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**BEFORE THE ARIZONA CORPORATION COMMISSION**

JIM IRVIN  
COMMISSIONER-CHAIRMAN  
TONY WEST  
COMMISSIONER  
CARL J. KUNASEK  
COMMISSIONER

CONSOLIDATED QUALITY OF SERVICE  
ARBITRATION

IN THE MATTER OF THE PETITION OF  
AMERICAN COMMUNICATIONS  
SERVICES, INC. AND AMERICAN COM-  
MUNICATIONS SERVICES OF PIMA  
COUNTY, INC. FOR ARBITRATION WITH  
US WEST COMMUNICATIONS, INC. OF  
INTERCONNECTION RATES, TERMS,  
AND CONDITIONS PURSUANT TO 47  
U.S.C. § 252(B) OF THE TELECOMMUNI-  
CATIONS ACT OF 1996.

Docket Nos. T-03021A-96-448  
T-03245A-96-448  
T-01051B-96-448

CONSOLIDATED WITH:  
T-02428A-96-417  
T-02752A-96-362  
T-03016A-95-372  
T-03016A-96-402  
T-03175A-96-479  
T-03009A-96-479  
T-02432A-96-505  
T-03155A-96-527

**CLEC COMMENTS IN SUPPORT OF  
POSITIONS ON OUTSTANDING ISSUES**

AT&T Communications of the Mountain States Inc. ("AT&T"), Teleport Communi-  
cations Group, Inc. and TCG Phoenix (collectively "TCG"), MCI WorldCom Inc.  
("MCIW"), Sprint Communications Company, L.P. ("Sprint"), Cox Arizona Telcom, L.L.C.  
("Cox"), e-spire, GST Net (AZ), Inc. ("GST"), NEXTLINK, and, Electric Lightwave, Inc.  
("ELI") (collectively "CLEC parties") hereby submit the following comments in support of  
their positions on outstanding issues.

**I. INTRODUCTION**

Since the Chief Arbitrator's February 23, 1999 conference call with the parties, the  
CLEC parties and U S WEST have on several occasions confirmed agreements that have  
been previously reached and discussed the remaining outstanding issues. The agreements  
that have been reached are covered in a separate joint filing of the CLEC parties and U S

1 WEST. The purpose of this document is to provide an explanation and advocacy for the  
2 CLEC parties' positions on the remaining outstanding issues.

3 **II. OUTSTANDING ISSUES – CLEC PARTIES' POSITIONS**

4 **A. 1(a) – What are the service categories to be measured?**

5 The CLEC parties and U S WEST have agreed that the service categories to be  
6 measured and reported should be those as identified in Exhibit A to the May 7, 1999 Joint  
7 Filing of the parties in this proceeding. Additionally, the CLEC parties propose that the  
8 service categories as identified in Exhibit B of the May 7, 1999 Joint Filing of the parties  
9 should be also be required. What follows is the CLEC parties' advocacy on why the  
10 additional service categories should be included.

11 **1. Resold ADSL, HDSL and xDSL Services**

12 These service categories were added to make it clear that U S WEST was obligated  
13 by the Telecommunications Act of 1996 to resell these types of services to requesting  
14 telecommunications carriers. The FCC has already ruled that U S WEST would have to  
15 resell these types of services. Specifically, the FCC stated:

16 Given our determination above that advanced services offered  
17 by incumbent LECs are telecommunications services, by the  
18 plain terms of the Act, incumbent LECs have the obligation to  
19 offer for resale, pursuant to section 251(c)(4), all advanced  
20 services that they generally provide to subscribers who are not  
21 telecommunications carriers.

22 The FCC also explicitly rejected a U S WEST argument that it was not obligated to  
23 resell advanced services such as ADSL when it stated:

24 We also reject U S WEST's contention that it is not subject to  
25 section 251(c) for its provision of advanced services because  
26 such services are neither "telephone exchange services" nor  
"exchange access services." To the extent that it offers advanced  
services, U S WEST contends, it is not acting as a "local

25 <sup>1</sup> Before the Federal Communications Commission, In the Matters of the *Deployment of*  
26 *Wireline Services Offering Advanced Telecommunications Capability*; CC Docket No. 98-147 *et*  
*al.*; Released August 7, 1998 ("Advanced Services Order"), ¶ 60.

1 exchange carrier" or "incumbent local exchange carrier," and the  
2 obligations imposed by section 251(c) on incumbent local  
3 exchange carriers do not apply. Because we have determined  
4 that advanced services offered by incumbent LECs are telephone  
5 exchange service or exchange access, we need not and do not  
6 address the section 251(c) obligations of an incumbent local  
7 exchange carrier offering services other than telephone exchange  
8 service or exchange access.<sup>2</sup> (footnotes omitted)

9 The addition of the three DSL type service categories are necessary to ensure that  
10 when U S WEST does provide DSL type services to resellers, that there is sufficient  
11 information available to determine if it is providing those service in a nondiscriminatory  
12 manner.

## 13 2. Resold DS3 Services

14 The current agreement with U S WEST on private line or special access services are  
15 limited to bandwidths of DSO, DS1 and DS3. Under that agreement, U S WEST is not  
16 obligated to report performance results for any circuits with a bandwidth greater than DS3.  
17 The additional service category of DS3 is necessary to recognize that resellers may resell U  
18 S WEST circuits with bandwidths greater than DS3 (OC-12, OC-48, OC-96, etc.). When  
19 that happens, it is necessary to have information available to determine if U S WEST is  
20 providing those services in a nondiscriminatory manner.

## 21 3. Unbundled Transport

22 The CLEC parties and U S WEST have agreed that reporting of unbundled transport  
23 information is important. There has also been agreement that performance results for  
24 unbundled transport should be further reported at a level of unbundled dedicated interoffice  
25 transport. The CLECs propose to further disaggregate the dedicated transport categories by  
26 bandwidth. Disaggregation by bandwidth is necessary to recognize the great differences in  
27 magnitude and importance between DSO, DS1 and DS3 circuits. For example, one DS3  
28 circuit contains the equivalent of 672 DSO circuits. Under U S WEST's proposal, missing

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<sup>2</sup> Advanced Services Order, ¶ 44.

1 an installation commitment on a DSO circuit would carry the same weight as missing an  
2 installation commitment on a DS3 circuit. The additional bandwidth specific dedicated  
3 transport service categories are necessary to account for the bandwidth differences.

4 **4. Unbundled or UNE derived DSL Loops**

5 U S WEST has agreed to report data for unbundled loops only an analog and digital  
6 basis. It has not agreed to provide data by ADSL, HDSL and xDSL service categories. This  
7 service category is necessary to ensure that U S WEST provisions loops with transmission  
8 characteristics that permit CLECs to offer their customers the same types of ADSL, HDSL  
9 and xDSL services that U S WEST provides to its customers. The reporting of information  
10 by this service category provides information that will permit a determination of whether  
11 U S WEST is providing advanced service capable loops on a nondiscriminatory basis.

12 **5. Enhanced Extended Loops ("EEL")**

13 A network architecture that combines unbundled loops, multiplexing and dedicated  
14 interoffice transport will permit CLECs to obtain circuits from their customers all the way  
15 back to the CLECs' switch. This access can be obtained without the time and expense of  
16 requiring either virtual or physical collocation. With its own switch and this architecture, a  
17 CLEC would quickly and efficiently be able to provide service to a larger number of  
18 customers than if collocation was required. The CLECs believe that the EEL service  
19 category is necessary to ensure that CLECs receive these network elements in a timely and  
20 nondiscriminatory manner.

21 **6. UNE DS3 loop**

22 CLECs will use U S WEST loops to provide services to other than single line  
23 customers. Like with transport, gradations of bandwidth carrying capacity are necessary to  
24 ensure that "apples-to-apples" comparisons can be made. An unbundled loop carrying DS3  
25 levels of bandwidth will generally be more critical to CLECs than will a voice grade analog  
26 loop capable of serving one customer. The CLEC parties are proposing this service

1 category to ensure that U S WEST disaggregate the data into meaningful levels.

2 **7. Network Interface Device**

3 U S WEST has not agreed to separately report information on the network interface  
4 device ("NID") network element. U S WEST includes the NID as part of its unbundled  
5 loop reporting. CLECs providing local exchange services through cable facilities may  
6 require the NID from U S WEST-- but may not require the unbundled loop as well.  
7 Therefore, its essential that U S WEST be required to report data for the NID network  
8 element when CLECs are ordering NIDs without an accompanying loop from U S WEST.  
9 NID performance information is required to determine if U S WEST is providing  
10 nondiscriminatory access to its NIDs.

11 **8. UNE Signaling**

12 U S WEST has not agreed to a service category for UNE signaling. There will be  
13 facilities-based CLECs that have their own switches but do not have their own signaling  
14 network. Some of those CLECs will need to obtain signaling from U S WEST as an  
15 unbundled network element. Requiring U S WEST to provide service quality information  
16 for the UNE signaling service category will permit interested parties to determine if U S  
17 WEST is meeting its nondiscrimination obligation with respect to signaling. Absent the  
18 addition of this service category, U S WEST has no obligation to report any information on  
19 the quality of the signaling unbundled network element(s) that it provides to CLECs.

20 **9. UNE Platform (at least DSO loop + local switching +**  
21 **transport elements)<sup>2</sup>**

22 Based in part upon 47 C.F.R. 51.315(b) the Commission has already found that,  
23 "Rule 51.315(b) allows a CLEC to order as combined those elements that an ILEC currently  
24  
25

26 <sup>3</sup> Sprint will only support the addition of a service category for the UNE Platform if it is ordered by the Commission.

1100-100-1-1

1 combines."<sup>4</sup> The recent Supreme Court decision supported the Commission's UNE plat-  
2 form decision. The Supreme Court reached virtually the same conclusion as this  
3 Commission when it found:

4 It is true that Rule 315(b) could allow entrants access to an  
5 entire preassembled network. In the absence of Rule 315(b),  
6 however, incumbents could impose wasteful costs on even those  
7 carriers who requested less than the whole network. It is well  
8 within the bounds of the reasonable for the Commission to opt in  
9 favor of ensuring against an anticompetitive practice.<sup>5</sup>

10 The Commission, the FCC and the Supreme Court have all agreed that network  
11 elements that are already assembled (the UNE Platform) should be provided to a requesting  
12 telecommunications carrier in the assembled state. However, U S WEST has refused to  
13 provide any information on the quality in which it provides and maintains the UNE platform  
14 for CLECs. A service category for the UNE platform is necessary to ensure that U S WEST  
15 provides the relevant service quality information to determine if it is meeting its nondis-  
16 crimination obligations for the UNE platform.

17 **10. UNE Ports**

18 U S WEST has only agreed to provide data for UNE switch ports at the most  
19 aggregated level of reporting. U S WEST's proposal fails to recognize the differences in the  
20 various types of switch ports. An analog switch port will be used to serve a quite different  
21 *type of customer than will a DID capable switch port.*

22 The CLEC parties have proposed service categories that recognize the different types  
23 of switch ports. The CLEC parties have proposed switch port reporting by Analog, BRI  
24 Capable (Line Side), PRI (trunk side) DID-capable (trunk side) and Message Trunk port.  
25 Reporting by this level will provide a more reasonable disaggregation of the data and permit  
26

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<sup>4</sup> Before the Arizona Corporation Commission; *In the Matter of the Petition of MCIMetro Access Transmission Services, Inc. For Arbitration of Interconnection Rates, Terms and Conditions Pursuant to 47 U.S.C. §252(b) of the Telecommunications Act of 1996*; Docket No. U-3175-96-479 et al., Decision No. 60353, p. 7:27-28.

1 more meaningful comparisons of CLEC and U S WEST performance results.

2 **B. Issue: 2(a) – What are the performance indicators to be reported?**

3 The CLEC parties are advocating that the performance measures shown in the  
4 Exhibit C of the May 7, 1999 Joint Filing of the parties in this proceeding should be  
5 reported. Additionally, the CLEC parties propose that the additional performance measures  
6 as identified in Attachment A to this filing should be included.

7 **1. Average Interval Offered<sup>6</sup>**

8 The “average offered interval” indicates whether both U S WEST and CLEC have  
9 the same scheduling opportunities for service delivery. U S WEST claims that both its retail  
10 representative and CLECs should quote the same standard installation intervals to its  
11 customers. This measure will allow interested parties to determine if U S WEST is  
12 providing the same installation commitments to CLECs as it is for similarly situated U S  
13 WEST customers. The measure also shows non-parity if the U S WEST’s offered intervals  
14 match more closely the completion intervals for its customers than do the U S WEST’s  
15 offered and completion intervals for CLEC customers. CLECs need to honor their offered  
16 intervals to retain customers. Reporting of “average interval offered” information will allow  
17 interested parties to determine if CLECs and their customers are receiving  
18 nondiscriminatory treatment in U S WEST’s assignment of due dates.

19 **2. % Orders Receiving Jeopardy Notices<sup>7</sup>**

20 This is a measure of the percentage of total orders processed for which U S WEST  
21 notifies the CLEC that the work will not be completed as committed on the original FOC.  
22 The FCC has tentatively concluded that ILECs should report the percentage of orders given  
23

24 <sup>5</sup> *AT&T Corp. vs. Iowa Utilities Board*, \_ U.S. \_, 119 S. Ct. 721, 737-38 (1999).

25 <sup>6</sup> For a more detailed explanation of this measure, please see pages 27 – 29 of the Local  
26 Competition Users Group (LCUG), Service Quality Measurements (SQM), Version 7.0, August 28,  
1998 (“LCUG SQM”). This document is attached to this letter as Attachment B.

<sup>7</sup> See LCUG SQM, pp. 31-35 for more detailed information on this measure.

1 jeopardy notices.<sup>8</sup> The FCC explained the reason for this tentative conclusion when it  
2 stated:

3 This information will enable a competing carrier to determine  
4 whether a significantly higher percentage of its orders are placed  
5 in jeopardy than an incumbent LEC's retail orders. Although  
6 there are many reasons why orders are placed in jeopardy, a  
7 higher jeopardy rate for competing carriers might reflect a  
8 discriminatory preference by an incumbent LEC to complete its  
9 own orders first. Additionally, a competing carrier should  
receive a jeopardy notice for each of its orders that the  
incumbent LEC fails to complete on time. A competing carrier  
can determine whether it is receiving this requisite advance  
notice by comparing the Percentage of Orders Given Jeopardy  
Notices to the Percentage Due Dates Missed measurement.

10 If U S WEST knows it will miss a due date that it committed to on a FOC, it is  
11 critical that the CLEC be informed of this fact as soon as possible. This measure will help  
12 determine how well U S WEST does in informing CLECs of missed commitments in  
13 comparison to how well U S WEST does in informing its own customers.

14 **3. Average Jeopardy Interval and Mean Jeopardy Interval for  
15 Maintenance and Trouble Handling<sup>10</sup>**

16 Jeopardy Interval is the remaining time between the pre-existing committed order  
17 completion date and time (communicated via the FOC or as part of trouble reporting) and  
18 the date and time U S WEST issues a notice to the CLEC indicating an order or repair is in  
19 jeopardy of missing the due date. The FCC has tentatively concluded that an ILEC should  
20 measure the average jeopardy notice interval.<sup>11</sup> The Commission has also previously  
21 concluded that U S WEST should measure Jeopardy Notice Interval.<sup>12</sup> Despite consensus  
22

23 <sup>8</sup> Performance Measurements NPRM, ¶ 59.

24 <sup>9</sup> Performance Measurements NPRM, ¶ 63.

25 <sup>10</sup> See LCUG SQM, pp. 31-35 and 39-41 for more detailed information on these measures.

26 <sup>11</sup> Performance Measurements NPRM, ¶ 59.

<sup>12</sup> Before the Arizona Corporation Commission; *In the Matter of the Petition of American Communications Services, Inc. and American Communications Services of Pima County, Inc. for Arbitration with U S WEST Communications, Inc. of Interconnection Rates, Terms, and Conditions*

1 on the importance of this measure by the Commission, the FCC and the industry, U S  
2 WEST has refused to provide jeopardy notices to CLECs and to measure the performance of  
3 its jeopardy notification process. The CLEC parties urge the Chief Arbitrator to once again  
4 make it clear that jeopardy notice measures are still required.

5 **4. Coordinated Conversion Interval Measures (Average**  
6 **Coordinated Conversion Interval, % Service Loss from**  
7 **Early Cuts and % Service Loss from Late Cuts)<sup>13</sup>**

8 Problems with coordination of number portability and unbundled loops all too often  
9 result in customer out of service conditions or an inability of the customer to receive  
10 incoming calls. CLEC customers that have experienced troubles as a result of number  
11 portability problems will often cancel service with the CLEC and return to the ILEC. It is  
12 critical that measures be put in place that can identify how well U S WEST is implementing  
13 number portability conversions.

14 U S WEST has not committed to the development of any measures associated with  
15 unbundled loop and permanent number portability coordination measures. The FCC has  
16 tentatively concluded "incumbent LECs should measure the Average Coordinated Customer  
17 Conversion Interval."<sup>14</sup> The FCC found that "This performance measure will assist in  
18 determining how long a customer switching to a competing carrier is without local exchange  
19 service when the competing carrier utilizes the incumbent LEC's loop in conjunction with  
20 its own switching equipment, to provide such service."<sup>15</sup> The Coordinated Unbundled Loop  
21 Provisioning and INP Order Fulfillment measure was also contained as measure OP-6 in  
22 Exhibit A of the March 26, 1998 Procedural Order and as OP measures of the ALTS list of  
23 measures. Despite both industry and FCC on consensus on the need for unbundled loop and

24 *Pursuant to 47 U.S.C. § 252(b) of the Telecommunications Act of 1996.; Docket No. U-3021-96-*  
25 *448 et al., Procedural Order; March 26, 1998; p. 8, Measure OP-3.*

25 <sup>13</sup> See LCUG SQM, pp. 35-37 for more detailed information on these measures.

26 <sup>14</sup> Performance Measurements NPRM, ¶ 61.

<sup>15</sup> Performance Measurements NPRM, ¶ 61.

1 interim number portability coordination measures, U S WEST still has not committed that it  
2 will provide such measures. The CLEC parties urge the Chief Arbitrator to once again  
3 make it clear that such measures are required.

4 CLECs also would be willing to consider a measure similar one identified in a  
5 collaborative process in Texas between CLECs and ILECs. That measure is "Percent of I-  
6 Reports for LNP in X days". This measure would be an alternative to the "% service Loss  
7 from Late Cuts" and would be used to identify various post-installation LNP problems.

8 **5. % of Time 10-digit trigger is applied prior to the LNP**  
9 **Order Due Date**

10 There are times when an ILEC has not activated the number portability ten digit  
11 trigger in time for the scheduled number portability. If the unbundled loop has already been  
12 converted to the CLEC, this will result in an inability for customers to receive incoming  
13 calls. The proposed measure will identify the frequency that U S WEST applies the 10-  
14 digit trigger prior to the scheduled due date and will track the frequency of customer service  
15 disruptions in LNP only conversions as well as LNP with unbundled loop coordinated  
16 conversions.

17 **6. Percent Call Completion**

18 When customers place calls, they expect that their calls will go through. Likewise  
19 customers also expect that other callers will be able to reach them without having their calls  
20 blocked. In order to ensure that CLEC customers do not experience greater blocking to and  
21 from their lines than U S WEST customers do, it is necessary to measure and compare call  
22 completion rates for both U S WEST and CLEC customers.

23 The FCC has noted that, "data regarding the rate of call completion would be useful  
24 in assessing the quality of interconnection".<sup>16</sup> Call completion rates will provide valuable  
25 information on exactly what a customer experiences when he or she attempts a call.  
26

1 Comparison of call completion rates for U S WEST customers with the same rates for  
2 CLEC customers will help determine if U S WEST is providing equal quality  
3 interconnection.

4 **7. Average Database Update Interval and % Database Update**  
5 **Accuracy.<sup>16</sup>**

6 These two measures cover the timeliness and accuracy of the information U S WEST  
7 enters into its databases or databases under its control. The databases of interest would  
8 include the line information database ("LIDB"), the directory listings database, the  
9 advanced intelligent network ("AIN") database, the 800 number database, the E911  
10 Automatic Location Identifier ("ALI") and any other database that would contain customer  
11 information. Disparity in timely and accurate updates of the above databases can lead to  
12 annoying, costly and possibly "life and death" situations for CLEC customers.

13 As such, the CLEC parties urge the Chief Arbitrator to require reporting of the  
14 proposed database timeliness and accuracy measures. Performance results for these  
15 measures will permit a determination of U S WEST's compliance with its nondiscriminatory  
16 obligations.

17 **8. Average Delay Days for NXX Loading and Testing**

18 U S WEST needs to program CLEC new NXXs into its end office and tandem  
19 switches before LERG effective dates. The programming of new NXXs should also include  
20 a testing process. There have been occasions where U S WEST has not programmed a  
21 CLEC's NXX into its switches in a timely manner. That has resulted in an inability of U S  
22 WEST customers being served by an end office switch without the proper NXX program to  
23 call CLEC customers from the NXX in question. Late updates have also delayed switch  
24 launches for CLECs. NXX update errors also can result in a local call being incorrectly  
25

26 <sup>16</sup> Performance Measurements NPRM, ¶ 101.

<sup>17</sup> See LCUG SQM, pp. 63-64 for more detailed information on these measures.

1 rated as a toll call or causing the routing of a 911 call to the wrong PSAP. It is critical the U  
2 S WEST have timely and accurate CLEC NXX updates in its switches.

3 The proposed measure will track the time that U S WEST is late in programming  
4 CLEC NXXs into its end office and tandem switches. This measure was recently adopted  
5 by the Texas PUC as a means of monitoring the blocking a CLEC's market entry or  
6 expansion resulting from ILEC NXX update delays.

7 **9. MTTR NXX Loading Errors**

8 Once NXX errors are reported as troubles, U S WEST needs to fix the problem as  
9 soon as possible so that the CLEC customers can continue to receive calls from friends or  
10 their own customers after converting to the CLEC's service. This metric will show how  
11 quickly U S WEST remedies this type of trouble report to minimize the chance of the CLEC  
12 dissatisfying and possibly losing the customer.

13 **10. Timeliness of Change Management Notice**

14 CLECs often are stalled in developing electronic interfaces or keeping them running  
15 smoothly because ILECs do not follow the requirements of change management notice  
16 agreements. To track compliance with change management notice agreements, U S WEST  
17 should measure whether agreement notice intervals are followed for all types of change  
18 notice: 1) Emergency, 2) Regulatory Requirements, 3) Industry Forum Agreements, 4)  
19 ILEC Initiated and 5) CLEC Initiated. A submetric should be established to monitor  
20 whether Type 4 and Type 5 notices are being given equal treatment in terms of rejected  
21 requests and time of implementation. The NY Carrier-to-Carrier collaborative is finalizing  
22 a Timely Change Management measurement as one of the critical metrics in its performance  
23 measurement and remedy plan for Bell Atlantic.

24 **11. Response Time on Right of Way Requests and Percent of**  
25 **Requests Denied for Space Reasons**

26 The Telecommunications Act of 1996 requires ILECs to provide nondiscriminatory

1 access to poles, conduits and rights of way. The measure response time on right of way  
2 requests will assist interested parties in monitoring U S WEST's compliance with this  
3 requirement. In addition, U S WEST should also report on how many requests are denied  
4 for lack of space. A high number of such rejections may warrant further investigation of  
5 whether space truly does not exist for the CLECs to use.

6 **12. % Orders Completed In Standard Interval**

7 This measure is a compliment to a measure of U S WEST's average interval offered  
8 performance. It will indicate how well U S WEST does in meeting it parity requirement for  
9 delivering service within the standard interval. As a result of information provided by U S  
10 WEST, when a CLEC advises its customers of an installation due date based on the U S  
11 WEST standard interval, it should be able to deliver service just as dependably as U S  
12 WEST does within that interval. As part of discussions in Pennsylvania and New Jersey,  
13 Bell Atlantic has agreed to provide this measurement report and SBC/Pacific Bell has  
14 agreed to do so in California as well.

15 **13. Notice of OSS Outages**

16 U S WEST should measure how quickly it notifies CLECs of OSS system outages.  
17 Both Bell Atlantic in PA and NJ and SBC/Pacific Bell in California have agreed to provide  
18 such notification within specified amounts of time so that CLECs are aware of the problem.  
19 can pursue workarounds and not waste time investigating whether the problem is within  
20 their interface.

21 **14. Timeliness of Response to Bona Fide Requests**

22 This metric recognizes that from opening NXX codes to requesting new unbundled  
23 network elements, the receipt of timely responses to bona fide requests are important to  
24 CLEC market entry. U S WEST's timely responses to such requests per commitments in  
25 contracts needs to be monitored through this performance measurement to ensure that U S  
26 WEST promptly acts on CLEC bona fide requests.

1           C.    Issue 4(a) – For what customer groupings should data be reported?

2           Please see response to Issue 7(a).

3           D.    Issue 5(a) – What is the process to be followed for additional  
4           performance indicators to be added to or deleted from the list  
5           established by agreement or arbitration?

6           Performance indicators can be added through the actions of the Commission or  
7           through an amendment to the interconnection agreement. The Commission can of course,  
8           revisit its order in this docket on its own motion or through the complaint or request of a  
9           party at any time to modify the list of performance measures.

10          If the list of performance measures is intended to be incorporated into  
11          interconnection agreements, a party can attempt to modify the list through an amendment.  
12          Should there be a dispute on a proposed amendment to the interconnection agreement, a  
13          party may exercise the dispute resolution provision in the interconnection agreement.

14          E.    Issue 7(a) – What performance measurement results are appro-  
15          priate in order to determine whether USWC has provided  
16          interconnection and access to unbundled network elements to  
17          CLECs at a level of quality at least equal to that which U S WEST  
18          provides the item to itself, its customers, its affiliates or to any other  
19          party.

20          Interconnection: U S WEST internal results for the availability, provisioning,  
21          maintenance, repair and operations of interoffice trunks (both dedicated and common)  
22          should be compared to the CLEC interconnection trunk results.

23          Unbundled Network Elements: U S WEST should report the following retail results  
24          as analogues for unbundled network element performance:

Unbundled Network Element	Retail Analogue
2/4w (8db) analog loop (incl. Coin/analog PBX)	POTS - Business (dispatch)
2w digital loop (ISDN capable)	ISDN(BRI)
2w digital loop (xDSL capable)	ADSL
4w digital loop (1.544Mbps capable/HDSL)	ISDN(PRI)/DS1
UNE Port-Basic Analog/Coin	POTS - Business (dispatch)
UNE Port-CENTREX	CENTREX

1	UNE Port-ISDN (BRI)	CENTREX
2	UNE Port-DS1/ISDN-PRI (incl. DS1 line port)	DS1/ISDN(PRI)
3	UNE Port-PBX DID	PBX DID
4	UNE Dedicated Transport (incl. DS1 and DS3)	HICAP
5	UNE Platform	Analogous Retail Service

6 This is probably the most important of the unresolved issues. The Chief Arbitrator's  
7 decision in this issue could very well determine if facilities-based local exchange  
8 competition is viable in Arizona. U S WEST must provide to requesting carriers  
9 interconnection "that is at least equal in quality to that provided by [U S WEST] to itself or  
10 to any subsidiary, affiliate, or to any other party to which [U S WEST] provides  
11 interconnection". 47 U.S.C. § 251(c)(2)(C) (emphasis added). U S WEST is also obligated  
12 to provide network elements such that "the quality of an unbundled network element, as  
13 well as the quality of the access to such unbundled network element, that [U S WEST]  
14 provides to a requesting telecommunications carrier shall be at least equal in quality to that  
15 which [U S WEST] provides to itself." 47 C.F.R. § 51.311(b) (emphasis added).

16 U S WEST is willing to report results for the manner in which it provides  
17 interconnection and network elements to CLECs. However, to determine if CLECs are  
18 receiving interconnection and network elements "at least equal in quality to that which  
19 U S WEST provides to itself" U S WEST must also report on the level of interconnection  
20 and network element quality that it provides to itself. Unfortunately, U S WEST persists in  
21 its assertion that it provides neither interconnection nor unbundled network elements to  
22 itself. That assertion, coupled with the fact that U S WEST is not presently providing  
23 interconnection or network elements to any of its affiliates or subsidiaries in Arizona,  
24 would, by U S WEST's reckoning, leave the nondiscrimination standard as merely equal  
25 treatment between CLECs.

26 Acceptance of U S WEST's assertion that (1) it provides neither interconnection nor  
unbundled network elements to itself and (2) the corollary proposition that there is no

1 comparable U S WEST internal standards that could be used to determine if the level of  
2 quality that U S WEST provides to CLECs is equal to that which it provides to itself would  
3 provide U S WEST with license to discriminate against facilities-based CLECs with  
4 impunity.

5 Other ILECs have backed off of their position that there are no comparable internal  
6 or retail analogues for UNEs and interconnection. The above-proposed analogues were  
7 exactly the analogues that Pacific Bell agreed to in a service quality proceeding before the  
8 California Public Utilities Commission.<sup>18</sup> In that same proceeding, GTE also agreed to  
9 retail analogues for UNEs. Additionally, Sprint's incumbent local service division has  
10 agreed to report information for similar retail analogues.

11 The CLEC parties view their UNE and interconnection analogue proposal as a  
12 reasonable solution to a major, unresolved issue. One that other large ILECs have already  
13 agreed to. As such, the CLEC parties urge the Chief Arbitrator to adopt the CLEC parties'  
14 proposal for the performance data that U S WEST should compare to CLEC UNE and  
15 interconnection performance data.

16 Local Number Portability: Cox also believes that U S WEST results for an  
17 appropriate retail analogue should be compared to the actual duration of the number porting  
18 from U S WEST to a CLEC, assuming U S WEST begins porting the number at the agreed  
19 upon time for cutover of service from U S WEST to the CLEC.

20 ...

21 ...

22 ...

23

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24 <sup>18</sup> Before the Public Utilities Commission of the State of California, Order Instituting  
25 Rulemaking on the Commission's Own Motion In Monitoring Performance of Operations Support  
26 Article 13.5 of the Commission's Rules of Practice and Procedure, January 7, 1999; Attachment A,  
p. 18 ("California Settlement Agreement"). A copy of this agreement can be seen in Attachment C  
to this letter.

1 F. Issue 11(a) – When comparing results, what is the statistical  
2 confidence level that should be applied in determining whether a  
3 statistically significant difference in results exists?

4 With the exception of Cox, the CLECs believe that a confidence level that leads to  
5 equal risk of Type I and Type II errors should be applied. A confidence level of 85% should  
6 produce roughly equal probability of Type I and Type II errors. Cox does not favor a  
7 statistical approach. Rather, Cox supports performance levels that are assessed on a direct  
8 comparison of all actual results. This will eliminate improper manipulation or interpretation  
9 of statistical samples and the inevitable disputes over statistical issues.

10 One of the choices that has to be made when using a statistical test is to decide at  
11 which statistical level of confidence should the test be performed. Confidence levels are  
12 typically expressed as percents (*i.e.*, 85%, 95% or 99%). The higher the confidence level,  
13 the lower the probability of falsely concluding that there is a systematic difference in two  
14 sets of data when in fact the difference is due to random occurrence. The probability of  
15 falsely accusing U S WEST of discrimination when in fact there was no discrimination  
16 would be called a Type I error. Of course, U S WEST would like to minimize the  
17 probability of Type I errors.

18 However, a high confidence level greatly increases the probability of falsely  
19 concluding that there is no systematic difference in two sets of data when in fact there is.  
20 The probability of falsely concluding that U S WEST was not discriminating when in fact it  
21 was would be called a Type II error. From the CLEC's perspective, the statistical test  
22 procedure should be designed so as to minimize the probability of Type II errors.

23 Both types of errors are important in determining whether parity of access has been  
24 and is being delivered to the CLEC. Type II errors are as real as Type I errors and may be  
25 more harmful to competition. As a result, there may be instances in which U S WEST is not  
26 providing equal service to the CLEC, however, purely by chance, the statistical test fails to  
27 detect this problem. In any event, it is necessary to strike a balance between Type I and

1 Type II errors. Because sample sizes cannot be controlled, if the Type I error rate selected  
2 in the statistical methodology is too small, the Type II error rate will be large. The converse  
3 is also true.

4 Clearly, U S WEST has arbitrarily selected an error rate of 1% because it wants to  
5 reduce the risk that it will be falsely accused of providing discriminatory service to the  
6 CLEC. Under U S WEST's proposal, although there is a smaller risk of a Type I error  
7 occurring (a smaller risk of declaring U S WEST to be out of parity when it is really in  
8 parity), there is an increased risk of a Type II error (not declaring U S WEST to be out of  
9 parity when in fact it is). Thus, U S WEST's proposed statistical methodology is  
10 necessarily biased in its favor.

11 The only fair and rational basis for determining how low the risk of false accusation  
12 should be is to equalize the risks borne by U S WEST and the CLEC of any error counter to  
13 its interests. Fairness and the Telecommunications Act of 1996 require regulators develop a  
14 statistical test that treats ILECs and CLECs equally.

15 Statisticians have concluded that a confidence level of 85% will produce  
16 approximately equal probabilities of Type I and Type II errors. As such, the CLEC parties  
17 except Cox urge the Commission to require that the modified Z-statistic test be performed at  
18 an 85% confidence level. This will produce fair treatment of both U S WEST and the  
19 CLECs and produce a result that nearly equalizes the probability of Type I and Type II  
20 errors.

21 **G. Issue 12(a) – What remedial action and/or remedies should be taken**  
22 **if a statistically significant difference in results exists?**

23 With the exception of Cox, the CLECs believe that if a statistically significant  
24 difference in results for a particular performance indicator occurs as determined by a failure  
25 of statistical test, that test failure would be an indication of the existence of discrimination.  
26 When discrimination is statistically proven, self-executing enforcement mechanisms in the

1 form of penalties or remedies are appropriate and necessary. Cox does not favor a statistical  
2 approach. Rather, Cox supports performance levels that are assessed on a direct comparison  
3 of all actual results. This will eliminate improper manipulation or interpretation of  
4 statistical samples and the inevitable disputes over statistical issues.

5 Remedial actions should certainly be taken to correct any discriminatory  
6 performance. However, remedial action should not be a mandatory precursor to any  
7 conclusion of discriminatory performance. That only delays the process and serves no party  
8 but U S WEST.

9 Once a statistical test indicates discriminatory performance, self-executing  
10 mechanisms in the form of penalties or remedies are appropriate and necessary. The FCC  
11 recommends self-executing enforcement mechanisms as a timely and efficient method to  
12 address discriminatory treatment by the BOC:

13 [A]s part of our public interest inquiry, we would want to  
14 inquire whether the BOC has agreed to private and self-  
15 executing enforcement mechanisms that are automatically  
16 triggered by noncompliance with the applicable performance  
17 standard without resort to lengthy regulatory or judicial  
18 intervention. The absence of such enforcement mechanisms  
could significantly delay the development of local exchange  
competition by forcing new entrants to engage in protracted and  
contentious legal proceedings to enforce their contractual and  
statutory rights to obtain necessary inputs from the incumbent.

19 U S WEST's proposal would introduce just such delay as the FCC is trying to avoid.  
20 The CLEC parties recognize that U S WEST should have the opportunity to appeal any  
21 penalty or remedy triggered by self-executing enforcement mechanisms and attempt to  
22 explain the discriminatory performance. However, that appeal should only occur after a  
23 finding of discriminatory performance. Additionally, appeals should not be granted as a  
24 result of a U S WEST "promise to do better next time". If there is any regulatory burden to  
25 bear in the self-executing enforcement mechanism process, that burden should be carried  
26

1 primarily by U S WEST. Otherwise, U S WEST could stifle the development of local  
2 exchange competition by forcing new entrants into protracted and contentious legal  
3 proceedings.

4  
5 **H. Issue 14 (a) - How should the development and process costs of**  
6 **performance measurement be determined?**

7 Virtually all of the performance measurements in the May 22, 1998 joint filing of the  
8 parties and the additional measurements advocated by the CLECs have been developed by  
9 U S WEST long ago to support the operation of its business. As such, there should be  
negligible costs required to track those measurements.

10 **I. Issue 15 (a) - How should the development and process costs of**  
11 **performance measurement be apportioned?**

12 See response to 14 (a). To the extent that there are legitimate costs to develop new  
13 performance measures, those costs should not be recovered from CLECs. Apart from being  
14 a sound business practice that well-managed businesses routinely employ, performance  
15 monitoring and reporting of performance results benefits U S WEST. The performance  
16 results will be critical information in deciding whether U S WEST is compliant with its  
17 statutory obligations and whether it can provide in-region interLATA services. As such,  
18 this information may be more important to U S WEST than it is to CLECs.

19 Sprint's local service division was faced with the same types of performance costs  
20 and recognized that those costs should be considered a cost of doing business.  
21 Consequently, Sprint's local service has not attempted to recover those measurement costs  
22 from its CLEC customers.

23 ...  
24 ...  
25 ...

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26 <sup>19</sup> Ameritech Michigan Order, ¶394.

1 Respectfully submitted this 7<sup>th</sup> day of May, 1999.

2  
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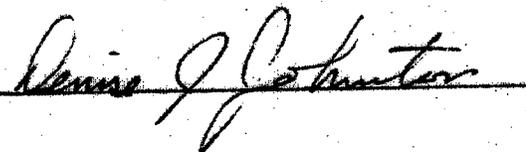
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### Additional CLEC Performance Measures

- Average Interval Offered
- % Mechanized Order Flow Through
- % Orders Rejected
- % Orders Receiving Jeopardy Notices
- Average Jeopardy Interval
- Average Coordinated Conversion Interval (Unbundled loops wo/number portability, Unbundled loops w/INP, Unbundled Loops w/LNP, INP wo/unbundled loop and LNP wo/unbundled loop)
- % Service Loss from Early Cuts
- % Service Loss from Late Cuts
- Mean Jeopardy Interval for Maintenance and Trouble Handling
- % Call Completion
- Mean Time to Provide Collocation Arrangement
- Average Database Update Interval
- % Database Update Accuracy

**LOCAL COMPETITION USERS  
GROUP (LCUG)**

**SERVICE QUALITY MEASUREMENTS (SQMs)**

August 28, 1998

Membership: AT&T, Sprint, MCI, LCI,  
WorldCom

Version 7.0

# Service Quality Measurements

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1100-100-111

# Service Quality Measurements Background

## **Background:**

On August 8, 1996, the Federal Communications Commission released its First Report and Order (the Order) in CC Docket No. 96-98 (Implementation of the Local Competition Provisions of the Telecommunications Act of 1996). The Order establishes regulations to implement the requirements of the Telecommunications Act of 1996. Those regulations are intended to enable potential competitive local exchange carriers (CLECs) to enter and compete in the local telecommunications markets. One requirement found to be "absolutely necessary" and "essential" to successful entry is that the incumbent local exchange carriers (ILECs) provide nondiscriminatory access to their operations support systems (OSSs). Many variations of interim OSS GUIs (graphic user interfaces) and electronic gateways have been or are being offered by the ILECs. These interim systems have not provided the capability for the CLECs to provide the same customer experience for their customers as compared to what the ILECs do for their customers. The availability, timeliness and accuracy of information processed by the ILEC for pre-ordering, ordering, provisioning, maintenance and repair, unbundled elements, and billing have not, to date, been satisfactory. Service delivery problems exist regardless of whether total service resale (TSR), unbundled elements, or interconnection are utilized. Final solutions for application-to-application real time system interfaces are elusive because of the complexity, the diversity of committed implementation schedules, and lack of or inconsistent use of industry guidelines.

On February 12, 1997, the Local Competition Users Group (LCUG) issued its "Foundation For Local Competition: Operations Support Systems Requirements For Network Platform and Total Services Resale." The core principles contained in the document are: Service Parity, Performance Measurement, Electronic Interfaces, Systems Integrity, Notification of Change, and Standards Adherence. Each of these is significant to ensure CLEC customers can receive at least equal levels of service compared to those the ILEC provides to its own customers.

The LCUG group indicated in its Foundation document that it was essential that a plan be developed to measure the ILECs performance for all the OSS categories (e.g. pre-ordering, ordering and provisioning, maintenance and repair, network performance, unbundled elements, operator services and directory assistance, system performance, service center availability and billing). To that end, an LCUG subcommittee was formed with a charter to address measurements and metrics. The subcommittee jointly developed a comprehensive list of potential measurements, which was shared among the team members for review. Each committee member researched an assigned measurement group for the purpose of proposing consolidation and other modifications. The subcommittee discussed each measurement and considered existing regulatory requirements (minimum service standards) as well as good business practices in arriving at the recommended measurement and extent of detail to be reported. Service Quality Measurement (SQM) benchmark levels of performance were established to provide a nondiscrimination standard in the absence of directly comparative ILEC results. Establishing precise benchmark levels was difficult since ILECs have been reluctant to share actual performance results. The benchmarks, therefore, were based upon best of class performance and an assessment of the necessary performance to support a meaningful opportunity for CLECs to compete. SQM benchmarks may change if the ILECs share historical and/or self-report current results.

## **Measurement Plans:**

A measurement plan, capable of monitoring for discriminatory behavior, must incorporate at least the following characteristics: 1) it permits direct comparisons of the CLEC and CLEC industry experience to that of the ILEC through recognized statistical procedures; 2) it accounts for potential performance variations due to differences in service and activity mix; 3) it measures not only retail services but experiences with UNEs and OSS interfaces; and 4) it produces results which demonstrate that nondiscriminatory access to OSS functionality is being delivered across all interfaces and a broad range of

## Service Quality Measurements Background

resold services, unbundled elements and interconnection capabilities. The measures employed must address availability, timeliness of execution, and accuracy of execution.

It is essential that the CLECs be able to determine that they are receiving at least equal treatment to that ILECs provide to their own retail operations or their local service affiliates. Benchmarks (performance standards) that are either negotiated by the CLECs and ILECs, or ordered by Commissions, need to clearly demonstrate that new service providers are receiving service on reasonable terms that affords an efficient CLEC a meaningful opportunity to compete.

This document discusses measurements at both a summary level (Executive Overview) and at a level suitable for starting the implementation process (Measurement Detail).

# Service Quality Measurements Business Rules

## Business Rules

### Test for Parity and Compliance with the Act:

Across all reporting dimensions, performance results (mean, proportion, or rate) should be collected for the ILEC's retail versus wholesale performance. Using a statistical model acceptable to CLECs, these results should be compared to confirm or reject an assumption of parity (in performance results and variance) for each dimension.<sup>1</sup> These individual parity comparisons should result in a monthly determination of the ILEC's compliance with its section 251 nondiscrimination obligations. The ILEC's record of compliance over some period of time will be used as one element in making a determination of compliance with section 271.<sup>2</sup>

### ILEC Results Are Not Reported Or Results Are Incomplete:

The mean, proportion or rate result for CLEC must be compared and a determination made that the CLEC result is no worse than the benchmark performance level. The benchmark performance level to be used in the comparison is the result produced via special study by an ILEC (as described below) or, in the absence of such a study result, either the LCUG default performance benchmarks or other applicable state standards as may be determined by the appropriate regulatory agency.

### Benchmarking Study Requirements:

The ILEC should produce a study supporting a benchmark performance level whenever a reasonable ILEC retail analog does not exist. When the ILEC performs a benchmarking study, it must be based upon equivalent experiences of that ILEC and conform to the following minimum requirements: (1) a benchmark result is provided for each reporting dimension described for the measurement; (2) the mean, standard error, and number of sample points are disclosed for each benchmark result; (3) the study process and benchmark are fully disclosed and independently audited; (4) update to the benchmark result will occur whenever changes may reasonably be expected to affect the study results and reviewed every six months for changes in the business climate that could significantly affect the benchmark. Unless directly ordered by the appropriate regulatory commission, no ILEC benchmark should be utilized without the mutual agreement of the CLECs impacted by the use of the benchmark.

### Reporting Expectations and Report Format:

CLEC results for the report month are to be shown in comparison to the ILEC retail result for the same period with an indication, for each measurement, where the CLEC result is lesser in quality compared to the ILEC (based upon the test for parity described in the preceding). Such detailed results should be reported only to the CLEC unless written permission is provided to do otherwise. Furthermore, reporting to the individual CLECs should include, for each measure, a representation of the dispersion around the average (mean) of the measured results for the reporting period (e.g. percent of 1-4 lines installed in the 1<sup>st</sup> day, 2<sup>nd</sup> day, 3<sup>rd</sup> day, and > 10 days, etc.) In summary, the ILEC should also report separately on its performance for each reporting dimension as provided to: (1) its own retail customers, (2) any of its affiliates that provide local service, (3) competing carriers (CLECs) in the aggregate, and (4) the individual CLEC receiving the report. The "affiliate" category above includes any ILEC affiliate that purchases local service for resale or purchases unbundled network elements from the ILEC. Performance results of the ILEC and ILEC affiliates would be provided to CLECs as proprietary information that could be used for legitimate business purposes other than marketing-type activities.

### Delivery of Reports and Data:

Reports should be made available to CLECs preferably by the 5<sup>th</sup> day following the close of the calendar report month or on an alternative schedule, which may be mutually agreed to between

<sup>1</sup> The details of this statistical model used to accept or reject an assumption of parity are found in LCUG's "Statistical Tests For Local Service Parity v1.0" white paper.

<sup>2</sup> The details of the methodology utilized to make a monthly 251 compliance determination as well as the requirements for 271 compliance are found in LCUG's "Local Service Non-Discrimination Compliance and Compliance Enforcement v1.0" white paper.

# Service Quality Measurements

## Business Rules

CLECs and the ILEC. If requested by the CLEC, data files of raw data supporting the performance reports are to be transmitted by the ILEC to the CLEC on the 5th scheduled business day pursuant to mutually acceptable format, protocol and transmission media. Likewise, individual CLEC reports should be considered proprietary and competitively sensitive. As such, no CLEC should receive information about another CLEC (other than a CLEC affiliate of an ILEC).

### **Disaggregation:**

Performance measurements reporting should be disaggregated to ensure parity comparisons are meaningful. The reporting dimensions in Appendix A provide LCUG's recommended disaggregation level for each Performance Measurement. The appropriate disaggregation across all ILECs should be comparable to the requirements in Appendix A. However, LCUG recognizes that the ILECs current method of operation may be unique and thus require modifying the disaggregation to be ILEC specific. The mutually agreed disaggregation must be consistent with the overall requirement of ensuring meaningful parity comparisons that do not obscure actual performance result differences.

Measurement data should be reported in a manner consistent with natural geographic and operational areas that allow prudent operational management decisions to be made and that do not obscure actual performance levels. Currently, ILECs report at levels as discrete as individual exchanges (Central Offices) and as aggregated as the ILEC Region.

Reporting at too high a level of geographic aggregation, for example, statewide (except for a LEC that may serve only a limited portion of a state) or LATA-wide (in states where LATAs encompass large geographic areas) can mask underlying differences in performance so as to make meaningful parity determinations unlikely. For example, if local competition exists only in one metropolitan area of a state, statewide measurement and reporting could obscure that an ILEC is providing significantly superior performance to its own metropolitan retail customers because of its below-average performance in non-competitive parts of the state.

Although an ILEC may claim that it cannot disaggregate below statewide/LATA reporting levels, it knows its performance in various regions within a state so that it can evaluate its operation and performance personnel, and allocation of resources within these smaller geographic units.

ILECs that currently report (whether externally or internally) performance in geographic units smaller than a state or LATA should continue to use those units. For ILECs that have not established such subdivisions, MSAs (metropolitan statistical areas) may be an appropriate level of geographic disaggregation.

Further, performance interval results are often affected by the volume of service requested by the CLEC. For instance, a request for 30 or more telephone numbers or an order for 100 lines will likely lead to a longer performance interval than a request for a single phone number or a single line installation. Hence, it is critical that interval-affecting volumes be reported separately to accurately depict ILEC performance in handling both the smaller and larger volume requests. The volume thresholds should be mutually agreed to by ILECs and CLECs and disaggregated sufficiently to allow a meaningful comparison of an ILEC's retail versus wholesale performance (e.g. Mean Completion Interval for 1-10 lines, 10-30 lines and greater than 30 lines).

### **Verification and Auditing:**

By request of one or more CLECs, an audit of data collecting, computing and reporting processes—as well as related business processes—must be permitted by the ILEC. The ILEC also must permit an individual CLEC to audit or examine its own results pursuant to terms no more restrictive than those established between the CLEC and the ILEC in their interconnection agreement for the relevant operating area.

## Service Quality Measurements Business Rules

During implementation of the measurement reporting, the validation of data collection, measurement result computation and report production will be necessary. The ILEC must permit such validation activities. It may not subsequently contend that such activities constitute an audit under the terms of the measurement plan or the CLEC's interconnection agreement.

### **Adaptation:**

Technology, market conditions and industry guidelines/standards continue to evolve. LCUG reserves the right to modify the content of this document as necessary to reflect such changes.

# Service Quality Measurements

## Executive Overview

### Executive Overview:

- Summarizes the business implications of each measurement function
- Quickly lists each measurement and its reporting dimensions

# Service Quality Measurements

## Executive Overview

### Ordering and Provisioning (OP)

<b>Function:</b>	
<b>Order Completion Intervals</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• When the CLEC commits to a due date for service delivery, the customer plans for service availability at that time and will be dissatisfied if the requested service or feature is not delivered when promised.</li> <li>• The "average completion interval" metric monitors the time required by the ILEC to deliver integrated and operable service components requested by a CLEC, regardless of whether total service resale or unbundled network elements are employed</li> <li>• When the service delivery interval of the ILEC is measured for comparable services, then conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers.</li> <li>• The "average completion interval" and "percent completed on time" also may prove useful in detecting developing network capacity problems.</li> <li>• The "average offered interval" shows whether the ILEC offers less favorable timeframes for completions to CLECs than to itself or affiliates. This measure also can be compared to the "mean completion interval" to note disparities in timeframes CLECs are offered but are later changed by the ILEC.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Average Completion Interval</li> <li>• % Orders Completed on Time</li> <li>• Average Offered Interval</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Type</li> <li>• Order Activity Type</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>

<b>Function:</b>	
<b>Order Processing Quality</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Customers expect that their service provider will deliver precisely the service ordered and all the features specified.</li> <li>• The "order accuracy" measurement monitors the accuracy of the provisioning work performed by the ILEC in response to CLEC orders.</li> <li>• Measuring the percent of mechanized order flow through is critical to reducing errors and inefficiency caused by ILEC rekeying CLEC orders on behalf of customers.</li> <li>• Measurements of order rejections and resubmissions can highlight problems with ILEC systems or training processes unduly affecting the CLEC.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• % Order Accuracy</li> <li>• % Mechanized Order Flow Through</li> <li>• % Order Rejections</li> <li>• Average Submissions Per Order</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Interface Type</li> <li>• Service Type</li> <li>• Order Activity Type</li> <li>• Volume Category</li> </ul>

# Service Quality Measurements

## Executive Overview

<b>Function:</b>	
<b>Order Status</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• When customers call their service provider, they expect to be able to promptly get information regarding the progress on their orders</li> <li>• When changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans.</li> <li>• The order status measurements, when compared to the ILEC result, will indicate whether the CLEC has timely access to all the information needed to notify its customers promptly when changes and rescheduling are required.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Reject Interval</li> <li>• FOC Interval</li> <li>• Jeopardy Interval</li> <li>• Completion Notice Interval</li> <li>• % Completions/Attempts Without Notice or With Notice Less Than 24 Hours</li> <li>• % Jeopardies</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Interface Type</li> <li>• Service Type</li> <li>• Order Activity</li> <li>• Geographic Scope</li> </ul>

<b>Function:</b>	
<b>Coordinated Cutovers</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Customers must not be subjected to unscheduled service disruptions because of lengthy or uncoordinated cutovers of loops with interim or permanent number portability.</li> <li>• Customers have suffered loss of dialtone due to the early cutover of trunks with interim number portability. Late ILNP facilities conversions and PNP conversions of translations by ILECs also can cause unscheduled disruptions in service.</li> <li>• The "coordinated cutover" measurements capture the extent to which CLEC customers face more losses in dialtone or call blocking due to mishandling of such cutovers.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Average Coordinated Conversion Interval</li> <li>• % Service Loss from Early Cuts</li> <li>• % Service Loss from Late Cuts</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Types</li> <li>• Order Activity</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>

<b>Function:</b>	
<b>Held Orders</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Customers expect that work will be completed when promised.</li> <li>• There must be assurances that the average period that CLEC orders are held, due to a delayed completion, is no longer for CLEC than ILEC orders.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Held Order Interval</li> <li>• % Orders Held ≥ 90 Days</li> <li>• % Orders Held ≥ 15 Days</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Type</li> <li>• Reason for Hold (no facilities, no equipment, workload, other)</li> <li>• Geographic Scope</li> </ul>

# Service Quality Measurements

## Executive Overview

### Maintenance and Repair (MR)

<b>Time To Restore</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Customers expect prompt restoration of service to the normal operating parameters whenever troubles are detected.</li> <li>• The longer the time required to correct a service problem, the greater the customer dissatisfaction</li> <li>• Failure to provide parity in jeopardy notices regarding maintenance appointments can cause customers great inconvenience, particularly for delivery of service through collocations and UNEs when massive coordination of vendors, technicians, translations specialists and other technicians are involved. Customers will not tolerate a provider that cannot at least notify them when a maintenance or trouble handling appointment cannot be met.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Time to Restore</li> <li>• Average Jeopardy Notice Interval for Maintenance Appointments/Trouble Handling</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Type</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>

<b>Function:</b>	
<b>Frequency of Repeat Troubles</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• This measurement, when gathered for both the ILEC and CLEC, can establish whether or not CLECs are competitively disadvantaged (vis-à-vis the ILEC) as a result of experiencing more frequent occurrences of customer troubles not being resolved on the first repair attempt. Differences in this measure may indicate that the CLEC is receiving inferior maintenance support in the initial resolution of troubles or, in the alternative, it may indicate that the network components supplied are of inferior quality.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Repeat Trouble Rate</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Type</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>

## Service Quality Measurements Executive Overview

<b>Function:</b>	
<b>Frequency of Troubles</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Customers demand high quality service from their supplier, and differentials in supplier performance are quickly recognized throughout the market place.</li> <li>• When measured for both the ILEC and CLEC and compared, this metric shows whether CLECs are competitively disadvantaged, compared to ILECs, as a result of experiencing more frequent incidents of trouble reports.</li> <li>• Disparity in this measure may indicate differences in the underlying quality of the network components supplied.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Trouble Rate</li> <li>• % Troubles in 30 Days of New Installations and Other Order Activity</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Geographic Scope</li> <li>• Service Type</li> <li>• Trouble Type</li> </ul>

<b>Function:</b>	
<b>Estimated Time To Restore Met</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• When customers experience trouble on working services, they naturally expect the services to be restored within the time frame promised.</li> <li>• When this measure is collected for the ILEC and CLEC and then compared, it can be used to establish that CLECs are receiving equally reliable (as compared to the ILEC operations) estimates of the time required to complete repairs.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• % Customer Troubles Resolved Within Estimate</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Type</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>

# Service Quality Measurements

## Executive Overview

### General (GE)

<b>Function:</b>	
<b>Systems Availability</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Dependable access to essential business functionality, supported by OSS of the ILEC, is absolutely essential to CLEC operations.</li> <li>• This measure monitors whether such OSS functionality is at least as accessible by the CLEC as by the ILEC.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• % System Availability</li> </ul>	<ul style="list-style-type: none"> <li>• By Function Interface</li> <li>• Company</li> <li>• Business Period</li> </ul>

<b>Function:</b>	
<b>Center Responsiveness</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• When CLECs experience operational problems dealing with ILEC processes or interfaces, prompt support by the ILEC is required in order to ensure that CLEC customers are not adversely impacted</li> <li>• Any delay in responding to CLEC center requests for support (e.g., request for a vanity telephone number) will, in turn, adversely impact the CLEC retail customer who may be holding on-line with the CLEC customer service agent.</li> <li>• This measure monitors whether the ILEC's handling of support calls from CLECs is at least as responsive as the ILEC's handling of calls from its retail customers seeking assistance (e.g., calling the business office of the ILEC or calling the ILEC to report service repair issues).</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Mean Time to Answer Calls</li> <li>• Call Abandonment Rate</li> </ul>	<ul style="list-style-type: none"> <li>• By Support Center Provided</li> </ul>

<b>Function:</b>	
<b>Average Response Interval for Real-Time OSS Queries</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• The CLEC customer service agent must determine the availability of desired features, likely service delivery intervals, telephone number(s) to be assigned and the validity of the street address information while the customer (or potential customer) is on the line.</li> <li>• It is critical that the CLEC employees be perceived as equally competent, knowledgeable and fast as ILEC customer service agents.</li> <li>• This measure is designed to monitor the time required for CLECs to obtain the pre-ordering information necessary to establish and modify service and maintenance information necessary to handle trouble resolution activities.</li> <li>• Comparison to the ILEC results allow conclusions regarding whether CLECs have an equal opportunity to deliver a comparable customer service experience when a retail customer calls with a service inquiry.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Average Response Interval for OSS Query Information</li> </ul>	<ul style="list-style-type: none"> <li>• Query Type (Pre-Ordering and Maintenance)</li> <li>• Interface Type for Each Functional Area</li> </ul>

# Service Quality Measurements

## Executive Overview

### Billing (BI)

<b>Function:</b>	
<b>Timeliness Of Billing Record Delivery</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>Regardless whether the billing is for retail customer or exchange access service, the timing of ILEC delivery of billing records must provide CLECs with the opportunity to deliver timely bills in as timely a manner as the ILEC; otherwise artificial competitive advantage would be realized by the ILEC.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>Mean Time to Provide Recorded Usage Records</li> <li>Mean Time to Deliver Invoices</li> </ul>	<ul style="list-style-type: none"> <li>Company</li> <li>Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)</li> </ul>

<b>Function:</b>	
<b>Accuracy of Billing Records</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>The accuracy of billing records affects the accuracy of the billing ultimately delivered to local service customers, whether retail local service or exchange access service customers.</li> <li>Billing for the elements from which CLEC services are constructed must be validated to assure that only correct charges are paid.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>% Invoice Accuracy</li> <li>% Usage Accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Company</li> <li>Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)</li> </ul>

# Service Quality Measurements

## Executive Overview

### Operator Services/Directory Assistance & Listings (OS, DA & DL)

<b>Function:</b>	
Speed To Answer	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>The speed of answer delivered to CLEC retail customers, when the ILEC provides Operator Services or Directory Services on behalf of the CLEC, must be no slower than the speed of answer that the ILEC delivers to its own retail customers of equivalent local services.</li> <li>CLECs need adequate time to review the accuracy of directory listings before publication. The opportunity to check for errors should be available at parity with that afforded the ILEC or its affiliates regardless of whether manual or electronic interfaces are available.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>Mean Time to Answer</li> <li>Average Time Provided To Proof Updated Listings Prior to Publication</li> </ul>	<ul style="list-style-type: none"> <li>Company</li> <li>Operator Services by Center</li> <li>Directory Service by Center</li> <li>Directory Listings by Directory</li> </ul> <p>Note: OS/DA Speed to Answer is to be CLEC-specific if technically feasible.</p>

# Service Quality Measurements

## Executive Overview

### Network Performance (NP)

<b>Function:</b>	
<b>Network Performance</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNE combinations are employed, will be heavily influenced by the underlying quality of the ILEC network performance.</li> <li>• Customers experience the quality of the service provider each time services are used.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• % Call Completion (Inbound and Outbound)</li> <li>• Mean time to notify CLEC of a Network Incident/Outage</li> <li>• Transmission Quality</li> </ul>	<ul style="list-style-type: none"> <li>• Trunk Type</li> <li>• Switch</li> <li>• Company</li> <li>• Geographic Scope</li> <li>• Reportable Incident</li> </ul>

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# Service Quality Measurements

## Executive Overview

### Collocation Provisioning (CP)

<b>Function:</b>	
<b>Timeliness of Collocation Provisioning</b>	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Timely responses about the availability and price of collocation space or alternatives where space is not available or high priced is critical for CLEC financial planning on expansions beyond the calling areas of its switches.</li> <li>• Timely provisioning of collocation arrangements enables CLECs to keep to business plans for entering new service areas.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Mean Time To Respond to Collocation Request</li> <li>• Mean Time To Provide Collocation Arrangement</li> <li>• % Due Dates Missed</li> </ul>	<ul style="list-style-type: none"> <li>• Company</li> <li>• Collocation Type</li> <li>• Geographic Scope</li> </ul>

# Service Quality Measurements

## Executive Overview

### Database Updates (DU)

<b>Function:</b>	
Database Update Timelines and Accuracy	
<b>Business Implications</b>	
<ul style="list-style-type: none"><li>• Timely and accurate database updates are critical to customers receiving prompt emergency assistance at correct locations when they dial 911; customers and friends obtaining correct dialing information from operators or telephone directories; and callers seeking correct information about acceptance of collect or third-party-billed calls.</li><li>• Timely and accurate loading of CLECs' NXXs enable proper completion and billing of all calls, on-time launch of new facilities-based service, and proper emergency routing of calls for emergency assistance.</li></ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"><li>• Average Update Interval</li><li>• % Update Accuracy</li></ul>	<ul style="list-style-type: none"><li>• Company</li><li>• Database Type</li></ul>

# Service Quality Measurements

## Executive Overview

### Interconnect / Unbundled Elements and Combos (IUE)

<b>Function:</b>	
Availability of Network Elements	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• Because CLECs use individual elements as well as element combinations to deliver unique services, it is essential that the UNE functionality operate properly due to the crucial role played by such elements in providing quality retail services.</li> <li>• This measure monitors individual network element or element combinations, that do not have an apparent retail analog, to assure that CLECs have a meaningful opportunity to compete through access to and use of an element (or combinations) functionality.</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Function Availability</li> </ul>	<ul style="list-style-type: none"> <li>• By Unique UNE or UNE Combination Requested by CLEC</li> </ul>

<b>Function:</b>	
Performance of Network Elements	
<b>Business Implications:</b>	
<ul style="list-style-type: none"> <li>• As CLECs use individual elements (as well as element combinations) to deliver unique services, it is essential that the UNE functionality operates in a timely manner because of the crucial role played by such elements in providing quality retail services</li> </ul>	
<b>Measurements:</b>	<b>Results Detail:</b>
<ul style="list-style-type: none"> <li>• Timeliness of Element Performance</li> </ul>	<ul style="list-style-type: none"> <li>• By Unique UNE or UNE Combination employed (e.g. LIDB Query time out)</li> </ul>

## Service Quality Measurements Formula Quick Reference

### Formula Quick Reference Guide

Measurement Designation:	Measurement Name:	Measurement Formula:
<b>Ordering and Provisioning (OP)</b>		
OP-1	Average Completion Interval	Average Completion Interval = $\Sigma [(\text{Completion Date \& Time}) - (\text{Order Submission Date \& Time})] / (\text{Count of Orders Completed in Reporting Period})$
OP-2	% Orders Completed on Time	% Orders Completed on Time = $(\text{Count of Orders Completed within ILEC Committed Due Date}) / (\text{Count of Orders Completed in Reporting Period}) \times 100$
OP-3	Average Offered Interval	Average Offered Interval = $\Sigma [(\text{Committed Due Date \& Time}) - (\text{Date \& Time of Receipt of valid Service Request})] / (\text{Number of Committed Due Dates})$
OP-4	% Order Accuracy	% Order Accuracy = $(\Sigma \text{Orders Completed w/o Error}) / (\Sigma \text{Orders Completed}) \times 100$
OP-5	% Mechanized Order Flow Through	% Mechanized Order Flow Through = $[(\text{Total Number of Orders Processed Without Manual Intervention}) / (\text{Total Number of Orders Completed})] \times 100$
OP-6	% Orders Rejected	% Orders Rejected = $[\text{Number of Orders Rejected Due to Error or Omission} / \text{Number of Orders Received by ILEC During Reporting Period}] \times 100$
OP-7	Average Submissions Per Order	Average Submissions Per Order = $\Sigma [(\text{Number of Firm Order Confirmations}) + (\text{Number of Rejections Issued})] / (\text{Number of Firm Order Confirmations})$
OP-8	Reject Interval	Reject Interval = $\Sigma [(\text{Date and Time of Order Rejection}) - (\text{Date and Time of Order Receipt or Acknowledgment})] / (\text{Number of Orders Rejected in Reporting Period})$
OP-9	FOC Interval	FOC Interval = $\Sigma [(\text{Date and Time of Firm Order Confirmation}) - (\text{Date and Time of Order Acknowledgment})] / (\text{Number of Orders Confirmed in Reporting Period})$
OP-10	Jeopardy Interval	Jeopardy Interval = $\Sigma [(\text{Date and Time of Committed Due Date for the Order}) - (\text{Date and Time of Jeopardy Notice})] / (\text{Number of Orders Jeopardized in Reporting Period})$ . For all orders jeopardized on or before the scheduled due date.
OP-11	Completion Notice Interval	Completion Notice Interval = $\Sigma [(\text{Date and Time of Notice of Completion Issued to the CLEC}) - (\text{Date and Time of Work Completion by ILEC})] / (\text{Number of Orders Completed in Reporting Period})$
OP-12	% Completions/Attempts without Notice or with Less Than 24 Hours Notice.	% Completions/Attempts without Notice or with Less Than 24 Hours Notice = $[\text{Completion Dispatches (Successful and Unsuccessful) With No FOC or FOC Received Within 24 Hours of Due Date} / \text{All Completions}] \times 100$

## Service Quality Measurements Formula Quick Reference

Measurement Designation	Measurement Name	Measurement Formula
OP-13	% Jeopardies	% Jeopardies = (Number of Orders Jeopardized in Reporting Period) / (Number of Orders Confirmed in Reporting Period)
OP-14	Average Coordinated Conversion Interval	Average Coordinated Conversion Interval = $\Sigma$ [(Date & Time Re-termination is Completed by ILEC) - Date and Time of Initial Service Interruption (disconnect of facilities and translations for customer transferring service) / All Customer Conversions Completed During Reporting Period] x 100
OP-15	% Service Loss from Early Cuts	% Service Loss from Early Cuts = (Customer Conversion Where Cutover Time is Earlier Than Due Date and Time) / (All Customer Conversions Completed During Reporting Period) x 100
OP-16	% Service Loss from Late Cuts	% Service Loss from Late Cuts = (Customer Conversion Where Cutover Time is More Than 30 Minutes Past Due Date and Time) / (All Customer Conversion Completed During Reporting Period) x 100
OP-17	Held Order Interval	Held Order Interval = $\Sigma$ (Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past The Committed Due Date) for all orders pending and past the committed due date
OP-18	% Orders Held $\geq$ 90 Days	% Orders Held $\geq$ 90 Days = (# of Orders Held for $\geq$ 90 days) / (Total # of Orders Pending But Not Completed) x 100
OP-19	% Orders Held $\geq$ 15 Days	% Orders Held $\geq$ 15 Days = (# of Orders Held for $\geq$ 15 days) / (Total # of Orders Pending But Not Completed) x 100
<b>Maintenance and Repair (MR)</b>		
MR-1	Mean Time to Restore	Mean Time To Restore = $\Sigma$ [(Date and Time of Trouble Ticket Resolution Returned to CLEC) - (Date and Time Trouble Ticket Referred to ILEC)] / (Count of Trouble Tickets Resolved in Reporting Period)
MR-2	Mean Jeopardy Interval for Maintenance and Trouble Handling	Mean Jeopardy Interval for Maintenance and Trouble Handling = $\Sigma$ [(Date and Time of Committed Due Date for Maintenance or Trouble Handling) - (Date and Time of Jeopardy Notice)] / (Number of Maintenance or Trouble Handling Appointments Jeopardized in Reporting Period)
MR-3	Repeat Trouble Rate	Repeat Trouble Rate = (Count of Trouble Reports Where More Than One Trouble Report Was Logged for the Same Service Access Line Within a Continuous 30 Day Period) / (Number of Reports in the Report Period) x 100
MR-4	Trouble Rate	Trouble Rate = (Count of Initial & Repeated Trouble Reports in the Current Period) / (Number of Service Access Line in Service at End of the Report Period) x 100

## Service Quality Measurements Formula Quick Reference

Measurement Designation	Measurement Name	Measurement Formula
MR-5	% Troubles Within 30 Days of Install and Other Order Activity	% Troubles Within 30 Days of Install and Other Order Activity = (Total Number of Trouble Tickets Associated With Lines That Had Service Order Activity Within 30 Days of the Trouble Report)/(Total Number of Orders Completed in the Report Period)
MR-6	% Customer Troubles Resolved Within Estimate	% Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100
<b>General (G)</b>		
GE-1	% System Availability	% System Availability = [(Hours Functionality is Available to CLECs During Report Period) / (Number of Hours Functionality was Scheduled to be Available During the Period)] x 100
GE-2	Mean Time to Answer Calls	Mean Time to Answer Calls = $\Sigma$ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)] / (Total Calls Answered by Center)
GE-3	Call Abandonment Rate	Call Abandonment Rate = (Count of Calls Terminated Before Answer During the Reporting Period) / (Count of All Calls Placed in Queue During the Reporting Period)
GE-4	Average Response Interval	Average Response Interval = $\Sigma$ [(Query Response Date & Time) - (Query Submission Date & Time)] / (Number of Queries Submitted in Reporting Period)
<b>Billing (BI)</b>		
BI-1	Mean Time to Provide Recorded Usage Records	Mean Time to Provide Recorded Usage Records = $\{ \Sigma [ (Data Set Transmission Date) - (Date of Message Recording) ] \} / (Count of All Messages Transmitted in Reporting Period)$
BI-2	Mean Time to Deliver Invoices	Mean Time to Deliver Invoices = $\Sigma [ (Invoice Transmission Date) - (Date of Scheduled Bill Cycle Close) ] / (Count of Invoices Transmitted in Reporting Period)$
BI-3	% Invoice Accuracy	% Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period] x 100
BI-4	% Usage Accuracy	% Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100
<b>Operator Services/Directory Assistance &amp; Listings (OS, DA and DL)</b>		
OS/DA-1	Mean Time To Answer	Mean Time To Answer = $\Sigma$ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)] / (Total Calls Answered on Behalf of CLECs in Reporting Period)

## Service Quality Measurements Formula Quick Reference

Measurement Designation	Measurement Name	Measurement Formula
<b>DL-1</b>	<b>Average Time Allotted To Proof Listing Updates Before Publication</b>	Average Time Allotted To Proof Listing Updates Before Publication = $\Sigma[(\text{Date \& Time of Directory Publication Deadline}) - (\text{Date and Time Updates Available for Proofing})] / \text{Number of Updates Sent for Proofing}$
<b>Network Performance (NP)</b>		
<b>NP-1</b>	<b>% Call Completion</b>	% Call Completion = $[(\text{Total number of blocked call attempts during busy hour}) / (\text{Total number of call attempts during busy hour})] \times 100$ . (inbound and outbound call attempts would be measured separately)
<b>NP-2</b>	<b>Meantime To Notify CLEC</b>	Meantime To Notify CLEC = $\Sigma[(\text{Date and Time ILEC Notified CLEC}) - (\text{Date and Time ILEC detected network incident})] / \text{Count of Network Incidents}$
<b>NP-3</b>	<b>Network Performance Parameters</b>	Network Performance Parameters = $\Sigma(\text{Network Performance Parameter Result}) / (\text{Number of Tests Conducted})$
<b>Collocation Provisioning (CP)</b>		
<b>CP-1</b>	<b>Meantime To Respond To Collocation Request</b>	Meantime To Respond To Collocation = $\Sigma[(\text{Request Response Date}) - (\text{Request Submission Date})] / \text{Count of Request Responses Issued}$
<b>CP-2</b>	<b>Meantime To Provide Collocation Arrangement</b>	Meantime To Provide Collocation Arrangement Request = $\Sigma[(\text{Date \& Time Collocation Arrangement is Complete}) - (\text{Date \& Time Collocation application submitted})] / \text{Number of Collocation Arrangements Complete}$
<b>CP-3</b>	<b>% Due Dates Missed</b>	% Due Dates Missed = $(\text{Number of Orders Not Completed By ILEC Committed Due Date}) / \text{Total Number of Orders Completed During the Reporting Period}$
<b>Database Updates (DU)</b>		
<b>DU-1</b>	<b>Average Update Interval</b>	Average Update Interval = $\Sigma[(\text{Completion Date \& Time of Database Update}) - (\text{Submission Date and Time of Database Change})] / \text{Total Number of Updates Completed During Reporting Period}$
<b>DU-2</b>	<b>% Update Accuracy</b>	% Update Accuracy = $[\text{Number of Updates Completed Without Error}] / (\text{Number Updates Completed}) \times 100$
<b>Interconnect / Unbundled Elements and Combos (IUE)</b>		
<b>IUE-1</b>	<b>Function Availability</b>	Function Availability <sup>1</sup> = $(\text{Amount of Time}^2 \text{ a Functionality is Useable}^1 \text{ by a CLEC in a Specified Period}) / (\text{Total Time}^2 \text{ Functionality Was Intended to Be Useable})$  Notes: 1. These measures may also be expressed in the negative, that is, in term of unavailability. 2. In some instances, rather than time, the availability will be expressed in terms of transactions executed successfully compared to transactions attempted

## Service Quality Measurements Formula Quick Reference

Measurement Designation	Measurement Name	Measurement Formula
TUE-2	Timeliness of Element Performance	$\text{Timeliness of Element Performance} = \frac{\text{Number of Times Functionality Executes Successfully Within the Established Timeliness Standard}}{\text{Number of Times Execution of Functionality was Attempted}}$

## Service Quality Measurements Measurement Detail

### Measurement Detail:

- Highlights the business implications of each measurement function
- Details the measurement methodology, analogous retail functions, reporting dimensions, and objective performance standard in the absence of ILEC retail performance results

# Service Quality Measurements

## Measurement Detail

### Pre-Ordering (PO)

The content of this section has been moved to the "General" section.

### Ordering and Provisioning (OP)

<b>Function:</b> <b>Business Implications:</b>	<p><b>Order Completion Intervals</b></p> <p>In order to be successful in the marketplace, CLECs must be capable of delivering service in time frames equal to or better than the ILEC delivers for comparable service configurations and activities. Likewise, CLECs' customers will be dissatisfied if requested services or features are not delivered when promised. The "average completion interval" measure monitors the time required by the ILEC to deliver integrated and operable service components requested by the CLEC, regardless of whether service resale, unbundled network elements or interconnection service delivery methods are employed. When the service delivery interval of the ILEC is measured for comparable services, a conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers. Timely provisioning of interconnect trunks and inbound augments by the ILEC can prevent customer harm from call blocking before the problem occurs.</p> <p>The "orders completed on time" measure monitors the reliability of ILEC commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customers. In addition, when monitored over time, the "average completion interval" and "percent completed on time" may prove useful in detecting developing capacity issues. The "average offered interval" indicates whether both ILEC and CLEC have the same scheduling opportunities for service delivery. The measure also shows non-parity if the ILEC's offered intervals match more closely the completion intervals for its customers than do the ILEC's offered and completion intervals for CLEC customers. CLECs need to honor their offered intervals to retain customers.</p> <p>Timely delivery of interconnect trunks and augments based on CLEC traffic projections rather than current utilization is a significant capacity parity issue. Because of the ILEC's more extensive network and greater use of DEOTs (direct end office trunks), ILECs typically do not need to augment their own trunks until utilization reaches 85%. A CLEC, however, is very likely to see its 50% utilization rate jump to 100% with the addition of one or two large customers. An ILEC should not deny the CLEC's request for inbound interconnect trunk augments when the CLEC's current utilization level does not match the percentage level at which the ILEC augments its own trunks. The ILEC's network should meet the CLEC's forecasted or otherwise formally communicated business needs for augment trunks and DS3 trunks (which must be in place before local tandem trunks and DEOT orders are placed).</p>
<b>Measurement Methodology:</b>	<p><b>Average Completion Interval = <math>\Sigma</math> [(Completion Date &amp; Time) - (Order Submission Date &amp; Time)] / (Count of Orders Completed in Reporting Period)</b></p> <p><b>% Orders Completed on Time = (Count of Orders Completed within ILEC Committed Due Date) / (Count of Orders Completed in Reporting Period) x 100</b></p>

## Service Quality Measurements Measurement Detail

**Average Offered Interval = [(Date & Time Due Date) - (Date & Time of Receipt of Service Request)]/(Number of Committed Due Dates)**

**For CLEC Results:** The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from the ILEC receipt of a syntactically correct order from the CLEC to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is accumulated for each reporting dimension (see below). The accumulated time for each reporting dimension then is divided by the associated total number of orders completed within the reporting period.

The percentage of orders completed on time is determined by first counting, for each specified reporting dimension, both the total numbers of orders completed within the reporting interval and the number of orders completed by the committed due date (as specified on the initial FOC returned to the CLEC). For each reporting dimension, the resulting count of orders completed no later than the committed due date is divided by the total number of orders completed with the resulting fraction expressed as a percentage.

Although CLEC forecasts are not technically "orders", the CLEC forecast provides the ILEC with the information it needs to be able to augment its inbound trunks (and other ILEC trunks needed for efficient interconnection) in a timely manner to handle the forecasted CLEC calling volume. To calculate ILEC trunk augments as a percentage of "orders" completed on time, the due date is the date on which the additional trunk is needed by the CLEC, as stated in the forecast. The total number of ILEC augments completed no later than the due date is divided by the total number of ILEC augments completed in the reporting period. The resulting fraction is expressed as a percentage.

The offered interval is the due date that an ILEC provides the CLEC on a firm order confirmation (i.e. the earliest date on which the CLEC's customer can obtain service without paying for an escalation).

**For ILEC Results:** Same as for CLEC with the clarifications noted below.

### **Other Clarifications and Qualification:**

- The elapsed time for an ILEC order is measured from the point in time when the ILEC customer service agent enters the order into the ILEC order processing system until the date and time that the ILEC personnel log actual completion of all work necessary to permit service initiation, whether or not the ILEC initiates customer billing at that point in time.
- Results for the CLECs are captured and retained at the order level (e.g., unique PON).
- The Completion Date and Time is the date upon which the ILEC issues the Order Completion Notice to the CLEC.
- If the CLEC initiates a supplement to the originally submitted order and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the order submission date and time will be the date and time of the ILEC receipt of a syntactically correct order supplement.
- No other supplemental order activities will result in an update to the order submission date and time used for the purposes of computing the order completion interval.

## Service Quality Measurements Measurement Detail

	<ul style="list-style-type: none"> <li>• See "Order Status" measurement detail for a discussion of ILEC analogs, receipt of a syntactically correct order and return of a valid completion notice.</li> <li>• Elapsed time is measured in hours and hundredths of hours rounded to the nearest hundredth of an hour.</li> <li>• The accumulation of elapsed time continues through off-schedule, weekends and holidays.</li> </ul>
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Service (See Appendix A)</li> <li>• Activity (See Appendix A)</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>	<ul style="list-style-type: none"> <li>• Canceled orders</li> <li>• ILEC Orders associated with internal or administrative use of local services</li> <li>• Orders where CLEC has selected a longer due date than requested.</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Order Number</li> <li>• Order Submission Date</li> <li>• Order Submission Time</li> <li>• Order Completion Date</li> <li>• Order Completion Time</li> <li>• Service Type</li> <li>• Activity Type</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Average Order Completion Interval</li> <li>• Standard Error for the Order Completion Interval</li> <li>• Count of Orders Completed</li> <li>• Count of Orders Completed by the Due Date</li> <li>• Average Offered Interval</li> <li>• Service Type</li> <li>• Activity Type</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Unless otherwise noted, the order completion interval for installations that do not require a premise visit and do not require anything beyond software updates is 1 business day.</li> <li>• Unless otherwise noted, the order completion intervals for installations that involve a premise visit or physical work is three business days.</li> <li>• Installation Interval Exceptions:             <ul style="list-style-type: none"> <li>• UNE Platform (at least DS0 loop + local switching + common transport elements) installation interval is 1 business day whether or not premise work is required.</li> <li>• The installation interval for unbundled loops is always 1 business day.</li> <li>• UNE Channelized DS1 (DS1 unbundled loop + multiplexing) installation interval is within 2 business days.</li> <li>• Unbundled Switching Element installation interval is within 2 business days</li> <li>• DS0/DS1 Dedicated Transport installation interval is within 3 business days (See Network Performance measurement detail for related standards on interconnect trunks and augment inbound trunk provisioning thresholds)</li> <li>• The installation interval for All Other Dedicated Transport is within 5 business days.</li> <li>• Access DS3s used for local interconnects within 10 days.</li> </ul> </li> </ul>

## Service Quality Measurements Measurement Detail

- The installation interval for all orders involving only feature modification is 5 hours.
- Order completion interval for all disconnection orders is 1 business day.

**Interconnect Augment Trunks** ILECs must meet relevant tariff, service level agreement or contract intervals for T-1s DS0s and DS1 provisioning 98% of the time

Although CLECs do not order them per se, ILECs must also provide inbound trunk augments in line with CLEC capacity projections. CLECs require these augments at utilization thresholds that are lower than the ILEC's own thresholds to reflect the differences in network size and the impact of growth in CLEC customer numbers on inbound as well as outbound capacity needs. The threshold below for augment trunk provisioning will afford CLECs a reasonable opportunity to compete. Individual CLECs may agree to different thresholds in negotiation with ILECs on inbound trunk augments:

- DEOTS REPRESENT LESS THAN 50% OF COMBINED INBOUND/OUTBOUND CAPACITY -- augment trunk orders must be provided when utilization reaches 60% on the Erlang-B.01 scale.
- DEOTS REPRESENT MORE THAN 50% OF TOTAL CAPACITY -- augment trunk orders may be placed when utilization is at 75% on the Erlang-B.01 scale.

### Function:

### Business Implications

#### Order Processing Quality

Customers expect that their service provider will deliver precisely the service ordered and all the features specified. A service provider that is unreliable in fulfilling orders, will not only generate ill-will with customers when errors are made, but will also incur higher costs to rework orders and to process customer complaints. This measurement monitors the accuracy of the provisioning work performed by the ILEC, in response to CLEC orders. When the ILEC provides the comparable measure for its own operation, it is possible to know if provisioning work performed for CLECs is at least as accurate as that performed by the ILEC for its own retail local service operations.

Many of the order transactions between ILEC and CLEC are designed to be entirely automated. For these transactions, any "fall out" from the mechanized process will result in a higher likelihood of delay or inaccurate processing. The availability of flow through order entry without manual intervention on the ILEC's part decreases the occurrence of rekeying errors and makes the CLEC more accountable for its order quality. Measurements are needed (1) to monitor the extent to which human intervention is required for CLEC automated order transactions and (2) to compare the results to ILEC order processing flow through. CLECs must be assured that their orders have the same opportunity as the ILEC's orders for timely and accurate processing.

Sometimes CLECs receive order rejections and must resubmit orders for failures on the part of the ILECs' systems or lack of notice or training on changed formats and processes for order entry. Sometimes orders are rejected with no explanation or delayed for invalid queries by the ILECs. Often ILEC electronic editing systems reject an order one error at a time, rather than capture all the issues with the order on one submission. These rejections and resubmissions not only are burdensome to CLECs but delay service delivery to the customer.

# Service Quality Measurements

## Measurement Detail

### Measurement Methodology:

**% Order Accuracy** =  $(\Sigma \text{Orders Completed w/o Error}) / (\Sigma \text{Orders Completed}) \times 100$

**% Mechanized Order Flow Through** =  $[(\text{Total Number of Orders Processed Without Manual Intervention}) / (\text{Total Number of Orders Completed})] \times 100$

**% Orders Rejected** =  $[\text{Number of Orders Rejected Due to Error or Omission} / \text{Number of Orders Received by ILEC During Reporting Period}] \times 100$

**Average Submissions Per Order** =  $[(\text{Number of Firm Order Confirmations}) + (\text{Number of Rejections Issued})] / (\text{Number of Firm Order Confirmations})$

#### For CLEC Results:

##### Order Accuracy:

For each order completed during the reporting period, the original account profile and the order that the CLEC sent to the ILEC are compared to the services and features reflected upon the account profile as it existed following completion of the order by the ILEC. An order is "completed without error" if all service attribute and account detail changes (as determined by comparing the original and the post order completion account profile) completely and accurately reflect the activity specified on the original and any supplemental CLEC orders. "Total number of orders completed" refers to the total number of order completion notices sent to the CLEC by the ILEC for each reporting dimension identified below.

##### % Mechanized Order Flow Through:

"Percentage Mechanized Order Flow Through" identifies the total orders processed from acceptance of the ILEC gateway to the ILEC service order processor and other legacy systems without manual intervention. For each type of order, the count includes orders that arrive at the destination work group(s) without human intervention from initial order creation by the customer contact agent until the time the order is delivered to the appropriate work group responsible for physical work. The resulting count is divided by the total number of orders (of the same type) that were processed during the reporting period with the result expressed as a percentage.

##### % Orders Rejected:

The percentage of orders rejected is the count of (1) order submissions where the ILEC returns a notice of a syntax rejection to the CLEC and (2) order submissions where the ILEC returns a notice that the CLEC order was rejected by legacy system edits. The resulting combined count of rejections is divided by the count of orders submitted (For EDI interfaces, the orders submitted would be the combined count of positive and negative 997 messages issued upon receipt of the CLEC order.)

##### Average Number of Submissions Per Order:

The "average number of submissions per order" is derived by adding the number of Firm Order Confirmations sent to the CLEC during the reporting period and the number of rejects issued to the CLEC during the reporting period. This sum is then divided by the number of Firm Order Confirmations to determine the average number of submissions per order for the CLEC.

**For ILEC Results:** Same computation as for the CLEC with the clarifications noted below.

##### Other Clarifications and Qualification:

**Order Supplements** - If the CLEC initiates any supplements to the originally submitted order, for the purposes of reflecting changes in customer

## Service Quality Measurements Measurement Detail

Reporting Dimensions	Excluded Situations
<ul style="list-style-type: none"> <li>• Company</li> <li>• Interface Type</li> <li>• Service Type (See Appendix A)</li> <li>• Order Activity (See Appendix A)</li> <li>• Volume Category</li> </ul>	<ul style="list-style-type: none"> <li>• Orders canceled by the CLEC</li> <li>• Order Activities of the ILEC associated with internal or administrative use of local services.</li> <li>• For resubmissions impact on due date measure. ILEC would not have to comply if tying final accepted order to original order is technically infeasible (But feasibility issue will be revised as systems are upgraded.)</li> </ul>
Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Count of Orders Completed Without Manual Intervention</li> <li>• Count of Firm Order Confirmations</li> <li>• Count of Syntax Rejects</li> <li>• Count of Legacy System Rejects</li> <li>• Count of Orders Submitted</li> <li>• Interface Type</li> <li>• Order Activity Type</li> <li>• Original order date for rejected orders</li> <li>• Rejection Notice Date and Time</li> <li>• Service Type</li> <li>• Volume Category</li> <li>• Manual Fallout (for Mechanized Orders Only)</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Count Orders Completed Without Manual Intervention</li> <li>• Count of Order Confirmations</li> <li>• Count of Syntax Rejects</li> <li>• Count of Legacy System Reject</li> <li>• Count of Orders Submitted</li> <li>• Interface Type</li> <li>• Order Activity</li> <li>• Service Type</li> <li>• Volume Category</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete.</p> <ul style="list-style-type: none"> <li>• Completed CLEC orders, by reporting dimension, are accurate no less than 99% of the time.</li> <li>• Mechanized flow through of orders occurs at least 98% of the time.</li> <li>•</li> </ul>

<b>Function:</b> <b>Business Implications:</b>	<p><b>Order Status</b></p> <p>When customers call their service providers, they expect prompt answers regarding the progress on their orders. Likewise, when changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans. A service provider that cannot fulfill such expectations will generate customer dissatisfaction. Lengthy delays in exchange of status information will result in the delay of other customer affecting activities. For example, inside wiring activity often is initiated after the firm order confirmation is returned, and customer billing must await CLEC receipt of the order completion notice. The order status measurements monitor, when compared to the ILEC result, whether the CLEC has timely access to order progress information so that the customer may be updated or notified promptly when changes and rescheduling are necessary.</p>
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## Service Quality Measurements Measurement Detail

### Measurement Methodology

The "% jeopardies returned" measure for the CLEC, when reported in comparison to the ILEC result, will gauge whether initial commitments to the CLEC for order processing are at least as reliable as the commitments the ILEC makes for its own operations.

CLECs also need adequate notice of order completion activities. They can be made to look disorganized by ILECs providing service without such advance notice. Customers and CLECs may even be unable to schedule necessary vendors on the scene to complete the installation, resulting in ILEC technicians being turned away and customer frustration with the CLEC. An ILEC could cause a great deal of harm to the CLEC competitively, yet look like it is providing parity or above parity service by the results other provisioning measures. A measurement capturing any non-parity in the occurrence of surprise or short-notice service deliveries also is critical to affording CLECs a reasonable opportunity to compete.

Order status intervals measure the elapsed time necessary to provide a notice to the CLEC that specific events have occurred or particular conditions have been encountered when processing an order. Order status includes notification of order rejection due to violation of order content or syntax requirements, confirmation of order acceptance, jeopardy of an order due to the inability to complete work as originally committed and work completion notification. The interval associated with each of these four preceding major categories of status must be separately monitored and reported.

**Reject Interval =  $\Sigma[(\text{Date and Time of Order Rejection}) - (\text{Date and Time of Order Receipt or Acknowledgment})]/(\text{Number of Orders Rejected in Reporting Period})$**

Reject Interval (syntax) is the elapsed time between the ILEC receipt of an order from the CLEC to the ILEC return of a notice of a syntax rejection to the CLEC. The time measurement starts when the ILEC receives the order from the CLEC. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular order type.

Reject Interval (legacy system) is the elapsed time between the ILEC's acknowledgement /acceptance of an order from the CLEC to the ILEC's return of a rejection notice to the CLEC. The time measurement starts when the ILEC accepts or acknowledges the order from the CLEC as syntactically correct. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular service and order type.

**FOC Interval =  $\Sigma[(\text{Date and Time of Firm Order Confirmation}) - (\text{Date and Time of Order Acknowledgment})]/(\text{Number of Orders Confirmed in Reporting Period})$**

Interval for Return of a Firm Order Confirmation (FOC Interval) is the elapsed time between the ILEC acceptance of a syntactically correct order and the return of a confirmation to the CLEC that the order will be worked as submitted or worked with the modifications specified on the confirmation. The time measurement starts when the ILEC accepts (acknowledges) the order from the CLEC. The time measurement stops when the ILEC returns a valid firm order confirmation to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of orders associated with the particular order type.

## Service Quality Measurements Measurement Detail

**Jeopardy Interval =  $\Sigma$ (Date and Time of Committed Due Date for the Order) - (Date and Time of Jeopardy Notice)/(Number of Orders Jeopardized in Reporting Period).** For all orders jeopardized on or before the scheduled due date.

Jeopardy Interval is the remaining time between the pre-existing committed order completion date and time (communicated via the FOC) and the date and time the ILEC issues a notice to the CLEC indicating an order is in jeopardy of missing the due date. The scheduled order completion time will be assumed to be 5:00 p.m. local time unless other information is communicated in the FOC. The date and time of the jeopardy notice delivered by the ILEC is subtracted from the scheduled completion date to establish the jeopardy interval for any order placed in jeopardy before its scheduled due date. The jeopardy interval is accumulated by standard order activity with the resulting accumulated time then divided by the count of orders placed in jeopardy before the due date for each order activity.

**Completion Interval =  $\Sigma$ (Date and Time of Notice of Completion Issued to the CLEC) - (Date and Time of Work Completion by ILEC)/(Number of Orders Completed in Reporting Period)**

Completion Notice Interval is the elapsed time between the ILEC technician's reported completion of physical work and the issuance of a valid completion notice to the CLEC. Where physical work is not required, such as in the case of software-only changes, the elapsed time will be measured beginning at 5:00 p.m. local time of the date for the committed completion and will end when the ILEC returns a valid completion notice to the CLEC. If a valid completion notice is returned before 5:00 p.m. on the committed completion date and no physical work is involved, then the elapsed time will be recorded as 1/10 hour. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of completion notices returned for each service and order type.

**% Completions or Attempts without Notice or with Less Than 24 Hours Notice. = [Completion Dispatches (Successful and Unsuccessful) With No FOC or FOC Received Within 24 Hours of Due Date/All Completions ] x 100**

Completion and Completion Attempts include any delivery of service (successful or not successful) for which the CLEC did not receive sufficient prior notification.

**For ILEC Results:** The ILEC reports completions for which ILEC technicians delivered service to customers without giving sufficient advance notice to customers, sales or to internal account team to arrange for appropriate vendors to be on hand. Calculation of insufficient notice is similar to CLEC calculation (none or less than 24 hours). Similar surprise service deliveries are calculated for ILEC affiliate's account representatives.

**For CLEC Results:** Calculation would exclude any successful or unsuccessful service delivery that CLEC was informed of at least 24 hours in advance. ILEC may also exclude from calculation deliveries on less than 24 hours' notice that CLEC requested.

**% Jeopardies = (Number of Orders Jeopardized in Reporting Period)/(Number of Orders Confirmed in Reporting Period)**

% Jeopardies is the percentage of total orders processed for which the ILEC notifies the CLEC that the work will not be completed as committed on the original FOC.

## Service Quality Measurements Measurement Detail

The measurement result is derived by dividing the count of jeopardy notices the ILEC issues to the CLEC by the count of FOCs returned by the ILEC during the identical period. Both the "Number of Orders Jeopardized in Reporting Period" and "Number of Orders Confirmed in Reporting Period" are utilized in other status measurement computations and have identical meaning and derivation for this measurement.

**For ILEC Results:** Same computation as the CLEC with the clarifications outlined below.

**Other Clarifications and Qualification:**

- When the ILEC processes orders for a CLEC via different interfaces (e.g., ASR and EDI) then the preceding measurement must be computed for each interface arrangement.
- All intervals are measured in hours and hundredths of hours rounded to the nearest hundredth.
- Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.
- "Syntactically correct" means all fields required to process an order are populated and reflect the correct format as agreed and documented in the current interface specifications.
- The ILEC service agent's attempt to submit an order for processing by the ILEC OSS is considered equivalent to the ILEC acknowledgment of the CLEC's order.
- The ILEC OSS return of any indication to the service agent that an order cannot be processed as submitted is considered equivalent to the ILEC return of a rejection notice to the CLEC.
- Return of any information (e.g., order recapitulation) to the ILEC customer service agent that indicates no errors are evident or that an order can be processed, is the equivalent of the ILEC return of a FOC to the CLEC.
- Logging of information in the ILEC OSS, whether manual or automatic, that indicates an order may not be completed by the existing due date, is equivalent of the return of a jeopardy notice to the CLEC regardless of whether or not the ILEC takes action based upon such information.
- Automatic logging of work completion and manual logging of work completion, whether input directly to the ILEC OSS or into an intermediate storage device, is considered the equivalent of the return of a completion notice to the CLEC.

**Reporting Dimensions:**

- Standard Order Activities (See Appendix A)
- Company
- interface Type
- Service Type (See Appendix A)
- Geographic Scope

**Excluded Situations:**

- Rejection Interval - None
- Jeopardy Interval - None
- Firm Order Confirmation Interval - None
- Completion Notification Interval - None
- % Jeopardies - None
- Completions or Attempts Without Notice or With less than 24-hours' notice delivery that the CLEC specifically requested.

## Service Quality Measurements Measurement Detail

Data Retained Relating To CLEC	Data Retained Relating To ILEC
<b>Experience:</b> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Interface Type</li> <li>• Service Type</li> <li>• CLEC Order Number</li> <li>• Order Submission Date</li> <li>• Order Submission Time</li> <li>• Status Type (Rejection, FOC, Jeopardy Type, Completion Notice)</li> <li>• Status Notice Date</li> <li>• Status Notice Time</li> <li>• Standard Order Activity</li> <li>• Order Due Date</li> </ul>	<b>Performance:</b> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Interface Type</li> <li>• Service Type</li> <li>• Status Type (Rejection, FOC, Jeopardy Type, Completion Notice)</li> <li>• Average Status interval</li> <li>• Standard error of status interval</li> <li>• Number of Orders Reflected In Result</li> <li>• Standard Order Activity</li> <li>• Number of Statuses Provided</li> </ul>

<b>Performance Standard in Absence of ILEC Results</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• no less than 97% of Rejects in any category for a reporting period are returned within 15 seconds</li> <li>• all Firm Order Confirmations are returned within 4 hours</li> <li>• no less than 97% of order completions in any category are returned within 30 minutes of work completion</li> <li>• 99.9% of completion and completion attempts should receive more than 24 hours notice.</li> <li>• no less than 97% of Jeopardies for any category are returned to the CLEC a minimum of 2 business days in advance of the due date indicated on the most recent FOC</li> <li>• no more than 5% of the total number of orders should result in a Jeopardy in any given report period.</li> </ul>
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<b>Function: Business Implications:</b>	<p><b>Coordinated Cutovers</b></p> <p>Customers must not be subjected to unscheduled service disruptions because of lengthy or uncoordinated cutovers of loops with interim or permanent number portability or the provision of any other UNEs that require disconnection and reconnection of a customer.</p> <p>Customers may suffer loss of dialtone due to early cutovers (ILEC takes down loop before scheduled date for CLEC loop to be ready) in cases where interim number portability is involved. With Permanent Number Portability (PNP), customers may not receive inbound calls if the ILEC (1) does not provide timely disconnection of the ILEC's old translations for routing the number or (2) does not employ or prematurely takes down the 10-digit trigger designed to ensure proper routing during the transition. Service may also be disrupted in conversions from ILNP-to-PNP or through premature disconnects in coordinated cutovers of UNE combinations. The percentage of early and late cutovers must be monitored to ensure that CLECs' customers are not disproportionately losing dialtone or having inbound calling blocked.</p>
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# Service Quality Measurements

## Measurement Detail

<b>Measurement Methodology:</b>	<p><b>Average Coordinated Conversion Interval</b> = <math>\Sigma[(\text{Date \&amp; Time Re-termination is Completed by ILEC}) - (\text{Date \&amp; Time of Initial Service Interruption (disconnect for Customer Transferring Service)})] / (\text{Count of Completed Coordinated Conversions in Reporting Period})</math></p> <p><b>% Service Loss from Early Cuts</b> = <math>(\text{Customer Conversion Where Cutover Time is Earlier Than Due Date and Time}) / (\text{All Customer Conversions Completed During Reporting Period}) \times 100</math></p> <p><b>% Service Loss from Late Cuts</b> = <math>(\text{Customer Conversions Where Cutover Time is More than 30 Minutes Past Due Date and Time}) / (\text{All Customer Conversions Completed During Reporting Period}) \times 100</math></p> <p><b>For CLEC Results:</b></p> <p><b>Average Coordinated Conversion Interval:</b> The elapsed time between the disconnection of an access line (for a retail customer of the ILEC) from the switch port of the ILEC to the time that the ILEC finishes both the physical work necessary to re-terminate the loop (at the point of re-termination specified by the CLEC) and receives CLEC confirmation that electrical continuity exists. The elapsed time is accumulated for the reporting period and divided by the number of loops that were re-terminated on a coordinated basis.</p> <p><b>% Service Loss (Early/Late Cuts):</b> For hot loop cuts, the same loop is moved from an existing port to what is effectively a different port (The CLEC collocation point). Translation disconnections also are reported if they occur too early or late in a conversion involving local number portability. For each conversion, the ILEC will track whether the cutover time (for facilities and translations) was earlier or later than the committed due date and time that appeared on the FOC. The total number of early cutovers will be divided by the total number of customer conversions that were completed during the reporting period. Likewise, the total number of cutovers that were completed more than 30 minutes past the committed due date and time will be divided by the total number of customer conversions that were completed during the reporting period. For both formulas, the resulting ratio will be expressed as a percentage.</p> <p><b>For ILEC Results:</b> ILECs would use retail residential or business POTS outside move activity as an analog. An outside move occurs when a customer, with existing service, moves from one premises to another within the same central office area without disconnecting and reconnecting service. With inside moves the customer keeps their own phone number. Although an outside move involves disconnecting an existing loop from an operating port and reconnecting a different loop (within the same office) to that same port, the work involved is very similar (i.e. coordinated re-termination).</p>
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Type of Loop or UNE Combination Cutover and Type of NP involved (i.e. ILNP, PNP or ILNP-to-PNP conversion) See also Service Type (Appendix A)</li> <li>• Order Activity</li> <li>• Geography</li> <li>• Volume Category</li> </ul>	None

## Service Quality Measurements Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Experience:
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Service Type</li> <li>• Order Activity</li> <li>• Committed Due Date and Time (from Firm Order Confirmation)</li> <li>• Completion Date and Time</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Number of Early Conversions</li> <li>• Number of Conversions &gt;30 Minutes Late</li> <li>• Total Number of Conversions</li> <li>• Average Conversion Interval</li> <li>• Standard Error of Conversion Interval</li> <li>• Geographic Scope</li> <li>• Volume Category</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• 98% of coordinated cutovers have ILEC and CLEC work completed within 5 minutes of one another and 100% within 15 minutes.</li> <li>• 98% of unscheduled disruptions causing loss of dialtone or inbound call blocking should be corrected in 1 hour and 100% within 2 hours.</li> </ul>

<b>Function:</b>	<b>Held Orders</b>
<b>Business Implications:</b>	Customers expect that work will be completed when promised. Therefore, when delays occur in completing CLEC orders, such delays must be no longer than the average period of time the ILEC's own customer orders are held.
<b>Measurement Methodology:</b>	<p><b>Held Order Interval = <math>\Sigma</math>( Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past The Committed Due Date) for all orders pending and past the committed due date</b></p> <p><b>For CLEC Results:</b> This metric is computed at the close of each report period. The held order interval is established by first identifying all pending orders at that time that (1) have not been reported "completed" via a valid completion notice and (2) have passed the currently "committed completion date." For each such order, the number of calendar days between the committed completion date and the close of the reporting period is established and represents the held order interval for that particular order. The held order interval is accumulated (by service type and reason for the hold, if identified) and then divided by the number of held orders within the same category to produce the mean held order interval.</p> <p><b>Orders Held for <math>\geq 90</math> days = (# of Orders Held for <math>\geq 90</math> days) / (Total # of Orders Pending But Not Completed) x 100</b></p> <p><b>Orders Held for <math>\geq 15</math> days = (# of Orders Held for <math>\geq 15</math> days) / (Total # of Orders Pending But Not Completed) x 100</b></p> <p>This "percentage orders held" measure is complementary to the held order interval but is designed to detect orders continuing in a "non-completed" state for an extended period of time. Computation of this metric uses a subset of the data accumulated for the "held order interval" measure. All orders, for which the "held order interval" equals or exceeds 90 (or 15) days, are counted by service type and reason for the hold.</p>

# Service Quality Measurements

## Measurement Detail

The total number of pending and past due orders for the same category are counted (as was done for the held order interval) and divided into the count of orders held past 90 (or 15) days.

**For ILEC Results:** Same computation as for the CLEC with the clarifications provided below..

**Other Clarifications and Qualification:**

- The "held order" measure established by some state commissions as part of minimum service standards is analogous to this proposed measure but, because it is typically limited to monitoring only those orders held because of facility shortages, needs to be expanded to include all reasons that an order is pending and past due.
- **Order Supplements** - If the CLEC initiates a supplement to the originally submitted order for the purpose of reflecting changes in customer requirements, then the due date returned on the FOC will be the basis for the preceding calculations. No other supplemental order activities will result in an update to the committed due date.
- See "Order Status" measurement definitions for discussion of the ILEC analog for a completion notice.
- The held order interval is measured in calendar rather than business days.

<b>Reporting Dimensions:</b>		<b>Excluded Situations:</b>	
<ul style="list-style-type: none"> <li>• Company</li> <li>• Service Type (See Appendix A)</li> <li>• Reason for Hold (no facilities, no equipment, workload, other)</li> <li>• Geographic Scope</li> </ul>		<ul style="list-style-type: none"> <li>• Any orders canceled by the CLEC will be excluded from this measurement.</li> <li>• Order Activities of the ILEC associated with internal or administrative use of local services</li> </ul>	
<b>Data Retained Relating To CLEC Experience:</b>		<b>Data Retained Relating To ILEC Performance:</b>	
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Order Number</li> <li>• Committed Due Date</li> <li>• Report Period Close</li> <li>• Service Type</li> <li>• Hold Reason</li> <li>• Geographic Scope</li> </ul>		<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Average Held Order Interval</li> <li>• Standard Error for Average Held Order Interval</li> <li>• Number of Orders Rejected</li> <li>• Service Type</li> <li>• Hold Reason</li> <li>• Geographic Scope</li> </ul>	
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Less than 0.1% of orders held for more than 15 calendar days.</li> <li>• No orders held for more than 90 calendar days.</li> </ul>		

# Service Quality Measurements

## Measurement Detail

### Maintenance and Repair (MR)

<b>Function:</b> <b>Business Implications:</b>  <b>Measurement Methodology:</b>	<p><b>Time To Restore</b></p> <p>Customers expect service to be restored promptly to the normal operating parameters whenever troubles are detected. The longer the time required to correct a service problem, the greater the customer dissatisfaction. Customers also need to know that the CLEC is monitoring the status of their repair closely. The CLEC, therefore, needs jeopardy notification if repair commitments are not going to be met. Both measures, when collected and compared for the CLEC and ILEC, monitor whether the CLEC receives the same intervals and jeopardy notices regarding repairs as the ILEC provides for its own or an affiliate's retail customers.</p> <hr/> <p><b>Mean Time To Restore = <math>\Sigma[(\text{Date and Time of Trouble Ticket Resolution Returned to CLEC}) - (\text{Date and Time of Trouble Ticket Referred to the ILEC})] / (\text{Count of Trouble Tickets Resolved in Reporting Period})</math></b></p> <p><b>For CLEC Results:</b> The restoral interval for resolution of customer requested maintenance and repair is the elapsed time, measured in hours and tenths of hours, measured from the CLEC submission of a customer trouble to the ILEC, regardless of the ultimate resolution of the trouble, to the time the ILEC returns a valid trouble resolution notification to the CLEC. The elapsed time is accumulated by service type and trouble disposition for the reporting period. The accumulated time is divided by the count of maintenance tickets reported as resolved by the ILEC (by service type and trouble type) during the report period.</p> <p><b>For ILEC Results:</b> Same computation as for the CLEC.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• Elapsed time is measured on a 24-hour-a-day, seven-days-a-week basis. The time is measured in hours and hundredths of hours rounded to the nearest hundredth hour.</li> <li>• Multiple reports for the same customer service are treated as the same incident only when a subsequent report is received for a customer service arrangement that already has an open ticket.</li> <li>• "Restore" means to return to the normally expected operating parameters for the service regardless of whether or not the service, at the time of trouble ticket creation, was operating in a degraded mode or was completely unusable.</li> <li>• A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters.</li> <li>• A trouble ticket or trouble report is any record (whether paper or electronic) used by the ILEC for the purpose of monitoring action and disposition of a service repair or maintenance situation.</li> <li>• ILEC acceptance of a trouble by the call receipt agent is considered equivalent to the CLEC logging or submitting a trouble to the ILEC.</li> <li>• The ILEC closure of a trouble ticket (whether automatic or manual) is considered equivalent to returning a trouble resolution notice to the CLEC.</li> </ul> <p><b>Mean Jeopardy Interval = <math>\Sigma [(\text{Date and Time of Committed Due Date for the Order}) - (\text{Date and Time of Jeopardy Notice})] / (\text{Number of Orders Jeopardized in Reporting Period})</math></b></p>
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## Service Quality Measurements Measurement Detail

	<p><b>CLEC Results:</b> Jeopardy Interval is the remaining time between the pre-existing committed maintenance or trouble handing appointment date and time and the date and time the ILEC issues a notice to the CLEC indicating an appointment is in jeopardy of being missed. The scheduled appointment time will be assumed to be 5:00 p.m. local time unless other information is communicated. The date and time of the jeopardy notice delivered by the ILEC is subtracted from the scheduled completion date to establish the jeopardy interval for any appointment placed in jeopardy. The jeopardy interval is accumulated by service group with the resulting accumulated time then divided by the count of scheduled appointments associated with the particular service.</p> <p><b>For ILEC Results:</b> Computations are the same as for the CLEC with the clarifications outlined below.</p> <p><b>Other Clarifications and Qualification:</b></p> <p>All intervals are measured in hours and hundredths of an hour rounded to the nearest hundredth. The lack of electronic bonding for maintenance does not excuse the ILEC from jeopardy reporting requirements.</p>	
	<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
	<ul style="list-style-type: none"> <li>• Service Type (See Appendix A)</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Trouble tickets that are canceled at the CLEC's request</li> <li>• ILEC trouble reports associated with administrative service</li> <li>• Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring</li> <li>• Subsequent Reports (additional reports on an already open ticket)</li> <li>• Any trouble type tracking that parties agree are technically unfeasible or operationally prohibitive</li> <li>• A trouble ticket created for tracking and or monitoring requests for clarifying information (e.g. confirmation of customer ownership from CLEC support centers.</li> <li>• Tickets used to track referrals of misdirected calls</li> </ul>

## Service Quality Measurements Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Ticket #</li> <li>• Ticket Submission Time</li> <li>• Ticket Submission Date</li> <li>• Ticket Completion Time</li> <li>• Trouble Resolution Time</li> <li>• Trouble Resolution Date</li> <li>• Service Type</li> <li>• WTN or CKTID (a unique identifier for elements combined in a service configuration)</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Average Restoral Interval</li> <li>• Standard Error for the Average Restoral Interval</li> <li>• Service Type</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> <li>• Number of Tickets</li> </ul>
<p><b>Performance Standard in Absence of ILEC Results</b></p>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ol style="list-style-type: none"> <li>1. Out of Service conditions where dispatch is required:               <ul style="list-style-type: none"> <li>• ≥90% resolved within 4 hours</li> <li>• ≥95% resolved within 8 hours</li> <li>• ≥99% resolved within 16 hours</li> </ul> </li> <li>2. Out of Service conditions where no dispatch is required:               <ul style="list-style-type: none"> <li>• ≥85% resolved within 2 hours</li> <li>• ≥95% resolved within 3 hours</li> <li>• ≥99% resolved within 4 hours</li> </ul> </li> <li>3. ≥ all other troubles resolved within 24 hours</li> </ol>

<p><b>Function:</b> Business Implications:</p>	<p><b>Frequency of Repeat Troubles</b></p> <p>Customers are keenly aware of the effectiveness of repair activities. First time troubles are sufficiently annoying and disruptive. When the trouble recurs within a short time frame, customers are even more dissatisfied. This measurement, when gathered for both the ILEC and CLEC, can establish whether or not CLECs are competitively disadvantaged (vis-à-vis the ILEC) as a result of experiencing more lingering customer troubles after the first repair attempt. Differences in this measure may indicate that the CLEC is receiving inferior maintenance support in the initial resolution of troubles or that ILEC-supplied network components are inferior.</p>
<p><b>Measurement Methodology:</b></p>	<p><b>Repeat Trouble Rate = (Count of Trouble Reports Where More Than One Trouble Report Was Logged for the Same Service Access Line Within a Continuous 30 Day Period) / (Number of Reports in the Report Period) x 100</b></p> <p><b>For CLEC Results:</b> The repeat trouble rate measure is computed by accumulating the number of instances where a trouble ticket is submitted by a CLEC to the ILEC for a service arrangement that had at least one prior trouble ticket any time in the 30 calendar days preceding the creation of the current trouble ticket. The number of repeat troubles are accumulated for the reporting period by service type and trouble type. The count of repeat troubles, by service type, is divided by the count of initial trouble reports (by service type) received during the report period.</p>

# Service Quality Measurements

## Measurement Detail

For ILEC Results: Same computation as for CLECs,

**Other Clarifications and Qualification:**

- Unbundled loops or UNE combinations involving and unbundled loops are considered a "service access line".
- A trouble is "resolved" when the ILEC issues notice to the CLEC that the Customer's service is restored to normal operating parameters.
- The "same service arrangement" means a trouble report being reported for the same telephone number or the same circuit identifier.
- The trouble resolution need not be identical between the repeated reports for the incident to be counted as a repeated trouble.

**Reporting Dimensions:**

- Service Type (See Appendix A)
- Company
- Trouble Type
- Geographic Scope

**Excluded Situations:**

- Trouble tickets that are canceled at the CLEC request
- ILEC trouble reports associated with administrative service
- Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring.
- Subsequent trouble report(s) on a maintenance ticket that has (have) not been reported as resolved (or closed)
- Trouble tickets created for tracking and/or monitoring requests for clarifying information (e.g., confirmation of customer ownership from CLEC support centers)
- Tickets used to track referrals of misdirected calls.

**Data Retained Relating To CLEC Experience:**

- Report Month
- CLEC Ticket #
- Ticket Submission Time
- Ticket Submission Date
- Trouble Resolution Time
- Trouble Resolution Date
- Service Type
- WTN or CKTID (a unique identifier for elements combined in a service configuration)
- Trouble Type
- Geographic Scope

**Data Retained Relating To ILEC Performance:**

- Report Month
- % repeat trouble
- Service Type
- Trouble Type
- Geographic Scope
- Count of Troubles
- Count of Repeat Troubles

**Performance Standard in Absence of ILEC Results**

If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:

- Less than 1% of trouble reports, by service type, experience a repeat report, regardless of the trouble disposition, within a 30-day period.

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# Service Quality Measurements

## Measurement Detail

Function	Frequency of Troubles
<b>Business Implications:</b>	<p>Customers demand high quality service from their supplier, and differentials in supplier performance are quickly recognized throughout the market place. Poor performance is difficult to overcome and may require lengthy periods of sustained superb performance in order to re-establish a product image that has been tarnished. When measured for both the ILEC and CLEC and compared, this measure can be used to establish that CLECs are not competitively disadvantaged, compared to the ILEC, as a result of experiencing more frequent trouble reports. Disparity in this measure may indicate differences in the underlying quality of the network components supplied.</p>
<b>Measurement Methodology</b>	<p><b>Trouble Rate = (Count of Initial &amp; Repeated Trouble Reports in the Current Period) / (Number of Service Access Line in Service at End of the Report Period) x 100</b></p> <p><b>For CLEC Results:</b> The frequency of trouble metric is computed by accumulating, by standard service grouping and disposition and cause, the total number of maintenance tickets logged by a CLEC (with the ILEC) during the reporting period. The resulting number of tickets for each trouble type is accumulated within each standard service grouping, and trouble type is divided by the total number of "service access lines" existing for the CLEC at the end of the report period.</p> <p><b>For ILEC Results:</b> Same calculation as for the CLEC with the clarifications provided below.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• This measure is frequently a minimum service standard required by state commissions for monitoring ILEC performance..</li> <li>• Unbundled loops or UNE combinations involving unbundled loops would be counted as a "service access line."</li> <li>• A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters.</li> <li>• See the "Time to Restore" measurement for a discussion of the ILEC equivalent of "trouble tickets" and "trouble logging"</li> </ul> <p><b>% Troubles Within 30 Days of Installations and Other Order Activity = (Total Number of Trouble Tickets Associated With Lines That Had Service Order Activity Within 30 Days of the Trouble Report)/(Total Number of Orders Completed in the Report Period.</b></p> <p><b>For CLEC Results:</b> The results are computed by accumulating the number of trouble tickets submitted by a CLEC to the ILEC for a service arrangement that had at least one install or service order activity within the 30 calendar days preceding the creation of the current trouble ticket. The count of troubles is divided by the count of service-affecting orders completed by the ILEC for the CLEC during the report period.</p> <p>Non-parity results for % Trouble Rate within 30 Days of Install and Other Order Activity may require further reporting to determine root cause issues. For instance, reports on whether facilities provided on new installations tested to industry standard per interconnection contract, tariff or regulatory requirements may be required if results indicate a poorer performance of facilities and supporting network equipment provided to CLECs. ILECs also may need to cooperate with CLECs on comparative mechanized line testing (through respective ILEC and CLEC switches) of the transmission quality of ILEC loops versus CLEC unbundled loops obtained from the</p>

# Service Quality Measurements

## Measurement Detail

ILEC. Reporting dimensions of copper versus fiber deployment may show that CLEC install troubles result from a disparity in use of underlying transmission media for install of ILEC vs. CLEC facilities. The broadening of the measure to include more than just new installs will detect new service activations (hunt group changes, other feature additions) that cause troubles versus the quality of the transmission medium.

**For ILEC Results:** Calculations are similar to those for CLECs.

<b>Reporting Dimensions:</b>		<b>Excluded Situations:</b>	
<ul style="list-style-type: none"> <li>• Standard Service Groupings (See Appendix A)</li> <li>• Company</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>		<ul style="list-style-type: none"> <li>• Trouble tickets that are canceled at the CLEC request</li> <li>• ILEC trouble reports associated with administrative service</li> <li>• Instances where the CLEC or an ILEC customer requests a ticket be "held open" for monitoring</li> <li>• Trouble tickets created for tracking and/or monitoring requests for clarifying information (e.g., confirmation of customer ownership from CLEC support centers)</li> <li>• Tickets used to track referrals of misdirected calls.</li> </ul>	
<b>Data Retained Relating To CLEC Experience:</b>		<b>Data Retained Relating To ILEC Performance:</b>	
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Ticket #</li> <li>• Ticket Submission Time</li> <li>• Ticket Submission Date</li> <li>• Trouble Resolution Time</li> <li>• Trouble Resolution Date</li> <li>• Service Type</li> <li>• WTN or CKTID (a unique identifier for elements combined in a service configuration)</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>		<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Service Type</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> <li>• Number of Tickets</li> <li>• Number of Service Access Lines</li> </ul>	
<b>Performance Standard in Absence of ILEC Results</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Less than 0.5% of lines, by service type, regardless of disposition and cause, experience a trouble in a report period for both the "trouble rate" and "percent troubles on new installations and order activity measures."</li> </ul>		

<b>Function:</b>	<b>Estimated Time To Restore Met</b>
<b>Business Implications:</b>	When customers experience trouble on working services, they naturally expect the services to be restored within the time frame promised. When such commitments are not fulfilled, an already unsatisfactory condition, in the customer's eyes, becomes even worse. When this measure is collected for the ILEC and CLEC and then compared, it can be used to establish that CLECs are receiving equally reliable (as

# Service Quality Measurements

## Measurement Detail

compared to the ILEC operations) estimates of the time required to complete service repairs.

### Measurement Methodology:

**% Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100**

**For CLEC Results:** The computation of the measure is as follows: The quoted repair completion date and time is compared to the actual repair date and time (ticket closure as defined in Time to Restore metric). In each instance where the actual repair date and time is on or before the initially provided estimated or quoted date and time to restore, the count of "troubles resolved within estimate" is incremented by one for the relevant "service type" and "trouble type." The resulting count is divided by the total number of troubles resolved (for the consistent service and trouble type), for the report period, in all instances where an estimated interval was provided or a standard interval existed.

**For ILEC Results:** Same calculation as for CLEC.

### Other Clarifications and Qualification:

The ILEC analog for this measure is derived by comparing the actual date and time of ILEC trouble ticket closure compared to the projected trouble clearance date and time established through the ILEC agent's on-line interaction with the ILEC's work management system, regardless of whether or not the ILEC currently quotes this information to its retail customer.

- See the "Time To Restore" measurement for discussion of analogous ILEC maintenance activities (e.g., trouble resolution).
- The "quoted" or "estimated" time to restore is the actual scheduled time projection returned by the ILEC work management system or the standardized repair interval that the ILEC uses for its own operations when equivalent service arrangements are involved.
- A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters.
- If the ILEC supplies only the estimated repair interval, then the estimated date and time of repair is determined by adding the repair interval to the date and time that the CLEC logged the repair request with the ILEC.

### Reporting Dimensions:

- Company
- Service Type (See Appendix A)
- Trouble Type
- Geographic Scope

### Excluded Situations:

- Trouble tickets that are canceled at the CLEC request
- ILEC trouble reports associated with administrative service
- Instances where the CLEC or an ILEC customer requests a ticket be "held open" for monitoring
- Trouble tickets created for tracking and/or monitoring requests for clarifying information (e.g., confirmation of customer ownership from CLEC support centers).
- Tickets used to track referrals of misdirected calls.

## Service Quality Measurements Measurement Detail

Data Retained Relating To CLEC Experience	Data Retained Relating To ILEC Performance
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• CLEC Ticket #</li> <li>• Ticket Submission Time</li> <li>• Ticket Submission Date</li> <li>• Trouble Resolution Time</li> <li>• Trouble Resolution Date</li> <li>• Service Type</li> <li>• WTN or CKTID (a unique identifier for elements combined in a service configuration)</li> <li>• Trouble Type</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Service Type</li> <li>• Trouble Type</li> <li>• Number of Troubles Resolved Within Estimate</li> <li>• Number of Troubles Resolved</li> <li>• Geographic Scope</li> </ul>
<p><b>Performance Standard in Absence of ILEC Results</b></p>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Greater than 99% of a maintenance problems, by service type and regardless of trouble type, are resolved by the quoted or estimated date and time of repair.</li> </ul>

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# Service Quality Measurements

## Measurement Detail

### General (GE)

<b>Measurement</b>	<b>Systems Availability</b>
<b>Business Implications:</b>	Access to essential business functionality, supported by the ILEC's OSS, is absolutely critical to CLEC operations. This measure monitors whether OSS functionality is at least as accessible to the CLEC as it is to the ILEC.
<b>Measurement Methodology:</b>	<p><b>% System Availability = [(Hours Functionality is Available to CLECs During Report Period) / (Number of Hours Functionality was Scheduled to be Available During the Period)] x 100</b></p> <p><b>For CLEC Results:</b> The total "number of hours functionality was scheduled to be available" is the cumulative number of hours (by date and time on a 24-hour clock) over which the ILEC planned to offer and support CLEC access to ILEC OSS functionality during the reporting period. The ILEC must provide a minimum advance notice of one reporting period regarding availability plans and such plans must be interface-specific. If scheduled availability is not provided with at least one report period's advance notice, then the default availability for the subsequent reporting period will be seven days per week, 24 hours per day.</p> <p>"Hours Functionality is Available" is the actual number of hours, during scheduled available time, that the ILEC gateway or interface is capable of accepting CLEC transactions or data files for processing in the gateway / interface and supporting OSS.</p> <p>The actual time available is divided by the scheduled time available and then multiplied by 100 to produce the "% system availability" measure. The "% system availability" measure is required for each unique interface type offered by the ILEC.</p> <p><b>For ILEC Results:</b> Each OSS of the ILEC that is employed in the support of CLEC operations must first be identified by supported functional area (e.g., pre-ordering, ordering and provisioning, repair and maintenance and billing) with such mapping disclosed to the CLECs. The "available time" and "scheduled available time" is gathered for each of the identified ILEC OSS during the report period. The OSS function availability is computed based upon the weighted average availability of the subtending support OSS. That is, the available time for each OSS supporting a functional area is accumulated over the report period and then divided by the summation of the scheduled available time for those same supporting OSS.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• The ILEC analogs for this performance measure are the internal measures of system downtime (or up time) typically established between the ILEC Systems Management Organization and the client organizations.</li> <li>• OSS scheduled and available time may be utilized in the computation of more than one functional area.</li> <li>• Parity exists if the CLEC "% system availability" <math>\geq</math> ILEC function availability for the functionality accessed by the CLEC</li> <li>• "Capable of accepting" must have a meaning consistent with the ILEC definition down time, whether planned or unplanned, for internal ILEC systems having a comparable potential for customer impact.</li> <li>• Time is measured in hours and tenths of hours rounded to the nearest tenth of an hour.</li> </ul>

## Service Quality Measurements Measurement Detail

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Reporting Dimensions:	Excluded Situations:
<ul style="list-style-type: none"> <li>Company</li> <li>Interface type offered for each functional area (See Appendix A)</li> <li>Business Period (8:00AM to 8:00PM local time versus 8:00PM to 8:00AM, weekends and holidays)</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
<ul style="list-style-type: none"> <li>Report Month</li> <li>Interface Type (Identifies each unique interface available to CLECs)</li> <li>Business Period</li> <li>Scheduled Hour Available</li> <li>Actual Hours Available</li> </ul>	<ul style="list-style-type: none"> <li>Report Month</li> <li>Functionality Identification</li> <li>Business Period</li> <li>% Availability of Functionality</li> </ul>
Performance Standard in Absence of ILEC Results	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>Less than 0.1% of unplanned down time, by interface type, during either business period.</li> </ul>

Function: Business Implications:	<p><b>Center Responsiveness</b></p> <p>When CLECs experience operational problems dealing with ILEC processes or interfaces, prompt responses by ILEC support centers are required to ensure that the CLEC customers are not adversely affected. Any delay in responding to CLEC center requests for support (e.g., request for a vanity telephone number) will, in turn, adversely impact the CLEC retail customer who may be holding on-line with the CLEC customer service agent. This measure monitors the ILEC's handling of support calls from CLECs to determine if responsiveness is at parity with the service the ILEC provides its retail customers seeking assistance (e.g., calls to the business office of the ILEC or call the ILEC to report service repair issues).</p>
Measurement Methodology	<p><b>Mean Time to Answer Calls</b> = <math>\Sigma [(Date\ and\ Time\ of\ Call\ Answer) - (Date\ and\ Time\ of\ Call\ Receipt)] / (Total\ Calls\ Answered\ by\ Center)</math></p> <p><b>Call Abandonment Rate</b> = <math>(Count\ of\ Calls\ Terminated\ Before\ Answer\ During\ the\ Reporting\ Period) / (Count\ of\ All\ Calls\ Placed\ in\ Queue\ During\ the\ Reporting\ Period)</math></p> <p><b>For CLEC Results:</b> Speed of answer (mean time to answer calls) and call abandonment rates are monitored through the call management technology utilized to distribute calls to ILEC agents supporting CLEC activities (i.e., call receipt personnel staffing ILEC support centers intended for CLEC use). Results for each measure are to be provided separately for each center handling CLEC inquiries. If centers deployed by the ILEC support multiple functions (e.g., both maintenance and provisioning) then the results for each function supported should be separately reported.</p> <p><b>Speed of Answer</b> is determined by measuring and accumulating the elapsed time from the entry of a CLEC call into the ILEC call management system until the CLEC call</p>

# Service Quality Measurements

## Measurement Detail

is transferred to the ILEC personnel assigned to handling CLEC calls for assistance. The elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second. The accumulated elapsed time is divided by the count of calls transferred to ILEC agents for accuracy.

The Call Abandonment Rate is based on the number of calls received by the call distribution system of the ILEC center for the reporting period, regardless whether the call actually is transferred to ILEC personnel for processing. In addition, a count is accumulated of all calls that are subsequently terminated by the calling party or dropped due to equipment failure before transfer to the service agent for processing. The accumulated count of calls abandoned (terminated) is divided by the total count of calls received at the monitored center.

**For ILEC Results:**

Speed of Answer, as it relates to the ILEC, will be measured in an identical manner as described for the CLEC. The results for the ILEC business office operations and its repair bureau operations should be separately accumulated, computed and retained. If further distinctions are made or more discrete tracking is performed within the ILEC call receipt centers (e.g., by business and residence), then results should be reported at the lowest possible level of detail. Where call receipt for such operations are commingled and inseparable, then only a single result for each measure will be generated and serve as the comparative result for both the CLEC repair support and the CLEC provisioning support results.

**Other Clarifications and Qualification:**

- Speed of Answer minimum service standards, established in many states for business office, maintenance center, and/or operator services represent a similar ILEC measure and are derived from identical data (although the result displayed may be in comparison to a pre-established standard performance minimum).
- For ILEC and CLEC calls, an ILEC Agent answering and placing the caller on hold does not stop timing for purposes of the speed of answer interval.
- An interactive voice response (IVR) unit does not stop the timing for purposes of the speed of answer interval. For a call to be considered answered, the live ILEC Agent must handle the CLEC request.
- Results may be reported for the CLEC industry in aggregate to the extent that separate carrier-specific support centers are not provided. If separate centers are provided (either for an individual CLEC or a group of CLECs) then results should be gathered and supplied for each center and reported to the CLEC(s) based upon the center providing the specific CLEC's support.
- If the ILEC call management technology cannot measure speed of answer on a call-specific basis, then an alternate methodology that simulates speed of answer based upon the average time for component parts of the call (e.g., queue to IVR + IVR to queue + queue to agent answer) can be utilized by mutual consent of the ILEC and CLECs.

**Reporting Dimensions:**

- Support Center Type (i.e., Center supporting CLEC maintenance, Center supporting CLEC provisioning, ILEC Center supporting retail customer maintenance calls, ILEC Center supporting business office inquiries)

**Excluded Situations:**

- None

## Service Quality Measurements Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
<ul style="list-style-type: none"> <li>• Month</li> <li>• Center Identifier</li> <li>• Center Type</li> <li>• Mean Speed of Answer</li> <li>• Standard Error for Mean Speed of Answer</li> <li>• Count of Calls Answered</li> <li>• Count of Calls Abandoned</li> </ul>	<ul style="list-style-type: none"> <li>• Month</li> <li>• Center Identifier</li> <li>• Center Type</li> <li>• Mean Speed of Answer</li> <li>• Standard Error for Mean Speed of Answer</li> <li>• Count of Calls Answered</li> <li>• Count of Calls Abandoned</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC's operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Greater than 95% of calls, by center, are answered within 20 seconds.</li> <li>• All calls are answered within 30 seconds.</li> </ul>

<b>Function:</b> <b>Business Implications:</b>	<p style="text-align: center;"><b>Average Response Interval for Real-time OSS Queries</b></p> <p>As an initial step of establishing service, the customer service agent must determine such basic facts as availability of desired features, service delivery intervals, telephone numbers to be assigned, the customer's current products and features, qualification of the customer's loop for advanced digital services, and/or the validity of the street address. Likewise, maintenance customer service agents also must obtain real-time information in order to log customer troubles. In preordering and maintenance operations, this type of information is gathered from supporting OSS while the customer (or potential customer) is on the telephone with the customer service agent. Because pre-ordering activities are the first tangible contact a customer may have with a CLEC and because customers already may be dissatisfied when they report a trouble, it is critical that the CLEC be perceived as equally competent, knowledgeable and fast as an ILEC customer service agent. This measure is designed to monitor the time required for CLECs to obtain the pre-ordering and maintenance information necessary to establish and modify service and to log trouble reports. Comparisons to ILEC results indicate whether a CLEC has an equal opportunity to deliver a comparable customer experience when a retail customer calls the CLEC with a service inquiry.</p>
<b>Measurement Methodology:</b>	<p><b>Average Response Interval = <math>\Sigma[(\text{Query Response Date \&amp; Time}) - (\text{Query Submission Date \&amp; Time})] / (\text{Number of Queries Submitted in Reporting Period})</math></b></p> <p><b>For CLEC Results:</b> The response interval for each query is determined by computing the elapsed time from the ILEC receipt of a query from the CLEC, whether or not syntactically correct, to the time the ILEC returns the requested data (or reject notification) to the CLEC. Elapsed time is accumulated for each major query or transaction type, consistent with the specified reporting dimension, and then divided by the associated total number of queries received by the ILEC during the reporting period.</p> <p><b>For ILEC Results:</b> The ILEC computation is identical to that for the CLEC with the clarifications noted below.</p>

# Service Quality Measurements

## Measurement Detail

### Other Clarifications and Qualification:

- The elapsed time for an ILEC query is measured from the point in time when the ILEC customer service agent submits the request for identical or similar information into the ILEC OSS until the time when the ILEC OSS returns the requested information to the ILEC customer service agent.
- As additional pre-ordering functionality is established by the industry, for example with respect to unbundled network elements, the reporting dimensions may be expanded.
- Elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second.
- Elapsed time is to be measured through automated rather than manual monitoring and logging.
- The ILEC service agent entry of a request for pre-ordering or repair information (to the ILEC OSS) is considered to be the equivalent of the ILEC receipt of a query from the CLEC.
- The ILEC OSS return of information to the ILEC customer service agent, whether in hard copy or by display on a terminal, is considered equivalent to the return of requested information to the CLEC.

<b>Reporting Dimensions:</b> <ul style="list-style-type: none"> <li>• Company</li> <li>• Interface Type</li> <li>• Pre-Ordering Query Types (See Appendix A)</li> <li>• Maintenance Query Types (See Appendix A)</li> </ul>	<b>Excluded Situations:</b> <ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Interface Type (specific to pre-ordering or maintenance and repair)</li> <li>• Query Identifier (e.g., unique tracking number)</li> <li>• Query Receipt Date by ILEC</li> <li>• Query Receipt Time by ILEC</li> <li>• Query Type (per reporting dimension)</li> <li>• Response Return Date</li> <li>• Response Return Time</li> </ul>	<b>Data Retained Relating To ILEC Performance:</b> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Interface Type</li> <li>• Query Type (per reporting dimension)</li> <li>• Mean response interval</li> <li>• Query Count</li> <li>• Standard error of the mean response interval</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation, then result(s) related to the CLEC operation should meet or exceed the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Other than a query requesting 30 or more telephone numbers, the response interval will be less than or equal 2 seconds for 98% of the CLEC's queries received by the ILEC during the reporting period and no query will take longer than 5 seconds.</li> <li>• For queries requesting 30 or more telephone numbers, the response interval is never to exceed two hours.</li> </ul>

# Service Quality Measurements

## Measurement Detail

### Billing (BI)

<b>Function</b>	<b>Timeliness Of Billing Record Delivery</b>
<b>Business Implications</b>	Regardless of whether the billing is to retail customers or to exchange access service customers, ILEC delivery of billing records must provide CLECs with the opportunity to deliver bills in as timely a manner as the ILEC; otherwise artificial competitive advantage will be realized by the ILEC. The "mean time to provide recorded usage" and the "mean time to deliver invoices" metrics monitor this situation.
<b>Measurement Methodology</b>	<p><b>Mean Time to Provide Recorded Usage Records</b> = <math>\frac{\sum[(\text{Data Set Transmission Date}) - (\text{Date of Message Recording})]}{(\text{Count of All Messages Transmitted in Reporting Period})}</math></p> <p><b>Mean Time to Deliver Invoices</b> = <math>\frac{\sum[(\text{Invoice Transmission Date}) - (\text{Date of Scheduled Bill Cycle Close})]}{(\text{Count of Invoices Transmitted in Reporting Period})}</math></p> <p><b>For CLEC Results:</b></p> <p><b>Usage Records:</b> This measure captures the elapsed time between the recording of usage data generated either by CLEC retail customers or by CLEC access customers (by the AMA recording equipment associated with the ILEC switch) and the time when the data set, in a compliant format, is successfully transmitted to the CLEC. For each usage record, the calendar date and time of usage recording is compared to the calendar date and time of successful completion of data set transmission to the CLEC. The number of hours and tenths of hours elapsed between message recording and data set transmission will constitute the elapsed delivery time. The elapsed delivery time is accumulated for each usage record with the resulting total number of hours accumulated being divided by the number of complete usage records in all the data sets transmitted.</p> <p><b>Invoices:</b> This measure captures the elapsed number of days between the scheduled close of a Bill Cycle and the ILEC's successful transmission of the associated invoice to the CLEC. For each invoice, the calendar date of the scheduled close of Bill Cycle is compared to the calendar date that successful invoice transmission to the CLEC completes. The number of calendar days elapsed between scheduled Bill Cycle close and completion of invoice transmission will constitute the elapsed delivery time. The elapsed delivery time is accumulated for each invoice with the resulting total number of days accumulated being divided by the number of complete invoices sent in the reporting period.</p> <p><b>For ILEC Results:</b> Identical computations are made for the ILEC with the clarifications provided below.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• The elapsed time for delivery of ILEC usage records is measured from the time of message recording, as captured on the ILEC's AMA tape, to the time the AMA tape is converted to billing format (EMR format or equivalent).</li> <li>• The elapsed time for ILEC invoice delivery is measured from the scheduled close date of the retail customer bill cycle to the production of the customer bill in a format appropriate for delivery to retail customers regardless whether such a distribution occurs immediately.</li> </ul>

# Service Quality Measurements

## Measurement Detail

	<ul style="list-style-type: none"> <li>Mean time to deliver usage records is to be reported separately for end user usage and access related usage.</li> </ul>
<b>Reporting Dimensions:</b>	<b>Reporting Situations:</b>
<ul style="list-style-type: none"> <li>Company</li> <li>Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)</li> </ul>	<ul style="list-style-type: none"> <li>Any usage records or invoices rejected due to formatting or content errors.</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>Report Monthly</li> <li>Record Type or Invoice Type</li> <li>Mean Delivery Interval</li> <li>Standard Error of Delivery Interval</li> <li>Number of Messages or Invoices Delivered</li> </ul>	<ul style="list-style-type: none"> <li>Report Month</li> <li>Record Type or Invoice Type</li> <li>Mean Delivery Interval</li> <li>Standard Error of Delivery Interval</li> <li>Number of Messages or Invoices Delivered</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>For usage records, separately for access usage and end user usage.             <ol style="list-style-type: none"> <li>Greater than 99.9% records received within 24 hours of usage recording.</li> <li>All usage is received within 48 hours of usage recording.</li> </ol> </li> <li>Greater than 99.95% of total service resale invoices received within 10 calendar days of bill cycle close.</li> <li>Greater than 99.95% of wholesale (UNE) invoices received within 10 calendar days of bill cycle close.</li> </ul>

<b>Function:</b>	<b>Accuracy of Billing Records</b>
<b>Business Implications:</b>	<p>The accuracy of billing records affects the accuracy of the billing ultimately delivered to local service customers, whether retail local service or exchange access service customers. Billing for the elements from which CLEC services are constructed must be validated to assure that only correct charges are paid. This validation is necessary to assure that the cost structure for services is not inflated. Furthermore, charges such as "time and material" related charges may be on the invoice and need to be promptly passed on to customers (by CLECs) to avoid dissatisfaction regarding the timeliness of CLEC billing. Prompt billing of such charges also minimizes customer inquiries on late billing. Fair competition requires that the accuracy of billing records (both usage and invoices) delivered by the ILEC to the CLEC must provide CLECs with the opportunity to deliver bills at least as accurate as those delivered by the ILEC. Producing and comparing this measurement result for both the ILEC and CLEC allows a determination as to whether or not parity exists.</p>
<b>Measurement Methodology:</b>	<p><b>Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period] x 100</b></p> <p><b>Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100</b></p> <p><b>For CLEC Results:</b> The completeness of content, accuracy of information and conformance of formatting will be determined based upon the terms of the individual CLEC interconnection agreements with the ILECs. The ILEC will establish a quality</p>

## Service Quality Measurements Measurement Detail

control process that is disclosed to CLECs and that is no less rigorous than the most rigorous quality monitoring established in the ILEC billing service contracts for long distance service providers. The quality monitoring process must be disclosed in advance and process auditing must be permitted. The records and invoices delivered by the ILEC must simultaneously meet the standards relating to content, accuracy and formatting in order to be counted as accurate. Each of the above measurements, is expressed as a ratio (expressed as a percentage) of accurate records (or invoices) to the total records (or invoices) delivered.

**For ILEC Results:** The computation for the ILEC is identical to that described for the CLEC. The usage accuracy determination is based upon comparison of the usage records, following format conversion to the EMR (or equivalent) format as compared to the internally established content and formatting requirements. Likewise, the accuracy measure for invoice delivery will be based upon a statistically reliable comparison of ILEC invoices to the content, calculation methodology and formatting standards of the ILEC. Separate comparisons are to be made for retail service invoices and access invoices with the results compared to wholesale (total service resale) and UNE invoices, respectively.

**Other Clarifications and Qualification:**

- The usage accuracy measure identified here is similar to the type of measures that ILECs commonly institute in service contracts with long distance service suppliers who use ILEC billing services.
- The wholesale invoice accuracy identified here is analogous to the measures contained within the Billing Quality Assurance Programs that the ILECs have with interchange carriers for monitoring access billing quality. If a sampling process is used to monitor accuracy, then the study results must be reconfirmed no less than quarterly.

<p><b>Reporting Dimensions:</b></p> <ul style="list-style-type: none"> <li>• Company</li> <li>• Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)</li> </ul>	<p><b>Excluded Situations:</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul>
<p><b>Data Retained Relating To CLEC Experience:</b></p> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Record Type or Invoice Type</li> <li>• Number of Records With Errors</li> <li>• Number of Records Delivered</li> </ul>	<p><b>Data Retained Relating To ILEC Performance:</b></p> <ul style="list-style-type: none"> <li>• Report Month</li> <li>• Record Type or Invoice Type</li> <li>• Number of Records With Errors</li> <li>• Number of Records Created</li> </ul>
<p><b>Performance Standard in Absence of ILEC Results:</b></p>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Greater than 98% of usage records transmitted, by usage type, reflect the agreed upon format and contain complete information.</li> <li>• Greater than 98% of wholesale bills, by invoice type, are accurate.</li> </ul>

# Service Quality Measurements Measurement Detail

## Operator Services,/Directory Assistance & Listings (OS, DA & DL)

<b>Function:</b>	<b>Speed To Answer/Review Period for Directory Listings</b>
<b>Business Implications:</b>	The speed of answer delivered to CLEC retail customers, when the ILEC provides Operator Services or Directory Services on behalf of the CLEC, must be no slower than the speed of answer that the ILEC delivers to its own retail customers of equivalent local services. The average amount of hold time that CLEC customers experience also must not be longer than it is for ILEC customers. In addition, CLECs must be provided the same opportunity to review directory listing updates to catch any errors before publication in white pages directories.
<b>Measurement Methodology:</b>	<p><b>Mean Time To Answer</b> = <math>\frac{\sum(\text{Date and Time of Call Answer}) - (\text{Date and Time of Call Receipt})}{(\text{Total Calls Answered on Behalf of the CLECs in Reporting Period})}</math></p> <p><b>Mean Time Allotted to Proof Listing Updates Before Publication</b> = <math>\frac{(\text{Date \&amp; Time of Directory Publication Deadline}) - (\text{Date and Time Updates Available for Proofing})}{(\text{Total Number of Updates Provided for Proofing During Reporting Period})}</math></p> <p><b>For CLEC Results:</b> Speed of answer is monitored through the call management technology used to distribute calls to ILEC agents supporting CLEC activities (i.e., call receipt personnel staffing Directory Assistance or Operator Service Positions)</p> <p><i>Speed of Answer</i> is determined by measuring and accumulating the elapsed time from the entry of a CLEC retail customer call into the ILEC call management system queue until the CLEC retail customer call is transferred to the ILEC personnel assigned to handling CLEC calls for assistance (whether DA or OS). The elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second.</p> <p><u>Time Allotted To Proof Listing Updates</u> encompasses the amount of review time afforded to CLECs for the purposes of validating directory listings prior to directory publication. If electronic access permits a CLEC to view, on demand, its customers' listings as they will be published, then this measure is not necessary. An interface availability measurement, however, should be included within the reporting dimensions for the "General" OSS systems measurements. The directory proofing interval information should be captured and retained for each directory published. The interval is measured from the date and time the CLEC receives a final listing of customer-related information that will be contained within the ILEC's next directory publication to the final date and time for submission of changes to the listings provided.</p> <p><b>For ILEC Results:</b> Identical to process described for the CLEC with the clarification provided below.</p> <p><b>Other Clarifications and Qualifications:</b></p> <ul style="list-style-type: none"> <li>• The "speed to answer" measure is directly analogous to speed of answer minimum service standards established within many states.</li> <li>• Results must be reported separately for CLECs that use facilities-based interconnection, as customer calls to OS and DA will arrive at the operator center on unique facilities. For CLECs that use common facilities to deliver customer calls to the operator center, results may be reported for the CLEC industry in aggregate until the capability to measure specific CLEC results exists.</li> </ul>

## Service Quality Measurements Measurement Detail

	<ul style="list-style-type: none"> <li>See the "Center Responsiveness" measurement for the treatment of situations where ILEC call management technology cannot measure speed of answer on a call basis from receipt to answer</li> </ul>
<b>Measuring Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>Company</li> <li>Operator Services By Center</li> <li>Directory Assistance By Center</li> <li>Directory Listings By Directory</li> </ul> <p>Note: OS/DA Speed to Answer is to be CLEC-specific if technically feasible.</p>	<ul style="list-style-type: none"> <li>Call abandoned by customers prior to answer by the ILEC OS or DA operator</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>Month</li> <li>Type of Measurement (OS Calls, DA Calls or Directory Listing)</li> <li>Center Identifier (or Directory ID for DL)</li> <li>Mean Speed of Answer (OS &amp; DA only)</li> <li>Standard Error for Mean Speed of Answer (OS &amp; DA only)</li> <li>Number of Calls Answered (OS &amp; DA only)</li> <li>Directory Close Date (DL only)</li> <li>List Availability Date (DL only)</li> </ul>	<ul style="list-style-type: none"> <li>Month</li> <li>Type of Measurement (OS Calls, DA calls or Directory Listings)</li> <li>Center Identifier (or Directory ID for DL)</li> <li>Mean Speed of Answer (OS &amp; DA only)</li> <li>Standard Error for Mean Speed of Answer (OS &amp; DA only)</li> <li>Standard Error for Mean Speed of Answer (OS &amp; DA only)</li> <li>Directory Close Date (DL only)</li> <li>Listing Availability Date (DL only)</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>More than 90% of calls answered by a "live" agent, separately for OS and DA services, within 10 seconds.</li> <li>All calls answered by a Voice Response Unit, separately for OS and DA services, within 2 seconds.</li> <li>Directory Listing review time may be no more than 4 hours less than the ILEC's.</li> </ul>

# Service Quality Measurements

## Measurement Detail

### Network Performance (NP)

<b>Function:</b> <b>Business Implications:</b>	<p><b>Interconnect Traffic Engineering/Trunking Capacity</b></p> <p>When customers place calls, they expect that their calls will go through. Likewise customers also expect that other callers will be able to reach them without having their calls blocked. In order to ensure that CLEC customers do not experience greater blocking to and from their lines than ILEC customers do, it is necessary to measure and compare blocking rates for ILEC and CLEC trunk usage.</p> <p>Overall trunk blocking experienced by ILEC and CLEC customers must be measured because blockage on common trunks affects a greater percentage of CLEC total traffic than ILEC total traffic. The ILEC's greater build out of Direct End Office Trunking (DEOT), using common trunking mostly for overflow traffic from DEOTS, creates the disparity. Common trunks carry a greater percentage of CLEC traffic because of the CLECs' reliance on tandem interconnection as their networks are built out. The reliance not only is an economic choice based on 'start-up' traffic volumes, but also results from ILEC restrictions on direct end office connections.</p> <p>Blocking measurements, as recommended below, or any call completion comparisons for dedicated final interconnection trunks do not tell the whole story of network capacity. Timely delivery of interconnect trunks and augments based on CLEC traffic projections rather than current utilization is also significant to the capacity parity issue and is discussed further in the order completion interval section. To protect their customers and their reputations, CLECs keep blocking levels under control on dedicated trunks by holding up new off-net and on-net customer orders. Installing new customers before ILECs have provided adequate trunking capacity, in line with CLEC forecasts and actual business requirements, can degrade service to existing and new CLEC customers.</p>
<b>Measurement Methodology:</b>	<p><b>% Call Completion:</b> <math>[(\text{Total number of blocked call attempts (separate measures for inbound and outbound) during the busy hour}) / \text{Total number of call attempts during busy hour}] \times 100</math></p> <p><b>For CLEC Results:</b> For determining outbound call blocking, the number of CLEC customer call attempts, where the customer dials a valid telephone number, is accumulated for the reporting period. The number of blocked call attempts experienced by CLEC customers, where a call to a valid telephone number was not completed by the network because of ILEC-controlled capacity limitations or other ILEC network trouble, also is accumulated during the reporting period. At the end of the reporting period, the total number of blocked attempts is divided by the total number of attempts, and the ratio is expressed as a percentage. For inbound calling, the results will measure calls originating on the ILEC's network and blocked from terminating on the CLEC's network.</p> <p><b>For ILEC Results:</b> The approach is identical to that described for the CLEC, except that the network performance is measured only for representative ILEC service configurations.</p> <p><b>Other Clarifications and Qualifications:</b></p> <p>CLECs may agree to call completion reports in lieu of or in addition to blocking reports.</p>

## Service Quality Measurements Measurement Detail

Reporting Dimensions:	Excluded Situations:
<ul style="list-style-type: none"> <li>• Trunk Capacity Type (DS0, DS1, DS3, etc.)</li> <li>• Dedicated Trunk Groups</li> <li>• Common Trunk Groups Where CLEC/LD Traffic Share Common ILEC Trunks.</li> <li>• Common Trunk Groups where CLEC traffic traverses a separate common network from ILEC traffic.</li> <li>• Availability of 7-digit call back-up to PSAP location</li> <li>• E911/911 Trunk Groups</li> <li>• OS/DA Trunk Groups</li> <li>• By Switch (Serving CLEC) for CLEC</li> <li>• By Switch (Serving CLEC) for ILEC</li> <li>• Company</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• None.</li> </ul>
Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• By Switch (Serving CLEC) for CLEC</li> <li>• Trunk Capacity Type</li> <li>• Trunk Group Identifier</li> <li>• Geographic Identifier</li> <li>• Busy Hour and Day</li> <li>• Calls Attempted</li> <li>• Calls Blocked</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• By Switch (Serving CLEC) for ILEC</li> <li>• Trunk Capacity Type</li> <li>• Trunk Group Identifier</li> <li>• Geographic Identifier</li> <li>• Busy Hour and Day</li> <li>• Calls Attempted</li> <li>• Calls Blocked</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <p><b>Engineering Parameters:</b></p> <ul style="list-style-type: none"> <li>• <i>Dedicated Trunk Groups:</i> Not to exceed blocking standard of B.01</li> <li>• <i>Common Trunk Groups:</i> <ol style="list-style-type: none"> <li>(1) Where CLEC/LD traffic share common ILEC trunks: No more than 1% of end offices may have more than 2% blockage a month based on the Erlang-B.01 scale.</li> <li>(2) Where CLEC traffic traverses a separate common network from ILEC traffic: No more than 2% of end offices may have more than 2% blocking.</li> </ol> </li> </ul>

4400-100-114

# Service Quality Measurements

## Measurement Detail

<b>Function:</b>	<b>Reporting Network Outages</b>
<b>Business Implications:</b>	<p>Both CLECs and ILECs must be made aware of major network events in order to notify customers and regulatory agencies (e.g. E-911 agencies, FAA, and other key customer accounts).</p> <p>To that end, the ILECs must provide the CLECs with timely and detailed information (pertaining to a network incident) to afford CLECs the opportunity to make prudent business decisions regarding management of their own customer base and networks. For example, the ILEC would inform the CLEC that the network incident was caused by a cable cut at a specified location.</p>
<b>Measurement Methodology:</b>	<p><b>Mean Time to Notify CLEC = <math>\Sigma[(\text{Date and Time ILEC Notified CLEC network incident}) - (\text{Date and Time ILEC detected network incident})] / \text{Count of Network Incidents}</math>.</b></p> <p><b>For CLEC Results:</b> The results will be based on the time it takes for the ILEC's Centralized Control Center to notify the CLEC and ILEC of a customer impacting network incident in equipment utilized by the CLEC. When the ILEC's Centralized Control Center becomes aware of the network incident, they must electronically notify both the ILEC and the CLEC.</p> <p>The notification time for each outage will be measured in minutes and divided by the number of outages for the reporting period.</p> <p><b>For ILEC Results:</b> Same computation as for the CLEC.</p>
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Type of Event - By each Reportable Incident Grouping (See Attachment A)</li> <li>• By Switch and Tandem</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Type of Event</li> <li>• Meantime to notify CLEC</li> <li>• Number of Events</li> <li>• Geographic Scope Indicator</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Type of Event</li> <li>• Mean Time to Detect Event</li> <li>• Number of Events</li> <li>• Geographic Scope Indicator</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Electronic Notification Procedures are required for real-time network incident reporting from ILEC to CLEC.</li> <li>• Manual reporting processes may be required until OSS Interfaces become operational.</li> </ul>

## Service Quality Measurements Measurement Detail

<b>Function:</b>	<b>Network Performance Parity</b>
<b>Business Implications:</b>	The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNE combinations are employed, will be heavily influenced by the underlying quality of the ILEC network performance. Customers experience the network quality of the service provider each time services are used. This metric, when collected for both the CLEC and ILEC and then compared, will help show whether CLEC network performance is at least at parity with ILEC network performance.
<b>Measurement Methodology:</b>	<p><b>Network Performance Parity = <math>\Sigma(\text{Network Performance Parameter Result})/(\text{Number of Tests Conducted})</math></b></p> <p><b>For CLEC Results:</b> Based upon a random and statistically reliable (at a preset level) sample of network configurations employed by the CLEC, the network performance parameter (as indicated in the reporting dimension) is monitored based upon generally accepted testing procedures and the resulting parameter value(s) recorded. The measured values are accumulated across the sample base and the mean and associated variance computed.</p> <p><b>For ILEC Results:</b> The approach is identical to that described for the CLEC, except that the network performance is measured only for representative ILEC service configurations.</p>
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• <b>Transmission Quality (See Appendix A)</b></li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Reporting Dimension</li> <li>• Mean Performance Result</li> <li>• Standard Error of Mean Performance</li> <li>• Number of Data Points</li> <li>• Geographic scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Reporting Dimension</li> <li>• Mean Performance Result</li> <li>• Standard Error of Mean Performance</li> <li>• Number of Data Points</li> <li>• Geographic scope</li> </ul>
<b>Performance Standard in Absence of ILEC Results</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• Performance Standards in this area are yet to be published.</li> </ul>

# Service Quality Measurements

## Measurement Detail

### Collocation Provisioning (CP)

<b>Function:</b>	<b>Collocation Provisioning</b>
<b>Business Implications:</b>	<p>CLECs need to receive timely responses describing the price and availability of collocation space and ontime provisioning of collocation arrangements. CLECs also need the timely offering of alternatives to physical collocation and virtual collocation.</p> <p>Where ILECs run out of physical collocation space, they may develop suitable space CLECs also may prefer more cost-efficient alternatives that afford control over their own equipment and may seek alternative arrangements from ILECs. The speed at which these alternative arrangements (i.e. leasing GR-303 compliant access concentration equipment as an unbundled network element or backhauling to a neighboring central office) are offered and provided also is critical to CLECs obtaining a meaningful opportunity to compete in local markets.</p>
<b>Measurement Methodology:</b>	<p><b>Mean Time To Respond To Collocation Request</b> = <math>\Sigma [(\text{Request Response Date}) - \text{Request Submission Date}] / \text{Count of Request Responses Issued}</math></p> <p><b>Mean Time To Provide Collocation Arrangement</b> = <math>\Sigma [(\text{Date \&amp; Time Collocation Arrangement is Complete}) - (\text{Date \&amp; Time Collocation Application Submitted})] / \text{Number of Collocation Arrangements Completed}</math></p> <p><b>% Due Dates Missed</b> = <math>(\text{Number of Orders Not Completed By ILEC Committed Due Date}) / \text{Total Number of Orders Completed During the Reporting Period}</math></p> <p><b>For CLEC Results:</b></p> <p><b>Mean Time to Respond to Collocation Request:</b> The response interval for each space request is determined by computing the elapsed time from the ILEC receipt of a collocation request (or inquiry) from the CLEC, to the time the ILEC returns the requested information or commitment to the CLEC. Elapsed time is accumulated for each type of collocation space request, and then divided by the associated total number of collocation requests received by the ILEC during the report period.</p> <p><b>Mean Time To Provide Collocation Arrangements:</b> The interval is the elapsed time from the ILEC's receipt of an order for collocation (from the CLEC) to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is then divided by the associated total number of collocation orders completed within the reporting period for each type of collocation. The measurement is similar to the Average Completion Interval for resold services and unbundled network element orders and could be reflected as a separate category of that measurement.</p> <p><b>% Due Dates Missed:</b> For each type of collocation, both the total numbers of orders completed within the reporting interval and the number of orders completed but missing the committed due date (as specified on the initial confirmation returned to the CLEC) are counted. The resulting count of orders completed later than the committed due date is divided by the total number of orders completed. The measurement is similar to the % Completed on Time for resold services and unbundled network element orders and could be reflected as a separate category within the % Completed on Time measurement.</p> <p><b>For ILEC Results:</b> The ILEC computation is identical to that for the CLEC for provision of collocations to ILEC affiliates. Largely, however, tariff and contract standards will be the benchmarks that ILECs must meet for a parity determination.</p>

## Service Quality Measurements Measurement Detail

<b>Performance Standard in Absence of ILEC Results</b>	<p>Their vast number of end offices compared to CLECs' switch deployment make it difficult to develop the appropriate analog.</p> <p><b>Other Clarifications and Qualifications:</b></p> <ul style="list-style-type: none"> <li>• Elapsed time is measured in days and hours.</li> <li>• A response to the collocation request will only be considered to be "received" if it is a thorough and actionable plan (i.e. a simple "yes" or "no" is not sufficient).</li> <li>• Questions about the CLEC's collocation request also do not count as a "received response."</li> </ul>
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Type of Collocation</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• CLEC cancellations or requested delays.</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Request Identifier (e.g., unique tracking number)</li> <li>• Date and Time of Request receipt by ILEC.</li> <li>• Request type (per reporting dimension)</li> <li>• Response Date and Time</li> <li>• Committed Delivery Date and Time</li> <li>• Actual Delivery Date and Time</li> <li>• Response Date and Time</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Request Identifier</li> <li>• Date and Time of Request Receipt by ILEC</li> <li>• Response Date and Time</li> <li>• Committed Delivery Date and Time</li> <li>• Actual Delivery Date and Time</li> <li>• Geographic scope</li> </ul>
<b>Performance Standard in Absence of ILEC Results</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• All responses must be provided in 5 business days unless contract/tariff interval is shorter.</li> <li>• All collocations must be provided within the applicable contract or tariff intervals.</li> <li>• No less than 98% of commitments must be met for Physical, Virtual and other alternative collocation offerings.</li> </ul>

# Service Quality Measurements

## Measurement Detail

### Database Updates (DU)

4100-100-474

<b>Function:</b>	<b>Database Updates</b>
<b>Business Implications:</b>	<p>CLECs must rely on ILEC databases in order to provide accurate E911/911 services, directory listings, directory assistance, and operator services. ILECs currently control the updating of many essential databases, such as the Line Information Database (LIDB); directory listings, E911 Automatic Location Identifier (ALI), Master Street Address Guide (MSAG) and selective routing databases.</p> <p>In addition, accurate and timely loading of NXXs before the LERG (Local Exchange Routing Guide) effectiveness date is vital to CLEC customer's receiving calls from ILEC customers, and it is essential to ensure that customers are charged correctly for local and toll calls. Routing of CLEC's NXXs at the tandem and central office to the proper Public Safety Answering Point (PSAP) for emergency calls also is critical to E911/911 service.</p> <p>Disparity in timely and accurate updates of the above databases can lead to annoying, costly and possibly "life and death" situations for CLEC customers.</p>
<b>Measurement Methodology:</b>	<p><b>Average Update Interval</b> = <math>\sum [(\text{Completion Date \&amp; Time of Database Update}) - (\text{Submission Date and Time of Database Change})] / \text{Total Number of Updates Completed During Reporting Period}</math></p> <p><b>% Update Accuracy</b> = <math>[(\text{Number of Updates Completed Without Error}) / (\text{Number Updates Completed})] \times 100</math></p> <p><b>For CLEC Results:</b></p> <p><u>Average Update Interval:</u> The actual update interval is determined for each update processed during the reporting period. It is the elapsed time from the ILEC receipt of a syntactically correct transaction from the CLEC to the ILEC's accurate completion of updating all databases affected by the CLEC activity. Elapsed time for each update is accumulated for each affected database (e.g., E911/911, LIDB, Directory and Directory Listings). The time required to update each database is accumulated and then divided by the associated total number of updates completed within the reporting period.</p> <p><u>% Update Accuracy:</u> For each update completed during the reporting period, the original update that the CLEC sent to the ILEC is compared to the Database following completion of the update by the ILEC. An update is "completed without error" if the database completely and accurately reflects the activity specified on the original and supplemental update (e.g., orders) submitted by the CLEC. Each Database (e.g., E911/911, LIDB, Directory and Directory Listings) should be separately tracked and reported.</p> <p><b>For ILEC Results:</b> The ILEC computation is identical to that for the CLEC with the clarifications noted below.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• For LIDB, the elapsed time for an ILEC update is measured from the point in time when the ILEC's file maintenance process makes the LIDB update information available until the date and time reported by the ILEC that database updates are completed.</li> <li>• Results for the CLECs are captured and reported at the update level by Reporting Dimension (see below).</li> </ul>

## Service Quality Measurements Measurement Detail

	<ul style="list-style-type: none"> <li>• The Completion Date is the date upon which the ILEC issues the Update Completion Notice to the CLEC.</li> <li>• If the CLEC initiates a supplement to the originally submitted update and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the update submission date and time will be the date and time of ILEC receipt of a syntactically correct update supplement. Update activities responding to ILEC initiated changes will not result in changes to the update submission date and time used for the purposes of computing the update completion interval.</li> <li>• Elapsed time is measured in hours and hundredths of hours rounded to the nearest tenth of an hour.</li> <li>• Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays; however, scheduled maintenance windows are excluded.</li> </ul>
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>• Company</li> <li>• Database Type</li> </ul>	<ul style="list-style-type: none"> <li>• Updates Canceled by the CLEC</li> <li>• Initial update when supplemented by CLEC</li> <li>• ILEC updates associated with internal or administrative use of local services</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Database Type</li> <li>• Update Submission Date</li> <li>• Update Submission Time</li> <li>• Update Completion Date</li> <li>• Update Completion Time</li> <li>• Reporting Dimension</li> <li>• Geographic Scope</li> </ul>	<ul style="list-style-type: none"> <li>• Report Month</li> <li>• Database Type</li> <li>• Mean Interval for Update</li> <li>• Standard Error of Mean</li> <li>• Number of Updates</li> <li>• Number of Updates With Errors</li> <li>• Geographic Scope</li> </ul>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>• 99.99% completed in 24 hours or 100% completed by LERG effective date.</li> <li>• 99.99% accurate</li> </ul>

# Service Quality Measurements

## Measurement Detail

### Interconnection/Unbundled Elements and Combinations (IUE)

<b>Function:</b>	Availability of Network Elements
<b>Business Implications:</b>	As CLECs use individual elements and element combinations to deliver unique services, UNE functionality must operate properly to ensure that those elements support quality retail services. This measure monitors individual network elements or element combinations to ensure that CLECs have a meaningful opportunity to compete through access to and use of element (or combination) functionality.
<b>Measurement Methodology:</b>	<p><b>Function Availability<sup>1</sup> = (Amount of Time<sup>2</sup> a Functionality is Useable<sup>1</sup> by a CLEC in a Specified Period)/(Total Time<sup>2</sup> Functionality Was Scheduled To Be Useable)</b></p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. These measurements may also be expressed in the negative, that is, in term of unavailability.</li> <li>2. In some instances, rather than time, the availability will be expressed in terms of transactions executed successfully compared to transactions attempted.</li> </ol> <p><b>For CLEC Results:</b> Availability will be measured for each unique UNE functionality (or combination of UNEs). The number of times that the functionality executes properly will be shown in comparison to the number of times that the execution of the functionality was requested or initiated. Availability can apply to both physical and logical (e.g., database) elements. Physical element availability (e.g., links to databases, dedicated transport, etc.) will typically be expressed as the percent of time that the functionality is useable compared to the total time in the period being observed. "Useable" means that, when monitored, the element indicates readiness to operate (e.g., an electrical (or equivalent) continuity is detected, expected signaling is returned, etc.). Logical element availability will typically be expressed in terms of the number of transactions successfully executed (e.g., successful database updates, success query responses) compared to the number of transactions attempted.</p> <p><b>Illustrative examples of availability measures are shown below</b></p> <ul style="list-style-type: none"> <li>• A-link: minutes unavailable per year</li> <li>• D-link: seconds unavailable per year</li> <li>• Databases: percentage of queries receiving a response</li> <li>• Databases: percentage of queries experiencing a return of unexpected values</li> </ul> <p><b>For ILEC Results:</b> Identical measurements are performed where the ILEC employs the same or reasonably comparable functionality. Where such analogs do not exist, the ILEC is expected to establish benchmark performance levels jointly with the CLEC requesting the functionality.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>• The preceding list of elements is illustrative and is not to be considered exhaustive</li> <li>• ILEC failure to provide comparably timely performance when using comparable functionality constitutes discriminatory access. Where comparable functionality is not employed, failure to meet or exceed parameters negotiated with the CLEC also is discrimination.</li> <li>• For each element or element combination requested, where a retail analog is not identified, the ILEC is expected to establish both an availability measure and an availability standard (ILEC functional analog or benchmark) unless the CLEC waives its right for such a measure.</li> </ul>

## Service Quality Measurements Measurement Detail

<ul style="list-style-type: none"> <li>Typical databases for which standards are currently expected are AIN, LIDB and 800 Number.</li> </ul>	
<b>Reporting Dimensions:</b>	<b>Excluded Situations:</b>
<ul style="list-style-type: none"> <li>By unique UNE or UNE combinations requested by the CLECs</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Data Retained Relating To CLEC Experience:</b>	<b>Data Retained Relating To ILEC Performance:</b>
<ul style="list-style-type: none"> <li>Month</li> <li>Element or Element Combination Identification</li> <li>Result for Agreed Upon Availability Parameter</li> </ul>	<ul style="list-style-type: none"> <li>To Be Determined</li> </ul>
<b>Performance Standard in Absence of ILEC Results</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>Performance Standards in this area are yet to be published.</li> </ul>

<b>Function:</b>	<b>Performance of Network Elements</b>
<b>Business Implications:</b>	As CLECs use individual elements (as well as element combinations) to deliver unique services, it is essential that the UNE functionality operates in a timely manner because of the crucial role played by such elements in providing quality retail services. This measure monitors individual network element (or element combinations) that do not have an apparent retail analog. CLECs must be afforded a meaningful opportunity to compete when element (or combination) functionality is utilized.
<b>Measurement Methodology:</b>	<p><b>Timeliness of Element Performance = (Number of Times Functionality Executes Successfully Within the Established Timeliness Standard)/(Number of Times Execution of Functionality was Attempted)</b></p> <p><b>For CLEC Results:</b> Timeliness will be measured for each unique UNE (or combination of UNEs) that delivers unique functionality. The number of times that the functionality executes properly within the established standard time frame will be accumulated and shown in comparison to the number of times that the execution of the functionality was requested or initiated.</p> <p>Illustrative examples of timeliness measures are shown below:</p> <ul style="list-style-type: none"> <li>Database: % transactions experiencing time-outs</li> <li>Post Dial Delay: % calls routed to CLEC OS platform within 2 seconds</li> </ul> <p><b>For ILEC Results:</b> Identical measurements are performed where the ILEC employs the same or reasonably comparable functionality. Where such analogs do not exist, the ILEC is expected to establish benchmark performance levels jointly with the CLEC requesting the functionality.</p> <p><b>Other Clarifications and Qualification:</b></p> <ul style="list-style-type: none"> <li>The preceding list of elements is illustrative and is not to be considered exhaustive</li> <li>ILEC failure to provide comparably timely performance when using comparable functionality constitutes discriminatory access. Where comparable functionality is not employed, failure to meet or exceed parameters negotiated with the CLEC also is discrimination.</li> </ul>

## Service Quality Measurements Measurement Detail

4-00-100-4-74

	<ul style="list-style-type: none"> <li>For each element (or element combination) requested where a retail analog is not identified, the ILEC is expected to establish both a timeliness measure and a timeliness standard (ILEC functional analog or benchmark) jointly with the requesting CLEC unless that CLEC waives its right for such a measure.</li> <li>Typical databases for which standards are currently expected are AIN, LIDB and 800 Number.</li> <li>Comparisons of performance should be based upon the criteria for which the element was engineered. For example, if the element was engineered based upon average busy hour criteria, the comparison should be based upon the CLEC busy hour period (likewise for criteria such as busy day, busy season, or ten high days).</li> </ul>	
<b>Reporting Dimensions:</b>	<ul style="list-style-type: none"> <li>By unique UNE or UNE combinations requested by the CLECs</li> </ul>	<b>Excluded Situations:</b>
<b>Data Retained Relating To CLEC Experience:</b>	<ul style="list-style-type: none"> <li>Month</li> <li>Element or Element Combination Identification</li> <li>Result for Agreed Upon Availability Parameter</li> </ul>	<b>Data Retained Relating to ILEC Performance:</b>
<b>Performance Standard in Absence of ILEC Results:</b>	<p>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:</p> <ul style="list-style-type: none"> <li>Performance Standards in this area are yet to be published.</li> </ul>	

# Service Quality Measurements

## Appendix A: Reporting Dimensions

### Appendix A: Reporting Dimensions

<b>Service Types:</b>	<ul style="list-style-type: none"> <li>• Resold Residence POTS</li> <li>• Resold Business POTS</li> <li>• Resold BRI ISDN</li> <li>• Resold PRI ISDN</li> <li>• Resold Centrex/Centrex-like</li> <li>• Resold Analog PBX trunks</li> <li>• Resold DID Trunks</li> <li>• Resold Voice-Grade Private Line</li> <li>• Resold DS1 Services</li> <li>• Resold DS3 Services</li> <li>• Resold &gt;DS3 Services</li> <li>• Other Resold Services</li> <li>• UNE Platform (at least DS0 loop + local switch + transport elements)</li> <li>• UNE Channelized DS1 (DS1 loop + multiplexing)</li> <li>• Unbundled or UNE-derived 8 dB Analog Loops</li> <li>• Unbundled or UNE-derived 2-wire Digital Loops</li> <li>• Unbundled or UNE-derived 4-wire Digital Loops</li> <li>• Unbundled or UNE-derived ADSL Loops</li> <li>• Unbundled or UNE-derived HDSL Loops</li> <li>• Unbundled or UNE-derived xDSL Loops</li> <li>• Other Unbundled or UNE-derived Loops</li> <li>• UNE Analog Switch Port (line side)</li> <li>• UNE BRI Capable Switch Port (line side)</li> <li>• UNE DS1 Switch Port (line side)</li> <li>• UNE PRI Switch Port (trunk side)</li> <li>• UNE DID-capable Switch Port (trunk side)</li> <li>• UNE Message Trunk Port</li> <li>• UNE Dedicated DS0 Transport</li> <li>• UNE Dedicated DS1 Transport</li> <li>• UNE Dedicated DS3 Transport</li> <li>• Interconnect Trunks (DS0s, DS1s and DS3s, Two-Way Trunking, Inbound Augments, separately)</li> <li>• Common Transport</li> <li>• ILNP</li> <li>• PNP</li> <li>• ILNP-to-LNP conversions</li> </ul>
<b>Standard Order Activities:</b>	<ul style="list-style-type: none"> <li>• New Service Installations</li> <li>• Service Migrations Without Changes</li> <li>• Service Migrations With Changes</li> <li>• Local Number Porting</li> <li>• Inside Move</li> <li>• Outside Move</li> <li>• Records Change</li> <li>• Feature Changes</li> <li>• Service Disconnects</li> <li>• Translation Disconnects</li> <li>• Standalone Directory Listing (DL)</li> <li>• Standalone Directory Assistance (DA) Listing</li> <li>• Standalone DL &amp; DA Activity</li> </ul>

# Service Quality Measurements

## Appendix A: Reporting Dimensions

<b>Pre-Ordering Query Types:</b>	<ul style="list-style-type: none"> <li>• Due Date Reservation (if separate transaction from Appointment Scheduling)</li> <li>• Feature Function Availability</li> <li>• Facility Availability (if separate transaction from Feature Function Availability)</li> <li>• Qualification of Loops for Advanced Digital Services</li> <li>• Street Address Validation</li> <li>• Service Availability Information (if separate transaction from Feature:Function Availability)</li> <li>• Appointment Scheduling</li> <li>• Customer Service Records</li> <li>• Telephone Number</li> <li>• Rejected or Failed Queries (regardless of type)</li> </ul>
<b>Maintenance Query Types:</b>	<ul style="list-style-type: none"> <li>• Create (or confirm logging of) a Maintenance Request</li> <li>• Obtain Status</li> <li>• Obtain Test Results</li> <li>• Cancel Request</li> <li>• Rejected or Failed Queries (regardless of type)</li> <li>• Clearance Notification</li> <li>• Closure Notification</li> </ul>
<b>Order Rejection Reason Codes:</b>	<ul style="list-style-type: none"> <li>• Invalid Address</li> <li>• Address Errors</li> <li>• End User Name Doesn't Match ILEC Records</li> <li>• Incorrect Directory Assistance Listing Due Date</li> <li>• Duplicate PON</li> <li>• Winback (Customer Returned to ILEC)</li> <li>• ILEC System Problem</li> <li>• TN Already Disconnected</li> </ul>
<b>Transmission Quality Parameter:</b>	<ul style="list-style-type: none"> <li>• Subscriber Loop Loss</li> <li>• Signal to Noise Ratio</li> <li>• Idle Channel Circuit Noise</li> <li>• Loop-Circuit Balance</li> <li>• Circuit Notched Noise</li> <li>• Attenuation Distortion</li> </ul>
<b>Collocation Provisioning Types:</b>	<ul style="list-style-type: none"> <li>• Physical within CO (space available at time of request)</li> <li>• Physical within CO (space created in response to request)</li> <li>• Physical outside of CO (space available at time of request)</li> <li>• Physical outside of CO (space created in response to request)</li> <li>• Virtual</li> <li>• Backhauling to neighboring CO</li> <li>• Access to GR-303 compatible concentration equipment (leased UNE alternative)</li> <li>• Other alternatives to physical</li> </ul>
<b>Databases and Switch Tables:</b>	<ul style="list-style-type: none"> <li>• E911/911 ALI, Selective Router</li> <li>• MSAG</li> <li>• LIDB</li> <li>• OS/DA</li> <li>• DL</li> <li>• NXX tables at CO for call completion and NXX routing</li> <li>• NXX tables at tandem for call completion and NXX routing</li> </ul>

# Service Quality Measurements

## Appendix A: Reporting Dimensions

Reportable  
Network  
Incidents:

### **Switching (Local/Tandem):**

- Complete loss of call processing capability from a switch (host/remotes) lasting = > 2 minutes or longer.
- Network Incident (Loss of Dial Tone) affecting one thousand access lines.
- Media Interest: Any interruption or outage that may cause public or news media attention.

### **Transport:**

#### **EQUIPMENT AND/OR FACILITY FAILURES**

- Local (200 or more working pairs affected, causing loss of dial tone)
- Toll/EAS (Isolation of an entire exchange) > 2 minutes.
- Fiber (Any working fiber providing customer service that fails without protection) lasting > 2 Minutes.
- A transport equipment failure (E.G. DACS) > 2 minutes.

#### **BROADBAND**

- Frame Relay (A failure of one or more channelized T1 carrier systems or two or more non-channelized T1 carrier systems.
- ATM (A failure of one OC3 or two DS3s)
- SMDS (A failure of one DS3 or four T1s)
- Packet Switching (Any failure of an access module (AM) or resource module (RM))

#### **NARROWBAND**

- 5 T1 carrier systems (within a switch)
- Fiber (Any working fiber providing customer service that falls without protection)
- Media Interest: Any interruption or outage that may cause public or news media attention.

### **SS7:**

- Loss of mated pair of STP or SCP > 2 minutes
- Media Interest: Any interruption or outage that may cause public or news media attention

### **Trunking:**

- Loss of intra/interoffice calling lasting > 2 minutes. (E.G. Toll and/or EAS)
- Media Interest: Any interruption or outage that may cause public or news media attention

### **911:**

- A central office isolation from the E911 network for = > 2 minutes or longer.
- Loss of 25% or more of the trunking capabilities from an E911 tandem to the PSAPs it serves for = > 2 minutes or longer (e.g. translations, trunking frame failure, etc.)
- A PSAP isolation from the E911 network for = > 2 minutes or longer (e.g. translations, trunking problems, etc.)
- A transport cable failure that isolates a central office from the E911 network; (Local switch to the E911 tandem) transport cable failure that isolates a PSAP from the E911 tandem;- A transport cable failure that results in the loss of 25% or more of the trunks/circuits (aggregate from an E911 tandem to the PSAPs served by that Tandem; A transport equipment failure that isolates a

# Service Quality Measurements

## Appendix A: Reporting Dimensions

	<p>central office from the E911 network; A transport equipment failure that isolates a Public Safety Answering Point (PSAP) tandem.; or A transport equipment failure that results in the loss of 25% or more of the trunks/circuits (aggregate) from an E911 tandem to the PSAPs served by that tandem</p> <ul style="list-style-type: none"> <li>• Federal Government, equipment or facility affecting 5 or more military special communication, isolations of FAA location or air ground facilities - State and local agencies interruptions seriously affecting service to police, fire departments, hospitals, press, military, PBS's</li> </ul>
<p>Trouble Types</p>	<ul style="list-style-type: none"> <li>• Inside (Central Office) Dispatch - Out of Service</li> <li>• Outside Dispatch - Out of Service</li> <li>• Inside Dispatch - Degraded Service</li> <li>• Outside Dispatch - Degraded Service</li> <li>• No Access or No Trouble Found</li> <li>• NXXs not loaded properly by ILEC</li> <li>• NXXs not loaded properly by party other than CLEC/ILEC</li> <li>• All Other Troubles</li> </ul> <p><i>"Out of Service" means that the customer has no dial tone.</i></p> <p><i>"Dispatch" means that ILEC repair personnel must be dispatched to a location outside an ILEC building (to customer premises or other off-site facilities) to resolve the trouble.</i></p>

44-000-400-434

# Service Quality Measurements

## Appendix B: Glossary

### Appendix B: Glossary

<i>Term:</i>	<i>Definition:</i>
<b>Abandoned Call:</b>	An abandoned call occurs when the caller hangs up after the call has been delivered, but before the receiving party has answered the call.
<b>Automatic Location Identification:</b>	A proprietary database developed for E911 systems that provides for a visual display of the caller's telephone number, address and the names of the emergency response agencies that are responsible for that address. The ALI also shows an interim number portability telephone number if applicable.
<b>Attenuation Distortion:</b>	Attenuation Distortion measures the variation in loss at different frequencies across the voice frequency spectrum (200Hz - 3400 Hz).
<b>Call Completion Rate:</b>	The call completion rate for CLEC customers is determined by calculating the total number of calls placed by CLEC customers that were completed to the calling destination. The number of completed calls is then divided by the total # of call attempts made by CLEC customers during the reporting period.
<b>Call Delivery Rate:</b>	The call delivery rate for CLEC customers is determined by calculating the total # of calls received by CLEC customers. This number of delivered calls is then divided by the total # of call attempts received by the ILEC for termination to CLEC customers.
<b>Common Trunks</b>	Trunks carrying the traffic from more than one carrier, such as the trunking between a tandem switch and end office switches.
<b>Completion:</b>	A completion is the transaction that the ILEC sends to the CLEC to inform the CLEC that a requested order has been completed.
<b>Dial Tone Delay:</b>	The dial tone delay is determined for each trial completed during the reporting period by computing the time that transpires from a customer's going off-hook and the receipt of dial tone from the servicing central office. It should be measured in seconds and tenths of seconds. Post dial delay for each trial is determined for each trial completed during the reporting period by computing the time that transpires from when the last digit is dialed until a valid response is received by the customer. It should be measured in seconds and tenths of seconds.
<b>Direct End Office Trunks</b>	Trunking from the serving central office to the central office switch (Class 5) used to connect subscriber loops.
<b>Directory Assistance Database:</b>	The database containing subscriber records used to provide live or automated operator-assisted directory assistance, including 411, 555-1212, NPA-555-1212.
<b>Directory Listings:</b>	Subscriber information, including name, address and phone numbers, that is published in any media, including traditional white yellow page directories, CD ROM and other electronic formats.

# Service Quality Measurements

## Appendix B: Glossary

Term:	Definition:
<p>FOC:</p> <p>GR303-Compliant Loop Access Concentration</p>	<p>A FOC is a Firm Order Confirmation notification, which is the transaction that the ILEC will send to the CLEC to confirm that an order can be completed.</p> <p>An alternative to physical and virtual collocation that enables CLECs to serve a greater number of unbundled loops with less transport and collocation costs through leasing GR303-compliant remote digital terminals (RDTs) (as an unbundled network element priced on forward-looking costs)—from the ILECs. Loops are then ordered to the RDTs and carried over leased transport to the CLEC's collocation area. Bellcore General Requirements-303 describes a family of generic criteria for integrated access systems that includes open interfaces for mix-and-match of (1) local digital switches with RDTs as well as (2) remote digital terminals and element management systems.</p>
<p>Held Orders:</p>	<p>Held orders are orders that the ILEC has confirmed (an FOC was returned to the CLEC) and that are overdue.</p>
<p>Idle Channel Circuit Noise:</p>	<p>The idle channel circuit noise for each trial is determined for each trial completed during the reporting month by computing the difference between the noise that exists in the channel when no signals are present and the reference noise. The resulting accumulated idle channel circuit noise for all trials is divided by the total # of trials completed during the reporting period.</p>
<p>Interface:</p>	<p>The interface is the ILEC interface that allows the CLEC to access the ILEC system.</p>
<p>Interim Local Number Portability:</p>	<p>An interim service arrangement, such as by use of remote call forwarding, whereby subscribers who change local service providers may retain existing telephone numbers without impairment of quality, reliability or convenience when changing local service providers and remaining in their current location or changing their location or changing their location within the geographic area service by the initial carrier.</p>
<p>Internal or Administrative Use:</p>	<p>The carrier's use for intra-company communications or for operation of its business.</p>
<p>Jeopardy:</p>	<p>A jeopardy is a transaction that the ILEC sends to the CLEC to inform the CLEC that a previous order cannot be processed as specified in the original FOC.</p>
<p>Line Information Database</p>	<p>A signal control point database (linked by common channel signaling to other points in the network) that provides for such functions as calling card validation for telephone number cards issued by ILECs and other entities and validation for collect and billed-to-third-party services.</p>

# Service Quality Measurements

## Appendix B: Glossary

<i>Term:</i>	<i>Definition:</i>
Loop-circuit Balance:	Loops-circuit balance should be measured in decibels and tenths of decibels above the reference noise. "Attenuation Distortion" should measure the variation in loss at different frequencies across the voice frequency spectrum (200Hz - 3400 Hz). It should be measured from the NID to the switch, and from the switch to the NID. It is measured by subtracting the loss at 1004 Hz from the loss at the frequency of interest, and should be reflected in tenths of decibels.
Master Street Address Guide:	A database defining the geographic area of an E911 service. It includes an alphabetical list of the street names, high-low house number ranges, community names and emergency service numbers provided by the counties or their agents.
Network Incident:	A network incident is an unplanned network occurrence that results in blocked calls
NXX:	The three-digit code that indicates the central office switch serving the called party. The NXX is the fourth, fifth and sixth digits of a telephone number as established within the North American Numbering Plan.
Physical Collocation:	A form of carrier network interconnection where the ILEC designates space on the floor of its central office for the CLEC to build a cage for its transmission equipment. With physical collocation, the CLEC services and maintains its own equipment.
Permanent Number Portability or Number Portability:	A long-term service arrangement whereby users of telecommunications services retain, at the same location, existing telephone numbers without impairment of quality, reliability or convenience when switching from one telecommunications carrier to another.
Post Dial Delay:	Post dial delay is the time that transpires from when the last digit is dialed until a valid response is received by the customer
Public Safety Answering Point	A public safety communications center that receives 911 calls placed by the public in a specific geographic area.
Return of Valid Completion:	Receipt of notification that service has been installed or is being provided to the customer and such service has been installed or provided.
Selective Router	A database service that automatically routes an E911 call to the PSAP that has jurisdictional responsibility for the service address of the telephone that dialed 911, irrespective of the telephone company exchange or wire center boundaries.
Signal to Noise Ratio:	Signal to Noise ratio is the ratio of usable signal being transmitted to the noise or undesired signal.

# Service Quality Measurements

## Appendix B: Glossary

<i>Term:</i>	<i>Definition:</i>
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- Subscriber Loop Loss:** Subscriber loop loss is determined by computing the difference between the strength of the signal as it enters the loop and the strength of the transmitted signal. Signal strength is measured in decibels rounded to the nearest tenth of a decibel. The total number of trials completed during the reporting period divides the resulting accumulated decimal strength.
- Subsequent Reports:** Customer trouble reports where the customer calls to check on the status of a previous trouble report (initial or repeat) that has not been cleared (closed or resolved) at the time of the call.
- Syntax Reject:** A syntax reject is the transaction that an ILEC will return to a CLEC when a the CLEC has submitted an order transaction that the ILEC's gateway cannot process due to violation of published rules for formatting or content.
- System:** The system is the combination of ILEC gateways, communications links, hardware and software that, in combination, is used to perform or support business functions or executes supporting transactions.
- Tandem:** A switch between a serving wire center and the end office switches that enables multiple carriers to trunk to one point rather than provide direct end office terminations to all switches.
- Trouble Appointment:** A trouble appointment is a commitment made by the ILEC (to CLEC or to customer) to resolve a trouble.
- Troubles:** Troubles include all reported difficulties with performance of resold services or UNEs, whether the report is the initial or a repeated report, that the CLEC refers to the ILEC repair process/interface for resolution. Subsequent reports are categorized separately.
- Virtual Collocation:** A form of carrier network interconnection where the CLEC provides its transmission equipment to the ILEC to install in the ILEC's network. The ILEC then services and maintains the equipment for the CLEC.

1400-1400-1400

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

<p>Order Instituting Rulemaking on the Commission's Own Motion into Monitoring Performance of Operations Support Systems</p>	<p>R. 97-10-016</p>
<p>Order Instituting Investigation on the Commission's Own Motion into Monitoring Performance of Operations Support Systems</p>	<p>I. 97-10-017</p>

**JOINT MOTION FOR ADOPTION OF PARTIAL SETTLEMENT AGREEMENT  
PURSUANT TO ARTICLE 13.5 OF THE COMMISSION'S RULES  
OF PRACTICE AND PROCEDURE**

Pursuant to Rule 51.1(c) of the Commission's Rules of Practice and Procedure, Pacific Bell ("Pacific") (U 1001 C), GTE California Incorporated ("GTE") (U 1002 C), AT&T Communications of California, Inc. ("AT&T") (U 5002 C), MCI Telecommunications Corporation ("MCI") (U 5011 C), Sprint Communications Company L.P. ("Sprint") (U 5112 C), ICG Telecom Group, Inc. ("ICG") (U 5406 C), Cox California Telecom, L.L.C. ("Cox") (U 5684 C), Covad Communication Company ("Covad") (U 5752 C), MediaOne Telecommunications of California, Inc. ("MediaOne") (U 5549 C), NorthPoint Communications, Inc. (U 5829 C), Time Warner Telecom of California, L.P. ("Time Warner") (U 5358 C), California Cable Television Association ("CCTA"), and Electric Lightwave, Inc. ("ELI") (U 5377 C) (collectively, the "Settling Parties") request that the Commission approve the Joint Partial Settlement Agreement Re: Performance Measurements ("Joint PSA") entered into by the Settling

Parties in the above-referenced consolidated proceedings. A copy of the Joint PSA is provided as Attachment A to this filing and is incorporated herein by reference.

The Settling Parties submit that the Joint PSA is reasonable in light of the whole record of competition in the California local exchange market, consistent with the stated objectives of the Commission in this proceeding, and meets the Commission's public interest test for the approval of settlements. The Settling Parties have not reached agreement on all of the performance measurement issues. Nonetheless, the Joint PSA resolves a majority of the outstanding issues among the Settling Parties regarding the standards of performance of Operation Support Systems ("OSS") offered by incumbent local exchange carriers ("ILECs") Pacific and GTE to Competitive Local Exchange Carriers ("CLECs")<sup>1</sup> in California.

The Joint PSA is the product of intense negotiations and deliberations and reflects significant compromises on the part of all the Settling Parties. The Settling Parties believe the Joint PSA is reasonable in light of the whole record, and achieves, for the most part, the objectives identified by the Commission at the inception of the OSS OII, and that, therefore, it should be approved by the Commission. The Settling Parties agree that to the extent that the PSA addresses issues in this proceeding, the PSA resolves those issues. By seeking approval of the Joint PSA, the Settling Parties make no representation by this settlement that the agreements within constitute a definitive or a conclusive standard for Pacific's or GTE's compliance with the Telecommunications Act of 1996. By agreeing to the performance measures contained in the Joint PSA, Pacific and GTE do not make any admission regarding the propriety or reasonableness of establishing performance penalties in any other proceeding. In early January,

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<sup>1</sup> CLEC means a common carrier that is issued a Certificate of Public Convenience and Necessity effective on or after January 1, 1996 to provide local exchange telecommunications service for a geographic area specified by such a carrier.

1999. Settling Parties will file with the Commission statements of their positions on the unresolved issues regarding performance measures, performance standards, auditing, specification and access to raw data. The January submission will include a delineation of the issues, their relevance to this filing, and suggestions on how to incorporate the issues into a comprehensive plan to monitor OSS performance by Pacific and GTE.

## I. THE PARTIES' SETTLEMENT PROCESS

### (INTRODUCTION)

On October 9, 1997, the Commission issued an order instituting a rulemaking proceeding and investigation (hereinafter, the "OSS OII") to accomplish several goals, including the determination of reasonable standards of OSS performance for Pacific and GTE, the development of a mechanism that will allow the Commission to monitor improvements in OSS performance, and the assessment of the best and fastest method of ensuring compliance if standards are not met, or improvement is not shown.<sup>2</sup> As part of its OSS OII, the Commission circulated a draft set of performance measurements that could be used to assess key aspects of OSS performance. (OSS OII, Appendix B.) The Commission further suggested that the parties might want to re-examine the performance measures and standards in their interconnection agreements in light of the performance measures and standards adopted in this proceeding.

#### A. The Development of Performance Measures.

Opening comments on Appendix B of the OSS OII (the draft performance measurements) were filed on November 20, 1997. Some commenters proposed performance measurements as alternatives to Appendix B. Reply comments were filed on December 11, 1997. In April 1998, the CPUC commenced a series of workshops to address issues raised in the parties' comments. At that point, Pacific supplemented the comments it had filed on November 20, 1997. After workshops had been held for three

weeks, the CPUC staff directed the parties to continue their development of measurements and the criteria for an effective performance monitoring program, with the objective of reconvening the workshop in May of 1998. To document their progress, the parties developed a performance measurement matrix that included the measurement description, formula, levels of disaggregation, reporting groups, report frequency, and highlighted areas of consensus and open issues.

In late May of 1998, the Nevada PUC also commenced workshops on performance measurements. In recognition of the work being done in the OSS OII at the CPUC, the Nevada PUC staff required parties to work from the California matrix. As a consequence, some of the agreements and drafting performance measurements that were made in the Nevada workshops was introduced into the ongoing work of the Settling Parties in California. The Nevada PUC held additional performance measurement workshops throughout the summer of 1998. Notes of issues, positions, areas of agreement, and action items were maintained and updated after each Nevada workshop session, usually in matrix format. Once updated, these matrices were exchanged between the parties. Each party that participated in the April and May workshops in California received updates of the Nevada negotiating process at the same time as those updates were being provided to the individuals who actively participated in the Nevada workshop.

Members of the negotiating teams kept the staff of the CPUC apprised of developments in both the California and Nevada meetings via e-mail and telephone calls. Based on these efforts, on August 7, 1998, the CLECs and ILECs jointly submitted a Revised Version of a performance measurement matrix to the CPUC staff. The parties then met with the CPUC staff on August 21, 1998, to provide a status report on the entire suite of performance measurements and performance standards.

**B. The Development of Performance Standards.**

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<sup>2</sup> Order Instituting Rulemaking on the Commission's Own Motion into Monitoring Performance of Operations Support Systems (R.97-10-016), and Order Instituting Investigation on the Commission's Own Motion into Monitoring Performance of Operations Support Systems (I.97-10-017).

The development of performance standards required an examination of whether a retail analog or a benchmark should constitute the standard against which a particular OSS performance measurement should be evaluated.<sup>3</sup> On June 19, 1998, the ILECs provided the CPUC staff with statements of position on analogs and benchmarks. In late July and mid-August of 1998, respectively, the CLECs and ILECs exchanged position statements with respect to analogs and benchmarks to facilitate consensus on the appropriate standard for as many performance measures as possible.

In November of 1998, the Settling Parties established a drafting subgroup to document the agreements reached in the workshops. The resultant document, the Joint PSA attached to this Motion, is intended to be a definitive, comprehensive, and self-explanatory reference guide to the reporting of OSS performance to the Commission, consistent with the objectives expressed in the OSS OII for those performance measurements on which the Settling Parties have reached agreement. Each agreed-to performance measurement is defined by its major OSS category, a description, calculation formula, level of disaggregation, reporting requirements, geographic level, measurable standard, business rules, and notes. The Joint PSA also identifies the relevant form of measurement, whether parity or benchmark, to which the ILEC's performance should be compared.

**C. Notice to Parties of Potential Settlement.**

On November 20, 1998, MCI gave notice to all parties to this proceeding, pursuant to Rule 51.1(b), that a conference would be held at MCI's offices, at 201 Spear Street, San Francisco, on December 3, 1998, for the purpose of discussing settlement of issues relating to OSS performance measurements. A copy of the notice is provided as Attachment B.

The first draft of the Joint PSA was mailed to all parties on the service list on November 27, 1998. On December 3, 1998, the parties met to discuss the draft Report. The discussion was continued on a conference call on December 7, 1998. A second draft of the Report, which included revisions

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<sup>3</sup> Reliance upon a "retail analog" requires a comparison between the ILEC's OSS performance on behalf of a CLEC with the same OSS function that Pacific provides to itself. If no retail analog exists, a "benchmark" is

identified in the previous meetings, was distributed on December 10, 1998. Follow-up meetings and conference calls were held on December 11, 1998 and December 17, 1998. An additional draft of the report was sent to all parties on December 18, 1998 and was reviewed on a conference call on December 21, 1998. Subsequent discussions resulted in a further draft report being distributed on December 31, 1998.

In addition, the parties participated in a CPUC staff-led workshop on December 14 through 16, 1998 to discuss the analogs and benchmarks that should constitute the standards for each performance measure. In preparation for the workshop, Pacific and GTE circulated position statements on analogs and benchmarks on December 4, 1998; the CLECs published their corresponding statements on December 10, 1998. At the workshop, although agreement was not reached on all issues, the parties were able to significantly reduce the number of issues that need to be resolved by Commission action.

## II. SCOPE AND SUMMARY OF SETTLEMENT AGREEMENT

The Joint PSA resolves many of the issues identified by the Settling parties concerning how Pacific and GTE's provision of OSS to CLECs should be measured. It also resolves most, but not all, of the issues regarding the standards by which Pacific and GTE's OSS performance should be measured.

There are, however, outstanding issues which various parties request that the Commission must resolve in order to enact a comprehensive framework for evaluating whether the OSS that Pacific and GTE offer to their competitors is sufficient meet the requirements of the Telecommunications Act. The parties intend to file motions for the Commission's adoption of their positions on open issues in early January of 1999, with replies to those motions to be filed 15 days later. These pleadings should enable the assigned Administrative Law Judge to evaluate the state of the record on unresolved issues and to rule as needed.

The Settling Parties submit that the Joint PSA embodies the best efforts of the CLECs, Pacific, and GTE to craft performance measurements that describe the quality of OSS being provided to CLECs

in California. The terms of the Joint PSA are more comprehensive than the terms contained in the existing Interconnection Agreements (ICAs) that Pacific and GTE have with the CLECs with respect to measuring the ILEC's provision of OSS. The Settling Parties intend to incorporate the terms of the Joint PSA into their existing and future interconnection agreements for local service. The parties have not reached consensus on how or when the terms of the PSA should be incorporated into their existing and future interconnection agreements for local service. Accordingly, the parties have agreed to set forth their proposals on this issue in the January 8, 1999 filing addressing open issues.

### **III. THE SETTLEMENT AGREEMENT IS REASONABLE AND IS IN THE PUBLIC INTEREST**

This Commission has recognized the strong public policy of this State favoring settlement. Re Pacific Bell, D.92-07-076, 45 C.P.U.C. 2d 158, 169 (1992). Commission policy also favors settlement that is "reasonable in light of the whole record, consistent with law, and in the public interest." Re Application of GTE California Inc. for Review of the Operations of the Incentive-Based Regulatory Framework Adopted in Decision 89-10-031, D.96-05-037, slip op. (FOF 1) (May 8, 1996); Rule 51.1(e). The attached Joint PSA satisfies these requirements.

The Settling Parties include many of the carriers that would be most directly affected by the standards by which Pacific's and GTE's OSS are provisioned, such as, AT&T, MCI, Sprint, Cox, ICG, MediaOne, Covad, Northpoint, Time Warner, ELI, and the members of CCTA. In turn, these CLECs include some of the ILEC's wholesale customers who are most likely to compete against the ILEC's by providing local service options to California consumers.

The Telecommunications Act of 1996 and the FCC's implementing rules require Pacific and GTE to provide competing CLECs with nondiscriminatory access to OSS. In the August 1996 *Local Competition First Report and Order*, the FCC commented, generally, that ILECs must provide CLECs with access to the preordering, ordering, provisioning, billing, repair, and maintenance OSS subfunctions

pursuant to the Act such that CLECs are able to perform such OSS functions in "substantially the same time and manner" as the ILECs can for themselves.<sup>4</sup> In August of 1997, the FCC's *Ameritech Opinion* analyzed the nondiscriminatory access requirements of §251(c) to a Bell Operating Company's (BOC's) §271 application, and clarified that for those OSS subfunctions with retail analogs, a BOC "must provide access to competing carriers that is equal to the level of access that the BOC provides to itself, its customers or its affiliates, in terms of quality, accuracy and timeliness."<sup>5</sup> The FCC further clarified in the *Ameritech Opinion* that for those OSS functions with no retail analog, a BOC must offer access sufficient to allow an efficient competitor "a meaningful opportunity to compete."<sup>6</sup>

The agreed-to performance measures in the PSA are consistent with the requirements of applicable law because they provide one objective means to help assess whether an ILEC is providing its competitors with sufficient, non-discriminatory access to OSS as required by the Act. The Settling Parties believe the Joint PSA strikes a reasonable compromise between all parties' interests in

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<sup>4</sup> See, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499, 15763-64 [¶518] (1996) ("*Local Competition First Report and Order*"), *aff'd in part and vacated in part sub nom. Competitive Telecommunications Ass'n v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utilities Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), *modified on reh'g*, No. 96-3321 (Oct. 14, 1997) (*Rehearing Order*), *petition for cert. granted*, 118 S. Ct. 879 (1998).

<sup>5</sup> See, *In the Matter of Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services In Michigan*, Memorandum Opinion and Order, 12 FCC Rcd 20543, 20618-19 [¶139] (1997) (*Ameritech Michigan Order*), *writ of mandamus issued sub nom. Iowa Utils. Bd. v. FCC*, No. 96-3321 (8th Cir. Jan. 22, 1998). ("*Ameritech Opinion*"); see also, *In the Matter of Application of Bellsouth Corporation, et al., for Provision of In-Region, InterLATA services in Louisiana ("BellSouth (Louisiana II) Opinion")* CC Docket No. 98-121, FCC 98-271 (10-13-98), paragraph 87 (*citing Ameritech Opinion at 12 FCC Rcd 20618-19*). See also, *Ameritech Opinion at ¶131*, wherein the FCC makes the following statement regarding application of the §251(c) requirements to a BOC's §271 application:

"Because the duty to provide access to network elements under section 251(c)(3) and the duty to provide resale services under section 251(c)(4) include the duty to provide nondiscriminatory access to OSS functions, an examination of a BOC's OSS performance is necessary to evaluate compliance with section 271(c)(2)(B)(ii) and (xiv)."

<sup>6</sup> See, *Ameritech Opinion at 12 FCC Rcd at 20619 [¶141]*; See also, *BellSouth (Louisiana II) Opinion at ¶87 (citing Ameritech Opinion at 12 FCC Rcd at 20619)*.

quantifying and evaluating Pacific's and GTE's OSS performance and the administrative burden of performance monitoring.

#### IV. CONCLUSION

For the foregoing reasons, the Settling Parties submit that the Joint PSA meets the Commission's standards for a reasonable settlement. Accordingly, the Settling Parties respectfully request that the Commission approve the Joint PSA.

Dated: \_\_\_\_\_, 1999

On behalf of the CLECs:

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**Attachment A**

***California OSS OII  
Performance Measurements***



**Joint Partial Settlement Agreement**

## INTRODUCTION

This partial settlement agreement (hereinafter "the Agreement") is the work product of the participating CLECs and ILECs in California. The California Commission opened the OSS OII proceeding in early October 1997.<sup>1</sup> Following approximately three weeks of Commission sponsored workshops that ended in May 1998, a working group of CLECs and ILECs continued to identify open issues and clarify some of the consensus that had been tentatively reached. Subsequent findings were shared with the larger CLEC community in order to elicit their input and resolve open issues. On August 7, 1998, the CLECs and ILECs submitted a draft performance measurements matrix to the California Commission staff. Given the number of remaining open issues, the staff instructed the CLECs and ILECs to continue to work to resolve as many issues as possible. Since that time, parties have been successful in resolving many of the remaining issues.

In addition to the collaborative work regarding performance measures, the CLECs and ILECs have come to agreement on many of the issues regarding auditing and reporting. Parties have also resolved the appropriate analogs for service group types. With respect to analogs and benchmarks, ILECs and CLECs provided their informational position papers on December 4<sup>th</sup> and 10<sup>th</sup> respectively. In order to resolve the open issues that existed after the filings, the Commission staff held workshops December 14-16, 1998. The issues that were resolved during the workshops have been included in this partial settlement agreement. The parties' recommendation is that any remaining open issues be decided by the Commission and included in the Commission's final order in this proceeding. These remaining issues will be addressed in separate filings in January, 1999.

Parties are still working on the issue of performance incentives. Thus, incentives are not included in this partial settlement agreement nor will they be addressed in the parties' January, 1999 filings.

The Commission staff has strongly encouraged CLECs and ILECs to stipulate to a resolution in this proceeding. This partial settlement agreement represents such a stipulation by the parties. This partial settlement report addresses the following:

- the performance measurements
- the formulas for the same
- the levels of disaggregation
- the analogs for the service group types (a level of disaggregation)
- other analogs and the benchmarks, to the degree there is agreement
- auditing and reporting
- review procedures

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<sup>1</sup> Order Instituting Rulemaking on the Commission's Own Motion into Monitoring Performance of Operations Support Systems (R.97-10-016), and Order Instituting Investigation on the Commission's Own Motion into Monitoring Performance of Operations Support Systems (I.97-10-017), October 9, 1997.

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## EXECUTIVE SUMMARY

### Performance Measures Development Process

The Telecommunications Act of 1996 and the FCC's implementing rules require Pacific and GTEC to provide CLECs with nondiscriminatory access to OSS. In the August 1996 Local Competition First Report and Order, the FCC commented, generally, that ILECs must provide CLECs with access to the pre-ordering, ordering, provisioning, billing, repair, and maintenance OSS sub-functions pursuant to the Act such that CLECs are able to perform such OSS sub-functions in "substantially the same time and manner" as the ILECs can for themselves.<sup>2</sup> In August of 1997, the FCC's *Ameritech Opinion* analyzed the nondiscriminatory access requirements of §251(c) to a Bell Operating Company's (BOC's) §271 application, and clarified that for those OSS subfunctions with retail analogs, a BOC "must provide access to competing carriers that is equal to the level of access that the BOC provides to itself, its customers or its affiliates, in terms of quality, accuracy and timeliness."<sup>3</sup> The FCC further clarified in the *Ameritech Opinion* that for those OSS functions with no retail analog, a BOC must offer access sufficient to allow an efficient competitor "a meaningful opportunity to compete."<sup>4</sup>

Initially, some of the interconnection agreements contained performance measures. In late 1997, the California Public Utilities Commission (CPUC) initiated OSS OII/OIR Docket 97-10-016 and 97-10-017 to address monitoring the performance of Operations Support Systems (OSS). The three stated goals of the Commission's OSS/OII proceeding are:

- "to determine reasonable standards of performance for Pacific Bell (Pacific) and GTE California Incorporated (GTEC) in their Operations Support Systems (OSS),

<sup>2</sup> See, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499, 15763-64 [¶518] (1996) ("Local Competition First Report and Order"), *aff'd in part and vacated in part sub nom. Competitive Telecommunications Ass'n v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utilities Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), modified on reh'g, No. 96-3321 (Oct. 14, 1997) (Rehearing Order), petition for cert. granted, 118 S. Ct. 879 (1998).

<sup>3</sup> See, *In the Matter of Application of Ameritech Michigan Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services In Michigan*, Memorandum Opinion and Order, 12 FCC Rcd 20543, 20618-19 [¶139] (1997) (*Ameritech Michigan Order*), writ of mandamus issued sub nom. *Iowa Utils. Bd. v. FCC*, No. 96-3321 (8th Cir. Jan. 22, 1998). ("Ameritech Opinion"); see also, *In the Matter of Application of Bellsouth Corporation, et al., for Provision of In-Region, InterLATA services in Louisiana* ("BellSouth (Louisiana II) Opinion") CC Docket No. 98-121, FCC 98-271 (10-13-98), paragraph 87 (citing, *Ameritech Opinion* at 12 FCC Rcd 20618-19). See also, *Ameritech Opinion* at ¶131, wherein the FCC makes the following statement regarding application of the §251(c) requirements to a BOC's §271 application:

"Because the duty to provide access to network elements under section 251(c)(3) and the duty to provide resale services under section 251(c)(4) include the duty to provide nondiscriminatory access to OSS functions, an examination of a BOC's OSS performance is necessary to evaluate compliance with section 271(c)(2)(B)(ii) and (xiv)."

<sup>4</sup> See, *Ameritech Opinion* at 12 FCC Rcd at 20619 [¶141]; See also, *BellSouth (Louisiana II) Opinion* at ¶87 (citing *Ameritech Opinion* at 12 FCC Rcd at 20619).

- to develop a mechanism that will allow the Commission to monitor improvements in the performance of OSS, and
- to assess the best and fastest method of ensuring compliance if standards are not met or improvement is not shown. A subset of the third goal will be to provide appropriate compliance incentives under Section 271 of the Telecommunications Act of 1996, which applies solely to Pacific for the prompt achievement of OSS improvements.”<sup>5</sup>

The scope of the proceeding included measures, reporting, comparative analogs, benchmarks, statistical tests, audits and incentives. During the second quarter of this year, the CPUC initiated workshops to address many of these issues. The participating CLECs and ILECs have worked in a collaborative fashion to resolve as many issues as possible and will address open issues in separate filings to be submitted in January, 1999. This report is not intended to address statistical tests and incentives.

## Major Categories

Measurements developed to help assess the provision of non-discriminatory access to OSS and other services, elements or functions were combined into the following broad categories:

- **Pre-Ordering**

Pre-ordering activities relate to the exchange of information between the ILEC and the CLEC regarding current or proposed customer products and services, or any other information required to initiate ordering of service. Pre-ordering encompasses the critical information needed to submit a provisioning order from the CLEC to the ILEC. The pre-order measurement reports the timeliness with which pre-order inquiries are returned to CLECs by the ILEC. Pre-ordering query types include:

- Address Verification/Dispatch Required
- Request for Telephone Number
- Request for Customer Service Record
- Service Availability
- Service Appointment Scheduling (due date)
- Rejected/Failed Inquiries
- Facility Availability

- **Ordering**

Ordering activities include the exchange of information between the ILEC and the CLEC regarding requests for service. Ordering includes: (1) the submittal of the service request from the CLEC, (2) rejection of any service request with errors and (3) confirmation that a valid

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<sup>5</sup> Order Instituting Rulemaking on the Commission's Own Motion into Monitoring Performance of Operations Support Systems (R.97-10-016), and Order Instituting Investigation on the Commission's Own Motion into Monitoring Performance of Operations Support Systems (I.97-10-017), October 9, 1997.

service request has been received and a due date for the request assigned. Ordering performance measurements report on the timeliness with which these various activities are completed by the ILEC. Also captured within this category is reporting on the number of CLEC service requests that automatically generate a service order in the ILECs' service order creation system.

- **Provisioning**

Provisioning is the set of activities required to install, change or disconnect a customer's service. It includes the functions to establish or condition physical facilities as well as the completion of any required software translations to define the feature functionality of the service. Provisioning also involves communication between the CLEC and the ILEC on the status of a service order, including any delay in meeting the commitment date and the time at which actual completion of service installation has occurred. Measurements in this category evaluate the quality of service installations, the efficiency of the installation process and the timeliness of notifications to the ILEC that installation is completed or has been delayed.

- **Maintenance**

Maintenance involves the repair and restoral of customer service. Maintenance functions include the exchange of information between the ILEC and CLEC related to service repair requests, the processing of trouble ticket requests by the ILEC, actual service restoral and tracking of maintenance history. Maintenance measures track the timeliness with which trouble requests are handled by the ILEC and the effectiveness and quality of the service restoral process.

- **Network Performance**

Network performance involves the level at which the ILEC provides services and facilitates call processing within its network. The ILEC also has the responsibility to complete network upgrades efficiently. If network outages do occur, the ILEC needs to provide notification so appropriate network management and customer notification can occur by CLECs. Network performance is evaluated on the quality of interconnection, the timeliness of notification of network outages and the timeliness of network upgrades (code openings) the ILEC completes on behalf of the CLEC.

- **Billing**

Billing involves the exchange of information necessary for CLECs to bill their customers, to process the end user's claims and adjustments, to verify the ILEC's bill for services provided to the CLEC and to allow CLECs to bill for access. Billing measures have been designed to gauge the quality, timeliness and overall effectiveness of the ILEC billing processes associated with CLEC customers.

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- **Collocation**

ILECs are required to provide to CLECs available space as required by law to allow the installation of CLEC equipment. Performance measures in this category assess the timeliness with which the ILEC handles the CLEC's request for collocation as well as how timely the collocation arrangement is provided.

- **Data Base Updates**

Database updates for directory assistance/listings and E911 include the processes by which these systems are updated with customer information which has changed due to the service provisioning activity. Measurements in this category are designed to evaluate the timeliness and accuracy with which changes to customer information, as submitted to these databases, are completed by the ILEC.

- **Interfaces**

ILECs provide the CLECs with choices for access to OSS pre-ordering, ordering, maintenance and repair systems. Availability of the interfaces is fundamental to the CLEC being able to effectively do business with the ILEC. Additionally, in many instances, CLEC personnel must work with the service personnel of the ILEC. Measurements in this category assess the availability to the CLECs of systems and personnel at the ILEC work centers.

### **Auditing and Review Procedures**

The parties have agreed to most procedures for auditing and review. Descriptions of these procedures can be found in Sections IV and V.

*Note: This Executive Summary is intended to provide a general background regarding parties' negotiations of the OSS performance measures. The statements contained in the Executive Summary are not intended to be binding on the parties and shall not be used for such purposes.*

## Reservation of Rights

These reservations of rights do not negate the parties agreement regarding performance measures and standards as reflected in this settlement agreement.

Incorporating the performance measures into the interconnection agreements raises several complex issues that require further consideration by the parties. Accordingly, the parties will set forth its proposal on this issue in the January, 1999 filing addressing open issues.

### ILECs

By agreeing to the performance measures contained in the Joint Partial Settlement Agreement, ILECs:

- do not make any admission regarding the propriety or reasonableness of establishing performance penalties;
- reserve the right to contest the level of disaggregation for purpose of assessing penalties;
- reserve the right to contend that any resulting penalties should viewed as liquidated damages and as the exclusive remedy for any failure of performance; and,
- do not admit that an apparent less-than-parity condition reflects discriminatory treatment without further factual analysis.

### CLECs

- By executing this Agreement, CLECs do not agree with, endorse, or otherwise concur in the terms of ILECs' reservation of rights.
- CLECs reserve the right to contend that ILEC compliance with the performance measures and standards in the Agreement does not conclusively demonstrate ILEC compliance with the Telecommunications Act of 1996.
- CLECs reserve the right to contend that ILEC compliance with the performance measures and standards does not conclusively demonstrate the existence of an open competitive local market.

# CALIFORNIA OSS OII PERFORMANCE MEASUREMENTS

## PRE-ORDERING

1. Average Response Time (to Pre-Order Queries)

## ORDERING

2. Average FOC Notice Interval
3. Average Reject Notice Interval
4. Percent of Flow Through Orders

## PROVISIONING

5. Percent of Orders Given Jeopardy Notice
6. Average Jeopardy Notice Interval
7. Average Completed Interval
8. Percent Completed within Standard Interval
9. Coordinated Customer Conversion
10. LNP Network Provisioning
11. Percent of Due Dates Missed
12. Percent Company Missed Due Dates due to Lack of Facilities
13. Delay Order Interval to Completion Date
14. Held Order Interval
15. Provisioning Trouble Reports
16. Percent Troubles in 30 days for New Orders
17. Percent Troubles in 7 days for New Orders
18. Average Completion Notice Interval

## MAINTENANCE

19. Customer Trouble Report Rate
20. Percent of Customer Trouble not Resolved within Estimated Time
21. Average Time to Restore
22. POTS Out of Service less than 24 Hours
23. Frequency of Repeat Troubles in 30 day period

## NETWORK PERFORMANCE

24. Percent Blocking on Common Trunks
25. Percent Blocking on Interconnection Trunks
26. NXX Loaded by LERG Effective Date
27. Network Outage Notification

## **BILLING**

- 28. Usage Timeliness**
- 29. Accuracy of Usage Feed**
- 30. Wholesale Bill Timeliness**
- 31. Usage Completeness**
- 32. Recurring Charge Completeness**
- 33. Non-Recurring Charge Completeness**
- 34. Bill Accuracy**
- 35. Duplicate Billing**
- 36. Accuracy of Mechanized Bill Feed**

## **DATABASE UPDATES**

- 37. Average Database Update Interval**
- 38. Percent Database Accuracy**
- 39. E911/911 MS Database Update Interval**

## **COLLOCATION**

- 40. Average Time to Respond to a Collocation Request**
- 41. Average Time to Provide a Collocation Arrangement**

## **INTERFACES**

- 42. Percent of Time Interface is Available**
- 43. Average Notification of Interface Outages**
- 44. Center Responsiveness**

## **NOTES:**

- 1. Not all measures apply to both ILECs.*
- 2. Some measures are still in dispute. Parties' positions on these disputed measures will be submitted in January, 1999.*
- 3. These performance measures are not intended to create, modify or otherwise affect parties' rights and obligations. The existence of any particular performance measure, or the language describing that measure, is not evidence that the CLECs are entitled to any particular manner of access, that these measures relate solely to access to OSS, or is it evidence that the ILEC's obligations are limited to providing any particular manner of access. The parties' rights and obligations to such access are defined elsewhere, including the relevant laws, FCC and CPUC decisions/regulations, tariffs, and interconnection agreements*

# OSS OII Performance Measurements Report Requirements

**Pre-Ordering**

**Measure 1**

**Title:** Average Response Time (to Pre-Order Queries)

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	<p>The response interval for each pre-ordering query is determined by computing the elapsed time from the ILEC receipt of the query from the CLEC, whether or not syntactically correct, to the time the ILEC returns the requested data to the CLEC.</p> <ul style="list-style-type: none"> <li>• Address Verification/Dispatch Required</li> <li>• Request for Telephone Number</li> <li>• Request for Customer Service Record</li> <li>• Service Availability</li> <li>• Service Appointment Scheduling (due date)</li> <li>• Rejected/Failed inquires</li> <li>• Facility Availability</li> </ul>
<b>Method of Calculation:</b>	<p><b>Mechanized:</b>  <math display="block">\text{Sum} ((\text{Query Response Date and Time}) - (\text{Query Submission Date and Time})) / (\text{Number of Queries Submitted in Reporting Period})</math></p> <p><b>Manual: (Pacific Bell and GTE - CSRs only)</b>  <math display="block">\text{Sum} ((\text{Fax Date and Time Returned}) - (\text{Business Date and Time of receipt of valid fax service request})) / (\text{Number of Faxes Submitted in Reporting Period})</math></p>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate, by ILEC (if analog applies) and ILEC affiliate
<b>Reported By:</b>	By query type and by interface type, including fax
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell and GTE:</b></p> <p><b>Mechanized:</b>            (Issue still to be resolved)</p> <p><b>Manual CSRs:</b></p> <ul style="list-style-type: none"> <li>• Standard - 95% in 4 hours (Pacific Bell)</li> <li>• Standard - (GTE) (Benchmark level still to be resolved)</li> </ul> <p><b>Pacific Bell and GTE:</b>  <b>Manual Check for Facilities Availability:</b>            (Issue still to be resolved)</p>
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Elapsed time is measured in seconds.</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• GTE does not have the ability to report by query type until EDI CORBA is implemented (planned for 3<sup>rd</sup> Quarter 1999).</li> </ul>

## OSS OII Performance Measurements Report Requirements

### Ordering

### Measure 2

**Title:** Average FOC/LSC Notice Interval

<b>Area</b>	<b>Requirement Description</b>		
<b>Description:</b>	Measures the average time from receipt of a service request to returning a Firm Order Confirmation (FOC)/Local Service Confirmation (LSC).		
<b>Method of Calculation:</b>	<p><b>Mechanized:</b> Sum ((Date and Time of FOC/LSC) - (Business Date and Time of Receipt of Valid Service Request)) / (Number of FOCs/LSCs Sent in Reporting Period)</p> <p><b>Manual:</b> Sum ((Fax Date and Time Returned) - (Business Date and Time receipt of valid fax service request)) / (Number of Faxes Submitted in Reporting period)</p>		
<b>Report Period:</b>	Monthly		
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate, by ILEC (if analog applies) and ILEC affiliates.		
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• Electronically received/electronically handled</li> <li>• Electronically received and manually handled</li> <li>• Manually received and manually handled</li> <li>• By service group type</li> <li>• Pacific Bell will report Interconnection trunks by New and Augment</li> <li>• SOT for flow through orders</li> </ul>		
<b>Geographic Level:</b>	Statewide		
<b>Measurable Standard:</b>	<p><b>Pacific Bell and GTE:</b> Fully Electronic/Flow Through: (Issue still to be resolved)</p> <p><b>Pacific Bell and GTE:</b> Electronically Received/Manually Handled (Benchmark Level still to be resolved) Manually received/Manually Handled (Benchmark level still to be resolved)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><b>Pacific Bell:</b> Interconnection Trunks Standard - Average 7 days (New) Average 4 days (Augment)</p> </td> <td style="width: 50%; vertical-align: top;"> <p style="text-align: center;"><b>GTE:</b></p> <p>Interconnection Trunks Standard - Average 5 days</p> </td> </tr> </table>	<p><b>Pacific Bell:</b> Interconnection Trunks Standard - Average 7 days (New) Average 4 days (Augment)</p>	<p style="text-align: center;"><b>GTE:</b></p> <p>Interconnection Trunks Standard - Average 5 days</p>
<p><b>Pacific Bell:</b> Interconnection Trunks Standard - Average 7 days (New) Average 4 days (Augment)</p>	<p style="text-align: center;"><b>GTE:</b></p> <p>Interconnection Trunks Standard - Average 5 days</p>		

<b>Business Rules:</b>	<ul style="list-style-type: none"><li>• Elapsed time calculated in hours.</li><li>• The start time of requests received after the end of the business day will be the beginning of the next business day. Business day is defined as published hours of operation for the ILEC ordering center.</li><li>• Business day = Monday through Friday, excluding weekends and ILEC published holidays (PB)</li><li>• Business day = Monday through Saturday, excluding Sundays and ILEC published holidays (GTE).</li><li>• Excludes non-business days.</li></ul>
<b>Notes:</b>	<ul style="list-style-type: none"><li>• Incorporation of the results for Projects is currently under study by the ILECs. Parties have agreed to study projects for "up to 50 lines".</li><li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li></ul>

## OSS OII Performance Measurements Report Requirements

**Ordering**

**Measure 3**

**Title:** Average Reject Notice Interval

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Reject interval is the elapsed time between the ILEC receipt of an order from the CLEC to the ILEC return of a notice of a rejection to the CLEC.
<b>Method of Calculation:</b>	<p><b>Mechanized</b> Sum ((Business Date and Time of ILEC Transmission of Order Rejection) - (Business Date and Time of Order Receipt)) / (# of Orders Rejected)</p> <p><b>Manual</b> Sum ((Fax Date and Time Returned) - (Business Date and Time Receipt of valid fax service request)) / (Number of Faxes Submitted in reporting Period)</p>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies) and ILEC Affiliates
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• Electronically received, electronically handled               <ul style="list-style-type: none"> <li>• All interfaces</li> <li>• Syntax(edit engine) and content errors (other edits)</li> <li>• Resale orders and Facility based/UNE orders</li> <li>• SOT (Issue still to be resolved)</li> </ul> </li> <li>• Electronically received, manually handled               <ul style="list-style-type: none"> <li>• All interfaces</li> <li>• Syntax (edit engine) and content errors (other edits)</li> <li>• Resale orders and Facility based/UNE orders</li> <li>• SOT (Issue still to be resolved)</li> </ul> </li> <li>• Manually received and handled (fax)               <ul style="list-style-type: none"> <li>• Resale orders and Facility based/UNE orders</li> <li>• SOT (Issue still to be resolved)</li> </ul> </li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	(Issue still to be resolved)
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Elapsed time calculated in hours.</li> <li>• Calculation of requests received after the end of the business day starts at the beginning of the next business day. Business day is defined as published hours of operation for the ILEC.</li> <li>• Business day = Monday through Friday, excluding weekends and ILEC published holidays (PB).</li> <li>• Business day = Monday through Saturday, excluding Sundays and ILEC published holidays (GTE)</li> <li>• Excludes non-business days</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## *OSS OII Performance Measurements Report Requirements*

**Ordering**

**Measure 4**

**Title:** Percentage of Flow-Through Orders

<b><i>Area</i></b>	<b><i>Requirement Description</i></b>
<b><i>Description:</i></b>	Measures the percentage of mechanized service requests processed on a flow through basis.
<b><i>Method of Calculation:</i></b>	$[(\text{Number of valid mechanized orders that flow-through without manual intervention}) / (\text{Total valid mechanized service requests})] \times 100$
<b><i>Report Period:</i></b>	Monthly
<b><i>Report Structure:</i></b>	Individual CLECs, CLECs in the aggregate, and ILEC Affiliates
<b><i>Reported By:</i></b>	<ul style="list-style-type: none"> <li>• All electronic interfaces</li> <li>• SGT/SOT (including PNP) limited to those currently programmed to flow-through</li> <li>• SGT/SOT aggregate data includes all service group/service order combinations received electronically.</li> </ul>
<b><i>Geographic Level:</i></b>	Statewide
<b><i>Measurable Standard:</i></b>	<b>The process to evaluate performance on this measure is under development. Issues, if any, are not yet finally defined. Final resolution depends on completed development of an agreed to Flow-Through Plan.</b>
<b><i>Business Rules:</i></b>	
<b><i>Notes:</i></b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

# OSS OII Performance Measurements Report Requirements

## Provisioning

## Measure 5

**Title:** Percentage of Orders Jeopardized

Area	Requirement Description			
<b>Description:</b>	Percentage of total orders processed for which the ILEC notifies the CLEC that the work will not be completed as committed on the original FOC.			
<b>Method of Calculation:</b>	$(\text{Number of Orders Jeopardized}) / (\text{Number of Orders Confirmed}) \times 100$			
<b>Report Period:</b>	Monthly			
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies) and ILEC Affiliates			
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• By electronic interface</li> <li>• By service group type</li> <li>• By lack of facilities and all other</li> </ul>			
<b>Geographic Level:</b>	Statewide			
<b>Measurable Standard:</b>	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; vertical-align: top;"> <b>Parity for Resale is Retail for Pacific Bell and GTE</b>  <b>Parity for UNE measured for the following UNES:</b>                      2/4w (8db) analog loop (incl. Coin/analog PBX)                      2/4w (5.5 db) assured analog loop                      2w digital loop(ISDN capable)                      2w digital loop(xDSL capable)                      4w digital loop (1.544Mbps capable/HDSL)                      UNE Port-Basic Analog/Coin                      UNE Port-CENTREX                      UNE Port-ISDN (BRI)                      UNE Port-DS1/ISDN-PRI (incl. DS1 line port)                      UNE Port-PBX DID                      UNE Dedicated Transport (incl. DS1 and DS3)                      UNE Platform (PB only)  <b>Interconnection Trunks</b> </td> <td style="width: 33%; vertical-align: top; text-align: center;"> <b>Pacific Bell Retail</b>                       POTS - Business (fielded)                      POTS - Business (Assured)                      ISDN(BRI)                      ADSL                      ISDN(PRI)/DS1                       POTS - Business (fielded)                      CENTREX                      CENTREX                      DS1/ISDN(PRI)                       PBX DID                      HICAP                       Analogous Retail Service                      ILEC Dedicated Trunks                 </td> <td style="width: 33%; vertical-align: top; text-align: center;"> <b>GTE Retail</b>                       B1 Dispatch Non-Designed                      Dispatch Designed Services                      Dispatch Designed Services                      Dispatch Designed Services                      Dispatch Designed Services                       CentraNet-Simple                      CentraNet -Complex                      CentraNet -Complex                      CentraNet -Complex                       CentraNet -Complex                      HICAP Designed                       N/A                      ILEC Dedicated Trunks                 </td> </tr> </table>	<b>Parity for Resale is Retail for Pacific Bell and GTE</b> <b>Parity for UNE measured for the following UNES:</b> 2/4w (8db) analog loop (incl. Coin/analog PBX) 2/4w (5.5 db) assured analog loop 2w digital loop(ISDN capable) 2w digital loop(xDSL capable) 4w digital loop (1.544Mbps capable/HDSL) UNE Port-Basic Analog/Coin UNE Port-CENTREX UNE Port-ISDN (BRI) UNE Port-DS1/ISDN-PRI (incl. DS1 line port) UNE Port-PBX DID UNE Dedicated Transport (incl. DS1 and DS3) UNE Platform (PB only) <b>Interconnection Trunks</b>	<b>Pacific Bell Retail</b>  POTS - Business (fielded) POTS - Business (Assured) ISDN(BRI) ADSL ISDN(PRI)/DS1  POTS - Business (fielded) CENTREX CENTREX DS1/ISDN(PRI)  PBX DID HICAP  Analogous Retail Service ILEC Dedicated Trunks	<b>GTE Retail</b>  B1 Dispatch Non-Designed Dispatch Designed Services Dispatch Designed Services Dispatch Designed Services Dispatch Designed Services  CentraNet-Simple CentraNet -Complex CentraNet -Complex CentraNet -Complex  CentraNet -Complex HICAP Designed  N/A ILEC Dedicated Trunks
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes delays for customer reasons.</li> </ul>			
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• CLECs/ILECs agree to postpone implementation of this measure until process is mechanized. (P*B - end of 2<sup>nd</sup> quarter 1999).</li> <li>• ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.</li> </ul>			

## *OSS OII Performance Measurements Report Requirements*

**Provisioning**

**Measure 6**

**Title:** Average Jeopardy Notice Interval - Pacific Bell

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the remaining time between the pre-existing committed order completion date and time (communicated via the FOC) and the date and time the ILEC issues a notice to the CLEC indicating an order is in jeopardy of missing the due date (or the due date/time has been missed).
<b>Method of Calculation:</b>	<p><u>Assignment:</u> <i>Jeopardies identified during assignment</i></p> <p>Sum ((Date of Committed Due Date for the Order) - (Date of Jeopardy Notice)) / (Number of Order Jeopardized)</p> <p><u>Installation:</u> <i>Jeopardies identified during installation prior to due time</i></p> <p>Sum ((Date &amp; Time of Committed Due Date for the Order) - (Date &amp; Time of Jeopardy Notice)) / (Number of Installation Jeopardy Notices)</p> <p><i>Notification of Missed Commitments</i></p> <p>Sum(Due Date and Time of Missed Commit Notice - Due Date and Time of Order) / (Number of Missed Commit Notices)</p>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate, and ILEC Affiliates
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• By electronic interface</li> <li>• By service group type</li> <li>• By lack of facilities and all other</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	(Issue still to be resolved)
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes delays for customer reasons.</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• If the ILECs' policy changes regarding jeopardy notices to their Retail customers, this measure should be evaluated for analog.</li> <li>• CLECs/ILECs agree to postpone implementation of this measure until process is mechanized. (P*B - end of 2<sup>nd</sup> quarter 1999)</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 6a**

**Title:** Average Jeopardy Notice Interval - GTE

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	<p>Measures the remaining time between the pre-existing committed order completion date and time (communicated via the FOC) and the date and time the ILEC issues a notice to the CLEC indicating an order is in jeopardy of missing the due date (or the due date/time has been missed).</p> <p style="text-align: center;"><i>(GTE does not support this measure)</i></p>
<b>Method of Calculation:</b>	
<b>Report Period:</b>	
<b>Report Structure:</b>	
<b>Reported By:</b>	
<b>Geographic Level:</b>	
<b>Measurable Standard:</b>	
<b>Business Rules:</b>	
<b>Notes:</b>	

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 7**

**Title:** Average Completed Interval

<b>Area</b>	<b>Requirement Description</b>																																										
<b>Description:</b>	Average business days from receipt of valid, error-free service request to completion date in service order system for new, move, and change orders.																																										
<b>Method of Calculation:</b>	Total business days from receipt of valid, error-free service request to completion date in service order system for new, move and change orders / Total new, move and change orders																																										
<b>Report Period:</b>	Monthly																																										
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and ILEC Affiliates																																										
<b>Reported By:</b>	By service group type and field work/no field work where applicable.																																										
<b>Geographic Level:</b>	Region (PB), Statewide (GTE)																																										
<b>Measurable Standard:</b>	<p><b>Parity for Resale is Retail for Pacific Bell and GTE.</b></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Parity for UNE measured for the following UNES:</th> <th style="text-align: left;">Pacific Bell Retail</th> <th style="text-align: left;">GTE Retail</th> </tr> </thead> <tbody> <tr> <td>2/4w (8db) analog loop (incl. Coin/analog PBX)</td> <td>POTS - Business (fielded)</td> <td>B1 Dispatch Non-Designed</td> </tr> <tr> <td>2/4w (5.5 db) assured analog loop</td> <td>POTS - Business (Assured)</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>2w digital loop(ISDN capable)</td> <td>ISDN(BRI)</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>2w digital loop(xDSL capable)</td> <td>ADSL</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>4w digital loop (1.544Mbps capable/HDSL)</td> <td>ISDN(PRI)/DS1</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>UNE Port-Basic Analog/Coin</td> <td>POTS - Business (fielded)</td> <td>CentraNet-Simple</td> </tr> <tr> <td>UNE Port-CENTREX</td> <td>CENTREX</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-ISDN (BRI)</td> <td>CENTREX</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-DS1/ISDN-PRI (incl. DS1 line port)</td> <td>DS1/ISDN(PRI)</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-PBX DID</td> <td>PBX DID</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Dedicated Transport (incl. DS1 and DS3)</td> <td>HICAP</td> <td>HICAP Designed</td> </tr> <tr> <td>UNE Platform (PB only)</td> <td>Analogous Retail Service</td> <td>N/A</td> </tr> <tr> <td><b>Interconnection Trunks</b></td> <td>ILEC Dedicated Trunks</td> <td>ILEC Dedicated Trunks</td> </tr> </tbody> </table>	Parity for UNE measured for the following UNES:	Pacific Bell Retail	GTE Retail	2/4w (8db) analog loop (incl. Coin/analog PBX)	POTS - Business (fielded)	B1 Dispatch Non-Designed	2/4w (5.5 db) assured analog loop	POTS - Business (Assured)	Dispatch Designed Services	2w digital loop(ISDN capable)	ISDN(BRI)	Dispatch Designed Services	2w digital loop(xDSL capable)	ADSL	Dispatch Designed Services	4w digital loop (1.544Mbps capable/HDSL)	ISDN(PRI)/DS1	Dispatch Designed Services	UNE Port-Basic Analog/Coin	POTS - Business (fielded)	CentraNet-Simple	UNE Port-CENTREX	CENTREX	CentraNet -Complex	UNE Port-ISDN (BRI)	CENTREX	CentraNet -Complex	UNE Port-DS1/ISDN-PRI (incl. DS1 line port)	DS1/ISDN(PRI)	CentraNet -Complex	UNE Port-PBX DID	PBX DID	CentraNet -Complex	UNE Dedicated Transport (incl. DS1 and DS3)	HICAP	HICAP Designed	UNE Platform (PB only)	Analogous Retail Service	N/A	<b>Interconnection Trunks</b>	ILEC Dedicated Trunks	ILEC Dedicated Trunks
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>Excludes customer requested due dates beyond interval offered, and orders delayed for customer reasons.</li> </ul>																																										
<b>Notes:</b>	<ul style="list-style-type: none"> <li>Incorporation of the results for Projects is currently under study by the ILECs. Parties have agreed to study projects for "up to 50 lines".</li> <li>Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.</li> <li>Currently, Pacific can not differentiate between residential and business 2-wire (8db) Therefore, the Measurable Standard for such loops is POTS-Business.</li> </ul>																																										

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 8**

**Title:** Percent Completed Within Standard Interval

<b>Area</b>	<b>Requirement Description</b>																																										
<b>Description:</b>	Measures of orders completed within the standard interval of receipt of valid, error-free service request.																																										
<b>Method of Calculation:</b>	Total New, Move and Change Orders Completed Within the Standard interval of Receipt of Valid, Error-free Service Request / Total New, Move and Change Orders																																										
<b>Report Period:</b>	Monthly																																										
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and ILEC Affiliates																																										
<b>Reported By:</b>	By service group type excluding services with flexible due dates.																																										
<b>Geographic Level:</b>	Region (PB), Statewide (GTE)																																										
<b>Measurable Standard:</b>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Parity for Resale is Retail for Pacific Bell and GTE.</th> <th style="text-align: left; width: 30%;">Pacific Bell Retail</th> <th style="text-align: left; width: 30%;">GTE Retail</th> </tr> </thead> <tbody> <tr> <td>Parity for UNE measured for the following UNEs:</td> <td></td> <td></td> </tr> <tr> <td>2-4w (5.5 db) assured analog loop</td> <td>POTS - Business (Assured)</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>2w digital loop(ISDN capable)</td> <td>ISDN(BRI)</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>2w digital loop(xDSL capable)</td> <td>ADSL</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>4w digital loop (1.544Mbps capable/HDSL)</td> <td>ISDN(PRI)/DS1</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>UNE Port-Basic Analog/Coin</td> <td>POTS - Business (fielded)</td> <td>CentraNet -Simple</td> </tr> <tr> <td>UNE Port- CENTREX</td> <td>CENTREX</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-ISDN (BRI)</td> <td>CENTREX</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-DS1/ISDN-PRI (incl. DS1 line port)</td> <td>DS1,ISDN(PRI)</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-PBX DID</td> <td>PBX DID</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Dedicated Transport (incl. DS1 and DS3)</td> <td>HICAP</td> <td>HICAP Designed</td> </tr> <tr> <td>UNE Platform (PB only)</td> <td>Analogous Retail Service</td> <td>N/A</td> </tr> <tr> <td>Interconnection Trunks</td> <td>ILEC Dedicated Trunks</td> <td>ILEC Dedicated Trunks</td> </tr> </tbody> </table>	Parity for Resale is Retail for Pacific Bell and GTE.	Pacific Bell Retail	GTE Retail	Parity for UNE measured for the following UNEs:			2-4w (5.5 db) assured analog loop	POTS - Business (Assured)	Dispatch Designed Services	2w digital loop(ISDN capable)	ISDN(BRI)	Dispatch Designed Services	2w digital loop(xDSL capable)	ADSL	Dispatch Designed Services	4w digital loop (1.544Mbps capable/HDSL)	ISDN(PRI)/DS1	Dispatch Designed Services	UNE Port-Basic Analog/Coin	POTS - Business (fielded)	CentraNet -Simple	UNE Port- CENTREX	CENTREX	CentraNet -Complex	UNE Port-ISDN (BRI)	CENTREX	CentraNet -Complex	UNE Port-DS1/ISDN-PRI (incl. DS1 line port)	DS1,ISDN(PRI)	CentraNet -Complex	UNE Port-PBX DID	PBX DID	CentraNet -Complex	UNE Dedicated Transport (incl. DS1 and DS3)	HICAP	HICAP Designed	UNE Platform (PB only)	Analogous Retail Service	N/A	Interconnection Trunks	ILEC Dedicated Trunks	ILEC Dedicated Trunks
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes customer requested due dates greater than the standard interval, and orders delayed for customer reasons.</li> <li>• Excludes services with flexible due date i.e., Basic Exchange services/POTS (PB), and B1/R1 Service (GTE)</li> </ul>																																										
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Incorporation of the results for Projects is currently under study by the ILECs. Parties have agreed to study projects for "up to 50 lines".</li> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.</li> </ul>																																										

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 9**

**Title:** Coordinated Customer Conversion as a Percentage On-Time

<b>Area</b>	<b>Requirement Description</b>												
<b>Description:</b>	Measures the percentage of coordinated orders (TBCC/CHC) completed on time* for all orders where CLEC has requested coordination (including PNP).  * Note: "On time" means within one hour of committed order due time												
<b>Method of Calculation:</b>	((Number of coordinated orders completed by due date and time) / (Count of coordinated orders completed in reporting period)) x 100												
<b>Report Period:</b>	Monthly												
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), by ILEC Affiliates												
<b>Reported By:</b>	Residence and Business conversions, including PNP												
<b>Geographic Level:</b>	Statewide												
<b>Measurable Standard:</b>	<p><b>Parity for Pacific Bell and GTE, except for PNP:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;"></th> <th style="width: 33%; text-align: center;"><b>Pacific Bell Retail</b></th> <th style="width: 33%; text-align: center;"><b>GTE Retail</b></th> </tr> </thead> <tbody> <tr> <td>Coor. Conversions (Res.)</td> <td style="text-align: center;">Coor. Conv. -Res</td> <td style="text-align: center;">Coor. Conv. -Res</td> </tr> <tr> <td>Coor. Conversions (Bus.)</td> <td style="text-align: center;">Coor. Conv. -Bus</td> <td style="text-align: center;">Coor. Conv. -Bus</td> </tr> <tr> <td>Coor. Conversions (PNP-Port Out)</td> <td style="text-align: center;">Coor. Conv. - (PNP-Port In/Back)</td> <td style="text-align: center;">Coor. Conv. - (PNP-Port In/Back)</td> </tr> </tbody> </table>		<b>Pacific Bell Retail</b>	<b>GTE Retail</b>	Coor. Conversions (Res.)	Coor. Conv. -Res	Coor. Conv. -Res	Coor. Conversions (Bus.)	Coor. Conv. -Bus	Coor. Conv. -Bus	Coor. Conversions (PNP-Port Out)	Coor. Conv. - (PNP-Port In/Back)	Coor. Conv. - (PNP-Port In/Back)
	<b>Pacific Bell Retail</b>	<b>GTE Retail</b>											
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Coor. Conversions (PNP-Port Out)	Coor. Conv. - (PNP-Port In/Back)	Coor. Conv. - (PNP-Port In/Back)											
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CLEC caused misses</li> <li>• Applies to CLEC requested coordinated orders only (including Number Portability orders where coordination is requested by the CLEC).</li> </ul>												
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>												

## *OSS OII Performance Measurements Report Requirements*

***Provisioning***

**Measure 10**

**Title:** PNP Network Provisioning

<b><i>Area</i></b>	<b><i>Requirement Description</i></b>
<b><i>Description:</i></b>	Measures PNP network provisioning failures as a percentage of the total number of NPAC broadcasts of telephone number subscription versions to port. <b>(No agreement has reached among parties on this measure at this time.)</b>
<b><i>Method of Calculation:</i></b>	(Total number of PNP network provisioning failures / Total number of NPAC porting broadcasts) x 100
<b><i>Report Period:</i></b>	Monthly
<b><i>Report Structure:</i></b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and ILEC Affiliates
<b><i>Reported By:</i></b>	
<b><i>Geographic Level:</i></b>	Statewide
<b><i>Measurable Standard:</i></b>	Parity for Pacific Bell and GTE
<b><i>Business Rules:</i></b>	<ul style="list-style-type: none"> <li>• Provisioning failure data will be collected at two points in the provisioning process:               <ul style="list-style-type: none"> <li>• Partial failures of NPAC broadcasts to reach and be processed by the ILEC LSMS</li> <li>• Individual network database failures - failures to provision between the ILEC LSMS and PNP network databases (STP or SCP)</li> </ul> </li> <li>• Excludes total failures from the NPAC to <i>all</i> LSMS systems.</li> <li>• Excludes broadcasts failing due to a lack of GTT information made available to ILEC ( no SS7 signaling agreement in place between ILEC and CLEC)</li> </ul>
<b><i>Notes:</i></b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

### Provisioning

### Measure 11

**Title:** Percent of Due Dates Missed

<b>Area</b>	<b>Requirement Description</b>																																													
<b>Description:</b>	Measures the percent of new, move and change orders where installation was not completed by the due date.																																													
<b>Method of Calculation:</b>	(Total Number of Missed Due Dates Due to ILEC Reasons for New, Move and Change Orders / Total Number of New, Move and Change Orders) x 100																																													
<b>Report Period:</b>	Monthly																																													
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																																													
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<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Missed Appointment reason codes as diagnostic data.</li> <li>• ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog..</li> </ul>																																													

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 12**

**Title:** Percent of Due Dates Missed Due to Lack of Facilities

<b>Area</b>	<b>Requirement Description</b>																														
<b>Description:</b>	Measures the percent of new, move and change orders missed due to lack of facilities.  Note: Results also included in Measure "Percent Missed Due Dates"																														
<b>Method of Calculation:</b>	$((\text{Total New, Move and Change Orders Missed Due Dates Due to Lack of Facilities}) / (\text{Total Number of New, Move and Change Orders})) \times 100$																														
<b>Report Period:</b>	Monthly																														
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																														
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## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 13**

**Title:** Delay Order Interval to Completion Date (For Lack of Facilities)

<b>Area</b>	<b>Requirement Description</b>																											
<b>Description:</b>	Measures the average calendar days from due date to completion date on company missed orders due to lack of ILEC facilities.																											
<b>Method of Calculation:</b>	Sum (Completion Date - Committed Order Due Date (for orders missed due to lack of ILEC facilities)) / (Number of Orders Missed due to Lack of ILEC Facilities in the Reporting Period)																											
<b>Report Period:</b>	Monthly																											
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																											
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• By service group type</li> <li>• Disaggregated by 1-30 days, 31-90 days and &gt;90 days</li> </ul>																											
<b>Geographic Level:</b>	Statewide																											
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## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 14**

**Title:** Held Order Interval

Area	Requirement Description																																										
<b>Description:</b>	Measures the time period that service orders are not completed by the original due dates for all ILEC reasons (including lack of facilities).																																										
<b>Method of Calculation:</b>	Sum (Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past the Committed Due Date) <i>Note: For all orders pending and past the committed due date.</i>																																										
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<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Missed Appointment reason codes as diagnostic data.</li> <li>• ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.</li> </ul>																																										

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 15**

**Title:** Provisioning Trouble Reports (Prior to Service Order Completion) - PB

<b>Area</b>	<b>Requirement Description</b>		
<b>Description:</b>	Measures the percent of troubles that are reported (via customer or indirectly by CLEC) that occur during the provisioning process.		
<b>Method of Calculation:</b>	(Number of trouble reports that occur from the time of service order creation, up to and including the date of service order completion)/ (Total Number of service orders in reporting period)		
<b>Report Period:</b>	Monthly		
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), by ILEC Affiliates		
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• By Resale, UNE Loop, UNE Port and PNP</li> <li>• By Affecting Service and Out of Service</li> </ul>		
<b>Geographic Level:</b>	Statewide		
<b>Measurable Standard:</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>Parity for Pacific Bell:</b>   <b>Resale</b>  <b>UNE Loop</b>  <b>UNE Port</b>  <b>PNP - Port Out</b> </td> <td style="width: 50%; vertical-align: top;"> <b>Pacific Bell Retail</b>                      Retail services                      Retail services (outside plant disposition codes)                      Retail services (central office disposition codes)                      (Issue still to be resolved)                 </td> </tr> </table>	<b>Parity for Pacific Bell:</b>  <b>Resale</b> <b>UNE Loop</b> <b>UNE Port</b> <b>PNP - Port Out</b>	<b>Pacific Bell Retail</b> Retail services Retail services (outside plant disposition codes) Retail services (central office disposition codes) (Issue still to be resolved)
<b>Parity for Pacific Bell:</b>  <b>Resale</b> <b>UNE Loop</b> <b>UNE Port</b> <b>PNP - Port Out</b>	<b>Pacific Bell Retail</b> Retail services Retail services (outside plant disposition codes) Retail services (central office disposition codes) (Issue still to be resolved)		
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes Subsequent reports</li> <li>• Excludes Message Reports (circuit reports for which ILEC has no records)</li> <li>• Excludes ILEC employee generated reports</li> </ul>		
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Maintenance Disposition codes as diagnostic data.</li> </ul>		

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 15a**

**Title:** Provisioning Trouble Reports (Prior to Service Order Completion) - GTE

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percent of troubles that are reported (via customer or indirectly by CLEC) that occur during the provisioning process.  <i>(GTE does not support this measure)</i>
<b>Method of Calculation:</b>	
<b>Report Period:</b>	
<b>Report Structure:</b>	
<b>Reported By:</b>	
<b>Geographic Level:</b>	
<b>Measurable Standard:</b>	
<b>Business Rules:</b>	
<b>Notes:</b>	

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# OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 16**

**Title:** Percentage Troubles in 30 Days for New Orders

Area	Requirement Description																																													
<b>Description:</b>	Measures the percent of network customer trouble reports received within 30 calendar days of service order completion. <i>Note: This measure is for all PB services and designed GTE services.</i>																																													
<b>Method of Calculation:</b>	(Total Number of Customer Trouble reports received within 30 calendar days of service order completion / Total Number of new, move and change completed orders) x 100																																													
<b>Report Period:</b>	Monthly																																													
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																																													
<b>Reported By:</b>	By service group type (including PNP)																																													
<b>Geographic Level:</b>	Region (PB), Statewide (GTE)																																													
<b>Measurable Standard:</b>	<p>Parity for Resale is Retail for Pacific Bell and GTE</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Parity for UNE measured for the following UNES:</th> <th style="width: 30%;">Pacific Bell Retail</th> <th style="width: 30%;">GTE Retail</th> </tr> </thead> <tbody> <tr> <td>2/4w (8db) analog loop (incl. Coin/analog PBX)</td> <td>POTS - Business (fielded)</td> <td>B1 Dispatch Non-Designed</td> </tr> <tr> <td>2/4w (5.5 db) assured analog loop</td> <td>POTS - Business (Assured)</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>2w digital loop (ISDN capable)</td> <td>ISDN(BRI)</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>2w digital loop (xDSL capable)</td> <td>ADSL</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>4w digital loop (1.544Mbps capable/HDSL)</td> <td>ISDN(PRI)/DS1</td> <td>Dispatch Designed Services</td> </tr> <tr> <td>UNE Port-Basic Analog/Coin</td> <td>POTS - Business (fielded)</td> <td>CentraNet -Simple</td> </tr> <tr> <td>UNE Port-CENTREX</td> <td>CENTREX</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-ISDN (BRI)</td> <td>CENTREX</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-DS1/ISDN-PRI (incl. DS1 line port)</td> <td>DS1/ISDN(PRI)</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Port-PBX DID</td> <td>PBX DID</td> <td>CentraNet -Complex</td> </tr> <tr> <td>UNE Dedicated Transport (incl. DS1 and DS3)</td> <td>HICAP</td> <td>HICAP Designed</td> </tr> <tr> <td>UNE Platform (PB only)</td> <td>Analogous Retail Service</td> <td>N/A</td> </tr> <tr> <td><b>Interconnection Trunks</b></td> <td>ILEC Dedicated Trunks</td> <td>ILEC Dedicated Trunks</td> </tr> <tr> <td><b>PNP (Port out)</b></td> <td>(Issue still to be resolved)</td> <td>(Issue still to be resolved)</td> </tr> </tbody> </table>	Parity for UNE measured for the following UNES:	Pacific Bell Retail	GTE Retail	2/4w (8db) analog loop (incl. Coin/analog PBX)	POTS - Business (fielded)	B1 Dispatch Non-Designed	2/4w (5.5 db) assured analog loop	POTS - Business (Assured)	Dispatch Designed Services	2w digital loop (ISDN capable)	ISDN(BRI)	Dispatch Designed Services	2w digital loop (xDSL capable)	ADSL	Dispatch Designed Services	4w digital loop (1.544Mbps capable/HDSL)	ISDN(PRI)/DS1	Dispatch Designed Services	UNE Port-Basic Analog/Coin	POTS - Business (fielded)	CentraNet -Simple	UNE Port-CENTREX	CENTREX	CentraNet -Complex	UNE Port-ISDN (BRI)	CENTREX	CentraNet -Complex	UNE Port-DS1/ISDN-PRI (incl. DS1 line port)	DS1/ISDN(PRI)	CentraNet -Complex	UNE Port-PBX DID	PBX DID	CentraNet -Complex	UNE Dedicated Transport (incl. DS1 and DS3)	HICAP	HICAP Designed	UNE Platform (PB only)	Analogous Retail Service	N/A	<b>Interconnection Trunks</b>	ILEC Dedicated Trunks	ILEC Dedicated Trunks	<b>PNP (Port out)</b>	(Issue still to be resolved)	(Issue still to be resolved)
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UNE Port-CENTREX	CENTREX	CentraNet -Complex																																												
UNE Port-ISDN (BRI)	CENTREX	CentraNet -Complex																																												
UNE Port-DS1/ISDN-PRI (incl. DS1 line port)	DS1/ISDN(PRI)	CentraNet -Complex																																												
UNE Port-PBX DID	PBX DID	CentraNet -Complex																																												
UNE Dedicated Transport (incl. DS1 and DS3)	HICAP	HICAP Designed																																												
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes troubles associated with inside wire</li> <li>• Excludes Trouble Reports Received on the Due Date (which instead are reported in the "Provisioning Troubles" measure)</li> <li>• Excludes Subsequent reports</li> <li>• Excludes Message Reports (circuit reports for which ILEC has no records)</li> <li>• Excludes ILEC employee generated reports</li> </ul>																																													

**Notes:**

- Availability of ILEC Affiliate data for review will be determined by the CPUC.
- When results are less than parity for a reporting period, ILECs will provide disaggregation by Maintenance Disposition codes as diagnostic data.
- ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.

## OSS OII Performance Measurements Report Requirements

**Provisioning**

**Measure 17**

**Title:** Percentage Troubles in 7 Days for New Orders - GTE only

<b>Area</b>	<b>Requirement Description</b>										
<b>Description:</b>	Measures the percent of network customer trouble reports received within 7 calendar days of service order completion.  <i>Note. This measure is for non-designed services only</i>										
<b>Method of Calculation:</b>	(Total Number of Network Customer Trouble Reports received within 7 calendar days of service order completion / Total new, move and change orders) x 100										
<b>Report Period:</b>	Monthly										
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates										
<b>Reported By:</b>	By service group type (including PNP) and Field Work/No Field Work as appropriate										
<b>Geographic Level:</b>	Statewide										
<b>Measurable Standard:</b>	<p><b>Parity for Resale is Retail for GTE (non-designed services only)</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;"><b>Parity for UNE measured for the following UNEs:</b></td> <td style="width: 40%;"></td> </tr> <tr> <td>2/4w (8db) loop</td> <td style="text-align: right;"><b>GTE Retail</b></td> </tr> <tr> <td>(incl. Coin/analog PBX)</td> <td style="text-align: right;">BI Dispatch Non-Designed</td> </tr> <tr> <td>UNE Port - Basic analog/Coin</td> <td style="text-align: right;">CentraNet - Simple</td> </tr> <tr> <td><b>PNP (Port Out)</b></td> <td style="text-align: right;"><b>(Issue still to be resolved)</b></td> </tr> </table>	<b>Parity for UNE measured for the following UNEs:</b>		2/4w (8db) loop	<b>GTE Retail</b>	(incl. Coin/analog PBX)	BI Dispatch Non-Designed	UNE Port - Basic analog/Coin	CentraNet - Simple	<b>PNP (Port Out)</b>	<b>(Issue still to be resolved)</b>
<b>Parity for UNE measured for the following UNEs:</b>											
2/4w (8db) loop	<b>GTE Retail</b>										
(incl. Coin/analog PBX)	BI Dispatch Non-Designed										
UNE Port - Basic analog/Coin	CentraNet - Simple										
<b>PNP (Port Out)</b>	<b>(Issue still to be resolved)</b>										
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes Trouble Reports Received on the Due Date</li> <li>• Excludes Subsequent reports</li> <li>• Excludes ILEC employee generated reports</li> <li>• Excludes troubles associated with inside wiring.</li> </ul>										
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Maintenance Disposition codes as diagnostic data.</li> </ul>										

## *OSS OII Performance Measurements Report Requirements*

**Provisioning**

**Measure 18**

**Title:** Average Completion Notice Interval

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the average time per order to issue notification to CLEC of a completed order.
<b>Method of Calculation:</b>	Sum ((Date and Time of Completion Notification to CLEC) - (Date and Time of Work Completion)) / (Number of Orders Completed)
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, and by ILEC Affiliates
<b>Reported By:</b>	All interfaces
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell:</b> Fully electronic(LEX, EDI) -standard to be determined All other interfaces</p> <ul style="list-style-type: none"> <li>• Standard- 90% within 24 hours</li> </ul> <p><b>GTE:</b> Fully Electronic (not available at this time) All other interfaces</p> <ul style="list-style-type: none"> <li>• Standard - 90% within 24 hours</li> </ul>
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• 24 hour clock is used to measure interval</li> <li>• Excludes weekends and ILEC published holidays</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Maintenance**

**Measure 19**

**Title:** Customer Trouble Report Rate

<i>Area</i>	<i>Requirement Description</i>																																													
<b>Description:</b>	Measures the total number of network customer trouble reports received within a calendar month per 100 circuits/UNEs.																																													
<b>Method of Calculation:</b>	(Total Number of Customer initial and repeat network trouble reports / Number of access lines/circuits/UNEs in service at the end of the prior reporting period) x 100																																													
<b>Report Period:</b>	Monthly																																													
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																																													
<b>Report By:</b>	By service group type (including PNP ) & NXX Code Opening Troubles																																													
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes Subsequent reports</li> <li>• Excludes Message Reports (circuit reports for which ILEC has no records)</li> <li>• Access line/circuit count taken from previous month</li> <li>• Excludes ILEC employee generated reports</li> </ul>																																													
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## *OSS OII Performance Measurements Report Requirements*

**Maintenance**

**Measure 20**

**Title:** Percentage of Customer Trouble Not Resolved Within Estimated Time

<i>Area</i>	<i>Requirement Description</i>																																													
<b>Description:</b>	Measures the percent of trouble reports not cleared by the commitment time.																																													
<b>Method of Calculation:</b>	(Total network trouble reports not cleared by the commitment time for ILEC reasons / Total network trouble reports completed) x 100																																													
<b>Report Period:</b>	Monthly																																													
<b>Report Structure :</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																																													
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• By service group type (including PNP) &amp; NXX Code Opening Troubles</li> <li>• By dispatch and no dispatch</li> </ul>																																													
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<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Maintenance Disposition codes as diagnostic data.</li> <li>• ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.</li> </ul>																																													

## OSS OII Performance Measurements Report Requirements

**Maintenance**

**Measure 21**

**Title:** Average Time to Restore

<i>Area</i>	<i>Requirement Description</i>																																													
<b>Description:</b>	Measures the average duration of customer trouble reports from the receipt of the customer trouble report to the time the trouble is cleared.																																													
<b>Method of Calculation:</b>	(Total duration of customer network trouble reports) / (Total customer network trouble reports)																																													
<b>Report Period:</b>	Monthly																																													
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																																													
<b>Reported By:</b>	<ul style="list-style-type: none"> <li>• By service group type (including PNP) &amp; NXX Code Opening Troubles</li> <li>• By dispatch and no dispatch</li> </ul>																																													
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes Subsequent reports</li> <li>• Excludes Message Reports (circuit reports which ILEC has no records on)</li> <li>• Excludes ILEC employee generated reports</li> </ul>																																													
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Maintenance Disposition codes as diagnostic data.</li> <li>• ADSL was selected as the analog for resale services and UNE DSL 2-wire loop because it currently is the most relevant analog.</li> </ul>																																													

## *OSS OII Performance Measurements Report Requirements*

### Maintenance

### Measure 22

**Title:** POTS Out of Service Less Than 24 Hours

<b>Area</b>	<b>Requirement Description</b>												
<b>Description:</b>	Measures the percent of POTS out-of-service trouble reports cleared in less than 24 hours.												
<b>Method of Calculation:</b>	$\left( \frac{\text{Total number of out of service network troubles cleared in less than 24 hours}}{\text{Total number of out of service network troubles reported}} \right) \times 100$ <p><i>Note: For non-design services only</i></p>												
<b>Report Period:</b>	Monthly												
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates												
<b>Reported By:</b>	By POTS Residence and Business (Resale and UNE)												
<b>Geographic Level:</b>	Statewide												
<b>Measurable Standard:</b>	<p><b>Parity for Resale (POTS) for Pacific Bell and GTE</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 33%;">Parity for UNEs (Basic)</th> <th style="text-align: left; width: 33%;">Pacific Bell Retail</th> <th style="text-align: left; width: 33%;">GTE Retail</th> </tr> </thead> <tbody> <tr> <td>2/4w (8db) analog loop</td> <td>POTS - Business (fielded)</td> <td>B1 Dispatch Non-Designed</td> </tr> <tr> <td>UNE Port - Basic Analog</td> <td>POTS - Business (fielded)</td> <td>CentraNet - Simple</td> </tr> <tr> <td>UNE Platform - POTS</td> <td>Analogous Retail Service</td> <td>N/A</td> </tr> </tbody> </table>	Parity for UNEs (Basic)	Pacific Bell Retail	GTE Retail	2/4w (8db) analog loop	POTS - Business (fielded)	B1 Dispatch Non-Designed	UNE Port - Basic Analog	POTS - Business (fielded)	CentraNet - Simple	UNE Platform - POTS	Analogous Retail Service	N/A
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UNE Platform - POTS	Analogous Retail Service	N/A											
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Residential and Business POTS only</li> <li>• Excludes no access</li> <li>• Interval for tickets received Saturday and Sunday begins no later than Monday morning</li> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes Subsequent reports</li> <li>• Excludes Message Reports (circuit reports for which ILEC has no records)</li> <li>• Excludes ILEC employee generated reports</li> </ul>												
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> <li>• When results are less than parity for a reporting period, ILECs will provide disaggregation by Maintenance Disposition codes as diagnostic data.</li> </ul>												

## OSS OII Performance Measurements Report Requirements

### Maintenance

### Measure 23

**Title:** Frequency of Repeat Troubles in 30 Day Period

Area	Requirement Description																																													
<b>Description:</b>	Measures the percent of customer network trouble reports received within 30 calendar days of a previous report.																																													
<b>Method of Calculation:</b>	$(\text{Total customer network trouble reports received within 30 calendar days of a previous customer report} / \text{Total customer network trouble reports}) \times 100$																																													
<b>Report Period:</b>	Monthly																																													
<b>Report Structure:</b>	Individual CLEC. CLECs in the aggregate, by ILEC (if analog applies), and by ILEC Affiliates																																													
<b>Report By:</b>	By service group type (including PNP) & NXX Code Opening Troubles																																													
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<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CPE and IEC/CLEC caused troubles</li> <li>• Excludes troubles associated with inside wiring</li> <li>• Excludes Subsequent reports</li> <li>• Excludes Message Reports</li> <li>• Excludes ILEC employee generated reports</li> </ul>																																													
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## OSS OII Performance Measurements Report Requirements

### Network Performance

### Measure 24

**Title:** Percent Blocking on Common Trunks

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percent of common and shared transport trunk groups exceeding 2% blockage.  <i>Note: Includes histogram distribution chart</i>
<b>Method of Calculation:</b>	$\frac{\text{(Number of common and shared transport trunk groups exceeding 2\% blockage)}}{\text{Total number of common and shared transport trunk groups}} \times 100$
<b>Report Period:</b>	Monthly (Exception Reporting Only)
<b>Report Structure:</b>	Reported by common/shared transport trunk group .
<b>Report By:</b>	By Central Office and Trunk type where individual trunk types can be distinguished
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	Issue still to be resolved
<b>Business Rules:</b>	
<b>Notes:</b>	Measured by: <ul style="list-style-type: none"> <li>• Trunk type (e.g., EAS, Toll, InterLATA, 911, etc.)</li> <li>• Total trunk groups</li> <li>• Percent Blocking</li> <li>• Location "A"</li> <li>• Report month</li> <li>• Threshold exceptions</li> </ul>

## ***OSS OII Performance Measurements Report Requirements***

### **Network Performance**

### **Measure 25**

**Title:** Percent Blocking on Interconnection Trunks

<b><i>Area</i></b>	<b><i>Requirement Description</i></b>
<b><i>Description:</i></b>	<p>Measures the percent of final dedicated interconnection trunk groups exceeding 2% blockage.</p> <p><i>Notes: 1)Includes histogram distribution chart. 2)Applies to those trunks where the ILEC has augmentation control. 3) Does not apply when trunks are provisioned as two-way trunks.</i></p>
<b><i>Method of Calculation:</i></b>	(Number of final dedicated interconnection trunk groups exceeding 2% blockage / Total number of final dedicated interconnection trunk groups) x 100
<b><i>Report Period:</i></b>	Monthly (Exception Reporting Only)
<b><i>Report Structure:</i></b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies), by ILEC Affiliates
<b><i>Report By:</i></b>	By Central Office and Trunk type where individual trunk types can be distinguished
<b><i>Geographic Level:</i></b>	Statewide
<b><i>Measurable Standard:</i></b>	<b>Parity for Pacific Bell and GTE – comparison made to ILEC final trunk groups</b>
<b><i>Business Rules:</i></b>	<ul style="list-style-type: none"> <li>• Only measured on trunks where ILEC has outgoing traffic to CLECs, and where ILEC controls trunk capacity.</li> <li>• Threshold exception trunk detail</li> <li>• Report month</li> </ul>
<b><i>Notes:</i></b>	<p>Measured by:</p> <ul style="list-style-type: none"> <li>• Trunk type (e.g., EAS, Toll, InterLATA, 911, etc.)</li> <li>• Total trunk groups</li> <li>• ILEC trunk groups</li> <li>• CLEC trunk groups</li> <li>• Threshold exceptions</li> <li>• ILEC end office to CLEC end office</li> <li>• ILEC tandem to CLEC end office</li> <li>• Availability of ILEC affiliate data for review will be determined by the CPUC.</li> </ul>

## *OSS OII Performance Measurements Report Requirements*

### Network Performance

### Measure 26

**Title:** NXX Loaded by LERG Effective Date

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the number of NXXs loaded and tested by the LERG effective date.
<b>Method of Calculation:</b>	$((\text{Number of NXXs loaded and tested by LERG effective date}) / (\text{Number of NXXs scheduled to be loaded and tested by LERG effective date})) \times 100$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	Reported for all NXX codes scheduled to be loaded in reporting period
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	Parity for Pacific Bell and GTE – comparison made to results for loading ILEC NXX codes by the LERG effective date.
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes any NXX codes with requested loading interval of less than the industry standard (currently 45 days).</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• NXX loading procedures include central office/tandem translations, verification of translations, call through testing, and AMA testing.</li> <li>• TRUCALL billing validation testing is not used unless maintenance trouble is reported (Pacific Bell only)</li> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## *OSS OII Performance Measurements Report Requirements*

### Network Performance

### Measure 27

**Title:** Network Outage Notification

<i>Area</i>	<i>Requirement Description</i>
<b>Description:</b>	Measures the time period for notification of a network outage. To be measured for the following: <ul style="list-style-type: none"> <li>• Switching</li> <li>• Transport</li> <li>• Network Fire Related Incident</li> <li>• Network Blockage</li> <li>• 911</li> <li>• SS7</li> </ul>
<b>Method of Calculation:</b>	Sum (Date & Time of Outage Notification) - (Date & Time of ILEC Outage Awareness)/Number of Outages
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate , ILEC(if analog applies), and ILEC affiliates
<b>Report By:</b>	Switching transport, network fire related incident, network blockage, 911, SS7
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	Parity for Pacific Bell and GTE
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Exception reporting only by central office.</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• CLECs will be notified of all qualifying outages</li> <li>• If ILECs develop a notification process which is parity by design, once all parties agree that complete parity is being provided, the ILECs may petition to have this measure deleted.</li> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 28**

**Title:** Usage Timeliness

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	This measure captures the elapsed time between the recording of usage data generated either by CLEC retail customers or access usage associated with CLEC customers and the time when the data set, in a compliant format, is successfully transmitted to the CLEC.
<b>Method of Calculation:</b>	$\frac{\text{Sum ((Data Set Transmission Availability Date) - (Date of Message Recording))}}{\text{(Count of All Messages available for Transmission in Reporting Period)}}$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• Resale</li> <li>• UNE (IntraLATA and InterLATA, etc.)</li> <li>• Jointly provided switched access (associated with meet point billing)</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell:</b> Parity for Resale and UNE Benchmark for Jointly provided switched access (<b>Benchmark level still to be resolved</b>)</p> <p><b>GTE:</b> Benchmark for Resale, UNE and Jointly provided switched access  (<b>Benchmark level still to be resolved</b>)</p>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 29**

**Title:** Accuracy of Usage Feed

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	<p>Measures the completeness of content, accuracy of information and conformance of formatting of the records the ILEC transmits to the CLEC in the reporting period.</p> <p><i>Note: This data will be reported by CLECs. If no data received from CLEC, ILEC will not report the measure.</i></p>
<b>Method of Calculation:</b>	<p>((Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)) x 100</p>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate
<b>Report By:</b>	
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Benchmark for Pacific Bell and GTE</b></p> <p><i>There is agreement that performance standard for this measure will not be established until a meeting with both ILECs and CLECs is held and criteria for this measure are defined and accepted by all parties.</i></p>
<b>Business Rules:</b>	
<b>Notes:</b>	

## *OSS OII Performance Measurements Report Requirements*

***Billing***

**Measure 30**

**Title:** Wholesale Bill Timeliness

<b><i>Area</i></b>	<b><i>Requirement Description</i></b>
<b><i>Description:</i></b>	This measure captures the elapsed number of days between the scheduled close of a Bill Cycle and the ILEC's successful transmission of the associated invoice to the CLEC. Disaggregated by: <ul style="list-style-type: none"> <li>• Resale</li> <li>• UNE (IntraLATA and InterLATA, etc.)</li> <li>• Facilities/Interconnection</li> </ul>
<b><i>Method of Calculation:</i></b>	Sum ((Invoice Transmission Availability Date) – (Date of Scheduled Bill Cycle Close*)) / (Count of Invoices Transmitted in Reporting Period)  *Bill Cycle Close = Bill Date
<b><i>Report Period:</i></b>	Monthly
<b><i>Report Structure:</i></b>	Individual CLEC, CLECs in the aggregate, and by ILEC Affiliates
<b><i>Report By:</i></b>	<ul style="list-style-type: none"> <li>• Resale</li> <li>• UNE (IntraLATA and InterLATA, etc.)</li> <li>• Facilities/Interconnection</li> </ul>
<b><i>Geographic Level:</i></b>	Statewide
<b><i>Measurable Standard:</i></b>	<b>Benchmark for Pacific Bell and GTE:</b>  Standard – 99% within 10 days
<b><i>Business Rules:</i></b>	<ul style="list-style-type: none"> <li>• Includes only mechanized bills.</li> <li>• Excludes paper bill, magnetic bill, CD ROM bill or Custom Bill diskette bill.</li> </ul>
<b><i>Notes:</i></b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 31**

**Title:** Usage Completeness

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percentage of usage charges appearing on the correct bill.
<b>Method of Calculation:</b>	(Count of usage charges on the bill that were recorded within last 30 days / total count of usage charges on the bill) x 100
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• Resale</li> <li>• UNE (IntraLATA and InterLATA, etc.)</li> <li>• Facilities/Interconnection</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell and GTE:</b> Parity for Resale and UNE</p> <p>Benchmark for Facilities/Interconnection (Benchmark level still to be resolved)</p>
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes summarized charges</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 32**

**Title:** Recurring Charge Completeness

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percentage of fractional recurring charges appearing on the correct bill.
<b>Method of Calculation:</b>	(Count of fractional recurring charges that are on the correct bill* / total count of fractional recurring charges that are on the bill) x 100  *Correct bill = next available bill  <i>Note: Pacific Bell will provide by count of charges. GTE will provide by dollar charges.</i>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• Resale</li> <li>• UNE (IntraLATA and InterLATA, etc.)</li> <li>• Facilities/Interconnection</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell:</b> Parity for Resale and UNE POTS Benchmark for Facilities/Interconnection and UNE Specials (Benchmark level still to be resolved)</p> <p><b>GTE:</b> Benchmark for Resale, UNE and Facilities/Interconnection (Issue still to be resolved)</p>
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• The effective date of the recurring charge must be within 30 days of the bill date for the charge to appear on the correct bill.</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 33**

**Title:** Non-Recurring Charge Completeness

Area	Requirement Description
<b>Description:</b>	Measures the percentage of non-recurring charges appearing on the correct bill.
<b>Method of Calculation:</b>	<p>(Count of non-recurring charges that are on the correct bill / total count of non-recurring charges that are on the bill) x 100</p> <p>*Correct bill = next available bill</p> <p><i>Note: Pacific Bell will provide by count of charges. GTE will provide by dollar charges.</i></p>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• Resale</li> <li>• UNE (IntraLATA and InterLATA, etc.)</li> <li>• Facilities/Interconnection</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell:</b> Parity for Resale and UNE POTS Benchmark for Facilities/Interconnection and UNE Specials <b>(Benchmark level still to be resolved)</b></p> <p><b>GTE:</b> Benchmark for Resale, UNE POTS and Facilities/Interconnection <b>(Benchmark level still to be resolved)</b></p>
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• The effective date of the non-recurring charge must be within 30 days of the bill date for the charge to appear on the correct bill.</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## *OSS OII Performance Measurements Report Requirements*

**Billing**

**Measure 34**

**Title:** Bill Accuracy

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percentage of the total bill amount that is not adjusted by correcting service orders or adjustments for the month.
<b>Method of Calculation:</b>	(Total monies billed without corrections/total monies billed) x 100
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies ) and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• Resale               <ul style="list-style-type: none"> <li>• Usage</li> <li>• Recurring Charges</li> <li>• Non-Recurring Charges</li> </ul> </li> <li>• UNE (IntraLATA and InterLATA, etc.)               <ul style="list-style-type: none"> <li>• Usage</li> <li>• Recurring Charges</li> <li>• Non-Recurring Charges</li> </ul> </li> <li>• Facilities/Interconnection               <ul style="list-style-type: none"> <li>• Usage</li> <li>• Recurring Charges</li> <li>• Non-Recurring Charges</li> </ul> </li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell:</b> Parity for Resale and UNE POTS Benchmark for Facilities/Interconnection and UNE Specials (Benchmark level still to be resolved)</p> <p><b>GTE:</b> Benchmark for Resale, UNE POTS  <ul style="list-style-type: none"> <li>• Standard - 97%</li> </ul>           Facilities/Interconnection (Benchmark level still to be resolved)</p>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 35**

**Title:** Duplicate Billing (Disconnect Bill Accuracy)

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the number of former ILEC customers sent bills erroneously after conversion to CLEC. <b>(No agreement has been reached with ILECs to support this measure)</b>
<b>Method of Calculation:</b>	$(\text{Number of former ILEC customers who receive erroneous bills after conversion} / \text{Number of former ILEC customers converted}) \times 100$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, by ILEC (if analog applies ) and by ILEC Affiliates
<b>Report By:</b>	Full Facilities based conversion, Resale and UNE
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<b>(Issue still to be resolved)</b>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Excludes the final bill to an end user and bills for an residual retail services provided by the ILEC to the end user</li> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Billing**

**Measure 36**

**Title:** Accuracy of Mechanized Bill Feed

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	<p>Measures the percentage of mechanized bill feeds that are accurately passed to the CLEC in the reporting period.</p> <p><i>Note: This data will be reported by CLECs. If no data received from CLEC, ILEC will not report the measure.</i></p>
<b>Method of Calculation:</b>	(Total # of files that passed / Total # of files sent in that reporting period) x 100
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate
<b>Report By:</b>	
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Benchmark for Pacific Bell and GTE</b></p> <p><i>There is agreement that performance standard for this measure will not be established until a meeting with both ILECs and CLECs is held and criteria for this measure are defined and accepted by all parties.</i></p>
<b>Business Rules:</b>	
<b>Notes:</b>	

## OSS OII Performance Measurements Report Requirements

### Database Updates

Measure 37

**Title:** Average Database Update Interval - Pacific Bell

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the average time to update databases.  <ul style="list-style-type: none"> <li>• <i>DA/Listings Database</i></li> </ul>
<b>Method of Calculation:</b>	$((\text{Completion Date \& Time}) - (\text{Update Submission Date \& Time})) / \text{Count of Updates Completed in Reporting Period}$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate , by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• Service Order generated updates</li> <li>• Direct gateway input</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<b>Pacific Bell:</b> Parity for service order generated updates Benchmark for direct gateway input updates <b>(Benchmark level still to be resolved)</b>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• CLECs reserve the right to request additional databases be included in this measure.</li> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## *OSS OII Performance Measurements Report Requirements*

### Database Updates

**Measure 37a**

**Title:** Average Database Update Interval -GTE

<i>Area</i>	<i>Requirement Description</i>
<i>Description:</i>	Measures the average time to update databases. <ul style="list-style-type: none"> <li>• <i>DA/Listings Database</i>  <i>(GTE does not support this measure)</i></li> </ul>
<i>Method of Calculation:</i>	
<i>Report Period:</i>	
<i>Report Structure:</i>	
<i>Report By:</i>	
<i>Geographic Level:</i>	
<i>Measurable Standard:</i>	
<i>Business Rules:</i>	
<i>Notes:</i>	

## OSS OII Performance Measurements Report Requirements

### Database Updates

Measure 38

**Title:** Percent Database Accuracy - Pacific Bell

<i>Area</i>	<i>Requirement Description</i>
<b>Description:</b>	Measures the percentage of database updates completed without error. <ul style="list-style-type: none"> <li>• 911 Databases</li> <li>• DA/Listings Database</li> </ul>
<b>Method of Calculation:</b>	$\frac{\text{((Count of Updates Completed without error) / (Count of Updates Completed))} \times 100}{100}$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	For DA/Listings: <ul style="list-style-type: none"> <li>• Service Order generated updates</li> <li>• Direct gateway input</li> </ul> For E911 Database: <ul style="list-style-type: none"> <li>• Service Order generated updates</li> <li>• Direct gateway input</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<b>Pacific Bell:</b> Parity for service order generated updates Direct Gateway Input (Issue still to be resolved)
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes CLEC caused errors</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• CLECs reserve the right to request additional databases be included in this measure.</li> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

### Database Updates

Measure 38a

**Title:** Percent Database Accuracy - GTE

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percentage of database updates completed without error. <ul style="list-style-type: none"> <li>• 911 Databases</li> <li>• DA/Listings Database</li> </ul> <p style="text-align: right;"><i>(GTE does not support this measure)</i></p>
<b>Method of Calculation:</b>	
<b>Report Period:</b>	
<b>Report Structure:</b>	
<b>Report By:</b>	
<b>Geographic Level:</b>	
<b>Measurable Standard:</b>	
<b>Business Rules:</b>	
<b>Notes:</b>	

## OSS OII Performance Measurements Report Requirements

### Database Updates

**Measure 39**

**Title:** E911/911 MS Database Update Average

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the percentage of E911/911 database updates completed within 48 hours.
<b>Method of Calculation:</b>	$(\text{Number of records updated within 48 hours} / \text{Total number of records updated}) \times 100$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate, by ILEC (if analog applies) and by ILEC Affiliates
<b>Report By:</b>	<b>(Issue still to be resolved)</b>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell and GTE:</b> Parity for service order generated updates</p> <p>Direct gateway input <b>(Issue still to be resolved)</b></p>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

### Collocation

### Measure 40

**Title:** Average Time to Respond to a Collocation Request

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the average time an ILEC takes to respond to a CLEC's collocation request.
<b>Method of Calculation:</b>	$\text{Sum}((\text{Request Response Date}) - (\text{Request submission Date})) / \text{Count of Requests submitted in Reporting Period}$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• All Collocation               <ul style="list-style-type: none"> <li>• Space Availability</li> <li>• Price and Schedule Quote</li> </ul> </li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	Benchmark for Pacific Bell and GTE (Benchmark level still to be resolved)
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes orders canceled by CLEC</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

#HOC-HOC-44

## OSS OII Performance Measurements Report Requirements

### Collocation

### Measure 41

**Title:** Average Time to Provide a Collocation Arrangement

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the average time it takes an ILEC to complete (build) a collocation arrangement.
<b>Method of Calculation:</b>	$\text{Sum}((\text{Date Collocation Arrangement is Complete}) - (\text{Date Application for Collocation Arrangement is approved* by ILEC})) / \text{Total Number of Collocation Arrangements Completed during the Reporting Period}$ <p>**Approved** means ILEC approves the application and has received, from CLEC, financial payment or bond.</p>
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLECs, CLECs in the aggregate and by ILEC Affiliates
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• All Collocation               <ul style="list-style-type: none"> <li>• New</li> <li>• Augment</li> </ul> </li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<b>Benchmark for Pacific Bell and GTE:</b> (Benchmark level still to be resolved)
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Excludes orders canceled by CLEC</li> </ul>
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## *OSS OII Performance Measurements Report Requirements*

### Interfaces

### Measure 42

**Title:** Percentage of Time Interface is Available

<i>Area</i>	<i>Requirement Description</i>
<b>Description:</b>	Measures percent of time OSS interface is available compared to scheduled availability.
<b>Method of Calculation:</b>	$\frac{((\text{Number of Scheduled System Available Hours}) - (\text{Number of Unscheduled System Unavailable Hours}))}{\text{Scheduled System Available Hours}} \times 100$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	CLECs in the aggregate, by ILEC (if analog applies)
<b>Reported By:</b>	By interface type for all interfaces accessed by CLECs (e.g., pre-ordering, ordering, and maintenance)
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	Parity for Pacific Bell for systems used by both ILEC and CLEC  Benchmark for Pacific Bell (for all other systems) and GTE (all systems) (Benchmark level still to be resolved)
<b>Business Rules:</b>	<ul style="list-style-type: none"> <li>• Outage hours are obtained from outage reports</li> <li>• Any change requests for extended availability during the reporting period are added to the scheduled hours.</li> </ul>
<b>Notes:</b>	

## OSS OII Performance Measurements Report Requirements

### Interfaces

### Measure 43

**Title:** Average Notification of Interface Outages

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the time it takes the ILEC to notify the CLEC of an outage of an interface.
<b>Method of Calculation:</b>	$\frac{\text{Sum}((\text{Date and time of Outage Notification to CLECs}) - (\text{Date and time of ILEC awareness of Interface Outage}))}{\text{Total Number of Interface Outages}}$
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	Individual CLEC, CLECs in the aggregate, and by ILEC Affiliates
<b>Reported By:</b>	By interface type for all interfaces accessed by CLECs
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Pacific Bell and GTE:</b></p> <p><b>Benchmark</b></p> <ul style="list-style-type: none"> <li>• Standard – 97% in 15 minutes (Pacific Bell)</li> <li>• Standard - (GTE) (Benchmark level still to be resolved)</li> </ul>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Availability of ILEC Affiliate data for review will be determined by the CPUC.</li> </ul>

## OSS OII Performance Measurements Report Requirements

**Interfaces**

**Measure 44**

**Title:** Center Responsiveness

<b>Area</b>	<b>Requirement Description</b>
<b>Description:</b>	Measures the average time it takes the ILEC's work center to answer a call.
<b>Method of Calculation:</b>	Sum (Date and Time of Call answer - Date and Time of Call Receipt) / (Total calls answered by center))
<b>Report Period:</b>	Monthly
<b>Report Structure:</b>	CLECs in the aggregate, and by ILEC (if analog applies)
<b>Report By:</b>	<ul style="list-style-type: none"> <li>• ILEC Ordering Center</li> <li>• ILEC Repair Center</li> </ul>
<b>Geographic Level:</b>	Statewide
<b>Measurable Standard:</b>	<p><b>Repair Centers</b></p> <p>Parity - Pacific Bell</p> <p>Benchmark - GTE,</p> <ul style="list-style-type: none"> <li>• Standard - average 20 seconds</li> </ul> <p><b>Benchmark for Pacific Bell and GTE (Ordering Centers)</b></p> <ul style="list-style-type: none"> <li>• Standard - average 15 seconds (Pacific Bell)</li> <li>• Standard - average 20 seconds (GTE)</li> </ul>
<b>Business Rules:</b>	
<b>Notes:</b>	<ul style="list-style-type: none"> <li>• Measured by individual queue, if applicable, in each ILEC center.</li> </ul>

## REPORTING PROCESS

Performance reports will be made available to the CLECs and the Public Utilities Commission no later than July 15, 1999 (for the June report month). Any deviations in the initial implementation of the individual measures will be noticed by the ILEC to the CPUC and the CLECs, no later than May 15, 1999.<sup>6</sup>

Subsequent performance reports will thereafter be provided by the fifteenth calendar day of the month succeeding the reporting period. The reporting period is the calendar month, unless otherwise noted. Positive reporting will be done for all measures, even those reported on an exception only basis.

For those measures where results appear to be statistically less than parity or not meeting the benchmark level, the ILEC will perform analysis of the data. This analysis will detail the underlying causes contributing to the reported performance results. This analysis will be made available to the same recipients as the monthly performance report thirty days after the website publication of the monthly results.

Authorized users will have access to monthly reports through an interactive website. Each CLEC will have access to its own data, aggregate CLEC data, and ILEC data. The Public Utilities Commission will have access to reports for all entities, including ILEC Affiliate data. ILEC Affiliate data will not be included in CLEC aggregate data. (As is noted in the report requirement section, availability of ILEC affiliate data for review by the CLEC will be determined by the CPUC.)

In addition to the performance measure results themselves, the raw data supporting the results will be available to the CLECs and the Public Utilities Commission. Raw data will be archived for a period of 24 months to provide an adequate audit trail and will be retained with sufficient detail so that CLECs can reasonably reconcile the data captured by the ILEC (for the CLEC) with its own internal data. Furthermore, data that relates to the ILEC's own performance would be retained, at a consistent level of disaggregation comparable to that reported for the CLECs.

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<sup>6</sup> In its January 1999 "Issues Filing", GTE will document any measures which it knows at that time it will not have available by the June 1999 report month.

## SERVICE GROUP TYPE DISAGGREGATION

Type	GTE	Pacific Bell
<b>RESALE</b>		
Residential POTS	X (incl. Res. ISDN BRI)	X
Business POTS	X (incl. Bus. ISDN BRI and PBX)	X
<b>ISDN</b>		
ISDN BRI		X
ISDN PRI		
<b>CENTREX</b>		X
<b>PBX</b>		
PBX Analog		
PBX DID		
Specials (i.e., Designed Services)	X (incl. PRI)	
DDS		X
DS-1/ISDN PRI		X
DS-3		X
VGPL/DS0		X
<b>UNBUNDLED NETWORK ELEMENTS</b>		
<b>UNE Loops</b>		
<b>Non-Designed</b>	X	
UNE Loop 8dB weighted 2/4 wire analog basic/Coin		X (incl. Analog PBX)
<b>Designed</b>	X	
UNE Loop 5.5dB 2 or 4 wire analog assured		X
UNE Loop 2 wire Digital ISDN Capable		X
UNE Loop 2 wire Digital xDSL Capable		X
UNE Loop 4 wire Digital (1.544mbps Capable)/HDSL		X (incl. Digital PBX, HDSL)
UNE Loop PBX		
<b>UNE Port</b>		
<b>Non-Designed</b>	X	
UNE Port Analog (incl. PBX analog port)		X (incl. Coin)
UNE Port Coin		
<b>Designed</b>	X	
UNE Port Centrex		X
UNE Port ISDN BRI		X

## SERVICE GROUP TYPE DISAGGREGATION

Type	GTE	Pacific Bell
UNE Port ISDN PRI (including DS-1 line port)		X
UNE Port PBX DID		X
<b>UNE Dedicated Transport</b>	X	X
UNE Dedicated Transport DS-1		
UNE Dedicated Transport DS-3		
<b>UNE PLATFORM</b>		
UNE Platform (i.e., loop + port + transport)		X
<b>INTERCONNECTION</b>		
Interconnection Trunks	X	X
<b>PNP</b>		
	X	X
<b>PROJECTS</b>		
Projects	X	X

Consensus on disaggregation is defined by the above matrix.

**INTERCONNECTION TRUNKS** will be included in measures: 2, 7, 8, 11, 12, 13, 14, 19, 20, 21, 23, 25, 27, 31, 32, 33, 34.

**PNP** is considered a facilities based service group type. PNP will be a level of disaggregation for the following measures: 2, 4, 9, 10, 15, 16, 19, 20, 21, 23.

**PROJECTS** are defined as follows:

- **PB:** POTS greater than 20 lines, for Specials greater than 6 lines, and UNE Loops greater than 20 loops.
- **GTE:** Res and Bus POTS greater than 20 lines. PBX, ISDN and CentraNet greater than 6 lines, UNE Loops greater than 6 loops.

Results for projects are being considered as a separate level of disaggregation for measurements 2, 7, and 8. For all other measures which have an SGT as a level of disaggregation, project results are included as part of the associated SGT.

- The current proposal being considered is the following:
  1. ILECs to study like sized projects, up to 50 lines, for CLEC/ILEC to determine if meaningful comparisons can be made. If this study shows that a meaningful comparison can be made, results for these types of projects will be reported for both ILECs and CLECs, and incentives applied as appropriate. ILECs have agreed to report this study, and study results are expected in April, 1999.
  2. If study results show that a meaningful comparison cannot be made, then the options are:
    - Report data, but no incentives apply.
    - Report no data on projects.

# **CALIFORNIA OSS OII PERFORMANCE MEASUREMENTS**

## **SERVICE ORDER TYPES**

- **New Service Installations**
- **Service Migrations without Changes**
- **Service Migrations with Changes**
- **Move and Change activities**
- **Feature Changes**
- **Service Disconnects**

## AUDITING

The Parties propose that an initial audit and certification process be performed to ensure that individual ILEC reporting procedures are sound and that data collection and reporting are timely, accurate and complete. Each ILEC shall submit its initial audit to the commission, and distribute copies (which include only non-proprietary information) to parties on the OSS OII service list.

The parties also support an annual comprehensive audit of the ILECs' reporting procedures and reportable data. This audit would be on behalf of all CLECs and would be performed by independent auditors. Each ILEC shall submit its annual comprehensive audit to the commission, and distribute copies (which include only non-proprietary information) to parties on the OSS OII service list.

The cost of this annual audit would be shared between the CLECs and the audited ILEC.

In addition to an annual audit, the ILECs and CLECs agree that the CLECs would have the right to mini-audits of individual performance measures during the year. When a CLEC has reason to believe the data collected for a measure is flawed or the reporting criteria for the measure is not being adhered to, it has the right to have a mini-audit performed on the specific measure upon written request (including e-mail), which will include the designation of a CLEC representative to engage in discussions with the ILEC about the requested mini-audit. If, 30 days after the CLEC's written request, the CLEC believes that the issue has not been resolved to its satisfaction, the CLEC will commence the mini-audit upon providing the ILEC with 5 business days advance written notice. Each CLEC would be limited to auditing five single measures during the year. The CLEC would pay for the mini-audit, including the ILEC's reasonable associated costs and expenses, unless the ILEC is found to be misreporting or misrepresenting data or to have non-compliant procedures, in which case, the ILEC would pay for the mini-audit, including the CLECs' reasonable associated costs and expenses. If, during a mini-audit of individual measures, more than 50% of the measures in a major service category are found to have flawed data or reporting problems, the entire service category will be re-audited at the expense of the ILEC. The major service categories for this purpose are:

- Pre-Ordering
- Ordering
- Provisioning
- Maintenance
- Network Performance
- Billing
- Database Updates
- Collocation
- Interfaces

Each mini-audit shall be submitted to the Commission as a proprietary document subject to the applicable protection afforded by Commission General Order No. 66 C and California Public Utilities Code Section 583.

There are some issues regarding the initial audit and certification process, the annual comprehensive audits and mini-audits which will be addressed in the January, 1999 filing.

## REVIEW PROCEDURES

As experience is acquired under this Partial Settlement Agreement with the new performance measurements and underlying business processes, the Parties expect to learn which measurements set forth in Section II may not have been properly defined or are more or less useful than others. The Parties also expect that experience will show whether new measurements are needed or whether certain existing measurements are not needed or require modification. Accordingly, the Parties agree to reconvene in February, 2000 to review the effectiveness of and modifications to the performance measurements approved by the Commission in this proceeding. In the event the Parties cannot agree on any addition, deletion or modification, they will jointly submit such dispute for resolution by the CPUC.

If, prior to the agreed-upon review date, there is consensus that one or more measures are not effective, the parties will schedule meetings to discuss modifying the measure(s) or process(es). If there is no consensus, any individual party seeking formal review by the CPUC shall give notice to the other parties of its intent to do so. The party will also describe the action it intends to take and the reason(s) for its proposed actions.

## DEFINITION OF TERMS

TERM	DEFINITION
Automatic Location Information (ALI)	The feature of E911 that displays at the Public Safety Answering Point (PSAP) the street address of the calling telephone number. This feature requires a data storage and retrieval system for translating telephone numbers to the associated address. ALI may include Emergency Service Number (ESN), street address, room or floor, and names of the enforcement, fire and medical agencies with jurisdictional responsibility for the address. The Management System (E911) database is used to update the Automatic E911 Location Information databases.
Call Blocking	A condition on a telecommunications network where, due to a maintenance problem or an over capacity situation in a part of the network, some or all originating or terminating calls cannot reach their final destinations. Depending on the condition and the part of the network affected, the network may make subsequent attempts to complete the call or the call may be completely blocked. If the call is completely blocked, the calling party will have to re-initiate the call attempt.
Code Opening	Process by which new NPA/NXXs (area code/prefix) are defined, through software translations to network databases and switches, in telephone networks. Code openings allow for new groups of telephone numbers (usually in blocks of 10,000) to be made available for assignment to an ILEC's or CLEC's customers, and for calls to those numbers to be passed between carriers.
Common Channel Signaling System 7 (CCSS7)	A network architecture used to for the exchange of signaling information between telecommunications nodes and networks on an out-of-band basis. Information exchanged provides for call set-up and supports services and features such as CLASS and database query and response.
Common Transport	Trunk groups between tandem and end office switches that are shared by more than one carrier, often including the traffic of both the ILEC and several CLECs.
Completion	The time in the order process when the service has been provisioned and service.
Completion Notice	A notice the ILEC provides to the CLEC to inform the CLEC that the requested service order activity is complete.
Coordinated Customer Conversion	Orders that have a due date negotiated between the ILEC, the CLEC, and the customer so that work activities can be performed on a coordinated basis under the direction of the receiving carrier.
Customer Requested Due Date	A specific due date requested by the customer which is either shorter or longer than the standard interval or the interval offered by the ILEC.
Customer Trouble Reports	A report that the carrier providing the underlying service opens when notified that a customer has a problem with their service. Once resolved, the disposition of the trouble is changed to closed.

## DEFINITION OF TERMS

TERM	DEFINITION
Dedicated Transport	A network facility reserved to the exclusive use of a single customer, carrier or pair of carriers used to exchange switched or special, local exchange, or exchange access traffic.
Delayed Order	An order which has been completed after the scheduled due date and or time
Directory Assistance Database	A database that contains subscriber records used to provide live or automated operator-assisted directory assistance. Including 411, 555-1212, NPA-555-1212.
Directory Listings	Subscriber information used for DA and/or telephone directory publishing, including name and telephone number, and optionally, the customer's address.
DS-0	Digital Service Level 0. Service provided at a digital signal speed commonly at 64 kbps, but occasionally at 56 kbps.
DS-1	Digital Service Level 1. Service provided at a digital signal speed of 1.544 Mbps
DS-3	Digital Service Level 3. Service provided at a digital signal speed of 44.736 Mbps.
Due Date	The date provided on the FOC the ILEC sends the CLEC identifying the planned completion date for the order.
End Office Switch	A switch from which an end users' exchange services are directly connected and offered.
Firm Order Confirmation (FOC)	Notice the ILEC sends to the CLEC to notify the CLEC that it has received the CLECs service order, created a service request, and assigned it a due date
Flow-Through	The term used to describe whether a LSR electronically is passed from the OSS interface system to the ILEC legacy system to automatically create a service order. LSRs that do not flow through require manual intervention for the service order to be created in the ILEC legacy system.
Held Order	An order for which the ILEC has issued a FOC, but whose due date has passed without it being completed.
Installation	The activity performed to activate a service.
Installation Troubles	A trouble, which is identified after service order activity and installation, has completed on a customer's line. It is likely attributable to the service activity (within a defined time period).
Inside Wiring	The telecommunications wiring located at a customer's premises that extends beyond the demarcation point.
Interconnection Trunks	A network facility that is used to interconnect two switches generally of different local exchange carriers
Interface Outage	A planned or unplanned failure resulting the unavailability or access degradation of a system.
Jeopardy	A failure in the service provisioning process which results potentially in the inability of a carrier to meet the committed due date on a service order
Jeopardy Notice	The actual notice that the ILEC sends to the CLEC when a jeopardy condition has been identified.

## DEFINITION OF TERMS

TERM	DEFINITION
Lack of Facilities	A shortage of cable facilities identified after a due date has been committed to a customer, including the CLEC. The facilities shortage may be identified during the inventory assignment process, or during the service installation process. If no facilities are available, the ILEC will issue a jeopardy.
Local Exchange Routing Guide (LERG)	A Bellcore master file that is used by the telecom industry to identify NPA-NXX routing and homing information, as well as network element and equipment designations. The file also includes scheduled network changes associated with activity within the North American Numbering Plan (NANP).
Local Exchange Traffic	Traffic originated on the network of a LEC in a local calling area that terminates to another LEC in a local calling area.
Local Service Confirmation	<b>OBF term for a FOC</b>
Mechanized Bill	A bill that is delivered via electronic transmission.
Meet Point Billing	A billing arrangement used when two or more LECs jointly provide access to and from an interexchange carrier (IEC) for inter LATA traffic. This arrangement can be Single Bill, where one LEC bills the IEC on behalf of both LECs and remits payment to the other LEC or Multiple Bill, where each LEC bills their portion directly to the IEC.
Missed Commitment Notification	A notice from ILEC to inform CLEC that the committed due date on an order has been missed.
Non-Recurring Charge	A rate charged for a product or a service that is assessed on a one time basis.
NXX, NXX Code or Central Office Code	The three digit switch entity indicator that is defined by the "D", "E", and "F" digits of a 10-digit telephone number within the NANP. Each NXX Code contains 10,000 station numbers.
Permanent Number Portability (also known as Local or Long Term Number Portability)	A network technology which allows end user customers to retain their telephone number when moving their service between local service providers. This technology does not employ remote call forwarding, but actually allows the customer's telephone number to be moved and redefined in the network of the new service provider. The activity to move the telephone number is called "porting".
Physical Collocation	Shall have the meaning set forth in 47 C.F.R. Section 51.5.
Plain Old Telephone Service (POTS)	Refers to basic 2 wire analog residential and business services. Can include feature capabilities (e.g., CLASS features).

## DEFINITION OF TERMS

TERM	DEFINITION
Projects	Service requests that exceed the line size and or level of complexity which would allow for the use of standard ordering and provisioning processes. Generally, due dates for projects are negotiated, coordination of service installations changes is required and automated provisioning may not be practical.
Provisioning Troubles	A trouble report that is opened for a customer's existing or new service for a trouble identified between the time of the service order creation to the time of order completion. Provisioning troubles that are associated with a CLECs customers include troubles that occur and are reported during the conversion of an ILEC customer to a CLEC.
Query Types	Pre-ordering information that is available to a CLEC that is categorized according to standards issued by OBF, the FCC and or the CPUC.
Recurring Charge	A rate charged for a product or service that is assessed each successive billing period.
Reject	A status that can occur to a CLEC submitted local service request (LSR) when it does not meet certain criteria. There are two types of rejects: syntax, which occur if required fields are not included in the LSR; and content, which occur if invalid data is provided in a field. A rejected service request must be corrected and re-submitted before provisioning can begin.
Repeat Report	Any trouble report that is a second (or greater) report on the same telephone number/circuit ID and at the same premises Address within 30 days. The original report can be any category, including excluded reports, and can carry any disposition code.
Service Group Type	The designation used to identify a category of similar services, e.g., UNE loops
Service Order	The work order created and distributed in ILECs systems and to ILEC work groups in response to a complete, valid service request.
Service Order Type	The designation used to identify the major types of provisioning activities associated with a service request
Service Request	The transaction sent from the CLEC to the ILEC to order services or to request a change(s) be made to existing services.
Standard Interval	The interval that the ILEC quotes to its customers with respect to how long it will take to provision a service request. These intervals are standardized by specific service type and type of service modification requested. ILECs publish these standard intervals in documents used by their own service representatives as well as ordering instructions provided to CLECs. POTS services do not have standard intervals; their installation intervals are based on force available and workload. They may change as frequently as twice a day.

## DEFINITION OF TERMS

TERM	DEFINITION
Subsequent Reports	A trouble report that is taken on a previously reported trouble prior to the date and time the initial report has a status of "cleared"
Summarized Charges	Billing charges that are aggregated on the bill, rather than individually itemized, e.g., local usage minutes on resale or retail calls, which are listed on the bill as "xx" minutes with no call detail
Tandem Switch	Switch used to connect and switch trunk circuits between and among Central Office switches.
Time to Restore	The time interval from the receipt, by the ILEC, of a trouble report on a customer's service to the time service is fully restored to the customer.
To Be Called Cut	A type of coordinated customer conversion, which involves the CLEC calling the ILEC to signal the ILEC that it should start the customer conversion. (Pacific Bell term)
Trouble Cause Code	A code identifying the known or suspected cause of a trouble condition
Trouble Disposition	A code identifying the end result of diagnostic and/or repair activities on a customer trouble report.
Usage Data	Data generated in network nodes to identify switched call data on a detailed or summarized basis. Usage data is used to create customer invoices for the calls.
Usage Records	The individual call records created in a switch to report the date, time, duration, calling and called numbers associated with a given call
Virtual Collocation	Shall have the meaning set forth in 47 C.F.R. Section 51.5.

## CALIFORNIA OSS OII PERFORMANCE MEASURES: GLOSSARY OF ACRONYMS

ACRONYM	DESCRIPTION
ADSL	Asymmetric Digital Subscriber Line
ALI	Automatic Line Information (for 911/E911 systems)
AS	Affecting Service (type of trouble condition)
BDT	Billing Data Tape
BRI	Basic Rate Interface (type of ISDN service)
CABS	Carrier Access Billing System
CARE	Customer Repair Center (GTE)
CBSS	Customer Billing Service System (GTE)
CESAR	Carrier Enhanced System for Access Request
CHC	Coordinated "Hot" Cut
CKT	Circuit
CLEC	Competitive Local Exchange Carrier
CO	Central Office
CORBA	Common Object Request Broker Architecture (Pre-ordering standard)
CPE	Customer Premises Equipment
CPUC	California Public Utilities Commission
CRIS	Customer Record Information System
CSB	Customer Service Bureau (PB retail repair center)
CSR	Customer Service Record
DA	Directory Assistance
dB	Decibel
DID	Direct Inward Dialing
DS0	Digital Service 0
DS1	Digital Service 1
DS3	Digital Service 3
E911 MS	E911 Management System
EAS	Equal Access Service
EDI	Electronic Data Interchange
FOC	Firm Order Confirmation
GTE	General Telephone Company
GTT	Global Title Translations
GUI	Graphical User Interface
HDSL	High-bit-rate Digital Subscriber Line
HICAP	High Capacity Digital Service
IEC	Inter-exchange Carrier
ILEC	Incumbent Local Exchange Carrier
I, N, T, C, M	Service Order Types - I (install-GTE), N(new-PB), T(to or transfer-PB), C(change)and M(move-GTE)
ISDN	Integrated Services Digital Network
IW	Inside Wire
LATA	Local Access Transport Area
LERG	Local Exchange Routing Guide
LNP	Local (or Long Term) Number Portability
LOC	Local Operations Center (PB repair and coordination center for CLEC activity)

## CALIFORNIA OSS OII PERFORMANCE MEASURES: GLOSSARY OF ACRONYMS

ACRONYM	DESCRIPTION
LSC	Local Service Confirmation or Local Service Center (PB)
LSMS	Local Service Management System
LSR	Local Service Request
MAC	Missed Appointment Code
NDM	Network Data Mover
NOMC	National Open Market Center (GTE)
NPAC	Number Portability Administration Center
NXX	Telephone number prefix
OBF	Ordering and Billing Forum
OOS	Out of service (type of trouble condition)
OSS	Operations Support System
PB	Pacific Bell
PBX	Private Branch Exchange
PNP	Permanent Number Portability (same as LNP)
PON	Purchase Order Number
POTS	Plain Old Telephone Service
PRI	Primary Rate Interface (type of ISDN service)
SBC	Southwestern Bell Corporation
SCP	Service Control Point
SGT	Service Group Type
SORD	Service Order Retrieval and Distribution (PB service order creation system)
SOT	Service Order Type
SS7	Signaling System 7
STP	Signaling Transfer Point
TBCC	To Be Called Cut (PB)
TN	Telephone Number
UNE	Unbundled Network Element
VGPL	Voice Grade Private Line
xDSL	(x) Digital Subscriber Line

## MISSED APPOINTMENT CODES – PACIFIC BELL MAC – COMPANY REASONS

CO91	No Access to Terminal Or Protector
CO92	No Electrical Permit-Company
CO93	All Other Company Reasons (Tone Back)
CO94	Joint Marketing Contractor
CO95	Civil Unrest, No Access
CO96	National 800 database to Facilities
CO97	Malfunction of Mechanized Service Order Systems i.e. SORD, COSMOS, FACS, MARCH PBOD
CO98	NFWK Service Order Sent To Field and Due Date Missed
CO99	Missed Appointment Window - Senate Bill 101 (System Failure)

## COMPANY WORK LOAD

CL71	Installation-Force/Load Imbalance
CL72	Weather Conditions
CL73	Sanctioned Work Stoppage Against Pacific Bell
CL74	Emergency Conditions, Earthquakes, Floods
CL75	800 Service Center Work Load Imbalance
CL79	Missed Appointment Window - Senate Bill 101 (Work Load)

## EQUIPMENT SUPPLY

CE81	Lack of Normally Ordered Facility Equipment or Supplies
CE82	Lack of Specially Ordered Facility Equipment or Supplies
CE83	Other Facility Equipment Problems

## COMPANY FACILITIES

CF61	Lack of Outside Plant
CF62	Lack of C/O Facilities
CF63	BSW
CF64	Lack of Assignment
CS	Switching Error

## STANDARD RING TEST NUMBERS

SE OFC	995-XXXX
DMS OFC	995-XXX-XXXX

## MISSED APPOINTMENT CODES – PACIFIC BELL MAC – CUSTOMER REASONS

NO. ACCESS	DESCRIPTION
SA01	None on Prem Left Notice
SA02	Agent/Mgr Not On Prem Left Notice
SA03	Denied Access To Term. On Cust. Prem Left Notice
SA04	Manager Refused Access Left Notice
SA05	Manager Had No Key Left Notice
SA06	Security Type Building
SA07	Unable to Locate Other Designated Party
SA08	Dog/Other Safety Hazard On Premises
SA09	No Response To Call Before Going Number (3 Or More Attempts Made)
SR20	Subscriber In Independent Company No Facility In Independent Company
SR21	No Pole
SR22	No Conduit
SR23	Conduit Plugged
SR24	inc. Full No Spares, Referred to Building Owner, No Authorization./Pre- Authorization to Repair
SR25	No Trench
SR26	Not Authorized To Sign Labor Receipt
SR27	Customer Requests Later Due Date From Tech.
SR28	Building Not Ready
SR29	Electric Power Not Available

## CUSTOMER REQUESTS LATER DUE DATES

SL31	Customer Called Company before Tech. Arrived
SL32	Pre-Survey Contact Customer Requests Changing of Due Date

## ALL OTHER CUSTOMER REASONS

SO41	Minor Daily Access
SO42	Customer Requested Additional Work
SO43	Customer Gave Wrong Address
SO44	Access Refused
SO45	Access Didn't Know Installation Locations
SO46	Mgr./Owner OK Needed For Exposed Wiring
SO47	Mgr./Owner OK Needed To Drill Hole
SO48	Customer Required To Pay Deposit
SO49	Missed Appointment Window- Senate Bill 101 (Customer Gave Wrong Address)
SO50	Vendor Problem Regarding CPE Term Equipment Either Not Delivered/Installed or Removed

## JEPOARDY MISSED APPOINTMENT CODES - GTE

Code	Why Miss Code	Description
50	00	System Default
51	01	Service Order Problems
52	02	Supplement Pending
53	03	Design Errors
54	04	Distribution Errors
60	10	Assignments
61	11	DORs
62	12	Work Orders
63	13	Installation Problem
71	21	Material Incorrect, Late, or Defective
74	24	Software Incorrect or Incomplete
75	25	Central Office or Field Not Ready/Installation Problems
80	30	OTC - Service Order Problems
81	31	OTC - Supplement Pending
82	32	OTC - IOF Assignment
83	33	OTC - Equipment Problems
84	34	OTC - Not Ready
90	40	Customer - Service Order Problems
91	41	Customer - Supplement Pending
92	42	Customer - No Access
93	43	Customer - Not Ready
94	44	Customer - No IC Response
96	46	Completed Not Reported
97	47	Control Company Not Ready
98	48	National / Local Emergencies
99	49	Customer - Other

The above applies to SPO's and SPO's only.  
GTE does not have "WHY MISS" reason codes for retail. It is currently being developed.

## DISPOSITION CODES

	PACIFIC BELL		GTE
01	TERMINAL EQUIPMENT	04	NETWORK FACILITIES
02	COMMUNICATIONS EQUIPMENT	05	COIN/COINLESS
02	OTHER STATION EQUIPMENT	05	E911
02	TERMINAL EQUIPMENT	06	OUTSIDE PLANT
03	NETWORK TERMINATING FACILITIES	07	INTEROFFICE FACILITIES
04	OUTSIDE PLANT	09	SERVICE ORDER
05	CENTRAL OFFICE	10	RECORDS
06	CUSTOMER MISUSE	11	CARRIER (FIELD) OR CONCENTRATOR
07	TEST OK	12	CENTRAL OFFICE
08	FOUND OK - IN	13	TEST OKAY
09	FOUND OK - OUT	15	CAME CLEAR
10	REFERRED OUT	16	CUSTOMER
12	NON-TELCO PROVIDED	17	EXCLUDE
13	INTER-EXCHANGE CARRIER/INDEPENDENT COMPANY	18	REFERRED OUT
		19	CPE
	<b>PACIFIC BELL CAUSE CODES</b>		
1	TELCO EMPLOYEE		
2	NON-EMPLOYEE		
3	PLANT OR EQUIPMENT		
4	WEATHER		
5	OTHER		
6	UNKNOWN		