BEFORE THE

ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN

JIM IRVIN
COMMISSIONER

WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF U S WEST COMMUNICATIONS, INC.'S COMPLIANCE WITH § 271 OF THE TELECOMMUNICATIONS ACT OF 1996.	DOCKET NO. T-00000A-97-0238

JOINT COMMENTS ADDRESSING PROPOSED PERFORMANCE MEASURES TO BE INCLUDED IN PERFORMANCE ASSURANCE PLAN

WorldCom, Inc., ("WCom") along with Eschelon Telecom, Inc., and Electric Lightwave, Inc., served electronically on September 25, 2000, the following joint comments. Pursuant to Commission staff request, these joint comments are now being formally filed and served on all parties listed on the attached service list.

WorldCom, Inc., ("WCom") along with Eschelon Telecom, Inc., and Electric Lightwave, Inc., submits these joint comments to the Arizona Corporation Commission (ACC) as requested in the August 22, 2000 workshop.

On August 4, 2000, WorldCom filed and provided comments to participants of the Arizona collaborative Performance Assurance Plan (PAP) workshop. Included in this filing was a document that identified a number of measurements that the joint CLECs would like to see included as part of the PAP. Participants in the August 22, 2000 PAP workshop were asked to submit comments and documentation regarding the proposed measurements they would like to see included and the structure of the plan. The attached information again addresses the joint CLECs proposed measurements and plan structure for review and consideration.

Exhibit A is the joint CLECs submission of their proposed Performance Assurance Plan structure. CLECs request permission to file further clarifications to the plan this week once the plan's key economic and statistical contributor returns from being out of the country. This would not lead to any change in the underlying plan structure.

Exhibit B again outlines the remedied measures proposed by the joint CLECs. This document also identifies Qwest proposed remedied measures. The joint CLECs also have attempted to match up the AZ measurements to the equivalent Texas and New York measures. The joint CLECs continue to adhere to their original request of the proposed remedied measures as submitted in the August 4, 2000 comments. Again, at a minimum the PAP remedies should include all products and levels of disaggregation currently being

purchased in a given month with provisions made to incorporate any new products made available by Qwest.

Exhibit C attempts to show the significant number of additional measures included in other regions. Generally, since 271 approval New York and Texas commissions have been adding to total metrics and remedied metrics to their plans. That is why CLECs believe the Qwest PID metrics need to be expanded to address the full range of CLEC market entry issues.

Exhibit D outlines the minimum level of disaggregation that Qwest's Performance Assurance Plan should initially cover. New levels of disaggregation will need to be added as CLECs start buying new UNEs, UNE combinations, emerging services, and use of different interfaces or query types.

As shown in Exhibit C, SBC-TX and Verizon-New York have many more metrics in total and covered by their remedy plans then Qwest's PID metrics in total and in its remedy plan. One of the most critical missing metric areas govern enforcement of interface software change control processes, which need to be revised before being measured and enforced with remedies for the Qwest region.

A Change Control process must be developed and implemented, one that allows for new metrics to be added that will enforce Qwest's interface software change control processes. The Verizon (legacy Bell Atlantic) change control plan is enforced by metrics and self-executing remedies. Verizon divides all changes into five categories and

provides specific time lines and intervals for each category.[1] Verizon's five categories of changes are: emergency, regulatory, industry standards, requests by Verizon, and requests by CLECs.[2]

By recognizing these different categories of requests, Verizon's process is more flexible, and Verizon is better able to be responsive to different needs. For example, Verizon's Change Agreement provides different time intervals for the different categories. Logically, the time intervals for emergency changes are much shorter than for other types of changes.[3] Because Qwest does not similarly have a separate process for emergency changes, it tends to either deal with emergency issues in an untimely manner or to deal with them on an ad hoc hit or miss basis.

Recently, CLECs have outlined problems with the Co-Provider Industry Change Management Process (CICMP) in letters to Qwest and the ROC. Copies of those letters are attached (see Exhibits E and F). Qwest's plan does not contain such metrics and remedies relating to CICMP.[4] Intervals need to be established for the distribution of Qwest's change management notification and documentation, along with metrics to report

[1] FCC Verizon 271 Order ¶105

[2] See http://www.bell-atl.com/wholesale/html/pdfs/CM_Process.pdf ("Bell Atlantic Change Agreement").

[3] Bell Atlantic notifies key individuals at CLECs by pager and conducts a conference call whenever there is an immediate software change. See FCC Bell Atlantic 271 Order note 333 to ¶116.

[4] Verizon-New York's Change Control Performance Assurance Plan also includes metrics covering Software Validation (is software change implemented while CLEC test deck is still experiencing failures), Delay Days for Documentation needed to implement changes, and Software Error Correction for Verizon software problems with and without workarounds.

Qwest's compliance with those intervals. Implementing metrics and self-executing remedies to enforce CICMP would greatly assist in improving that process.

DATED this 28th day of September, 2000.

LEWIS AND ROCA

Thomas H. Campbell
40 N. Central Avenue
Phoenix, Arizona 85007

- AND –

Thomas F. Dixon
WorldCom, Inc.
707 –17th Street, #3900
Denver, Colorado 80202
303-390-6206

Attorneys for WorldCom, Inc.

ORIGINAL and ten (10) copies of the foregoing filed this 28th day of September, 2000, with:

Arizona Corporation Commission
Docket Control – Utilities Division
1200 W. Washington Street
Phoenix, Arizona 85007

COPY of the foregoing hand-delivered this 28th day of September, 2000, to:

Maureen Scott
Legal Division
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, Arizona 85007

Jerry Rudibaugh, Chief Hearing Officer
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, Arizona 85007

Deborah Scott, Director
Utilities Division
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, Arizona 85007

COPY of the foregoing mailed
this 28th day of September, 2000, to:

Pat van Midde, Assistant Vice President
AT&T Communications of the
Mountain States
111 West Monroe, Suite 1201
Phoenix, Arizona 85003

Scott Wakefield
Residential Utility Consumer Office
2828 N. Central Avenue
Phoenix, Arizona 85004

Maureen Arnold
US West Communications, Inc.
3033 N. Third Street
Room 1010
Phoenix, Arizona 85012

Mark Dioguardi
Tiffany and Bosco PA
500 Dial Tower
1850 N. Central Avenue
Phoenix, Arizona 85004

Thomas L. Mumaw
Snell & Wilmer
One Arizona Center
Phoenix, Arizona 85004-0001

Andrew O. Isar
TRI
4312 92nd Avenue N.W.
Gig Harbor, Washington 98335

Michael Patten
Brown & Bain, P.A.
2901 N. Central Avenue
Phoenix, Arizona 85012

Darren S. Weingard
Stephen H. Kukta
Sprint Communications Co., L.P.
1850 Gateway Drive, 7th Floor
San Mateo, CA 94404-2467

Timothy Berg
Fennemore, Craig, P.C.
3003 N. Central Avenue
Suite 2600
Phoenix, Arizona 85012-3913

Thomas M. Dethlefs
Charles Steese
US West, Inc.
1801 California Street, Ste. 5100
Denver, Colorado 80202

Joan S. Burke
Osborn & Maledon
2929 N. Central Avenue
21st Floor
Phoenix, Arizona 85067-6379

Richard S. Wolters
AT&T & TCG
1875 Lawrence Street
Suite 1575
Denver, Colorado 80202

Michael M. Grant
Gallagher & Kennedy
2600 N. Central Avenue
Phoenix, Arizona 85004-3020

Richard M. Rindler
Morton J. Posner
Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007-5116

Mary Tee
Electric Lightwave, Inc.
4400 NE 77th Avenue
Vancouver, Washington 98662

Raymond S. Heyman
Randall H. Warner
Roshka Heyman & DeWulf
Two Arizona Center
400 Fifth Street
Suite 1000
Phoenix, Arizona 85004

Diane Bacon, Legislative Director
Communications Workers of America
5818 North 7th Street
Suite 206
Phoenix, Arizona 85014-5811

Charles Kallenback
ACSI
131 National Business Parkway
Annapolis Junction, Maryland 20701

Bradley Carroll, Esq.
Cox Arizona Telcom, L.L.C.
1550 West Deer Valley Road
Phoenix, Arizona 85027

Joyce Hundley
United States Department of Justice Antitrust Division
1401 H Street, N.W.
Suite 8000
Washington, D.C. 20530

Daniel Waggoner
Davis Wright Tremaine
2600 Century Square
15011 Fourth Avenue
Seattle, Washington 98101-1688

Alaine Miller
NextLink Communications, Inc.
500 108th Avenue NE, Suite 2200
Bellevue, Washington 98004

Carrington Phillips
Cox Communications
1400 Lake Hearn Drive N.E.
Atlanta, Georgia 30319

Mark N. Rogers
Excell Agent Services, L.L.C.
2175 W. 14th Street
Tempe, Arizona 85281

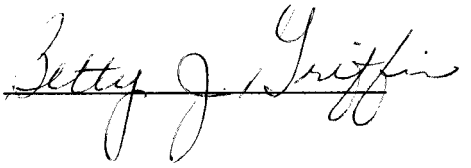
Robert S. Tanner
Davis Wright Tremaine LLP
17203 N. 42nd Street
Phoenix, Arizona 85032

Mark P. Trinchero
Davis Wright Tremaine LLP
1300 S.W. Fifth Avenue, Suite 2300
Portland, Oregon 97201

Gena Doyscher
Global Crossing Local Services, Inc.
1221 Nicollet Mall
Minneapolis, Minnesota 55403-2420

Karen Clauson
Eschelon Telecom, Inc.
730 2nd Avenue South
Suite 1200
Minneapolis MN 55402

Douglas Hsiao
Rhythms Links Inc.
6933 S. Revere Parkway
Englewood, CO 80112



A

The Joint CLEC Proposal for a Performance Assurance Plan

Introduction

The CLECs participating in the Arizona Performance Remedies Collaborative have agreed to present a compromise Performance Assurance Plan. The plan proposal consists of four parts. First, metrics with well-defined business rules, exclusions, formulas, disaggregation levels and standards. Second, a method of evaluating data is prescribed to determine whether or not the service quality provided to CLECs is equal in quality to that provided to Qwest's retail customers or its affiliates. Where a similar retail product exists, the test of service equality is a *statistical test*. For services where no comparable retail analog exists, the test is a *benchmark* that provides CLECs with a reasonable opportunity to compete. Third, after the tests of service equality, the underlying data is evaluated to determine the magnitude of any detected disparity. The indicator of service disparity is the basis for levying remedies.

General Principles

The FCC highlighted in its first approval of a 271 application (Bell Atlantic-New York) general principles for a successful performance incentive plan. The CLECs' compromise plan embraces the FCC's pillars of an effective remedy plan. Such a plan must include:

- Potential liability that provides a meaningful and significant incentive to comply with the designated performance standards;

- Clearly-articulated, pre-determined measures and standards, which encompass a comprehensive range of carrier-to-carrier performance;

- A reasonable structure that is designed to detect and sanction poor

performance when it occurs;

- A self-executing mechanism that does not leave the door open unreasonably to litigation and appeal;

- Reasonable assurances that the reported data is accurate.

In addition to the FCC's well-articulated criteria, the CLECs' compromise plan also reflects the following attributes of an effective remedy plan:

- Incentive payments increase with the severity of the substandard performance and the duration of substandard performance.

- Remedy amounts increase permanently for repeated, chronic failures.

The CLECs' proposed remedy structure adjusts dynamically to market entry strategies, unlike static weighting plans that create bargain prices or free-zones for anticompetitive behavior. The relationship of remedies to pricing and volumes, with per measure additional remedies for chronic and severe failures, ensure that the remedies are sufficient to motivate the ILEC to improve performance rather than ignore the operational issues causing the disparity in performance.

Incentives should be based on the expected financial gain to Qwest-Arizona from impeding competition by providing sub-standard service to CLECs. A review threshold for total remedies should be set no less than the FCC's recommendation of 36 percent of "Net Revenue," or $94 million for Qwest-Arizona (see Attachment A for calculations). In light of the post-271 remedial

actions of the FCC and New York Public Service Commission that raised the total remedies for Bell Atlantic New York poor performance to 44 percent of net revenue, the CLECs recommend an initial review threshold of 44 percent or $114 million per year. When the review threshold is reached, the Commission can chose at that point whether or not to apply additional remedies. The CLECs' plan does not propose a remedy cap because a cap can reduce the effectiveness of the remedy plan with no offsetting benefits. A firm cap makes it easier for the ILEC to judge quickly whether the costs and benefits of not fixing the problem outweigh the remedies at risk. CLECs also oppose per measure or monthly caps that ensure that the full force of even a capped plan are never reached because the available monies do not carry over into the subsequent months.

Step 1.

Defining the Performance Measures

In order for a Performance Assurance Plan to be effective, performance measures that establish the minimum acceptable performance reporting requirements must be in place. In Arizona, the CLECs agreed with Qwest on metrics to be used in the commission's Third-Party OSS test, but metrics still need to be added to be comparable to other ILEC reporting and remedy plans. The metrics also must be adopted by Commission order, subject to periodic review (initially six months and subsequently annual reviews).

Step 2. Testing for Service Equality

Performance levels for 'Parity Measures' are based upon evaluation of modified z-score statistic. A permutation test can be used for small sample sizes between 1 and 30. A critical value that balances Type I (ILEC mistakenly found to be discriminating) and Type II (ILEC mistakenly found not to be discriminating) errors is preferred. But for most metrics, the CLEC plan compromises and uses a critical value with a 95% confidence level (Type I error probability is set a 5% but potential for Type II error is greater to varying degrees depending on sample size.) The modified z-statistic is defined as:

$$z = \frac{\bar{x}_C - \mu_I}{s_I \sqrt{1/n_I + 1/n_C}} \qquad (1)$$

where $\bar{x}$ is the CLEC mean, μ is the ILEC mean, s is the standard deviation of the ILEC's performance data, and n is the sample size for the ILEC (n_I) and CLEC (n_C) performance data. If the z-score exceeds the critical z value [1.04[1] (15% chance of Type I error) or 1.645 (5% chance of Type I error)], then the service provided is disparate. Alternately, if the z value is less than the chosen critical value, then service is determined to be non-discriminatory. Given the critical nature of performance submetrics related to Missed Appointment and Average Interval provisioning metrics, a critical z value of 1.04 is used to detect

[1] Critical values are written here as positive number. Whether the disparity shown to CLECs is a positive or negative number depends on how the modified z score is calculated. For instance, any positive number in the SBC-Southwestern Bell and SBC-Ameritech regions reflects that the CLEC received worse performance than the ILEC. In Verizon territory, any negative modified z score connotes that the CLEC received worse performance than Verizon.

discrimination. A critical value of 1.645 is used to detect discrimination for all other submetrics.[2]

For 'Benchmark Measures,' disparity is detected with a non-statistical comparison of actual CLEC performance to the benchmark standard. For example, if the benchmark service standard is *b* (say, 95% in 3 days) but the service to the CLEC is 78% in 3 days, then the service provided is disparate. Alternately, if the CLEC result is the same or better than the benchmark (say 98% in 3 days), then service is non-discriminatory. Benchmarks generally are set at levels the ILEC can dependably make with some leeway (5% in most cases) for not hitting the benchmark perfectly (100%) for each measured activity. Therefore, no statistical testing of benchmark results is required.

Step 3. Measuring Service Disparity

Service Disparity for Parity Measures

Performance levels for 'Parity Measures' are based upon evaluation of the underlying data. Specifically, the data is portioned into three Zones. **Zone 0** includes all observations that are less than or equal to the mean of the actual data. **Zone 1** includes all observations that are above the mean but less than the value x^*, where x^* is set such that only five percent of the ILEC's observations exceed this value. Thus, **Zone 2** includes the largest five percent of the observations and is bounded by x^* and $2x^*$.[3] Once the Zones are established, the percentage of ILEC observations in each Zone is calculated.

The percent of CLEC observations falling in each Zone as determined from the ILEC's data measures the degree of service disparity between the ILEC and

[2] The New York remedy plan accepted by the FCC begins detecting discrimination when the modified z score hits a critical value of 0.8225, but failures at this level need to be repeated by the same or worse score in the next two months before being counted for remedy assessments. Massachusetts on Sept. 5, 2000 adopted a similar statistical testing methodology, rejecting Verizon's proposal to start detecting disparity with a 1.645 critical value.

[3] An analysis of the actual data may indicate the upper boundary of Zone 2 could be greater or less than $2x^*$. However, the maximum acceptable quality of service should not be set too high. Quality service to consumers should be a priority and long intervals unacceptable, particularly in the case of few CLEC orders.

CLEC. For example, say 6% of the CLEC's observations exceed x^*. Because only 5% of the ILEC's observations exceed x^* (by definition), then Zone 2 disparity equals 1% for this CLEC. If 40% of the ILEC's observations lie between $\bar{x}$ and x^* while 45% of the CLEC's observations lie between those values, then the level of disparity is 5% for Zone 1. Similar to the Texas performance incentive plan accepted by the FCC in approving SBC-TX's 271 application, this simple procedure produces a count of disparate acts that can then be the foundation for the assessment of remedies. Unlike, the Texas plan, however, the methodology described in this paper sizes the remedies to the magnitude of the misses and not just the number of items missed. It also corrects the SBC-TX's plan deficiency of keeping remedies low when sample sizes are small thus discouraging the ramp up of new competitive services (See minimum payment discussion below).

The number of discriminatory occurrences for Zone 1 is defined as

$$D_S^1 = n_c \cdot (Z_I^1 - Z_C^1) \tag{2}$$

where Z indicates the percent of observations in Zone 1 for the ILEC and CLEC. The number of discriminatory occurrences for Zone 2 is defined as

$$D_S^2 = n_c \cdot (Z_I^2 - Z_C^2) \tag{3}$$

where Z indicates the percent of observations in Zone 1 for the ILEC and CLEC. In order to ensure that improvements in service are not penalized, any under-population of Zone 2 offsets over-population of Zone 1. For example, assume the Zone Parity Benchmarks are 25% for Zone 1 and 5% for Zone 2. A review of a CLEC's 100 orders reveals that 30 orders are in Zone 1 whereas none of its observations are in Zone 2. While the ILEC over populated Zone 1 for this CLEC by five observations, it under populated Zone 2 by 5 observations. The ILEC has, in effect, provided better than parity service for these 5 orders. In this scenario, the under-population of Zone 2 offsets fully the over-population of Zone 1 so that no remedy is required.[4]

[4] While the zones generally are based on actual ILEC retail performance, CLECs propose that it may be necessary for the commission to set improved zone performance levels over actual results because the retail service does not meet state end user standards. Such quality benchmark can be established at levels that gradually raise the bar over time giving Qwest an attainable incentive to improve service quality for retail and wholesale end users. Commission staff in the SBC-Ameritech region have recently expressed interest in this "Parity with a Floor" concept as an added incentive for Ameritech to improve severely deficient end-user service quality. The 1996 Telecommunications Act requires that service to CLECs must be "just and

Service Disparity for Benchmark Measures

The indicator of service disparity for measures for which the benchmark test is applied is defined as:

$$D_B = (a - b) \cdot n_C \tag{4}$$

where the variables are defined as above. The indicator of service disparity for the statistical test is a measure of the magnitude of the disparate service between the ILEC and CLEC for the relevant month.

Step 4. The Remedy Structure[6]

reasonable" as well as non-discriminatory. To use retail service quality well below state end-user rules for judging parity is neither just or reasonable nor in the public interest. Providing Consumers choice does not mean choice between equally poor quality options.

If discrimination is severe, the negative effects of the discrimination will not be restricted to the customers receiving the poor performance. Alternately, small deviations from parity may have only customer specific effects. Thus, two types of remedies are required. For small deviations from parity, a small remedy – reflecting the financial gain from a single customer -- should be levied. For larger deviations, larger remedies are more appropriate in that the remedy level will more accurately measure the true impact of the discrimination. In addition, small samples will never produce much in the way of remedies although discrimination against small samples may be a potent impediment to competition.[7] A simple (and conceptually appropriate) solution to this problem is to incorporate a minimum remedy for severe or persistent discrimination against CLECs or measures with small order counts.

Remedy for Ordinary Disparities

Using the indicators of service disparity defined above (D_S and D_B), the per-occurrence element of the CLEC plan is as follows: If the per-occurrence remedy is *f* and the indicator of service disparity is *D*, the per-occurrence remedy is *Df*. As discussed below, the per-occurrence remedy will vary by metric, depending on the service affected by the metric. For statistical measures, the remedy for Zone 2 is twice that of Zone 1, reflecting the lower quality of service in Zone 2 and discouraging the ILEC from providing extremely poor service.

Remedies for Severe and Persistent Disparities

Incorporating into the remedy structure adjustments for severity and duration is accomplished easily. A per-measure remedy, the structure of which is described later in this text, applies when the indicator of service disparity as a percent of total CLEC observations exceeds specific threshold values. A basic "factor approach" can be used. For example, assume the severity threshold is set at 5%. If $D/n_C \geq 0.05$, then the severity remedy *F* is levied along with the disparity remedy *Df* (for a total remedy of *F* + *Df*). If $D/n_C \geq 0.10$, then the severity remedy of 2*F* is levied along with the disparity remedy of *Df*. For increasingly levels of severity, increasing factors are applied. The proposed factors are provided in

[6] The CLEC Joint Plan incorporates elements of performance plans offered by a number of CLECs. The penalty approach discussed here follows closely the Zone Parity proposal of Z-Tel Communications.

[7] Remember that the goal of the remedy is to extract the financial gain from the act of discrimination and that gain may not be highly correlated with sample size (especially for small samples).

Table 1.

Duration is another important dimension of discriminatory behavior. As with severity, a simple factor-based remedy structure can be designed to handle repetitive discrimination. As a theoretical matter, repetitious failure indicates that the remedy level is set too low. Thus, increasing the remedy in response to repetitious discrimination is appropriate. If the severity/duration remedy for severity is invoked for two concurrent months, then the base severity/duration remedy is doubled (a factor of 2). In other words, exceeding the 5 percent threshold two months in a row increases the base severity/duration remedy to 2*F*. If the higher remedy does not produce parity/benchmark quality service, then the remedy will be doubled again (say, to 4*F*). The goal is to set the remedy so that poor performance is not an acceptable option for the ILEC.

While the base severity/duration remedy is reduced back to *F* upon three months of equal service, if the severity/duration remedy is increased above the base level a second time, then the higher severity/duration remedy becomes the base remedy. Obviously, if repetitious disparity is observed, the base remedy is not adequate. Notice that the effective remedy (the one that ensures compliance) will be reached iteratively using the factor approach. The size of the factors and the initial base remedy will determine how much iteration is required to reach the effective remedy.

Table 1. Proposed Remedy Structure

Severity/Duration Remedies					
Severity†	$D/n_C > 0.05$	$D/n_C > 0.10$	$D/n_C > 0.15$	$D/n_C > 0.20$	$D/n_C > 0.25$
Remedy	*F*	2·*F*	3·*F*	4·*F*	5·*F*
Duration‡	1 month	2 month	3 month	4 month	*N* month
Remedy	*F*	2·*F*	3·*F*	4·*F*	*N*·*F*

† Severity Remedies increase to 6·*F* at 1.30·ZPB, and 7·*F* at 1.35·ZPB, and so forth. For some crucial metrics set at above 99% performance benchmarks, such as System Availability, the 0.05 steps for increasing remedies may be too wide apart and 0.025 steps for severity factor increases may be more appropriate.

‡ Duration factors return to 1 after 2 months of compliance. If duration factor exceeds 1 month for a second time, then the increased remedy becomes the base remedy.

Initial Remedy Levels

In theory, the ILEC will choose not to discriminate if its expected financial gain from doing so is extracted by a remedy. Thus, in order to discourage discrimination, the financial gain must be estimated. If the remedy is below the financial gain, discrimination is profit maximizing and (as such) expected. If the

initial remedy levels do not produce a benchmark level of quality, then the remedies are too low and should be increased.[8]

The initial remedy levels are nothing more than "best guesses" of the financial gain from discrimination. Setting aside (for now) state specific calculations, a general framework for the "best guess" of the per-occurrence remedy (*f*) is set forth in the following text. Put simply, the financial gain from discrimination is the retention of profit.[9] A single act of discrimination may allow the ILEC to retain the profit from that particular customer or all customers affected by that act. A single act of discrimination also may reduce the perceived service quality of a CLEC or all CLECs, thus reducing the number of customers switching to a CLEC. The purpose of the disparity remedy is to penalize the per-customer effects of discrimination whereas the per-measure remedy is intended to penalize the far-reaching implications of discriminatory conduct.

Generally, the disparity remedies should be based on the following formula:

$$2f = \frac{\pi \cdot A_{r,t}}{\phi} \tag{5}$$

where π is the annual profit protected by the act of discrimination and A is the present value of a $1 annuity at discount rate r for t years, and ϕ is the probability of detection and punishment.[10] The numerator of Equation (4) is the expected profit from discrimination. The relevant time horizon of the annuity (*t*) should equal to the expected number of years the customer will be retained by the ILEC because of the discriminatory performance.

The disparity remedy can be specified as a percentage of total annual retail

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[8] See In the Matter of Bell Atlantic-New York Authorization Under Section 271 of the Communications Act to Provide In-Region InterLATA Service in the State of New York, Order, FCC 00-92 (March 9, 2000) and Order Directing Market Adjustments And Amending Performance Assurance Plan, New York Public Service Commission Cases 00-C-0008 et al. (March 23, 2000).

[9] This retention of profit is either from retaining customers or avoiding the costs necessary to comply with the requirements of the performance plan.

[10] At a 10 percent discount rate and discounting annually, *A* is $3.79 for 5 years and $6.14 for 10 years. The FCC's "net return" calculation in the NY 271 Order indicates that the average margin (a reasonable measure of π) is about 22 percent. At this margin, annual revenues closely approximate the numerator of Equation (4) for a 5-year time horizon.

revenue for the ILEC service in question by rewriting Equation (4) as

$$f = R\left(\frac{m \cdot A_{r,t}}{\phi}\right) = gR \tag{6}$$

where R is annual retail revenue for the ILEC for the service in question (e.g., POTS, xDSL, etc.), m is the profit margin on that service, and g is the term in parenthesis. The FCC's "Net Return" calculations from the NY 271 Order indicate a profit margin on local service of about 22 percent (although the return varies considerably by ILEC). Using the 22 percent margin, the disparity remedies (f) – expressed as a percentage of annual retail revenues -- are provided in Table 6 for various assumptions regarding t and ϕ. [11] In some cases a direct measure of service revenue may not be available. This fact is not problematic. The goal of using revenue as a basis for remedy levels is to correlate the remedy with the value of the service. Thus, rough guesses concerning the revenue of the service affected are legitimate. Furthermore, because the remedy plan automatically adjusts remedies to the effective level, errors in matching revenues to services are short-lived. Without question, some educated guess work will be required, but educated guess work is better than the generally arbitrary selection of remedy levels such as those in the Texas plan. For measured services that do not appear to have associated revenues, estimates can be made of revenues for products affected by below standard performance for the activity, i.e. System Availability for Resale and UNE-P or a late or missing confirmation for xDSL service. Even though such an allocation of revenue is subjective, the nature of the plan would adjust any remedies set too low until they reach a sufficient level to deter repetition of inferior performance.

Table 2. Disparity Remedies as a Percent of Annual Revenues (Margin = 0.22)

t (Years)	$A_{r,t}$ (r = 10%)	g (ϕ = 1.0)	G (ϕ = 0.75)	g (ϕ = 0.50)
1	0.91	20%	27%	40%
2	1.74	39%	51%	77%
3	2.49	55%	74%	110%
4	3.17	70%	94%	140%
5	3.79	84%	112%	168%

[11] Equations (4) and (5) are based on the assumption that discrimination is an attempt to retain the customer and, therefore, the expected financial gain is based on retention. It seems reasonable to assume that retention is more likely with a Zone 2 failure than a Zone 1 failure. Implicit in the proposed calculation of the Zone 1 penalty is a 50% probability of retention.

10	6.14	136%	181%	272%

The per-occurrence remedy is equal to *g* multiplied by total annual revenue for the service affected by what is being "measured."

The table is interpreted as follows. Assume the annual revenues per residential access line are $500 year. Setting *r*, *t*, and ϕ at 0.10, 1, and 0.75 (respectively), the disparity remedy for measures affecting residential access lines would be $133 (27 percent of $500; numbers in table are rounded) $132. Alternately, setting *r*, *t*, and ϕ at 0.10, 5, and 0.75 (respectively), the disparity remedy for measures affecting switched access lines would be $560.

The revenue factor approach is a convenient method for establishing disparity remedies. Disparity remedies should not be identical across all measures, because a single disparity remedy cannot accurately capture the expected financial gain from discrimination across a wide range of measures covering services of different revenues and profit margins. Because annual revenues are measured easily for most services, establishing different disparity remedies for different measures is not a difficult process.

Not every act of discriminatory service will lead to the retention of a customer by the ILEC. Thus, the *g* values in Table 2 can be scaled by the visibility of each metric to the consumer or potential to block competitive growth. The critical scale is *c* (where $0 \leq c \leq 1$), so the disparity remedy is *ckR*. For example, the Texas plan uses Low, Medium, and High importance. Similarly, the joint CLEC plan can do the same by weighting the revenue-based remedies—i.e. c=.25 for Low, c=.5 for Medium, and c = 1 for High.

Conceptually, the severity/duration remedies should be computed using the formula

$$F = N \cdot \frac{\pi \cdot A_{r,t}}{2\phi} \tag{7}$$

where *N* is the number of customers indirectly affected by the discrimination.[12] Considering only those indirectly affected is appropriate because the profits from those directly affected are captured by the disparity remedy. Equation (7) also can be rewritten for easier calculation. Letting *w* equal the number of customers

[12] Because the per-measure penalty is invoked for both Zone 1 and Zone 2 failures, the Zone 1 penalty is used as a basis for the per-submeasure remedy.

indirectly affected by a single act of discrimination and *n* be the number directly affected, the severity/duration remedy can be written as

$$F = w \cdot Df \tag{7a}$$

where *nf* is the Zone 1 remedy multiplied by the indicator of service disparity. If *w* is equal to 1, for example, the per-measure remedy is equal to the sum of the per-occurrence remedies (*F* = *Df*). Equation (7a) implies that the per-sub measure remedy will vary directly with the total disparity remedy.[13] This relationship is sensible because severe discrimination experienced by a large number of consumers likely will have more widespread effects than severe discrimination against a few. This relationship, however, does not always hold. Discrimination that occurs early in the competitive process can have substantial negative effects despite low order counts.

Minimum Remedy

Because the severity/duration remedy will be small for smaller samples (the *n* will be small), a minimum severity/duration remedy of $5,000 is established that applies to above threshold discrimination (i.e., severe discrimination) unless the value from Equation (7/7a) exceeds this minimum remedy level.

In setting a value for *w* the relevant question is how many consumers are indirectly affected by a single act of discrimination (defined as above benchmark observations). Indirect effects of discrimination include scaling back entry efforts due to poor performance, reputation effects through word-of-mouth, and so forth. An initial value for *w* can be established by evaluating the FCC's remedies for slamming in the long distance industry. Using slamming remedies to establish a first approximation of *w* is sensible given that the FCC and states have found it reasonable to apply these remedies when a telecommunications firm interferes with a customer's decision to choose its telecommunications carrier (a situation all but identical to one dealt with in the performance plans). State legislators, regulators and attorney generals, as well as the FCC, have been increasing the per occurrence remedies for slamming.

In June 2000, the FCC imposed a $3.5 million dollar remedy on long distance carrier for slamming. The remedy was based on 2,900 slamming complaints filed against the company during the year 1999. The per-complaint remedy

[13] In fact, absent the minimum per-submeasure remedy, the calculation described in Equation (7) implies that all remedies are "per-occurrence."

approximately equals $1,200. The average revenue per long distance subscriber is about $300 annually (or $25 per month). So that Table 2 can be used, assume that the long distance margin is 22 percent, which is consistent with estimates of the margin in the long distance business.[14] Further, assume that the typical customer life in the long distance industry is two years and that the probability of detecting and punishing slamming is 75 percent. From Table 2, the expected profit per customer from slamming is $152.73 (0.51 multiplied by $300). Assuming slamming is equivalent to a Zone 2 offense, the $1,200 per-compliant remedy imposed by the FCC implies a value for *w* of 6.86:

$$\$1{,}200 \cong \$152.73 + 6.86 \cdot \$152.73. \tag{8}$$

A number of other proposals for remedies for slamming have *w* values as high as 261, 653, and 981.[15]

Considering the enforcement experience against slamming, two approaches to setting *w* come to mind. First, the value for *w* could be set to 6.86 as calculated above. Alternately, the value of *w* could be set so that some predetermined specification of a severe failure (a slamming equivalent level of service) invokes a remedy of $1,200 per occurrence. For example, assume $A_{0.1,1}$ is the chosen

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[14] For the average long distance bill, see George S. Ford, "An Economic Analysis of the FCC's Notice of Inquiry on Flat Rate Charges in the Long Distance Industry," Table 1, filed in CC Docket No. 99-249, In the Matter of Low-Volume Long-Distance Users, Notice of Inquiry, July 20, 1999 (Average long distance bill = $27.45). Assumed margin is taken from Communications Daily, SNET Said to Have Won 30% of IXC Business in Conn., GTE Gains Nationwide, December 3, 1996.

[15] See, e.g., Governor Pataki Introduces Bill To Halt Telephone Slamming, (June 18, 1997: www.state.ny.us/governor/press/june18_97.html) and Carolyn Hirschman, "Congress to Get Tough on Slammers," *Policy & Regulation* (July 27, 1998; www.internettelephony.com/ archive/7.27.98/PRnews.htm). See *Michigan Telecommunications Act* (Act 295 of 2000 amendments), which establishes a fine of between $20,000 and $30,000 per slamming offense, increasing to up to $50,000 for repeat offenses, and up to $70,000 if the repeated offenses were done knowingly. Also, see General Accounting Office report GAO/RCED-99-193 *State and Federal Actions to Curb Slamming and Cramming* (July 27, 1999).

specification for the annuity value (A) and the probability of detection is 0.75. Also assume that the "slamming equivalent" disparity level is $D = 1.00$ (service intervals to CLEC are twice as long) and the critical scale is 0.50. The estimated value for w using an average of ILEC data on revenue and profit margin per access line is 1. This estimate of w, of course, is highly dependent on a number of assumptions such as those in Tables 1 and 2 and should be computed for the Commission approved set of assumptions.

Tier II Remedies

Assessing Tier II remedies, paid to the State, is identical in structure to the Tier I remedies only that the aggregate (or pool) of CLEC data is used. The pooled CLEC is treated as any other CLEC, but all remedy dollars go directly to the State Treasury or Corporation Commission for administrative costs of the performance plan, including audits. In no case should Qwest benefit by receiving any funding from the state allocation.

Special Cases:

There are many forms of performance disparity that will not be detected by the performance metrics. Without adequate incentive to provide parity service in areas where performance is 'unmeasured,' it is possible for Qwest to impede competition "outside the performance plan" without consequence. Thus, the CLECs recommend that the Commission institute a *Special Cases* portion of the plan which can be used provide financial incentives to Qwest for expedient resolution of performance problems that are not captured by the performance metrics. A *Special Cases* fund sized at 5% of "Net Return" (as computed by the FCC methodology) is recommended. Even in the original New York plan, before the addition of remedies for metrics covering CLEC missing status notifier problems, the PSC designated certain Special Measures that focused large amounts of remedies on a non-per occurrence basis in order to give Verizon an incentive to fix major process and systems issues, such as hot cuts, flow through levels, and late partially electronic confirmations and rejections because of numerous flow-through eligible orders falling to manual intervention. The PSC also retained the right to adjust dollar allocations outside the annual review to refocus remedies on new problem areas.

Audits:

Under the Joint CLEC Plan, Qwest will support an annual comprehensive audit of its reporting procedures and reportable data. Qwest will include all systems, processes and procedures associated with the production and reporting of performance measurement results. This audit will be performed by a third party.

The third party auditor will be jointly selected by Qwest and the CLECs. If the parties cannot agree on the auditor, the auditors selected by each party will jointly determine the auditor. Costs for these annual audits will be borne by Qwest.

The comprehensive Annual Audits will be conducted every twelve (12) months, with the first such audit commencing twelve (12) months after the conclusion of the KPMG OSS Test's metric replication. The audit process will be open to CLECs. (Upon completion, Qwest shall submit its annual comprehensive audit to the Commission and distribute copies to CLECs.

Mini-Audits:

In addition to an annual audit, CLECs would have the right to Mini-Audits of individual performance measures/submeasures 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/sub-measure upon written request (including e-mail), which will include the designation of a CLEC representative to engage in discussions with Qwest 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 Qwest with 5 business days advance written notice. Each CLEC would be limited to auditing three single measures/sub-measures or one domain area (preorder, ordering, provisioning, maintenance or billing) during the audit year. The audit year shall commence with the start of the OSS test (or an Annual Audit. Mini-Audits may be requested for months including and subsequent to the month in which the KPMG OSS or an Annual Audit was initiated. Mini-audits cannot be requested by a CLEC while the OSS third party test or an Annual Audit is being conducted (i.e. before completion).

Mini-Audits will include all systems, processes and procedures associated with the production and reporting of performance measurement results for the audited measure/sub-measure. Mini-Audits will include two (2) months of data, and all parties agree that raw data supporting the performance measurement results will be available monthly to CLECs.

No more than three (3) Mini-Audits will be conducted simultaneously unless more than one CLEC wants the same measure/sub-measure audited at the same time, in which case, Mini-Audits of the same measure/sub-measure shall count as one Mini-Audit for the purposes of this paragraph only.

Mini-Audits will be conducted by a third party auditor, selected by the same method as described above. Qwest will pay for fifty percent (50%) of the costs of the mini-audits. The other fifty percent (50%) of the costs will be divided among the CLEC(s) requesting the mini-audit unless Qwest is found to be "materially" misreporting or misrepresenting data or to have non-compliant procedures, in which case, Qwest would pay for the entire cost of the third party auditor. Parties agree that the issue of whether Qwest is "materially" at fault will be based on the parameters of failure to perform: "materially" at fault means that a reported successful measure changes as a consequence of the audit to a missed measure, or there is a change from an ordinary missed measure to intermediate or severe. Each party to the Mini-Audit shall bear its own internal costs, regardless of which party ultimately bears the costs of the third party auditor.

If, during a Mini-Audit, it is found that for more than 30% of the measures in a major service category Qwest is "materially" at fault (i.e., a reported successful measure changes as a consequence of the audit to a missed measure, or there is a change from an ordinary missed measure to intermediate or severe), the entire service category will be re-audited at Qwest's expense. The major service categories for this purpose are:

- Pre-Ordering/Ordering
- Billing
- Provisioning - POTS and UNE Loop and Port Combinations
- Provisioning - Resale Specials and UNE Loop and Port Combinations
- Provisioning - Unbundled Network Elements

- Maintenance - POTS and UNE Loop and Port Combinations
- Maintenance - Resale Specials and UNE Loop and Port Combinations
- Maintenance - Unbundled Network Elements
- Interconnection Trunks
- Local Number Portability
- Database - 911
- Database - Directory Assistance
- Database - NXX
- Collocation
- Coordinated Conversions

Each Mini-Audit shall be submitted to the CLEC involved and to the Commission as a proprietary document. Qwest will provide notification to all CLECs of any Mini-Audit requested when the request for the audit is made.

Application and Payment:

The remedy plan supplements remedies already included in CLEC interconnection agreements. CLECs also may voluntarily negotiate additions, deletions or changes to the metrics adopted in this collaborative for inclusion in interconnection agreements. Upon completion of this proceeding, the metrics developed and remedies would be in force for all CLECs buying service through tariff or interconnection agreement from Qwest. The metrics and remedies approved by the Commission would not need to be amended into interconnection agreements to be effective. They would also take effect before Qwest's Sec. 271 application for in-region long distance entry is approved to enforce Sec. 251 market opening obligations.

Performance remedy payments will be determined on a monthly basis and will be applied at a submeasure level for each CLEC for each failed submeasure.

Payments to the CLECs will be made by check by the end of the month following the data report (e.g. June data, reported in July, remedies paid by August 31). An invoice will accompany the payment explaining the calculation of each submetric missed (base and any minimum, magnitude or duration remedies would be specified). Payment by check is necessary in order to ensure certain payment and is easier for the CLECs to administer and track. Bill credits are inappropriate because they are not easily traceable back to a specific CLEC account for credit, are less visible and hence less motivating to Qwest executives, and are hard to track when Qwest billing is erratic or subject to numerous billing disputes. Remedies for prior periods also can potentially be greater than the bill for a given month. It is counterintuitive to require CLECs to buy additional services from a vendor to receive full compensation for past inferior performance.

Mitigation Measures and Dispute Resolution:

The use of the Zone calculation of disparities in addition to statistical testing for parity measures provides a reasonable level of deviation from the strict parity requirement. In the Qwest region, a worse than 0 (i.e. a negative number) reflects that the CLEC received poorer performance than Qwest, so even setting the modified z score at –1.04 for Average Interval and Missed Appointment measures provides some mitigation for disparity resulting from monthly sampling of a varying process. No additional mitigation is required, particularly no forgiveness plan such as Qwest's k table that wrongly would forgive (1) statistical failures with modified z scores at or above a 99% confidence level, (2) material failures representing very large means difference, or (3) repeated failures of the same submesure sooner than once in a 24-month period (the period at

which the same submeasure would be likely to repeat a random failure.)

A limited root-cause analysis process will be performed at a CLEC's request by Qwest for chronic performance failures.

Either Qwest or the CLEC may initiate a request for an expedited hearing process to resolve differences associated with performance parity and remedy payment issues; however, payments must continue to the CLECs pending the outcome of such proceeding.

EXAMPLES OF REMEDIES FOR SINGLE MONTH:

n_c =	100	f = $	61.10	FACTOR =	1
				MIN F =	5000

D/n_c	D	Df	F	Total	Avg
5%	5	$ 305	5,000	$ 5,305	1,061.10
10%	10	$ 611	5,000	$ 5,611	561.10
15%	15	$ 916	5,000	$ 5,916	394.43
20%	20	$ 1,222	5,000	$ 6,222	311.10
25%	25	$ 1,527	7,637	$ 9,164	366.58
30%	30	$ 1,833	10,997	$ 12,830	427.68
35%	35	$ 2,138	14,969	$ 17,107	488.77
40%	40	$ 2,444	19,551	$ 21,995	549.87
45%	45	$ 2,749	24,744	$ 27,493	610.97
50%	50	$ 3,055	30,548	$ 33,603	672.06
55%	55	$ 3,360	36,963	$ 40,324	733.16
60%	60	$ 3,666	43,990	$ 47,655	794.26
65%	65	$ 3,971	51,627	$ 55,598	855.35
70%	70	$ 4,277	59,875	$ 64,151	916.45
75%	75	$ 4,582	68,734	$ 73,316	977.54
80%	80	$ 4,888	78,204	$ 83,091	1,038.64
85%	85	$ 5,193	88,285	$ 93,478	1,099.74
90%	90	$ 5,499	98,976	$ 104,475	1,160.83
95%	95	$ 5,804	110,279	$ 116,083	1,221.93
100%	100	$ 6,110	122,193	$ 128,303	1,283.03

n_c = 1000	f = 61.10	FACTOR =	1
		MIN F =	5000

D/n_c	D	Df	F	Total	Per
5%	50	$ 3,055	5,000	$ 8,055	161.10
10%	100	$ 6,110	12,219	$ 18,329	183.29
15%	150	$ 9,164	27,493	$ 36,658	244.39
20%	200	$ 12,219	48,877	$ 61,097	305.48
25%	250	$ 15,274	76,371	$ 91,645	366.58
30%	300	$ 18,329	109,974	$ 128,303	427.68
35%	350	$ 21,384	149,687	$ 171,070	488.77
40%	400	$ 24,439	195,509	$ 219,948	549.87
45%	450	$ 27,493	247,441	$ 274,935	610.97

50%	500	$ 30,548	305,483	$ 336,031	672.06
55%	550	$ 33,603	369,634	$ 403,237	733.16
60%	600	$ 36,658	439,895	$ 476,553	794.26
65%	650	$ 39,713	516,266	$ 555,979	855.35
70%	700	$ 42,768	598,746	$ 641,514	916.45
75%	750	$ 45,822	687,336	$ 733,159	977.54
80%	800	$ 48,877	782,036	$ 830,913	1,038.64
85%	850	$ 51,932	882,845	$ 934,777	1,099.74
90%	900	$ 54,987	989,764	$ 1,044,751	1,160.83
95%	950	$ 58,042	1,102,793	$ 1,160,835	1,221.93
100%	1000	$ 61,097	1,221,931	$ 1,283,028	1,283.03

Attachment A

Data for Arizona from ARMIS 43-01 (1999)						
(Downloaded from FCC Web Site: http://www.fcc.gov/ccb/armis/)						
Year	Company Name	Row_#	Row_Title	Total_b	State_g	Interstate_h
1999	US West	1090	Total Operating Revenues	1,747,477	1,142,559	482,614
1999	US West	1190	Total Operating Expenses	1,278,011	863,867	291,331
1999	US West	1290	Other Operating Income/Losses	-13	366	130
1999	US West	1390	Total Non-operating Items (Exp)	34,467	1,794	-1,173
1999	US West	1490	Total Other Taxes	102,935	68,330	33,229
1999	US West	1590	Federal Income Taxes (Exp)	103,960	57,954	50,405
1999	US West	1915	Net Return	N/A	N/A	108,952
1999	US West	101	Switched Lines (ARMIS 43-08)	2,861,742		
FCC's Net Return Calculation*						
				Net Return	36% Net Return	44% Net Return
	US West		"Net Return"	259,932	93,576	114,370

*Calculations in testimony based on FCC NY 271 Order at ft. 1332: "To arrive at a total "Net Return" figure that reflects both interstate and intrastate portions of revenue derived from local exchange service, we combined line 1915 (the interstate "Net Return" line) with a computed net intrastate return number (total intrastate operating revenues and other operating income, less operating expenses, non-operating items and all taxes)."

B

AZ	DESCRIPTION	Q	CLEC	NY	NY-R	TX	TX-R
MR-5	All Troubles Cleared within 4 Hours	X	X	MR-4	X	N/A	N/A
MR-6	Mean Time to Restore		X	MR-4	X	PM-39	X
						PM-52	X
						PM-67	X
						PM-76	X
MR-7	Repair Repeat Report Rate	X	X	MR-5	X	PM-41	X
						PM-53	X
						PM-69	X
MR-8	Trouble Rate		X	MR-2	X	PM-37	
						PM-37.1	X
						PM-54	X
						PM-65	
						PM-65.1	X
MR-9	Repair Appointments Met		X	MR-3	X	PM-38	X
						PM-66	X
MR-10	Customer-Related Trouble Reports			MR-3		N/A	N/A
BILLING							
BI-1	Time to Provide Recorded Usage Records	X	X	BI-1	X	PM-19	
BI-2	Invoices Delivered within 10 Days	X	X	BI-2	X	PM-18	X
BI-3	Billing Accuracy - Adjustments for Errors	X	X	BI-3		PM-14	
BI-4	Billing Completeness		X	N/A	N/A	PM-17	X
DATABASE UPDATES							
DB-1	Time to Update Databases			N/A	N/A	PM-102	X
						PM-104	X
DB-2	Accurate Database Updates		X	N/A	N/A	PM-103	X
DIRECTORY ASSISTANCE							
DA-1	Speed of Answer - Directory Assistance		X	OD-1	X	PM-82	X

AZ	DESCRIPTION	Q	CLEC	NY	NY-R	TX	TX-R
DA-2	Calls Answered within Ten Seconds - Directory Assistance			OD-1	X	N/A	N/A
OPERATOR SERVICES							
OS-1	Speed of Answer - Operator Services		X	OD-1	X	PM-80	X
OS-2	Calls Answered within Ten Seconds - Operator Services			N/A	N/A	N/A	N/A
NETWORK PERFORMANCE							
NI-1	Trunk Blocking	X	X	NP-1	X	PM-70	X
						PM-71	X
NP-1	NXX Code Activation	X	X	N/A	N/A	PM-117	X
COLLOCATION							
CP-1	Installation Interval	X	X	NP-2	X	N/A	N/A
CP-2	Installation Commitments Met	X	X	NP-2	X	PM-107	X
CP-3	Feasibility Study Interval		X	N/A	N/A	N/A	N/A
CP-4	Feasibility Study Commitments Met		X	NP-2	N/A	PM-109	X
CP-5	Quote Interval		X	N/A	N/A	N/A	N/A
CP-6	Quote Commitments Met		X	NP-2	X	N/A	N/A

* Service Order Posting in TX is similar to Billing Completion Notification Timeliness

** Have consensus and are awaiting approval from the commission

***Includes non-maintenance help desks as well.
Included in ROC PID

AZ	DESCRIPTION	Q	CLEC	NY	NY-R	TX	TX-R
ELECTRONIC GATEWAY AVAILABILITY							
GA-1	Gateway Availability - IMA GUI	X	X	PO-2	X	PM-4	
GA-2	Gateway Availability - IMA EDI	X	X	PO-2	X	PM-4	X
GA-3	Gateway Availability - EB-TA			MR-1	X		
GA-4	System Availability - Exact						
ORDERING AND PROVISIONING							
PO-1	Pre-Order/Order Response Times	X	X	PO-1	X	PM-1	
PO-2	Electronic Flow-Through		X	OR-5	X	PM-13	X
						PM-13.1	
PO-3	LSR Rejection Notice Interval		X	OR-2	X	PM-11	
						PM-11.1	
PO-4	LSRs Rejected		X	OR-3		PM-9	
PO-5	FOCs On Time (%)	X	X	OR-1	X	PM-5	X
						PM-5.2	X
PO-6	Work Completion Notification Interval		X	OR-4	X	PM-7.1	X
PO-7	Billing Completion Notification Timeliness		X	OR-4	X	*PM-17.1	
PO-8	Jeopardy Notice Interval		X	N/A	N/A	PM-11.2	
PO-9	Timely Jeopardy Notices			PR-7		PM-10.2	
po-10	LSR Accountability		X	N/A	N/A	N/A	N/A
PO-15	Number of Due Date Changes per Order		X	N/A	N/A	N/A	N/A
ORDERING AND PROVISIONING							
OP-1	Avg speed of answer			PO-3		NA	NA
OP-2	Calls Answered within Twenty Seconds - Interconnect Provisioning Center	X	X	PO-3	X	PM-22	X
						PM-25	X

AZ	DESCRIPTION	Q	CLEC	NY	NY-R	TX	TX-R
OP-3	Installation Commitments Met	X	X	PR-4	X	PM-29	X
						PM-45	X
						PM-58	X
OP-4	Installation Interval	X	X	PR-2	X	PM-27	X
						PM-43	X
						PM-55	X
OP-5	New Service Installation Quality	X	X	PR-6	X	PM-35	X
						PM-46	X
						PM-59	X
OP-6a	Delayed Days		X	PR-4	X	PM-32	X
						PM-49	X
						PM-62	X
OP-6b	Delayed - Facilities			PR-5	X	PM-31	
						PM-48	
						PM-61	
OP-7	Coordinated "Hot Cut" Interval - UBL			PR-9	X	PM-114.1	
						PM-55.2	
OP-8	Number Portability Timeliness	X	X	PR-4	X	PM-97	X
OP-13	Coordinated Cuts On Time - UBL	X	X	PR-9	X	PM-114	X
						56.1	X
OP-15	Interval for Pending Orders Delayed Past Due Date			**PR-8		PM-73.1	X
MAINTENANCE AND REPAIR							
MR-1	Avg speed of answer			PO-3		N/A	N/A
MR-2	Calls Answered within Twenty Seconds - Interconnect Repair Center	X	X	***PO-3	X	PM-22	X
						PM-25	X
MR-3	Out of Service Cleared within 24 Hours	X	X	MR-4	X	PM-40	X
MR-4	All Troubles Cleared within 48 Hours		X	N/A	N/A	N/A	N/A

C

DESCRIPTION	NY	NY-R	TX	TX-R
Avg. Response Time - Rejected Query	PO1-07	X		
Response Time - % Timeouts	PO1-08	X		
Parsed CSR	PO1-09	X		
Parsed CSR - CLEC Total	PO1-10			
Total OSS Availability	PO2-01			
Non-Primetime OSS Availability	PO2-03			
% Change Management Notices Sent On Time	PO4-01	X	PM123	
Change Management Notice Delay 1-7 Days	PO4-02			
Change Management Notice 8+ Days	PO4-03	X		
Interface Outage Notification	PO5-01	X		
Software Validation	PO6-01	X		
% Software Problem Resolution Timeliness	PO7-01	X	PM124	X
Delay Hours Software Resolution - Change - Transactions Failed, No Work Around	PO7-02	X		
Delay Hours Software Resolution - Change - Transactions Failed, Work Around	PO7-03			
Delay Hours - Failed/Rejected Test Deck Transactions, No Work Around	PO7-04			
Manual Loop Qualification - Avg. Response Time	PO8-01	X	PM1.1	X
Engineering Record Response Time	PO8-02	X		
% Missing Notifier Not Cleared In 3 Business Days	PO9-02	X		
Avg. FOC Interval Flow Through	OR1-01			
Avg. FOC Interval < 10 lines - electronic/manual	OR1-03			
% FOCs On Time < 10 lines - electronic/manual	OR1-04	X		
Avg. FOC Interval > = 10 lines - electronic/manual	OR1-05			
% FOCs On Time > = 10 lines - electronic/manual	OR1-06	X		
Avg. FOC Interval < 10 lines - manual	OR1-07			
% FOCs On Time < 10 lines - manual	OR1-08		PM5	X
Avg. FOC Interval > = 10 lines - manual	OR1-09			
% FOCs On Time > = 10 lines - manual	OR1-10		PM5	X
Avg. Trunk FOC Interval	OR1-11			
% On Time Design Layout Record	OR1-13	X		
% On Time Response - In Bound, Augment Trunks	OR1-19			
Avg. Reject Interval Flow Through	OR2-01			
% On Time Reject Flow Through	OR2-02	X		
Avg. Reject Interval < 10 lines - electronic/manual	OR2-03			
% Reject Interval < 10 lines - electronic/manual	OR2-04	X		
Avg. Reject Interval > = 10 lines - electronic/manual	OR2-05			
% Reject Interval > = 10 lines - electronic/manual	OR2-06	X		
Avg. Reject Interval < 10 lines - manual	OR2-07			
% Reject Interval < 10 lines - manual	OR2-08			
Avg. Reject Interval > = 10 lines - manual	OR2-09			
% Rejects On Time > = 10 lines - manual	OR2-10			
Avg. Trunk Reject Interval	OR2-11			
% On Time Trunk Rejects	OR2-12	X		
% Resubmitted PONs Rejected	OR3-02	X		
Completion Notice - Avg. Response Time	OR4-01			
Completion Notice - % On Time	OR4-02	X		
% Orders Excluded From % On Time Measurement	OR4-03			
Avg. Duration - Work Completion (SOP) to Bill Completion	OR4-06			
% SOP to Bill Completion > = 5 Business Days	OR4-07			
% SOP to Bill Completion > 1 Business Day	OR4-08			
% Flow Through - Simple Orders	OR5-02			
% Accuracy - Orders	OR6-01	X	PM12	X
% Accuracy - Opportunities	OR6-02			
% Accuracy - LSRC (Interim Measure)	OR6-03			
% Accuracy - LSRC (Long Term Measure)	OR6-04			
% Orders Confirmed/Rejected In 3 Business Days	OR7-01	X		
Avg. Interval Offered - Total No Dispatch	PR1-01			
Avg. Interval Offered - Total Dispatch	PR1-02			
Avg. Interval Offered - Dispatch (1-5 lines)	PR1-03			
Avg. Interval Offered - Dispatch (6-9 lines)	PR1-04			
Avg. Interval Offered - Dispatch (> = 10 lines)	PR1-05			
Avg. Interval Offered - DSO	PR1-06			
Avg. Interval Offered - DS1	PR1-07			
Avg. Interval Offered - DS3	PR1-08			

Avg. Interval Offered - Total	PR1-09					
Avg. Interval Offered - Disconnects - No Dispatch	PR1-10					
Avg. Interval Offered - Disconnects - Dispatch	PR1-11					
Avg. Interval Completed - Dispatch (1-5 lines)	PR2-03					
Avg. Interval Completed - Dispatch (6-9 lines)	PR2-04					
Avg. Interval Completed - Dispatch (> = 10 lines)	PR2-05					
Avg. Interval Completed - Disconects - No Dispatch	PR2-10					
Avg. Interval Completed - Disconects - Dispatch	PR2-11					
Avg. Interval Completed - 2 wire xDSL (DD-2 Test & Serial Number)	PR2-13					
Avg. Interval Completed - 2 Wire xDSl (DD Test Total)	PR2-14					
Avg. Interval Completed - 2 wire xDSL (No DD-2 Test & Serial Number)	PR2-15					
Avg. Interval Completed - 2 wire xDSL (No DD-2 Test & 800# Provided)	PR2-16					
Avg. Interval Completed - 2 wire xDSL (No DD-2 Test & No 800# Provided)	PR2-17					
% Completed in 1 Day (1-5 lines - No Dispatch)	PR3-01					
% Completed in 2 Days (1-5 lines - No Dispatch)	PR3-02					
% Completed in 3 Days (1-5 lines - No Dispatch)	PR3-03					
% Completed in 1 Day (1-5 lines - Dispatch)	PR3-04					
% Completed in 2 Days (1-5 lines - Dispatch)	PR3-05					
% Completed in 3 Days (1-5 lines - Dispatch)	PR3-06					
% Completed in 4 Days (1-5 lines - Total)	PR3-07					
% Completed in 5 Days (1-5 lines - No Dispatch)	PR3-08	X				
% Completed in 5 Days (1-5 lines - Dispatch)	PR3-09	X				
% Completed in 6 Days (1-5 lines - Total) (xDSL)	PR3-10	X				
% Missed Appointment - Customer	PR4-03					
% On Time Performance - LNP Only	PR4-07	X				
% Missed Appointment - Customer - Due to late Order Confirmation	PR4-08					
% Completed On Time - 2 wire xDSL (DD-2 Test & Serial Number)	PR4-14	X				
% Completed On Time - 2 wire xDSL (DD-2 Test Total)	PR4-15	X				
% Completed On Time - 2 wire xDSL (No DD-2 Test & Serial Number)	PR4-16	X				
% Completed On Time - 2 wire xDSL (No DD-2 Test & 800 # Provided)	PR4-17	X				
% Completed On Time - 2 wire xDSL (No DD-2 Test & No 800 # Provided)	PR4-18	X				
% Missed Appointment - BA - Facilities	PR5-01	X				
% Orders Held for Facilities > 15 Days	PR5-02	X		PM30, PM63		
% Orders Held for Facilities > 30 Days	PR5-03	X		PM30		
% Installation Troubles Reported within 7 Days	PR6-02	X				
% Installation Troubles Reported within 30 Days - FOK/TOK/CPE	PR6-03					
% Early Cuts - Lines	PR9-02					
% Early Cuts - Orders	PR9-03					
% Defective Cuts - Lines	PR9-04					
% Defective Cuts - Orders	PR9-05					
% Late Cuts - Lines	PR9-06					
% Late Cuts - Orders	PR9-07					
Avg. Duration of Svc. Interruption	PR9-08					
% Supplemented or Cancelled Orders at BA Request	PR9-09					
Avg. Response Time to Create Trouble Report	MR1-01	X				
Avg. Response Time - Status Trouble	MR1-02					
Avg. Response Time - Modify Trouble	MR1-03	X				
Avg. Response Time - Request Cancellation	MR1-04	X				
Avg. Response Time - Trouble Report History (by TN/Circuit)	MR1-05					
Avg. Response Time - Test Trouble (POTS Only)	MR1-06	X				
Network Trouble Report - Total	MR2-01					
Network Trouble Report Rate - Loop	MR2-02	X				
Network Trouble Report Rate - Central Office	MR2-03	X				
% Subsequent Reports	MR2-04					
% CPE/TOK/FOK Trouble Report Rate	MR2-05					
% Missed Repair Appointment - Central Office	MR3-02	X				
% Missed Repair Appointment - No Double Dispatch	MR3-04					
% Missed Repair Appointment - Double Dispatch	MR3-05					

MTTR - Central Office Trouble	MR4-03	X			
% Out of Service > 2 Hours	MR4-05				
% Out of Service > 4 Hours	MR4-06				
% Out of Service > 12 Hours	MR4-07				
MTTR - No Double Dispatch	MR4-09				
MTTR - Double Dispatch	MR4-10				
% Final Truck Groups Exceeding Blocking Standard - (No Exceptions)	NP1-02				
Number Final Truck Groups Exceeding Blocking Standard - 2 Months	NP1-03				
Number Final Truck Groups Exceeding Blocking Standard - 3 Months	NP1-04	X			
Avg. Delay Days - Physical Collocation	NP2-07	X			
Avg. Delay Days - Virtual Collocation	NP2-08	X			
% DUF in 3 Business Days	BI1-01				
% DUF in 5 Business Days	BI1-03				
% DUF in 8 Business Days	BI1-04				
% Billed Adjustments - Number of Adjustments	BI3-02				
% Response received within "X" Seconds	n/a	n/a		pm-2	x
% FOCs for xDSL/Linesharing Returned in "X" Hours	or-1	x		pm-5.1	x
Average Time to Return FOC	or-1	x		pm-6	
Average Time to Return DSL FOC	or-1	x		pm-6.1	
% Mechanized Rejects Returned within 1 Hour of EDI/LSR	or-2			pm-10	x
% Manual Rejects Returned within "X" hours	or-2			pm-10.1	x
Average Installation Interval - DSL	pr-2	x		pm-55.1	x
Manual Loop Make Up Response Time	po-8	x		pm-1.1	x
Usage Accuracy				PM16	X
Average Delay Days Missed Due Dates				PM108	X
Poles, Ducts, Conduit and Rights of Way				PM105	X
% Busy in the Local Service Center				PM23	X
% Busy in the Local Operations Center				PM26	X
Trunk Blocking Exlusion				PM70.1	
Distribution of Common Transport Trunk Groups >2%				PM72	
% of Installations completed within the CRDD				PM73	X
Avg Delay Days (CRDD) for Missed Due Dates - Interconnection Trunks				PM74	X
Avg Trunk Restoration Interval				PM76	X
Avg Trunk Restoration Interval for Service Affecting Trunk Groups				PM77	X
% LNP Due Dates within Industry Guide Lines				PM91	
% of time the old service provider releases subscription prior to the expiration of the second 9 hour timer				PM92	
% of customer account restructured prior to LNP Due Dates				PM93	X
% premature disconnects for stand alone LNP orders				PM96	X
% of time SWBT applies the 10-digit trigger prior to the LNP order due date				PM97	X
% LNP I-Reports in 10 days				PM98	X
Avg delayed days for SWBT Missed Due Dates (LNP)				PM99	X
Average Time of out of service LNP conversions				PM100	
% out of Service <60 minutes				PM101	X
Average Time to unlock 911 record				PM104.1	
% of updates completed into DA database within 72 hrs for facility based CLECs				PM110	X
Average Update Interval for DA database for facility based CLECs				PM111	X
% of DA database accuracy for manual updates				PM112	X
% of electronic updates that flow through the DSR process with out manual intervention				PM113	X
% of SWBT caused delayed Coordinated Cutovers				PM15	
MTTR - Provisioning Trouble Report				PM115.1	
Average Delayed Days for NXX Loading and Testing				PM118	X
% of BFR process within 45 Business Days				PM120	
% of Quotes Provided for Authorized BFRs within 30 Business Days				PM121	X

% Provisioning Accuracy for Non-Flow Through Orders				PM12.1	X	
% Completed on Customer Requested Due Date				PM28, PM44, PM 56	X	

D

Disaggregation Qwest for Remedy Plan
CHANGE CONTROL (By TYPE-Emergency, Regulatory, Industry Forum, CLEC initiated, Qwest initiated).
GATEWAY AVAILABILITY
IMA-GUI
– IMA-EDI
Each Interface Used by CLECs
PRE-ORDER/ORDERS
Pre-Order/Order Response Time
Each Query Type for Each Interface
Time Outs
LSR/ASR Rejection Notice Interval
Volume Types/Full, Partial Electronic, Manual Separately
2-WIRE DSL Loops
4-WIRE DSL Loops
Trunks (Volume Types—DS1, DS3, Projects separately)
Firm Order Confirmations On Time
Volume Types/Full, Partial Electronic, Manual Separately
2-WIRE DSL Loops
4-WIRE DSL Loops
Trunks (Volume Types—DS1, DS3, Projects separately)
Billing Completion Notification Timeliness
Jeopardy Notice Interval
EELs
UNE-Loops
UNE-P -Dispatch
Resale -Dispatch
ORDERING AND PROVISIONING
Resale POTS
Resale Centrex
Resale Specials (DS1 and DS3)
UNE-P
2-WIRE xDSL (with and without line sharing, with and without conditioning)
Other 2-Wire Digital
4-WIRE xDSL
4 WIRE Other Digital
SPECIALS (DS1, DS3, PROJECTS)
TRUNKS (DS1, DS3, PROJECTS)
EELs (IOF and LOOP)
Hot Cuts (Volume Types)
Stand-Alone LNP
Calls Answered within Twenty Seconds
Maintenance Center
Ordering Center
Each other Help Desk (hot cuts, systems, etc.)
MAINTENANCE AND REPAIR
UNE-P (BUSINESS AND RESIDENTIAL)
Resale POTS (BUSINESS AND RESIDENTIAL)

Resale Specials
UNE LOOP (Volume Type)
UNE Specials (DS0, DS1, DS3, Projects0
TRUNKS (DS1, DS3, Projects.
BILLING
DUF and CABS for Accuracy/Completeness
By Transmission Type (ELECTRONIC, TAPE, ETC. FOR TIMELINESS)
NETWORK PERFORMANCE
Trunk Blocking
By Design Threshold (0.5%, 1%, 2%, OS, 911)
COLLOCATION
Physical
Virtual
Cageless
Adjacent
Remote
Augments

New product types for UNE to be added once one or more CLECs order

E

August 28, 2000

Ms. Sydney Margul, *by facsimile, U.S. mail & email*
Qwest Corporation
1801 California St.
Denver, CO 80202

Re: Feedback from CLEC Forum Regarding CICMP

Dear Ms. Margul:

As indicated at recent Co-Provider Industry Change Management Process ("CICMP") meetings, the Competitive Local Exchange Carrier ("CLEC") Forum believes it would be helpful at this time to communicate in writing several comments on the CICMP. The CLEC Forum has authorized me to write on its behalf to Qwest Corporation, f/k/a U S WEST Communications, Inc. ("Qwest").

CLECs have long requested a change management process and welcome the opportunity to participate in CICMP meetings. CLECs appreciate the time and efforts of Qwest in hosting the CICMP meetings and listening to and considering CLEC requests.

CLECs believe, however, that the CICMP process to date is less effective than it could be if the process was worked faster, particularly for emergency issues, and if Qwest demonstrated more flexibility. CLECs are disappointed, for example, that a number of Change Requests previously requested will not be implemented until at least Release 7.0. Also, Qwest delayed implementation of some of the Change Requests due to claimed regulatory reasons, but those reasons disappeared once Qwest needed to move forward on them to obtain approval of its merger with U S WEST. It is unclear when and whether those changes are actually going to be implemented. The process needs to incorporate more ability to expedite matters that CLECs or Qwest identify as important. It should be driven less by Qwest and its regulatory needs and more by CLEC business needs.

Currently, months can and do go by as CLECs must first formalize a Change Request (even though the same request may have been raised repeatedly in other arenas, such as regulatory processes or with a Qwest account manager), wait a month or more to get it on the agenda for discussion as to the nature of the request, wait a month or more to

hear Qwest's response, possibly wait a month or more to get an indication of the priority that will be given to the request (*i.e.*, a "t-shirt size"), *etc.* Months are lost through this cumbersome process. At the end of those months, if Qwest decides that it will not honor a request, Qwest designates the issue as "closed," even though CLECs are not satisfied with the response. (At a minimum, these issues should be designated as "unresolved" or "disputed.") The escalation process has been poorly communicated and may still result in closure of an issue, despite continued CLEC need for the requested item. Particularly for issues that CLECs or Qwest identify as important or urgent, a more streamlined, expedited process is needed.

Flexibility is needed not only to consider important issues earlier but also with respect to structure and scheduling. At a recent meeting, for example, Qwest's insistence that it make a presentation requested by CLECs as part of the CLEC forum, rather than as part of the CICMP (as requested by CLECs), suggested that Qwest construes narrowly the purpose and structure of the CICMP. In contrast, in regulatory proceedings, Qwest representatives often suggest that a wide range of issues are being handled in the CICMP. When an OSS or related issue arises, the CICMP should be available to deal with that issue, even if doing so does not fit into the existing rigid structure of the CICMP. That structure is exemplified by the materials in the CICMP "Distribution Package for 7/19/00." If an issue does not fit into one of the forms or matrixes represented by the materials in the package, it is difficult to get it addressed in the CICMP.

CLECs also would like more information about upcoming releases to be an ongoing part of the CICMP meetings (and not just by request, as for the last presentation). If Qwest is already working on a change, the CLECs need to know about it and prepare for it. Also, none of the parties should have to expend resources on the lengthy change request process, if those changes are already in the process internally at Qwest. Qwest needs to communicate these issues to CLECs so they also have that information. Additionally, CLECs need a better understanding of the internal organization and prioritization that takes place at Qwest with respect to changes requested by CLECs and those instituted by Qwest itself. We understand, for example, that Qwest is or was working on its billing architecture. CLECs need to know the nature and status of this project.

CLECs also asked that, when scheduling the meetings, consideration be given to the scheduling of meetings for the Regional Oversight Committee ("ROC"), due to overlap in participants. CLECs appreciate Qwest's responsiveness in agreeing to accommodate this request. CLECs also appreciate Qwest's responsiveness to their request that ROC updates take place during the CICMP meetings. The first update at the last CICMP meeting provided a helpful introduction to the ROC process. Also, CLECs need to know how ROC activities affect the change management process. For example, if Qwest is ultimately mandated to make changes to its systems as a result of the ROC and related proceedings, CLECS need to know how they relate to the change management process, how CLECs will be notified of changes, and how the changes will be prioritized.

CLECs have requested more coordination and communication between the CICMP and ROC processes. Some of the CLECs are unfamiliar with the ROC process, and many have limited resources for participation in both processes. Issues raised in the ROC process, however, will likely affect issues being discussed in the CICMP. By separate letter, the CLEC Forum is contacting the ROC to request more communication and coordination between the two processes. Changes being discussed in the ROC must be implemented, and the CICMP participants should be aware of the nature of those changes and plans to implement them. CLECs have some concern that ROC participants currently believe that the CICMP forum is more comprehensive than it is currently.

Perhaps we could discuss formulation of a sub-group or task force to work on CICMP process issues and recommend changes, now that several meetings have been held and the parties have had more exposure to the existing process. CLEC Forum members look forward to working with you on these issues.

Sincerely,

F. Lynne Powers,
Vice President,
Customer Operations

cc: Denise Anderson, Regional Oversight Committee Project Manager

F

August 28, 2000

Denise Anderson, *by facsimile, U.S. mail & email*
Regional Oversight Committee ("ROC") Project Manager
MTG Consulting
1309 Lake Washington Blvd. So.
Seattle, WA 98144-4017

Re: Co-Provider Industry Change Management Process

Dear Ms. Anderson:

Competitive Local Exchange Carriers ("CLECs") have formed a group, known as the "CLEC Forum," which has held meetings recently to discuss common experiences of CLECs with respect to Operations Support Systems ("OSS") issues and the change management process. The meetings are generally held immediately preceding meetings of the Co-Provider Industry Change Management Process ("CICMP"). Participating CLECs agreed to send a letter to Qwest Corporation, f/k/a U S WEST Communications, Inc. ("Qwest"), to provide feedback with respect to the CICMP process. A copy of that letter is enclosed.

As indicated in the enclosed letter, members of the CLEC Forum are concerned that the CICMP remains driven by Qwest's needs, rather than CLEC business needs, and that ROC participants may believe that the CICMP forum is more comprehensive and effective than it is currently. Members of the CLEC Forum have asked Qwest to assist in facilitating better coordination and communication between the CICMP and ROC processes. They also believe that it was important to share their concerns and request with ROC participants involved in third party testing. Anything that can be done to improve the effectiveness of CICMP, as well as coordination and communication between the ROC and CICMP, would be appreciated.

Please contact me if you would like to discuss the issues addressed in the enclosed letter.

Sincerely,

F. Lynne Powers,
Vice President,
Customer Operations

cc: Ms. Sydney Margul, Qwest