Interface Device                  |  |
| NP     | Number Portability                        |  |
| NPA    | Number Planning Area                      | Area Code  |
| NPAC   | Number Portability Admin Center           |  |
| OBF    | Order Billing Forum                       | EDI Standards Body   |
| OCN    | Operating Company Number                  |  |
| OSS    | Operations Support Systems                | For purposes of this test OSS refers to systems that are included for testing as defined in the MTP.   |
| P-CLEC | Pseudo-Competitive Local Exchange Carrier | Four CLECs created for this test to do business with Pacific.  |
| PBSM   | Pacific Bell Service Manager              | Pacific developed character based stand-alone system that provides access to Pacific's maintenance & repair.   |
| PDT    | Pacific Daylight Time                     |  |
| PLA    | Place Listing As                          | Directory Listings   |
| PON    | Purchase Order Number                     |  |
| POT    | Point of Termination                      |  |
| PRAF   | Pacific Remote Access Facility            | Modem bank associated with a communications server.  |

|          |  |  |
|----------|--|--|
| PSAP     | Public Safety Answering Point            | 9-1-1 Entity   |
| PST      | Pacific Standard Time                    |  |
| RFP      | Request For Proposal                     |  |
| PT       | Pacific Time                             |  |
| RMS      | Remote Media Service                     |  |
| RPON     | Related Purchase Order Number            |  |
| SAGA     | Service Address Grid Area                | Sub-section of a zip code  |
| SBC      | Southwestern Bell Company                |  |
| SDIR     | Stand-Alone Directory Listing            |  |
| SME      | Subject Matter Expert                    | Expert in a defined area   |
| SMS      | Service Manager System                   | Part of Number Portability   |
| SOC      | Service Order Completion                 | Response from the service order processor that acknowledges the provisioning systems provided a successful completion of the request |
| SORD     | Service Order Retrieval and Distribution | Pacific system used to create, store, and distribute service orders to various work groups to establish service.                     |
| SPLNP    | Service Provider LNP                     |  |
| SPID     | Service Provider Identifier              |  |
| TA       | Technical Advisor                        | Assists the CPUC staff.  |
| TAB      | Technical Advisory Board                 |  |
| TAM      | Test Administrator/Manager               | Oversees the execution and assesses the processes and test execution.  |
| TCIF     | Telecommunications Interface Forum       | Industry Standards Organization.   |
| TG       | Test Generator                           | Performs the execution of the test.  |
| TN       | Telephone Number                         | Telephony term   |
| TTN      | Trouble Ticket Number                    |  |
| SUPP     | Supplemental Order                       |  |
| UNE      | Unbundled Network Elements               |  |
| Verigate | Verification Gateway                     | An on-line windows based application developed by Pacific to support pre-order functions for pacific wholesale customers             |
| VMX      | Voice Mail                               |  |