

R.97-10-016, I.97-10-017 ALJ/JAR/jva

APPENDIX A

**PACIFIC BELL TELEPHONE COMPANY d/b/a AT&T CALIFORNIA**

## AT&T California Performance Incentive Plan

### 1. GENERAL PRINCIPLES

- 1.1. **Plan Elements.** The Performance Incentive Plan (PIP) consists of the following elements: (1) a collection of measures that assess service delivery; (2) a set of testing rules for deciding whether service delivery is in parity (where there are retail analogues) or in compliance (where there are benchmarks); (3) a mechanism for calculating incentive payments for those sub-measures found to be out of parity or out of compliance; (4) a specification of the payment amounts to be paid for out-of-parity or non-compliant performance; (5) a provision for Absolute and Procedural caps on payments; and (6) a provision for Root Cause analysis that can excuse service delivery failures that were outside the control of AT&T California.
- 1.2. **Performance Measures.** The performance measures used in the PIP are specified in the Performance Measurements Plan. Payments apply to those non-diagnostic sub-measures designated in Section 4 herein that have data for a given month when AT&T California delivers out-of-parity or non-compliant performance.
- 1.3. **Testing Rules.** The rules for assessing whether specific sub-measures are out-of-parity or non-compliant are applied from Exhibit 3 attached to this plan.
- 1.4. **Incentive Payment Calculations.** Incentive payment calculations are applied to those performance results for each month that are deemed to be out-of-parity or non-compliant.
- 1.5. **Incentive Payment Amounts.** The incentive payment amounts are dependent on the importance of the measure being assessed (measures are classified as being *primary* or *secondary*) and on the number of failures during the recent history of the evaluations of the measure. The details of these amounts are specified in Section 3.
- 1.6. **Absolute and Procedural Caps.** In any month, the following caps on payments apply: (1) a procedural cap of \$15,000,000 for AT&T California for all CLECs; and (2) an absolute monthly cap of 1/12 of 36% of annual net revenue from local exchange service for AT&T California. Using the same method that was used to determine these amounts, these amounts will be updated to reflect new ARMIS data published each year.
- 1.7. **Root Cause Analysis.** A procedure for Root Cause Analysis and subsequent action is included (see Section 5).
- 1.8. **Modifications.** The Commission shall retain authority to modify any element of this plan.

### 2. THE ASSESSMENT OF PARITY AND COMPLIANCE

- 2.1. The specific mechanism for assessing parity and compliance depends on the classification of the sub-measure being assessed. Sub-measures can be classified according to three dimensions: (1) the *type* of the comparison: parity where there is a retail analogue or benchmarks where no retail analogues are

available or feasible, (2) the *basis* for the measurement: averages, percentages (proportions), rates, or indices; and (3) the *direction* of good service: either high values or low values. The table below gives a summary of the tests that are applied to sub-measures according to their first two dimensions. These tests are described in more detail below.

- 2.2. **Statistical Criterion for Deciding Parity.** A statistical test is applied to the data on a sub-measure for both the CLEC and the ILEC that yields a probability of the data given the null hypothesis of parity. If the probability is less than 10% (0.10 critical alpha), the parity test for the sub-measure fails. Otherwise the sub-measure passes.
- 2.3. **Criteria for Deciding Compliance.** Data for the CLEC will be compared to the benchmark for the sub-measure. If the data are in the acceptable range (at or below the benchmark when low values are good service and at or above the benchmark when high values are good service), the sub-measure passes; otherwise it fails. If the Small Sample Adjustment Procedure is applicable, it is used in place of a direct comparison with the benchmark.
- 2.4. Parity and compliance tests shall be applied as specified Exhibit 3. The test applications are summarized in the following table:

<b>Testing Procedures Applied to Sub-measures According to their Basis and Type</b>		
<b>Basis</b>	<b>Parity</b>	<b>Benchmarks</b>
Averages	Modified <i>t</i> -test applied to all sub-measures.	Benchmark is used as an absolute comparison standard.
Percentage	Fisher's exact test applied to all sub-measures.	Small Sample Adjustment Procedure is applied where applicable; otherwise the benchmark is used as an absolute standard.
Rates	Binomial test applied to all sub-measures.	Small Sample Adjustment Procedure is applied where applicable; otherwise the benchmark is used as an absolute standard.
Index	(There are no sub-measures in this category.)	The performance is compared to an absolute standard.

### 3. CALCULATION OF INCENTIVE VALUES

- 3.1. The assessment of incentive payments for non-compliance is performed each month in two ways: (1) at the level of the CLEC on those sub-measures for which reportable data can be attributed to the CLEC (all measures except Measures 24, 38 and 42), and (2) on an industry aggregate basis for the sub-measures of Measures 24, 38 and 42. The first group of sub-measures (those

tested at the level of the CLEC) are called *Category A* sub-measures. The second group is called *Category B*.

3.2. **Category A:** The Category A measures are divided into two classes: *primary* (Measures 11, 17, 19, 20, and 21) and *secondary* (all remaining measures).<sup>1</sup> For primary measures a payment of \$1,000 will be assessed for each failure. For secondary measures a payment of \$500 will be assessed for each failure.

3.3. **Category B:** A payment of \$5,000 will be assessed for each failure in Category B.

3.4. **Chronic Failures**

3.4.1. **Definition:** A sub-measure attains the status of a *Chronic Failure* whenever three consecutive tests fail for the sub-measure. Parity and compliance tests will be considered consecutive if there are no more than two months of missing data (and, therefore, no tests) between failures. Three or more months with missing data will reset the count of prior failures to zero.

3.4.2. **Exiting Chronic Failure Status:** Once a sub-measure attains chronic failure status, all subsequent failures will be deemed chronic until two consecutive passes are obtained or three months intervene with no parity or compliance tests.

3.4.3. **Category A.**

3.4.3.1. **Primary sub-measures:** For primary sub-measures, an *additional* assessment will be applied each time a sub-measure has a chronic failure according to the following scheme:

Number of failures at chronic level	Additional assessment
First occurrence	\$3,000
Second occurrence	\$3,000
Third occurrence	\$3,500
Fourth occurrence	\$4,000
Fifth occurrence	\$4,500
Six and subsequent occurrences	\$5,000

3.4.3.2. **Secondary sub-measures:** For secondary sub-measures, an *additional* \$1,500 assessment will be applied each time a sub-measure has a chronic failure.

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<sup>1</sup> AT&T California agrees that identification of performance measures as “primary” and “secondary” will not be used against CLECs in future negotiations or contested case proceedings regarding further changes to the JPSA.

3.4.4. **Category B:** An *additional* \$25,000 assessment will be applied each time a sub-measure has a chronic failure.

3.5. Category A payments will be made to the CLEC whose sub-measure failed the parity or compliance test. Category B payments will be distributed evenly to all CLECs meeting the eligibility requirements set forth in Section 6.1.3.

3.6. The total payment to a CLEC in any month, adding together all Category A and B sub-measures, shall not exceed the total charges to the CLEC for OSS and local exchange services for that month.

#### **4. SPECIFIC MEASURES TO WHICH INCENTIVE PAYMENTS APPLY**

4.1. Payments for AT&T California's failure to meet specified performance measures will only apply to the Specified Measures listed below:

##### **4.2. Pre-Ordering**

4.2.1. Measure 1- Response Time (to Pre-Order Queries)

##### **4.3. Ordering**

4.3.1. Measure 2 - FOC Notice Interval

##### **4.4. Provisioning**

4.4.1. Measure 5 - Percentage of Orders Jeopardized

4.4.2. Measure 6 - Jeopardy Notices Returned by Required Interval

4.4.3. Measure 7 - Average Completed Interval

4.4.4. Measure 9 - Coordinated Customer Conversion

4.4.5. Measure 9A - Frame Due Time Conversions as a Percentage On-Time

4.4.6. Measure 11 - Percent of Due Dates Missed

4.4.7. Measure 14 – Held Order Interval

4.4.8. Measure 15 - Provisioning Trouble Reports

4.4.9. Measure 16 - Percent Troubles in 30 Days for New Orders (Specials)/

4.4.10. Measure 17 - Percent Troubles in 10 Days for New Orders (Non-Specials)

4.4.11. Measure 18 (Includes former Measure 18A) - Average Completion Notice Interval/ Mechanized Line Loss Notifications

##### **4.5. Maintenance**

4.5.1. Measure 19 - Customer Trouble Report Rate

4.5.2. Measure 20 – Percentage of Customer Trouble not Resolved w/in Est. Time

4.5.3. Measure 21 - Average Time to Restore

4.5.4. Measure 23 - Frequency of Repeat Troubles in 30 Day Period

#### **4.6. Network Performance**

4.6.1. Measure 24 - Percent Blocking on Common Trunks

#### **4.7. Billing**

4.7.1. Measure 34 - Bill Accuracy

#### **4.8. Databases**

4.8.1. Measure 38 – Percent Database Accuracy

4.8.2. Measure 39 – E911/911 MS Database Update

#### **4.9. Collocation**

4.9.1. Measure 41 - Time to Provide a Collocation Arrangement

#### **4.10. Interfaces**

4.10.1. Measure 42 - Percentage of Time Interface is Available

### **5. ROOT CAUSE ANALYSIS**

5.1. AT&T California may use Root Cause Analysis to demonstrate that an apparent out-of-parity condition was attributable to an atypical event beyond the reasonable control of AT&T California. The list of “excludable events” that could be considered as part of AT&T California’s Root Cause Analysis is reflected in Exhibit 1 hereto. In addition, the following provisions apply to Root Cause Analysis:

5.2. Where performance data suggests an out-of-parity condition exists, AT&T California may use Root Cause Analysis to demonstrate there was no discriminatory treatment (the situations in which AT&T California may invoke Root Cause Analysis – referred to as “excludable events” – are reflected in Exhibit 1). When Root Cause Analysis is invoked, AT&T California will have the burden of proving that but for the occurrence and nature of an “exclusion event” AT&T California would have succeeded on the measure in question.

5.3. If a dispute arises over whether AT&T California’s Root Cause Analysis is sufficient to excuse an apparent out-of-parity condition, the Parties will first attempt to resolve the disagreement through an informal discussion. AT&T California will prepare a Root Cause Analysis report and provide it to any affected CLEC. If the Parties agree that the Root Cause Analysis report is sufficient to excuse AT&T California, the Parties will sign the report and AT&T California will be relieved from any associated payments. If CLEC does not accept AT&T California’s Root Cause Analysis, the Parties agree to seek resolution by the Commission.

5.4. Pending the resolution of any dispute, AT&T California shall place the payments in an interest-bearing escrow account. The funds in question will be transferred to the CLEC when and if it is determined through the EDR process that AT&T’s Root Cause Analysis is not sufficient to excuse AT&T California.

5.5. Exhibit 1 identifies the categories of events that may form the basis of Root Cause Analysis and provides examples of the types of events within each category. The list is only illustrative; it is not definitive.

- 5.6. Force majeure events will be treated as excludable events.
- 5.7. AT&T California will provide to the CLEC, at the time of submitting a Root Cause Analysis report to the CLEC, all non-confidential documents that were used as part of AT&T California's Root Cause Analysis.
- 5.8. Inadequate forecasts shall also be treated as an excludable event. AT&T California may demonstrate as part of its Root Cause Analysis that but for the inadequate forecast provided by CLEC, AT&T California would have complied with the performance measure at issue. Exhibit 2 hereto provides the terms of the forecasting exclusion.
- 5.9. Delays or other problems resulting from actions of a Service Bureau Provider acting on the CLEC's behalf for connection to AT&T California's OSS, including Service Bureau Provider provided processes, services, systems or connectivity, shall be treated as excludable events.

## 6. PERFORMANCE INCENTIVE PAYMENTS

### 6.1. Payments/Credits

- 6.1.1. **Schedule.** AT&T California will provide billing credits for the incentive amounts generated by the plan, on or before the 30th day following the due date of the performance report for the month in which the obligation arose.
- 6.1.2. **Absolute and Procedural Caps.** In any given month, the payment to CLECs shall not exceed the following amounts. When the limit is reached, payments shall be prorated among the CLECs in the amounts proportional to what they would otherwise be entitled to collect absent a cap: 1) a procedural cap of \$15,000,000 for all CLECs; 2) an absolute cap of 1/12 of 36% of annual net revenue from local exchange service. If a procedural cap is reached in a month, the Commission should conduct a hearing to determine whether it would be reasonable under the circumstances, and in light of the evidence, to require AT&T to pay any amounts in excess of the procedural caps. If the procedural cap is met, the amounts owed up to the cap will be prorated among the CLECs to whom incentive payments are owed and will be paid regardless of the outcome of the hearing.
- 6.1.3. **Eligibility.** CLECs are not eligible for incentive payments until 10 days after receipt by AT&T California of an executed (by CLEC) Interconnection Agreement, or an amendment to an existing Interconnection Agreement ("Receipt Date"), the terms of which have been agreed to by both CLEC and AT&T California, expressly referencing this provision. Incentive payments will be made, effective with the first full month of performance results after the Receipt Date, and will be payable from and after the date that the Interconnection Agreement or amendment is approved by the Commission. AT&T California will not unnecessarily delay filing of the Interconnection Agreement or amendment once both CLEC and AT&T California have signed. In addition, only CLECs who have submitted orders for services

to AT&T during the month under report shall be eligible for incentive payments (reportable data on Measure 2).

## EXHIBIT 1

### FACTUAL ANALYSIS

The following incidences are reasonable exceptions that can be used to mitigate a statistical finding of out-of-parity (or benchmark miss) provided that the incident impacted the CLEC to such a degree as to make otherwise compliant performance non-compliant:

- I. Significant activity by a third party external to AT&T California\* (not controllable by AT&T California)
  - A. Damage to facilities:
    - major cable cuts
    - gas/water main break
    - manhole/structure fire
    - central office/facilities fires not caused or under control of AT&T California
    - other damage to facilities cause by a third party
  - B. Failure of third party systems
    - LNP-service degradation/out-of-service of NPAC
  - C. Threats to personal safety
    - Bomb threat causing evacuation of a AT&T California building (service center, central office, etc.)
    - Other threats to personal safety which impact the execution of AT&T California's activities on behalf of the CLEC
- II. Environmental events not considered force majeure
  - A. Environmental events causing service center evacuation/building condemnation
    - building fire
    - building damage cause by external force
    - hazardous condition (gas or chemical leaks, presence of hazardous material)
- III. Failure of CLEC process/system or those of a third party vendor, including a Service Bureau Provider, acting on behalf of CLEC
  - A. CLEC ordering system with degraded service or out-of-service for an extended period of time, resulting in:

- a backlog of requests sent all at once
  - the CLEC changing from electronic transmission to manual (fax) for duration of the outage
- B. Chronic, severely impaired testing capabilities on part of CLECs
- C. Chronic failure on the part of the CLEC to provision their own network in a timely manner in establishing new or migrated end user service which also involves activities on the part of AT&T California

\*Note: AT&T California's sub-contractors or other AT&T California agents are not considered an external third party.

## EXHIBIT 2 FORECASTING PLAN

CLECs shall submit forecasts to AT&T California for the following categories of products/services:

- Collocation
- Interconnection Trunks
- Service Requests by:
  - Resale
    - Non- special (POTS and POTS-like services)
    - Specials
  - UNE
    - Loops
      - Non- special (POTS and POTS-like services)
      - Specials
    - Unbundled Transport
- Forecasts shall cover a six-month period (two quarters) and shall be submitted one quarter in advance of the commencement of the six-month period.
  - Forecasts may be updated quarterly, or sooner, if the CLEC determines that conditions warrant an update.
    - For example, a forecast of 3<sup>rd</sup> and 4<sup>th</sup> Quarter 2008 must be submitted by March 31, 2008. However, the 4<sup>th</sup> Quarter forecast may be updated as part of the quarterly submission on or before June 30, 2008 (which covers 4<sup>th</sup> Quarter 2008 and 1<sup>st</sup> Quarter 2009).
  - For Service Request forecasts, forecasts shall be submitted on a statewide basis. For Interconnection forecasts, forecasts shall be submitted by wire center. Tandem interconnection shall be by tandem with identification of estimated traffic to and from subtending end offices.
  - For collocation, forecasts shall be submitted by wire center.
  - Forecasts shall be disaggregated on a monthly level.
- If AT&T California misses a mapped sub-measure (see Exhibit 2) for which a CLEC's actual volumes are 20% greater than the forecasted volume, on a monthly basis, a root cause analysis may be triggered.

- If AT&T California misses a mapped sub-measure (see Exhibit 2) for which the CLEC has not provided any forecast, a root cause analysis may be triggered.
- AT&T California may address the effect on AT&T California of an inaccurate forecast in its limited root cause analysis of a missed mapped sub-measure. In this review, AT&T must document how, but for the variance in the CLEC's forecast and actual volumes for one of the categories above (i.e., service requests, interconnection trunks or collocation), AT&T California would not have missed the mapped sub-measure. For purposes of the limited root cause analysis, the performance measures potentially affected by forecasting are set forth, or mapped, on the attached chart.
- Forecasts may contain commercially sensitive information and must be kept confidential. AT&T shall protect forecasts against disclosure to any unauthorized persons, including personnel responsible for retail sales or marketing. In addition, AT&T shall limit the disclosure of CLEC forecasts to personnel with a need to know for the purpose of ensuring AT&T's compliance with OSS performance measures and their applicable incentive plan, including compliance with the underlying wholesale obligations.

**EXHIBIT 2****FORECAST MAPPING TO PERFORMANCE MEASURES**

	TYPE OF FORECAST		
	Service Order	Collocation	Interconnection
<b><i>Pre-Ordering</i></b>			
• 1 - Response Time	X		
<b><i>Ordering</i></b>			
• 2 - FOC Notice Interval	X		X
<b><i>Provisioning</i></b>			
• 5 - Percent of Orders Jeopardized	X		X
• 6 - Jeopardy Notices returned by Required Interval	X		X
• 7 – Average Completed Interval	X		X
• 9 - Coordinated Customer Conversions	X		
• 9A - Frame Due Time (FDT) Conversions	X		
• 11 - Percent of Due Dates Missed	X		X
• 14 – Held Order Interval	X		X
• 15 - Provisioning Trouble Reports	X		
• 16 - Percent Troubles in 30 Days for Special Services Orders	X		X
• 17 - Percent Troubles in 10 Days for Non-Special Orders	X		
• 18 - Comp. Notice/Line Loss Notice Interval	X		
<b><i>Maintenance</i></b>			
• 19 - Customer Trouble Report Rate			
• 20 - % of Cust. Trouble Not Resolved w/in Est. Time			
• 21 – Average Time to Restore			

	TYPE OF FORECAST		
	Service Order	Collocation	Interconnection
<ul style="list-style-type: none"> <li>23- Frequency of Repeat Troubles in 30 day period</li> </ul>			
<b>Network Performance</b>			
<ul style="list-style-type: none"> <li>24 - Percent Blocking on Common Trunks</li> </ul>			
<b>Billing</b>			
<ul style="list-style-type: none"> <li>34 - Bill Accuracy</li> </ul>			
<b>Databases</b>			
<ul style="list-style-type: none"> <li>38 – Percent Database Accuracy</li> </ul>			
<ul style="list-style-type: none"> <li>39 – E911/911 MS Database Update</li> </ul>	X		
<b>Collocation</b>			
<ul style="list-style-type: none"> <li>41 - Time to Provide a Collocation Arrangement</li> </ul>		X	
<b>Interfaces</b>			
<ul style="list-style-type: none"> <li>42 - Percent of Time Interface is Available</li> </ul>			

### EXHIBIT 3

## PARITY AND COMPLIANCE TESTING

### I. Parity measures

All statistical tests will be one-tailed tests.

#### 1. Average-based Parity Measures

The Modified *t*-test will be used for all average-based parity measures as specified in:

**Brownie, C., Boos, D., & Hughes-Oliver, J. (1990). Modifying the t and ANOVA F tests when treatment is expected to increase variability relative to controls. *Biometrics*, 46, 259-266.**

The Modified *t*-test for the difference in means (averages) between the ILEC and the CLEC populations is:

$$t = \frac{M_I - M_C}{S_I \sqrt{\frac{1}{N_C} + \frac{1}{N_I}}}$$

Where:

$M_C$  = the CLEC mean result

$M_I$  = the ILEC mean result

$S_I$  = the standard deviation of the results for the ILEC

$N_C$  = the CLEC sample size

$N_I$  = the ILEC sample size

For measures of time intervals, the raw score distribution will be normalized by taking the natural log of each score after a constant of 0.4 of the smallest unit of measurement is added to each score. For example, if the smallest unit of measurement is an integer, then the added constant would be 0.4:

$$x_{\text{tran}} = \ln(x + 0.4)$$

Similarly, if the smallest unit of measurement is 0.01, then the added constant would be 0.004:

$$x_{\text{tran}} = \ln(x + 0.004)$$

Results that are not measures of time intervals (e.g., Measure 34) will not be transformed.

The Modified *t*-test calculation for average parity measures will be structured so that a negative sign indicates “worst” performance. Specifically, when a lower value represents better performance, such as time to provision a service, the CLEC mean will

be subtracted from the ILEC mean. Different performance measures may require reversing the means in the equation to have a negative sign indicate poorer performance.

The *t*-statistic will be converted to a p-value (probability value) using a *t*-distribution table or calculation. Degrees of freedom (*df*) will be based only on the ILEC sample size consistent with Brownie, et al. If the obtained p-value is less than the critical alpha (.1), then the result will be deemed not in parity.

## 2. Percentage-based Parity Measures

The Fisher's Exact Test will be used for all percentage or proportion parity measures as specified in:

**Sheskin, D. (1997). *Handbook of parametric and nonparametric statistical procedures*. Boca Raton: CRC Press, pp. 221-225.**

If the obtained p-value is less than the critical value of .1, then the result will be deemed out-of-parity.

## 3. Rate-based Parity Measures

The Binomial Exact Test will be used for all rate parity measures as specified in

**Lehmann, E. L. (1986). *Testing statistical hypotheses*. New York: Wiley, p 81.**

## II. Benchmark Measures: Small Sample Adjustment Procedure

The Small Sample Adjustment Procedure can only be used for percentage-based or rate-based sub-measures for which the benchmark may be expressed as a proportion. The Procedure defines the number of "misses" that are permitted for various sample sizes in lieu of an absolute comparison with the benchmark. The meaning of a "miss" depends on whether the benchmark is near 1.0 or near 0. Let **X** be the observed numerator in the CLEC data, let **N** be the CLEC's sample size, and let **B** be the benchmark. Then the number of "misses," **M** is given by

$$\mathbf{M} = \mathbf{N} - \mathbf{X} \text{ if } \mathbf{B} > .5 \text{ and}$$

$$\mathbf{M} = \mathbf{X} \text{ if } \mathbf{B} \leq .5.$$

The following procedure calculates the permitted values for **M** given **N** assuming **B** > .5. The essential idea forming the basis for the procedure is that for each benchmark there is a performance level **P** (**P** > **B**) at which the ILEC should be providing service. The value of **P** is chosen so that for a fixed reference sample size, **R** (which will also depend on the benchmark), the probability of observing results for the CLEC that fail the benchmark by chance is .1 (consistent with the critical value for parity tests. The values of **P**, **R**, and the permitted number of misses are given in the following steps.

1. Define **L**, the maximum sample size for which small sample adjustments are permitted, by the formula

$$L = \frac{5}{1 - B}$$

For sample sizes larger than **L**, comparisons with the benchmark will be absolute without any further adjustments.

2. The reference sample size is given by

$$R = 3L$$

3. The implied performance level, **P**, is that value which solves the equation

$$b = \text{ceiling}(B \times R) - 1$$

$$\sum_{k=0}^b \binom{R}{k} P^k (1-P)^{R-k} = .01$$

where *ceiling(x)* is the largest integer at least equal to x.

4. The permitted number of misses, **M**, for the sample size **N**, is the largest value of k that satisfies the following:

$$\sum_{t=0}^k \binom{N}{N-t} P^t (1-P)^{N-t} \geq .1$$

When the benchmark is less than or equal to .5, the above procedure works by replacing **B** with **1 - B**.

To illustrate how the procedure works, let **B** = .9. Then **L** becomes 50 and **R** = 150. Step 3 turns a reference sample size of 150 into an implied performance level **P** = .944. Step 4 gives the result that 0 misses are permitted for a sample size of 1, 1 miss is permitted for samples sizes of 2 to 9, 2 misses for 10 to 20, 3 misses for 21 to 31, 4 misses for 32 to 44, and 5 misses for 45 to 50. Above sample sizes of 50, the permitted number of misses is **B x N**.

**(END OF APPENDIX A)**

APPENDIX B

~~Appendix J:~~ **AT&T California Performance Incentives Plan**

**1. 1. GENERAL PRINCIPLES**

1.1.1. Plan Elements. The Performance Incentive Plan (hereafter the ~~Incentive Plan~~ PIP) consists of the following elements: (1) a collection of measures that assess service delivery; (2) a set of testing rules for deciding whether service delivery is in parity (where there are retail analogues) or in compliance (where there are benchmarks); (3) a mechanism for calculating incentive payments for those sub-measures found to be out of parity or out of compliance; (4) a specification of the payment amounts to be paid for out-of-parity or non-compliant performance; (5) a provision for Absolute and Procedural caps on payments; and (6) a provision for Root Cause analysis that can excuse service delivery failures that were outside the control of the ~~Pacific Bell or Verizon~~ AT&T California.

1.2.2. Performance Measures. The performance measures used in the ~~Incentive Plan~~ PIP are specified in the Performance Measurements ~~Joint Partial Settlement Agreement (JPSA) as amended by D.01-05-087~~ Plan. Payments apply to those non-diagnostic sub-measures designated in Section ~~554~~ herein that have data for a given month when ~~Pacific Bell or Verizon~~ AT&T California delivers out-of-parity or non-compliant performance.

1.3.3. Testing Rules. The rules for assessing whether specific sub-measures are out-of-parity or non-compliant are applied from Exhibit 3 attached to this plan.

1.4.4. Incentive Payment Calculations. Incentive payment calculations are applied to those performance results for each month that are deemed to be out-of-parity or non-compliant.

1.5.5. Incentive Payment Amounts. ~~The size of the incentive payments depends on performance failure pervasiveness (that is, the payment amounts are dependent on the importance of the measure being assessed (measures are classified as being *primary* or *secondary*) and on the number of performance failures during the recent history of the evaluations of the measure. The details of these amounts are affecting a CLEC), and whether performance failures are repeated. The incentive amounts increase as the number of performance failures increase or as they are repeated specified in Section 3.~~

1.6.6. Absolute and Procedural Caps. In any month, the following caps on payments apply: (1) a procedural cap of \$15,000,000 for ~~Pacific Bell~~ AT&T California for all CLECs; and (2) a procedural cap of \$4,500,000 for ~~Verizon~~ for all CLECs, and (3) an absolute monthly cap of 1/12 of 36% of annual net revenue from local exchange service for both ~~Pacific Bell and~~

~~Verizon-AT&T California.~~ Using the same methodology that was used to determine these amounts, these amounts will be updated to reflect new ARMIS data published each year.

1.71.7. Root Cause Analysis. A procedure for Root Cause Analysis and subsequent action is included (see Section 5).

1.81.8. Modifications. The Commission shall retain authority to modify any element of this plan.

## 2. 2. THE ASSESSMENT OF PARITY AND COMPLIANCE

2.12.1. The specific mechanism for assessing parity and compliance depends on the classification of the sub-measure being assessed. Sub-measures can be classified according to ~~four~~three dimensions: (1) the *type* of the comparison: parity where there is a retail analogue or benchmarks where no retail analogues are available or feasible, (2) the *basis* for the measurement: averages, percentages (proportions), rates, or indices, or counts; and (3) the *direction* of good service: either high values or low values; and (4) ~~the applicability of aggregation rules.~~ The table below gives a summary of the tests that are applied to sub-measures according to their first two dimensions. These tests are described in more detail below.

2.2.1.2.2. Statistical Criteria~~Criteria~~Criterion for Deciding Parity. A statistical test is applied to the data on a sub-measure for both the CLEC and the ILEC that yields a probability of the data given the null hypothesis of parity. ~~Except where different critical alpha levels are applied conditionally, a sub-measure will be deemed out of parity (i.e., the sub-measure fails) if the probability is less than 10% (0.10 critical alpha)), the parity test for the sub-measure fails.~~ Otherwise the sub-measure passes.

2.2.2. ~~Under the following conditions,~~ Criteria for Deciding Compliance. Data for the CLEC will be compared to the benchmark for the sub-measure will be deemed out of parity if the probability is less than 20% (0.20 critical alpha level): (1) When sample sizes. If the data are in the acceptable range (at or below the benchmark when low values are less than 30 for single month individual CLEC tests where the aggregate good service and at or above the benchmark when high values are good service), the sub-measure test indicates non-parity, or (2) for all tests for repeated failures.

2.2.3. ~~Under the following conditions,~~ the sub-measure will be deemed out of parity if the probability passes; otherwise it fails. If the Small Sample Adjustment Procedure is applicable, it is less than 5% (0.05 critical alpha level): (1) When sample sizes are 100 or greater for single-month individual CLEC tests where the aggregate sub-measure test

~~indicates parity, or (2) when single month sample sizes are 500 or greater.~~

~~2.2.4. A step by step application of the above critical alpha applications is provided in the Decision Model attached as Exhibit 3.~~

~~2.3. **Benchmarks.** Small sample adjustment tables shall be used for both individual CLEC tests and industry aggregate tests.~~

- 2.3. ~~Statistical tests shall be applied as specified in the Interim Opinion, D.01-01-037, unless otherwise specified herein, place of a direct comparison with the benchmark.~~
- 2.4. Parity and compliance tests shall be applied as specified Exhibit 3. The test applications are summarized in the following table:

<b>Testing Procedures Applied to Sub-measures According to their Basis and Type</b>		
<b>Basis</b>	<b>Parity</b>	<b>Benchmarks</b>
Averages	<del>Modified <i>t</i>-test applied to the logs of the data except for Measures 34 and 44 for which the test is applied to the raw data: <u>all sub-measures.</u></del>	Benchmark is used as an absolute comparison standard.
Percentage	Fisher's exact test applied to all sub-measures.	Small Sample Adjustment <u>Procedure</u> is applied where applicable; otherwise the benchmark is used as an absolute standard.
Rates	Binomial test applied to all sub-measures.	Small Sample Adjustment <u>Procedure</u> is applied where applicable; otherwise the benchmark is used as an absolute standard.
Index	<del>The performance difference is compared to an absolute standard. (There are no <u>sub-measures in this category.</u>)</del>	The performance is compared to an absolute standard.
<b>Count</b>	<b>No sub-measures of this kind</b>	<del>The CLEC numerator is compared to the benchmark as an absolute standard. <b>Applicable to LNP sub-measures in Measures 20 and 23.</b></del>

### ~~3. CALCULATION OF INCENTIVE VALUES~~

~~The assessment of incentive payments for non-compliance is performed in three ways: (1) on a CLEC-by-CLEC basis, each month, by examining all the sub-measures “touched” by an individual CLEC (hereafter the *portfolio of touched sub-measures*) that do not fall into the specialized categories discussed below, (2) on an industry aggregate basis, each month, for those sub-measures covering processes that only involve computer processing and are therefore designed to automatically provide parity (covered by Measures 1, 24, 38, 42, and 44, and the *fully-electronic* sub-measures of 2, 3, and 18), and (3) on an industry aggregate basis, each month, for those parity measures that have chronic conditional failures. The calculation and assessment of incentive amounts are different for each of these four categories of sub-measures. Categories A, and B are termed Tier I categories. Tier I payments are made to the CLECs. Category C is termed Tier II, and payments are made to the ratepayers.<sup>4</sup>~~

~~A base amount (BA) of \$38 will be used as a starting point for calculating Pacific Bell’s payment amounts.~~

~~A base amount (BA) of \$23 will be used as a starting point for calculating Verizon’s payment amounts.~~

~~Actual payment amounts will be calculated using an adjusted base amount. The base amount (BA) will be adjusted according to the total number of observations (total number of sub-measure performance results for all CLECs) each month. The adjusted base amount (ABA) will be determined by the following formula:  $ABA = BA \times (\text{total number of observations listed for each ILEC in Appendix G} / \text{current total number of observations for each ILEC})$ , rounded to the closest dollar. For example, if in a future month Pacific had a 5000 observation total, then the adjusted base amount would be  $\$38 \times (4243/5000) = \$32$ .~~

~~Tier I incentive payments will be limited to an amount equal to the total amount that each CLEC pays for OSS and wholesale local exchange services. Any payment surplus amounts generated by Tier I payment mechanisms shall be added to Tier II payment amounts for distribution.~~

~~Category A. Includes all sub-measures for all incentive payment measures (specified in Section 5), except those included in Category B. In this~~

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<sup>4</sup>In prior drafts of this plan, Categories A, B, and C were designated Categories 1, 3, and 4, respectively. The category designated Category 2 in prior drafts is not used in this plan.

~~category there is a portfolio of touched sub-measures for each CLEC. The following description applies to this portfolio for a single CLEC.~~

~~Ordinary Failures. To calculate payments for *Ordinary Failures*, the following steps are required for each CLEC.~~

~~Calculate the size of the portfolio of touched sub-measures for each CLEC. Those sub-measures that fall into Category B are excluded in calculating the size of the CLEC's portfolio of touched sub-measures.~~

~~Determine the CLEC's portfolio failure rate in percentage points by calculating its percentage of touched sub-measures that failed the statistical tests or benchmarks.~~

~~The amount paid to the CLEC for each failure is then determined by multiplying its *Ordinary Failure* rate percentage points by the adjusted base amount. (E.g., with a \$40 adjusted base amount and a 12% *Ordinary Failure* rate:  $12 \times ABA = \$480$ .)~~

~~Chronic Failures. Sub-measure failures that occur for three or more consecutive months are called *Chronic Failures*. The procedure for *Chronic Failures* is similar to that for Ordinary failures.~~

~~Determine the number of *Chronic Failures* for each CLEC.~~

~~The amount paid to the CLEC for each *Chronic Failure* is then determined by multiplying the *Ordinary Failure* payment amount by five (5). (E.g., with a \$40 adjusted base amount and a 12% *Ordinary Failure* rate,  $12 \times \$40 \times 5 = \$2400$ ).~~

~~To identify *Chronic Failures* for the first two months of implementation, performance results from the CLEC's current month and two previous months will be used.~~

~~Except where there are three consecutive months of inactivity by a CLEC, the months immediately preceding and following these months without individual OSS sub-measure activity by that CLEC, will be considered consecutive months for the purposes of identifying *Chronic Failures*. Exception: Measures and sub-measures identified as having no minimum sample size will have no limit to the number of intervening months of inactivity that will be ingored for the purposes of determining *Chronic Failures*. See Exhibit 4.~~

~~Extended Failures. Sub-measure failures for five or six out of six consecutive months are called *Extended Failures*.~~

~~To identify *Extended Failures* for the first five months of implementation, performance results from the current month and the five previous months will be used.~~

~~The amount paid to the CLEC for each *Extended Failure* is determined by multiplying the *Ordinary Failure* payment amount by ten (10). (E.g., with a \$40 adjusted base amount and a 12% *Ordinary Failure* rate,  $12 \times \$40 \times 10 = \$4800$ ).~~

~~Except where there are three consecutive months of inactivity by a CLEC, the months immediately preceding and following these months without individual OSS sub-measure activity by that CLEC, will be considered consecutive months for the purposes of identifying *Extended Failures*. Exception: Measures and sub-measures identified as having no minimum sample size will have no limit to the number of intervening months of inactivity that will be ingored for the purposes of determining *Extended Failures*. See Exhibit 4.~~

~~Category B (Industry Aggregates). All those sub-measures that fall under treatment as an Industry Aggregate are considered as a single portfolio. The procedure for determining incentive payments for this portfolio is as follows.~~

~~Calculate the size of the portfolio for the Industry Aggregates for:~~

~~Performance Measures 1, 16, 24, 38, 42, and 44 (all sub-measures except for manual processes in Measure 1).~~

~~Performance Measures 2 and 3, all sub-measures where orders are electronically received *and* electronically handled.~~

~~Performance Measure 18, Sub-measures 1800101 (LEX/EDI LASR), 180201 (LEX/EDI CLEO), 1800502 (LEX/EDI LASR – not reported by DSS), and 1800503 (LEX/EDI CLEO – not reported by DSS), only. Sub-measures 1800502 and 1800503 track additional conditions that must be met in order to pass 1800101 and 1800201, respectively, and are not assessed penalties independently.~~

~~Determine the number of failures.~~

~~The incentive amount is then determined by multiplying the failure rate percentage points by the adjusted base amount and then by 10 for the *Ordinary Failures*, 50 for *Chronic Failures* and 100 for *Extended Failures*.~~

~~The sum of all payments for Industry Aggregate sub-measures is divided equally among all CLECs eligible for incentive payments.~~

~~Category C (Tier II). Includes all sub-measures for all incentive payment measures (specified in Section 5). Each sub-measure is aggregated on an industry basis and the set of aggregated sub-measures is considered as a single portfolio. The aggregate sub-measures are tested using the same procedures as for individual CLEC tests. To create industry-aggregate performance results for the count-based sub-measures in Performance~~

~~Measures 20 and 23, the average count over all CLECs shall be compared to the benchmarks.~~

~~Calculate the size of the portfolio for the Tier II Industry Aggregates.~~

~~Determine the number of Category C single-month failures.~~

~~Determine the failure rate percentage points. (E.g., 0.15 = 15 percent = 15 percentage points.)~~

~~Determine the number of sub-measures that have failed the current month and the previous two months.~~

~~The payment amount for each failed sub-measure is then determined by multiplying the Industry Aggregate single-month failure rate percentage points by the adjusted base amount (e.g., with a \$40 base amount and a 15 percent failure rate:  $15 \times ABA = \$600$ ), and then by 25.~~

~~To identify Tier II failures for the first two months of implementation, performance results from the current month and the two previous months will be used.~~

~~Except where there are three consecutive months of inactivity, the months immediately preceding and following these months without CLEC aggregate OSS sub-measure activity will be considered consecutive months for the purposes of identifying Tier II failures. Exception: Measures and sub-measures identified as having no minimum sample size will have no limit to the number of intervening months of inactivity that will be ingored for the purposes of determining *Chronic Failures*. See Exhibit 4.~~

~~Payments calculated for this category are paid to the ratepayers as follows:~~

~~Pacific and Verizon shall deposit Tier II incentive payments monthly into an interest-bearing memorandum account with a monthly-compounded interest rate equal to the tariffed rate the respective ILEC's charge their customers for late payment.~~

~~Each ILEC shall be responsible for maintaining these performance incentive accounts, which will be subject to audit by Commission staff.~~

~~When the annual Price Cap filings are made and the surcharge and surcredit amounts are calculated, the most recent twelve-month's incentive payments (August of the previous year through July of the current year) shall be added to the surcredit amounts included in Pacific's Rule 33 (Schedule Cal. P.U.C. No. A2.1.33) and Verizon's Tariff 38 (Schedule Cal. P.U.C. No. 38) disbursement mechanisms.~~

~~Interest shall accrue beginning with the first monthly incentive payment due date and shall continue to accrue on all amounts not yet credited to the ratepayers.~~

~~Pacific Bell shall identify in its Intrastate Earnings Monitoring Report (IEMR), NRF monitoring report code PD-01-27, an adjustment clearly identifying the annual performance incentive payments. This adjustment shall remove from the California intrastate results of operations, and the earnings monitoring reports, the payments made to the memorandum account.~~

~~Verizon shall identify in its Recorded and Adjusted Separated Results of Operations Report, NRF monitoring report code GD-04-01, an adjustment clearly identifying the annual performance incentive payments. This adjustment shall remove from the California intrastate results of operations, and the earnings monitoring reports, the payments made to the memorandum account.~~

~~Payment reduction. When the conditions in both of the following subparagraphs are met, \$60,000 shall be deducted from the total payment amount. Any amounts in excess of the \$60,000 shall be disbursed through Tier II mechanisms.~~

~~All Category A, B, and C failure rates are less than or equal to the following respective rates~~

~~Category A:~~

- ~~—— Ordinary Failures 4.0 percent~~
- ~~—— Chronic Failures 0.33 percent~~
- ~~—— Extended Failures —— 0.062 percent~~

~~Category B:~~

- ~~—— Ordinary Failures 1.7 percent~~
- ~~—— Chronic Failures 0.2 percent~~
- ~~—— Extended Failures —— 0.0 percent~~

~~Category C:~~

- ~~—— Ordinary Failures 3.4 percent~~
- ~~—— Chronic Failures 0.85 percent~~

~~None of the measures or sub-measures listed in Exhibit 4 have chronic or extended failures.~~

#### ~~4. SPECIFIC MEASURES TO WHICH INCENTIVE PAYMENTS APPLY~~

~~4.1 Payments for Pacific Bell's failure to meet specified performance measures will only apply to the Specified Measures listed below:~~

~~4.2 Pre-Ordering~~

### **3. CALCULATION OF INCENTIVE VALUES**

- 3.1. The assessment of incentive payments for non-compliance is performed each month in two ways: (1) at the level of the CLEC on those sub-measures for which reportable data can be attributed to the CLEC (all measures except Measures 24, 38 and 42), and (2) on an industry aggregate basis for the sub-measures of Measures 24, 38 and 42. The first group of sub-measures (those tested at the level of the CLEC) are called *Category A* sub-measures. The second group is called *Category B*.
- 3.2. **Category A:** The Category A measures are divided into two classes: *primary* (Measures 11, 17, 19, 20, and 21) and *secondary* (all remaining measures).<sup>2</sup> For primary measures a payment of \$1,000 will be assessed for each failure. For secondary measures a payment of \$500 will be assessed for each failure.
- 3.3. **Category B:** A payment of \$5,000 will be assessed for each failure in Category B.
- 3.4. **Chronic Failures**
- 3.4.1. **Definition:** A sub-measure attains the status of a *Chronic Failure* whenever three consecutive tests fail for the sub-measure. Parity and compliance tests will be considered consecutive if there are no more than two months of missing data (and, therefore, no tests) between failures. Three or more months with missing data will reset the count of prior failures to zero.
- 3.4.2. **Exiting Chronic Failure Status:** Once a sub-measure attains chronic failure status, all subsequent failures will be deemed chronic until two consecutive passes are obtained or three months intervene with no parity or compliance tests.
- 3.4.3. **Category A.**
- 3.4.3.1. **Primary sub-measures:** For primary sub-measures, an *additional* assessment will be applied each time a sub-measure has a chronic failure according to the following scheme:

<sup>2</sup> AT&T California agrees that identification of performance measures as "primary" and "secondary" will not be used against CLECs in future negotiations or contested case proceedings regarding further changes to the JPSA.

<u>Number of failures at chronic level</u>	<u>Additional assessment</u>
<u>First occurrence</u>	<u>\$3,000</u>
<u>Second occurrence</u>	<u>\$3,000</u>
<u>Third occurrence</u>	<u>\$3,500</u>
<u>Fourth occurrence</u>	<u>\$4,000</u>
<u>Fifth occurrence</u>	<u>\$4,500</u>
<u>Six and subsequent occurrences</u>	<u>\$5,000</u>

**3.4.3.2. Secondary sub-measures:** For secondary sub-measures, an additional \$1,500 assessment will be applied each time a sub-measure has a chronic failure.

**3.4.4. Category B:** An additional \$25,000 assessment will be applied each time a sub-measure has a chronic failure.

**3.5.** Category A payments will be made to the CLEC whose sub-measure failed the parity or compliance test. Category B payments will be distributed evenly to all CLECs with reportable data on any sub-measure of Measure 2 meeting the eligibility requirements set forth in Section 6.1.3.

**3.6.** The total payment to a CLEC in any month, adding together all Category A and B sub-measures, shall not exceed the total charges to the CLEC for OSS and local exchanges services for that month.

#### **4. SPECIFIC MEASURES TO WHICH INCENTIVE PAYMENTS APPLY**

**4.1.** Payments for AT&T California's failure to meet specified performance measures will only apply to the Specified Measures listed below:

##### **4.2. Pre-Ordering**

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

##### **4.3. 4.3 Ordering**

**4.3.1.** Measure 2 - Average FOC Notice Interval

~~—Measure 3—Average Reject Notice Interval~~

- ~~• For Measure 3, remedies will be paid on the service group type disaggregations only. Error type levels of disaggregation will be reported diagnostically, and not subject to incentive payments.~~

~~—Measure 4—Percentage of Flow Through (once measures of success are ordered for this measure by the Commission)~~

##### ~~—4.4—Provisioning~~

~~—Measure 5—Percentage of Orders Jeopardized~~

~~—~~

~~———— Measure 6 – Average Jeopardy Notice Interval~~

~~———— Measure 7 – Average Completed Interval~~

—

~~———— Measure 9 – Coordinated Customer Conversion as a Percentage On-Time~~

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#### **4.4. Provisioning**

4.4.1. Measure 5 - Percentage of Orders Jeopardized

4.4.2. Measure 6 - Average Jeopardy Notices Interval Returned by Required Interval

4.4.3. Measure 87 - (including former Measure 8A) – Percent Average Completed within Standard Interval/ Percent Completed within the Customer Requested Due Date (“CDDD”)

4.4.4. Measure 9 - Coordinated Customer Conversion

4.4.5. Measure 9A - Frame Due Time Conversions as a Percentage On-Time

————

~~———— Measure 10 – LNP Network Provisioning~~

————

4.4.6. — Measure 11 - Percent of Due Dates Missed

4.4.7. Measure 14 – Held Order Interval

~~———— Measure 14 – Held Order Interval~~

~~———— Measure 15 - Provisioning Trouble Reports (Prior to Service Order Completion)~~

4.4.8.

~~———— Measure 16 (Includes former Measure 17) - Percent Troubles in 30 Days for New Orders (Specials)~~

4.4.9. Measure 17 – / Percent Troubles in 10 Days for New Orders (Non-Specials)

4.4.10. Measure 17 -> Percent Troubles in 10 Days for New Orders (Non-Specials)

4.4.11. Measure 18 (Includes former Measure 18A) - Average Completion Notice Interval/ Mechanized Line Loss Notifications

#### **4.5. 4.5 Maintenance**

4.5.1. Measure 19 - Customer Trouble Report Rate

4.5.2. Measure 20 – Percentage of Customer Trouble not Resolved w/in Est. Time

~~———— Measure 20 — Percent of Customer Trouble Not Resolved Within Estimated Time~~

~~4.5.3. Measure 21 - Average Time to Restore~~

~~4.5.4. Measure 23 - Frequency of Repeat Troubles in 30 Day Period~~

#### ~~4.6. 4.6 Network Performance~~

~~4.6.1. Measure 24 - Percent Blocking on Common Trunks~~

~~———— Measure 25 — Percent Blocking on Interconnection Trunks~~

~~———— Measure 26 — NXX Loaded by LERG Effective Date~~

#### ~~4.7. 4.7 Billing~~

~~———— Measure 28 — Usage Timeliness~~

~~———— Measure 29 — Accuracy of Usage Feed~~

~~———— Measure 30 — Wholesale Bill Timeliness~~

~~———— Measure 31 — Usage Completeness~~

~~———— Measure 32 — Recurring Charge Completeness~~

~~———— Measure 33 — Non-Recurring Charge Completeness~~

~~———— Measure 34 - Bill Accuracy~~

~~For Measure 34, incentive payments will be paid on the service group type disaggregations only. Charge types will be reported diagnostically, and will be not subject to incentive payments.~~

~~Measure 35 — Billing Completion Notice Interval~~

~~———— Measure 36 — Accuracy of Mechanized Bill Feed~~

#### ~~4.8 — Database Updates~~

~~Measure 37 — Average Database Update Interval~~

~~Measure 38 — Percent Database Accuracy~~

~~Measure 39 — E911/911 MS Database Update Average~~

~~4.9 Collocation~~

~~Measure 40 Average Time to Respond to a Collocation Request~~

~~4.7.1. Measure 41 Average Time to Provide a Collocation Arrangement~~

**4.8. Databases**

4.8.1. Measure 38 – Percent Database Accuracy

4.8.2. Measure 39 – E911/911 MS Database Update

**4.9. Collocation**

4.9.1. Measure 41 - Average Time to Provide a Collocation Arrangement

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**4.10. 4.10 Interfaces**

4.10.1. Measure 42 - Percentage of Time Interface is Available

~~Measure 44 - Center Responsiveness~~

## 5. ROOT CAUSE ANALYSIS

5.15.1. ~~Pacific Bell~~AT&T California may use Root Cause Analysis to demonstrate that an apparent out-of-parity condition was attributable to an atypical event beyond the reasonable control of ~~Pacific Bell~~AT&T California. The list of “excludable events” that could be considered as part of ~~Pacific Bell’s~~AT&T California’s Root Cause Analysis is reflected in Exhibit 1 hereto. In addition, the following provisions apply to Root Cause Analysis:

5.25.2. Where performance data suggests an out-of-parity condition exists, ~~Pacific Bell~~AT&T California may use Root Cause Analysis to demonstrate there was no discriminatory treatment (the situations in which ~~Pacific Bell~~AT&T California may invoke Root Cause Analysis – referred to as “excludable events” – are reflected in Exhibit 1). When Root Cause Analysis is invoked, ~~Pacific Bell~~AT&T California will have the burden of proving that but for the occurrence and nature of an “exclusion event” ~~Pacific Bell~~AT&T California would have succeeded on the measure in question.

5.35.3. If a dispute arises over whether ~~Pacific Bell’s~~AT&T California’s Root Cause Analysis is sufficient to excuse an apparent out-of-parity condition, the Parties will first attempt to resolve the disagreement through an informal discussion. ~~Pacific Bell~~AT&T California will prepare a Root Cause Analysis report and provide it to any affected CLEC. If the Parties agree that the Root Cause Analysis report is sufficient to excuse ~~Pacific Bell~~AT&T California, the Parties will sign the report and ~~Pacific Bell~~AT&T California will be relieved from any associated payments. If CLEC does not accept ~~Pacific Bell’s~~AT&T California’s Root Cause Analysis, the Parties agree to seek resolution by the Commission.

5.45.4. Pending the resolution of any dispute, ~~Pacific Bell~~AT&T California shall place the payments in an interest-bearing escrow account. The funds in question will be transferred to the CLEC when and if it is determined through the EDR process that ~~Pacific’s~~AT&T’s Root Cause Analysis is not sufficient to excuse ~~Pacific Bell~~AT&T California.

5.55.5. Exhibit 1 identifies the categories of events that may form the basis of Root Cause Analysis and provides examples of the types of events within each category. The list is only illustrative; it is not definitive.

5.65.6. Force majeure events will be treated as excludable events.

5.75.7. ~~Pacific Bell~~AT&T California will provide to the CLEC, at the time of submitting a Root Cause Analysis report to the CLEC, all non-confidential documents that were used as part of ~~Pacific Bell’s~~AT&T California’s Root Cause Analysis.

5.85.8. Inadequate forecasts shall also be treated as an excludable event. ~~Pacific Bell~~AT&T California may demonstrate as part of its Root Cause Analysis

that but for the inadequate forecast provided by CLEC, ~~Pacific Bell~~AT&T California would have complied with the performance measure at issue. Exhibit 2 hereto provides the terms of the forecasting exclusion.

~~5.95.9.~~ Delays or other problems resulting from actions of a Service Bureau Provider acting on the CLEC's behalf for connection to ~~Pacific Bell's~~AT&T California's OSS, including Service Bureau Provider provided processes, services, systems or connectivity, shall be treated as excludable events.

## **66. PERFORMANCE INCENTIVE PAYMENTS**

### **6.16.1. Payments/Credits**

~~6.1.16.1.1.~~ **Schedule.** ~~Pacific Bell~~AT&T California will provide billing credits for the incentive amounts generated by the plan, on or before the 30th day following the due date of the performance report for the month in which the obligation arose.

~~6.1.26.1.2.~~ **Absolute and Procedural Caps.** In any given month, the payment to CLECs shall not exceed the following amounts. When the limit is reached, payments shall be prorated among the CLECs in the amounts proportional to what they would otherwise be entitled to collect absent a cap: 1) a procedural cap of \$15,000,000 (~~Pacific~~) and \$4,500,000 (~~Verizon~~) for all CLECs; 2) an absolute cap of 1/12 of 36% of annual net revenue from local exchange service. If a procedural cap is reached in a month, the Commission should conduct a hearing to determine whether it would be reasonable under the circumstances, and in light of the evidence, to require ~~Pacific~~AT&T to pay any amounts in excess of the procedural caps. If the procedural cap is met, the amounts owed up to the cap will be prorated among the CLECs to whom incentive payments are owed and will be paid regardless of the outcome of the hearing.

~~6.1.3~~ **Eligibility.** CLECs are not eligible for incentive payments until 10 days after receipt by AT&T California of an executed (by CLEC) Interconnection Agreement, or an amendment to an existing Interconnection Agreement ("Receipt Date"), the terms of which have been agreed to by both CLEC and AT&T California, expressly referencing this provision. Incentive payments will be made, effective with the first full month of performance results after the Receipt Date, and will be payable from and after the date that the Interconnection Agreement or amendment is approved by the Commission. AT&T California will not unnecessarily delay filing of the Interconnection Agreement or amendment once both CLEC and AT&T California have signed. In addition, Only CLECs who have submitted orders for services to ~~Pacific~~AT&T during the month under report shall be eligible for incentive payments.

~~7.~~ **Clarifications and illustrations to aid performance incentive plan implementation.**

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~~General Issues.~~

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~~Application of the Small Sample Adjustment Table to sub-measures where low values are associated with good service is done by subtracting the benchmark from 1 and using the result as the point of entry into the table.~~

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~~The Small Sample Adjustment table is applied to aggregates as well as CLEC observations.~~

---

~~Aggregations of Count based sub-measures are evaluated by comparing the average of the numerators for all the CLECs in the aggregation to the benchmark for the sub-measure.~~

---

~~The following definitions are used throughout:~~

---

~~An *Observation* is the data for a single CLEC (reportable data) on a sub-measure in a single month.~~

---

~~An *Aggregate* is any collection of observations within a given sub-measure in a single month.~~

---

~~A *Single month evaluation* is a pass/fail test on an observation or an aggregate using the single month evaluation rules given in Exhibit 3, section B.~~

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~~A *Repeated Failures evaluation* is a pass/fail test on an observation or aggregate using the repeated failures evaluation rules given in Exhibit 3, section B.~~

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~~An *Ordinary Failure* is a failure determined using a single month evaluation.~~

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~~A *Chronic Failure* is an observation or aggregate failure that is determined using the repeated failures evaluation and is at least~~

~~the third in a string of consecutive months of repeated failures (allowing for months with inactivity). Once a sub-measure has a chronic failure, all subsequent failures using the repeated failures critical alpha criterion will be deemed chronic until two consecutive passes are obtained or three months intervene with no activity.~~

~~An *Extended Failure* is an observation or aggregate failure that is determined using the repeated failures evaluation and that is preceded by at least five repeated failures in the preceding six months of tests (allowing for months with inactivity). Once a sub-measure has an extended chronic failure, all subsequent failures using the repeated failures critical alpha criterion will be deemed extended chronic until two consecutive passes are obtained or three months intervene with no activity.~~

~~The denominator used to calculate the Adjusted Base Amount is taken as the total number of remedy relevant observations for those CLECs having reportable data for the month. The aggregate measures, 24, 42, and 44, contribute just the number of sub-measures with data.~~

~~The following formulae specify how payments are calculated in each category~~

~~**General Parameters.**~~

~~**M** = the number of remedy relevant observations in the month.~~

~~**$K = 4243 / M$**~~

~~**$ABA = \$38 \times K$**  (rounded to the nearest dollar).~~

~~**Category A.**~~

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $N(A)$  = the number of observations for a CLEC in a month excluding Category B sub-measures.

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $FO(A)$  = the number of ordinary failures for the CLEC.

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $FC(A)$  = the number of chronic failures for the CLEC.

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $FE(A)$  = the number of extended chronic failures for the CLEC.

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $P(A) = 100 \times FO(A) / N(A)$

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $PPM(A) = ABA \times P(A)$  (pay per miss amount)

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $PO(A) = PPM(A) \times FO(A)$  (payment for ordinary failures)

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $PC(A) = PPM(A) \times FC(A) \times 5$  (payment for chronic failures)

~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~  $PE(A) = PPM(A) \times FE(A) \times 10$  (payment for extended chronic failures)

~~Category B.~~~~N(B) = the number of Industry Aggregate sub-measures falling in Category B.~~~~FO(B) = the number of ordinary failures for Category B.~~~~FC(B) = the number of chronic failures for Category B.~~~~FE(B) = the number of extended chronic failures for Category B.~~ ~~$P(B) = 100 \times FO(B) / N(B)$~~  ~~$PPM(B) = ABA \times P(B)$  (pay per miss amount)~~ ~~$PO(B) = PPM(B) \times FO(B) \times 10$  (payment for ordinary failures)~~ ~~$PC(B) = PPM(B) \times FC(B) \times 50$  (payment for chronic failures)~~ ~~$PE(B) = PPM(B) \times FE(B) \times 100$  (payment for extended chronic failures)~~~~Category C.~~~~N(C) = the number of Aggregate sub-measures falling in Category C.~~~~FO(C) = the number of ordinary failures for Category C.~~~~FC(C) = the number of chronic failures for Category C.~~

---

~~$$P(C) = 100 \times FO(C) / N(C)$$~~

---

~~$$PPM(C) = ABA \times P(C) \text{ (pay per miss amount)}$$~~

---

~~$$PC(C) = PPM(C) \times FC(C) \times 25 \text{ (payment for chronic failures)}$$~~

---

~~**Special Issues.**~~

---

~~6.1.3. The CLECs qualifying for Category B incentive payments are those that touch sub-measures in Measure 2, 3, and 40).~~

~~**Category C is applied to all sub-measures.**~~

~~**The Category C failure rate is determined by the number of single-month failures in the month in question.**~~

~~**The rules for entering and leaving the chronic state (there is no extended chronic state) are the same as those for the other categories.**~~



**EXHIBIT 1**  
**FACTUAL ANALYSIS**

The following incidences are reasonable exceptions that can be used to mitigate a statistical finding of out-of-parity (or benchmark miss) provided that the incident impacted the CLEC to such a degree as to make otherwise compliant performance non-compliant:

I. Significant activity by a third party external to ~~Pacific Bell~~AT&T California\* (not controllable by ~~Pacific Bell~~AT&T California)

A. Damage to facilities-:

- major cable cuts
- gas/water main break
- manhole/structure fire
- central office/facilities fires not caused or under control of ~~Pacific Bell~~AT&T California
- other damage to facilities cause by a third party

C.B. Failure of third party systems

- LNP-service degradation/out-of-service of NPAC

D.C. Threats to personal safety

- Bomb threat causing evacuation of a ~~Pacific Bell~~AT&T California building (service center, central office, etc.)
- Other threats to personal safety which impact the execution of ~~Pacific Bell's~~AT&T California's activities on behalf of the CLEC

II. Environmental events not considered force majeure

A. Environmental events causing service center evacuation/building condemnation

- building fire
- building damage cause by external force
- hazardous condition (gas or chemical leaks, presence of hazardous material)

III. Failure of CLEC process/system or those of a third party vendor, including a Service Bureau Provider, acting on behalf of CLEC

- A. CLEC ordering system with degraded service or out-of-service for an extended period of time, resulting in:
- a backlog of requests sent all at once
  - the CLEC changing from electronic transmission to manual (fax) for duration of the outage
- B. Chronic, severely impaired testing capabilities on part of CLECs
- D.C. Chronic failure on the part of the CLEC to provision their own network in a timely manner in establishing new or migrated end user service which also involves activities on the part of ~~Pacific Bell~~ Pacific AT&T California

\*Note: ~~Pacific Bell~~ Pacific AT&T California's sub-contractors or other ~~Pacific Bell~~ Pacific AT&T California agents are not considered an external third party.

## EXHIBIT 2 FORECASTING PLAN

CLECs shall submit forecasts to ~~Pacific Bell~~AT&T California for the following categories of products/services:

- Collocation
- Interconnection Trunks
- Service Requests by:
  - Resale
    - ~~Non-designed~~
    - ~~Designed~~
    - Non- special (POTS and POTS-like services)
    - Specials
  - UNE
    - Loops
      - ~~Non-designed~~
      - ~~Designed~~
      - ~~Loop/Port Combinations~~
      - Non- special (POTS and POTS-like services)
      - Specials
    - Unbundled Transport
- Forecasts shall cover a six-month period (two quarters) and shall be submitted one quarter in advance of the commencement of the six-month period.
  - Forecasts may be updated quarterly, or sooner, if the CLEC determines that conditions warrant an update.
    - For example, a forecast of 3<sup>rd</sup> and 4<sup>th</sup> Quarter ~~200120012008~~ must be submitted by March 31, ~~20012008~~. However, the 4<sup>th</sup> Quarter forecast may be updated as part of the quarterly submission on or before June 30, ~~200120012008~~ (which covers 4<sup>th</sup> Quarter ~~200120012008~~ and 1<sup>st</sup> Quarter ~~20022009~~).
  - For Service Request forecasts, forecasts shall be submitted on a statewide basis. For Interconnection forecasts, forecasts shall be submitted by wire center. Tandem interconnection shall be by tandem

with identification of estimated traffic to and from subtending end offices.

- For collocation, forecasts shall be submitted by wire center.
- Forecasts shall be disaggregated on a monthly level.
- If ~~Pacific Bell~~AT&T California misses a mapped sub-measure (see Exhibit 2) for which a CLEC's actual volumes are 20% greater than the forecasted volume, on a monthly basis, a root cause analysis may be triggered.
- If ~~Pacific Bell~~AT&T California misses a mapped sub-measure (see Exhibit 2) for which the CLEC has not provided any forecast, a root cause analysis may be triggered.
- ~~Pacific Bell~~AT&T California may address the effect on ~~Pacific Bell~~AT&T California of an inaccurate forecast in its limited root cause analysis of a missed mapped sub-measure. In this review, ~~Pacific~~AT&T must document how, but for the variance in the CLEC's forecast and actual volumes for one of the categories above (i.e., service requests, interconnection trunks or collocation), ~~Pacific Bell~~AT&T California would not have missed the mapped sub-measure. For purposes of the limited root cause analysis, the performance measures potentially affected by forecasting are set forth, or mapped, on the attached chart.
- Forecasts may contain commercially sensitive information and must be kept confidential. ~~Pacific~~AT&T shall protect forecasts against disclosure to any unauthorized persons, including personnel responsible for retail sales or marketing. In addition, ~~Pacific~~AT&T shall limit the disclosure of CLEC forecasts to personnel with a need to know for the purpose of ensuring ~~Pacific's~~AT&T's compliance with OSS performance measures and their applicable incentive plan, including compliance with the underlying wholesale obligations.

## EXHIBIT 2

## FORECAST MAPPING TO PERFORMANCE MEASURES

	TYPE OF FORECAST		
	Service Order	Collocation	Interconnection
<b><i>Pre-Ordering</i></b>			
<del>1 - Av. Response Time</del>			
<del><b><i>Ordering</i></b></del>	X		
<del>• 221 - Av. FOC Notice Interval</del>			
<del>• 3 - Av. Reject Notice Interval</del>			
<del>• <u>Response Time</u></del>			
<b><i>Provisioning</i></b>			
<del>5 - Percent of Orders Jeopardized</del>			
<del>6 - Av. Jeopardy Notice Interval</del>			
<del>7 - Av. Completed Interval</del>			
<del>9 - Coordinated Customer Conversions</del>			
<del>9A - Frame Due Time Customer Conversions</del>			
<del>10 - PNP Network Provisioning</del>			
<del>11 - Percent of Due Dates Missed</del>			
<del>14 - Held Order Interval</del>			
<del>15 - Provisioning Trouble Reports</del>			
<del>16 - Percent Troubles in 30 Days for New Orders</del>			
<del>18 - Av. Comp. Notice Interval</del>			
<del>• <u>2 - Av. FOC Notice Interval</u></del>	X		X
<b><i>Provisioning</i></b>			
<del>• <u>5 - Percent of Orders Jeopardized</u></del>	X		X
<del>• <u>6 - Av. Jeopardy Notices returned by</u></del>	X		X

<u>Required Interval</u>			
• <u>87 – Percent Average Completed within Standard Interval or Cust. Requested Due Date</u>	<u>X</u>		<u>X</u>
• <u>9 - Coordinated Customer Conversions</u>	<u>X</u>		
• <u>9A - Frame Due Time Customer Conversions(FDT) Conversions</u>	<u>X</u>		
• <u>11 - Percent of Due Dates Missed</u>	<u>X</u>		<u>X</u>
• <u>14 – Held Order Interval</u>	<u>X</u>		<u>X</u>
• <u>15 - Provisioning Trouble Reports</u>	<u>X</u>		
• <u>16 - Percent Troubles in 30 (10) Days for New Orders (Special Services Orders/ Non-Specials)</u>	<u>X</u>		<u>X</u>
• <u>17 - Percent Troubles in 10 Days for Non-Special Orders</u>	<u>X</u>		
• <u>18 - Av. Comp. Notice/Line Loss Notice Interval</u>	<u>X</u>		
<b><u>Maintenance</u></b>			
• <u>19 - Customer Trouble Report Rate</u>			
• <u>20 - % of Cust. Trouble Not Resolved w/in Est. Time</u>			
• <u>21 — Average Time to Restore</u>			
	<u>TYPE OF FORECAST</u>		
	<u>Service Order</u>	<u>Collocation</u>	<u>Interconnection</u>
• <u>23- Frequency of Repeat Troubles in 30 day period</u>			
<b><u>Network Performance</u></b>			
• <u>24 - Percent Blocking on Common Trunks</u>			
	<u>TYPE OF FORECAST</u>		
	<u>Service Order</u>	<u>Collocation</u>	<u>Interconnection</u>

<p><b><i>Maintenance</i></b></p> <p>19—Customer Trouble Report Rate</p> <p>20—Percent of Customer Trouble not Resolved within Est. Time</p> <p>21—Av. Time to Restore</p> <p>23—Frequency of Repeat Troubles in 30-day period</p> <p><b><i>Billing</i></b></p>			
<p>—<b><i>Network Performance</i></b></p> <ul style="list-style-type: none"> <li>• 24—Percent Blocking on Common Trunks</li> <li>• 25—Percent Blocking on Interconnection Trunks</li> <li>• 26—NXX Loaded by LERG Effective Date</li> <li>• <u>34 - Bill Accuracy</u></li> </ul>			
<p><b><i>Databases</i></b></p>			
<ul style="list-style-type: none"> <li>• <u>38 – Percent Database Accuracy</u></li> </ul>			
<ul style="list-style-type: none"> <li>• <u>39 – E911/911 MS Database Update</u></li> </ul>	<p><u>X</u></p>		
<p><b><i>Billing</i></b></p> <p>28—Usage Timeliness</p> <p>29—Accuracy of Usage Feed</p> <p>30—Wholesale Bill Timeliness</p> <p>31—Usage Completeness</p> <p>32—Recurring Charge Completeness</p> <p>33—Non-recurring Charge Completeness</p> <p>34—Bill Accuracy</p> <p>35—Billing Notice Completion Interval</p> <p>36—Accuracy of Mech. Bill Feed</p>			

<b><u>Collocation</u></b>				
		<b>TYPE OF FORECAST</b>		
<ul style="list-style-type: none"> <li>• <del>41 - Av. Time to Provide a Collocation Arrangement</del></li> </ul>		Service Order	Collocation X	Interconnection
<b><i>Database Updates</i></b> <ul style="list-style-type: none"> <li>• <del>37 - Av. Database Update Interval</del></li> <li>• <del>38 - Percent Database Accuracy</del></li> <li><del>39 - E911/911 MS Database Update Interval</del></li> </ul>			Collocation	Interconnection
<b><i>Database Updates</i></b> <ul style="list-style-type: none"> <li>• <del>37 - Av. Database Update Interval</del></li> <li>• <del>38 - Percent Database Accuracy</del></li> <li>• <del>39 - E911/911 MS Database Update Interval</del></li> <li>42 - <u>Percent of Time Interface is Available</u></li> </ul>				
<b><i>Collocation</i></b> <ul style="list-style-type: none"> <li>40 - Av. Time to Respond to Collocation Requests</li> <li>41 - Av. Time to Provide a Collocation Arrangement</li> </ul>			X	
<b><i>Interfaces</i></b> <ul style="list-style-type: none"> <li>42 - Percent of Time Interface is Available</li> <li>44 - Center Responsiveness</li> </ul>				

~~Exhibit 3~~

~~Decision Model~~

~~Revised from D.01-01-037, Appendix C~~



**EXHIBIT 3****PARITY AND COMPLIANCE TESTING****I. Parity measures****Statistical Tests**

All statistical tests will be one-tailed tests.

**1. Average-based Parity Measures**

The Modified *t*-test will be used for all average-based parity measures as specified in:

**Brownie, C., Boos, D., & Hughes-Oliver, J. (1990). Modifying the *t* and ANOVA *F* tests when treatment is expected to increase variability relative to controls. *Biometrics*, 46, 259-266.**

The Modified *t*-test for the difference in means (averages) between the ILEC and the CLEC populations is:

$$t = (M_i - M_c) / [S_i * \text{sqrt}(1/N_c + 1/N_i)]$$

$$t = \frac{M_I - M_C}{S_I \sqrt{\frac{1}{N_C} + \frac{1}{N_I}}}$$

Where:

$M_c$  = the CLEC mean result

$M_i$  = the ILEC mean result

$S_i$  = the standard deviation of the results for the ILEC

$N_c$  = the CLEC sample size

$N_i$  = the ILEC sample size

sqrt = square root

For measures of time intervals, the raw score distribution will be normalized by taking the natural log of each score after a constant of 0.4 of the smallest unit of

measurement is added to each score. For example, if the smallest unit of measurement is an integer, then the added constant would be 0.4:

$$x_{\text{tran}} = \ln(x + 0.4)$$

Similarly, if the smallest unit of measurement is 0.01, then the added constant would be 0.004:

$$x_{\text{tran}} = \ln(x + 0.004)$$

Results that are not measures of time intervals (e.g., Measure 34) will not be transformed. ~~Results for Measure 44 will not be transformed.~~

The Modified *t*-test calculation for average parity measures will be structured so that a negative sign indicates “worst” performance. Specifically, when a lower value represents better performance, such as time to provision a service, the CLEC mean will be subtracted from the ILEC mean. Different performance measures may require reversing the means in the equation to have a negative sign indicate poorer performance.

The *t*-statistic will be converted to a p-value (probability value) using a *t*-distribution table or calculation. Degrees of freedom (*df*) will be based only on the ILEC sample size consistent with Brownie, et al. If the obtained p-value is less than the critical alpha ( $\alpha$ ) value (.1), then the result will be deemed not in parity.

—

## **2. ~~Proportion~~ Proportion/Percentage-based Parity Measures**

The Fisher’s Exact Test will be used for all percentage or proportion parity measures as specified in:

**Sheskin, D. (1997). *Handbook of parametric and nonparametric statistical procedures*. Boca Raton: CRC Press, pp. 221-225.**

If the obtained p-value is less than the critical  $\alpha$ -value of .1, then the result will be deemed out-of-parity.

## **3. Rate-based Parity Measures**

The Binomial Exact Test will be used for all rate parity measures. ~~The Binomial Exact Test is as specified in GTECs Exhibit C, Section 3, “Permutation Test for Rates”, Equations 3.1 and 3.2 (Deliverable #7, Facilitated Work Group, April 2000).~~

## ~~Indexed-based Parity Measures~~

~~Measure 42 provides an index of parity performance that will be assessed by comparing ILEC and CLEC performance as follows:~~

~~Non-parity will be identified when the ILEC percentage minus the CLEC percentage exceeds 0.05 percentage points.~~

## ~~Critical Alpha Level for Parity Tests~~

~~The p-values obtained from the parity statistical tests will be compared to the critical alpha values as specified below. A performance result with a p-value less than the critical alpha will be deemed a performance failure. The critical alphas to be applied are listed below:~~

~~For Tier I:~~

~~Examine the single-month industry aggregate using:~~

~~0.10 for sample sizes of 1 to 499.~~

~~0.05 for sample sizes of 500 and greater.~~

~~For CLEC-level analyses:~~

~~For multiple-month tests:~~

~~Use 0.20 for the test for each and every individual month (i.e., Chronic: months 1, 2, and 3. Extended: months 1, 2, 3, 4, 5, and 6).~~

~~For single-month tests:~~

~~If the industry aggregate fails:~~

~~For each CLEC with a sample size of 1 to 29 use 0.20.~~

~~For each CLEC with a sample size of 30 to 499 use 0.10.~~

~~For each CLEC with a sample size of 500 or greater, use 0.05.~~

~~If the industry aggregate passes:~~

~~For each CLEC with a sample size of 1 to 99 use 0.10.~~

~~For each CLEC with a sample size of 100 or greater, use 0.05.~~

~~For Tier II:~~

~~Since all Tier II tests are repeated failure tests, use 0.20 for the test for each and every individual month (i.e., months 1, 2, and 3). (Note: the single-month aggregate failure rate used as a multiplier for calculating the payment amounts will follow the single-month industry aggregate test rules listed above.)~~

## **Sample Sizes and Aggregation Rules**

~~Statistical tests will be applied to the monthly performance results specified in the Joint Partial Settlement Agreement (D.01-05-087 or “JPSA”) and in any Commission-approved modifications to the JPSA. Statistical analyses and decision rules will be applied to determine performance subject to the performance incentives plan for all samples regardless of sample size.~~

### **D. Measures without Retail Analogues.**

~~In months where there are no retail analogue performance data, the prior six months of ILEC data be aggregated (to the extent that such data exist) and used in place of the data-deficient month. If the aggregate does not produce sufficient ILEC data, the sub-measure will not be evaluated for the month.~~

### **Benchmark Measures**

~~For large samples, the actual performance will be compared to the benchmark nominal percentage according to the percentage set in the Joint Partial Settlement Agreement approved by the Commission. For small samples, maximum permitted “misses” shall be determined by small sample adjustment tables. Small samples are defined as follows:~~

~~90 percent benchmarks – 50 cases or less~~

~~95 percent benchmarks – 100 cases or less~~

~~98 percent benchmarks – 250 cases or less~~

~~99 percent benchmarks – 500 cases or less~~

~~99.65 (and 0.0035) percent benchmarks – 1429 cases or less~~

~~99.75 (and 0.0025) percent benchmarks – 2000 cases or less~~

## SMALL SAMPLE ADJUSTMENT TABLES

Maximum Permitted Misses	Benchmark = 90%		Benchmark = 95%		Benchmark = 98%		Benchmark = 99%		Benchmark = 99.6%	
	Minimum Sample Size	Maximum Sample Size								
0	1	1	1	3	1	9	1	19	1	55
1	2	9	4	19	10	48	20	97	56	304
2	10	20	20	40	49	101	98	202	305	634
3	21	31	41	63	102	159	203	319	632	999
4	32	44	64	88	160	222	320	445	1000	1393
5	45	50	89	100	223	250	446	500	1394	1429

~~The small sample adjustment tables shall be used in the following steps:~~

~~The number of performance “misses” for the CLEC industry-wide aggregate for each remedy plan benchmark sub-measure will be compared to the number of permitted misses for all sample sizes covered by the related adjustment table. Industry aggregate performance will be identified as passing if the number of actual misses is less than or equal to the number of permitted misses, and identified as failing if otherwise.~~

~~For CLEC industry-wide aggregate aggregate~~ Lehmann, E. L. (1986). *Testing statistical hypotheses*. New York: Wiley, p 81.

## II. Benchmark Measures: Small Sample Adjustment Procedure

The Small Sample Adjustment Procedure can only be used for percentage-based or rate-based sub-measures for which the benchmark may be expressed as a proportion. The Procedure defines the number of “misses” that are permitted for various sample sizes in lieu of an absolute comparison with the benchmark. The meaning of a “miss” depends on whether the benchmark is near 1.0 or near 0. Let **X** be the observed numerator in the CLEC data, let **N** be the CLEC’s sample size, and let **B** be the benchmark. Then the number of “misses,” **M** is given by

$$M = N - X \text{ if } B > .5 \text{ and}$$

$$M = X \text{ if } B \leq .5.$$

The following procedure calculates the permitted values for **M** given **N** assuming **B** > .5. The essential idea forming the basis for the procedure is that for each benchmark there is a performance level **P** (**P** > **B**) at which the ILEC should be providing service. The value of **P** is chosen so that for a fixed reference sample size, **R** (which will also depend on the benchmark), the probability of observing results for the CLEC that fail the benchmark by chance is .1 (consistent with the critical value for parity tests. The values of **P**, **R**, and the permitted number of misses are given in the following steps.

1. Define **L**, the maximum sample size for which small sample adjustments are permitted, by the formula

$$L = \frac{5}{1 - B}$$

For sample sizes larger than **L**, comparisons with the benchmark will be absolute without any further adjustments.

2. The reference sample size is given by

$$\underline{R = 3L}$$

3. The implied performance level, **P**, is that value which solves the equation

$$b = \text{ceiling}(B \times R) - 1$$

$$\underline{\sum_{k=0}^b \binom{R}{k} P^k (1-P)^{R-k} = .01}$$

where *ceiling(x)* is the largest integer at least equal to x.

4. The permitted number of misses, **M**, for the sample size **N**, is the largest value of k that satisfies the following:

$$\underline{\sum_{t=0}^k \binom{N}{N-t} P^t (1-P)^{N-t} \geq .1}$$

When the benchmark is less than or equal to .5, the above procedure works by replacing **B** with **1 - B**.

To illustrate how the procedure works, let **B** = .9. Then **L** becomes 50 and **R** = 150. Step 3 turns a reference sample size of 150 into an implied performance level **P** = .944. Step 4 gives the result that 0 misses are permitted for a sample size of 1, 1 miss is permitted for samples sizes of 2 to 9, 2 misses for 10 to 20, 3 misses for 21 to 31, 4 misses for 32 to 44, and 5 misses for 45 to 50. Above sample sizes not covered by the related adjustment table, the actual performance percentage result will be compared to the benchmark nominal percentage value. Industry aggregate performance will be identified as passing if the actual performance percentage result is greater than or equal to the benchmark nominal percentage value, and identified as failing if otherwise.

~~For each sub-measure where the CLEC industry-wide aggregate performance fails the benchmark, the actual performance percentage result for each non-aggregated CLEC result will be compared to the benchmark nominal percentage value. Each individual performance result will be identified as passing if the actual performance percentage result is greater than or equal to the benchmark nominal percentage value, and identified as failing if otherwise.~~

~~For sample sizes covered by the related adjustment table where the CLEC industry-wide aggregate performance passes the benchmark, the following shall apply for each sub-measure. For each benchmark sub-measure, the number of~~

performance “misses” for each non-aggregated CLEC will be compared to the number of permitted misses. CLEC performance will be identified as passing if the number of actual misses is less than or equal to the number of permitted misses, and identified as failing if otherwise.

For sample sizes *not covered* by the related adjustment table where the CLEC industry-wide aggregate performance *passes* the benchmark, the following shall apply. The actual performance percentage result for each non-aggregated CLEC result will be compared to the benchmark nominal percentage value. Each individual performance result will be identified as passing if the actual performance percentage result is greater than or equal to the benchmark nominal percentage value, and identified as failing if otherwise.

**Small Sample Adjustment Table****Calculation Procedure**

Set the benchmark to **B**. In this procedure it is assumed that **B** is a number close to 1.0. If the benchmark is small, simply use  $1 - B$ .

Set the maximum length of the table,  $L$ , according to the formula

$$L = \frac{5}{1 - B}$$

Set the derivation (reference) sample size according the formula

$$N = 3 * L$$

Calculate the implied performance level,  $P$ , as that value which solves the equation

$$b = \text{ceiling}(B * N) - 1$$

$$\sum_{k=0}^b \binom{N}{k} P^k (1 - P)^{N-k} = .01$$

Calculate 50, the permitted number of misses,  $m$  for the sample size  $n$ , as the largest value of  $k$  that satisfies the following:

$$\sum_{t=0}^k \binom{n}{n-t} P^t (1 - P)^{n-t} \geq .1$$

~~Mathcad worksheet to calculate small sample tables  
for percentage benchmarks.~~

~~Set benchmark.~~

$$B := .90$$

~~Set probability of failing the benchmark at the reference sample size.~~

$$P_{\text{crit}} := .01$$

~~Set probability of failing the benchmark with small samples (Type I  
error rate).~~

$$P_{\text{T1E}} := .1$$

~~Calculate the length of the Small Sample Adjustment Table~~

$$L := \text{floor}\left(\frac{5}{1 - B} + .1\right)$$

$$L = 50$$

~~Calculate the reference (derivation) sample size.~~

$$N := 3 \cdot L$$

$$N = 150$$

~~"p" gives initial guesses at the required performance levels~~

$$p := \frac{1 + B}{2}$$

The following function calculates the performance level that is consistent with the reference sample size  $N$  and criterion probability  $P$ .

Given

$$pbinom(b - 1, N, p) = P_{crit}$$

$$f(b, N) := \text{Find}(p)$$

This is the required performance level.

$$PL := f(\text{ceil}(B \cdot N), N)$$

$$PL = 0.9441636$$

$$pbinom(\text{ceil}(B \cdot N) - 1, N, PL) = 10 \cdot 10^{-3}$$

Calculate the minimum number of misses for which the cumulative probability is less than the Type I error criterion.

$$\text{miss}(n, P) := \begin{array}{|l} k \leftarrow 1 \\ \text{while } pbinom(n - k, n, P) \geq P_{T1E} \\ \hline k \leftarrow k + 1 \\ \text{return } k - 1 \end{array}$$

$$n := 2..L$$

$$M_n := \text{miss}(n, PL)$$

$$k := 1..5$$

```

set(h, L, d) := | j ← 2
                | x ← L · (1 - d)
                | while Mj < h
                |   j ← j + 1
                |-----
                | while (j ≤ L) · (Mj = h)
                |   | x ← j if (d = 0) · (j < x) + (d = 1) · (j > x)
                |   | j ← j + 1
                | return x

```

~~$A_{k,0} := \text{set}(k, L, 0)$~~

~~$x_k := k$~~

~~$\text{set}(1, 50, 0) = 2$~~

~~$A_{k,1} := \text{set}(k, L, 1)$~~

~~$A := \text{augment}(x, A)$~~

~~In the following matrix,~~

~~— the first column is the number of permitted misses,~~

~~— the second column is the minimum sample size that gets this number, and~~

~~— the third column is the maximum sample size that gets the number.~~

$$A = \begin{bmatrix} 0 & 0 & 0 \\ 1 & 2 & 9 \\ 2 & 10 & 20 \\ 3 & 21 & 31 \\ 4 & 32 & 44 \\ 5 & 45 & 50 \end{bmatrix}$$

**Exhibit 4**

**Measures and sub-measures identified  
as having no minimum samples size\***

**Measure 30:** Wholesale bill timeliness.

**Measure 40:** Average time to respond to a collocation request.

**Measure 41:** Average time to provide a collocation request.

**UNE Loop DS-3:** (Disaggregated as an Service Group Type).

**UNE Transport DS-1:** (Disaggregated within UNE Transport).

**UNE Transport DS-3:** (Disaggregated within UNE Transport).

**Interconnection Trunks.**

**OC level services:** (Service group type).

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\*See *Interim Opinion* (D.01-01-037), App. H, Attach. 1. OC services were added since they were included as a service group type in D.01-05-087.

B x N.

**(END OF APPENDIX B)**