QWEST, CONSUMERS AND LONG DISTANCE ENTRY: A DISCUSSION PAPER

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also estimates that CLECs have gained 10.2 percent of local exchange *revenues* at the end of 1Q01, a larger proportion than the access lines gained. This is, of course, consistent with the expectation that CLECs would pursue the most profitable customers first. CSFB does not disaggregate its CLEC market share estimates by region or state.

A third source of data comes from the testimony of Qwest in the §271 workshops. Basing its estimates on the number of unbundled loops in service, the number of resold lines and the number of telephone numbers ported, Qwest estimates that CLECs had captured 10.0 percent of lines regionwide by May 31, 2001. This compares to the FCC's estimate of 8.4 percent made five months earlier.

Finally, regulatory commissions develop information about CLEC market share. In a decision granting Qwest pricing flexibility for large business customers in four major cities in Washington, the Washington Utilities and Transportation Commission accepted evidence on market share derived from a survey conducted by its staff. The survey showed that CLECs had gained market share in the business market ranging from 36 percent to 45 percent in Bellevue, Seattle, Spokane and Vancouver, as of February 2000. A second group of cities (for which flexibility was not granted) exhibited CLEC business market shares ranging from 14 percent in Kent to 19 percent in Tacoma to 34 percent in Issaquah.[32]

The staff of the Oregon Public Utility Commission conducted a survey of CLEC activities in Oregon as of January 1, 2000. Although the information is now older than the other studies quoted here, the Oregon staff found that CLECs had captured about 17.6 percent of the access lines in the Oregon business market, but only 0.3 percent of residential lines. This low percentage for residential customers is consistent with the FCC's *Local Competition Report* that showed, one year later, the estimated residential and small business market share of Oregon CLECs was 2.2 percent.

CLEC Entry in Qwest Residential Markets

Of the measures commonly used by policy makers to measure the success of the 1996 Telecommunications Act, one of the most common is whether competition has reached the residential market. On one hand, it is reasonable to judge the Act in this fashion since competition for residential customers is highly desirable and was a prominent part of the sales pitch for the new law in 1995. On the other hand, an undue focus on the residential market may obscure the substantial gains by other retail customers (small and large businesses), and also the gains in investment in infrastructure and wholesale services that were undoubtedly stimulated by the 1996 Act.

This being said, it is important that policy makers consider how likely it is that residential consumers in the Qwest region will see rivalry among local carriers competing to offer

local service. The purpose of this section is to examine the system of retail residential rates and the schedule of Qwest's UNE prices and then estimate the relative likelihood that CLECs will be able to compete effectively with Qwest using the platform of those unbundled elements.

But first, a caveat. The 1996 Act envisioned that competitors would enter the local market through either i) resale, ii) facilities-based competition or iii) the use of the incumbent's network elements, possibly in conjunction with facilities owned by the new entrant. The analysis in this section looks only at competitive entry using the combination of unbundled loops, switching and transport—the so-called "UNE-Platform" or "UNE-P."

This does not mean that competitors in the Qwest region will enter the residential market exclusively through UNE-P. Indeed, much of today's competition for business customers in the Qwest region comes from carriers that own most or all of the required facilities. Similarly, some of the existing competitive options for residential customers come from carriers (e.g., AT&T, Cox and other cable companies) that use their own facilities exclusively. Finally, resale of Qwest services will be an option for other carriers. There is no reason to think this multi-mode character of local entry won't continue in the region. For that reason, it is important that policy makers ensure that the prices of resold services, interconnection, collocation and UNEs are all correct in relative as well as absolute terms to avoid discrimination among CLECs on the basis of the mode of competitive entry.

UNE-P based entry in the residential market is examined in this report for two reasons. First, based on the experience in New York and Texas, UNE-P has become the predominant means of entering residential local markets. The NYPSC estimates that 61 percent of the CLECs' residential customers are served by UNE-P in New York. It is likely that, at least for the initial wave of mass-market entry for residential customers in the Qwest region, UNE-P will be the predominant mode of entry.

Second, it is much easier to estimate the costs of UNE-P entry as compared to the same task for facilities-based entry. The ingredients are tariff rates, and assumptions are limited to the number of minutes of use per customer and whether (in a few states) the CLEC purchases optional switch feature packages. On the other hand, costs of facilities-based entry will vary widely depending on scale, technology, and the extent to which facilities are shared with other products (e.g., cable services). In particular, the prices of these inputs are not posted in tariffs.

CLEC Entry Using the UNE-Platform

This section presents an analysis of the costs and revenues that a CLEC might encounter when serving a residential customer in each of the Qwest region states, using the UNE platform. The details of the analysis are contained in **Appendix B.**

The analysis is conducted in four steps: For each of the fourteen states in the Qwest region, 1) the costs of the UNE platform are estimated for a zone or combination of zones representing at least 50 percent of the residential access lines in a state; 2) the prices for basic single-party residential service (including EAS increments and the federal subscriber line charge) are compiled; 3) additional revenues (from switched access, intraLATA toll and calling features) are estimated; and 4) gross margins are calculated for four scenarios: i) no additional revenues; and ii) low, iii) medium and iv) high levels of additional revenues. The gross margins (i.e., before a CLEC's internal costs) are expressed both in dollars and as a percentage of the cost of UNE-P.

The details of the model are contained in Appendix B, on pages 77 and 78. A summary of the margins, in dollars and in percentages, is found in **Table 6** below.

Before turning to the results, here are some caveats about the analysis that should be kept in mind:

- The model estimates gross margins that CLEC might realize (both positive and negative) and does not attempt to quantify a CLEC's internal costs. CLEC-side costs such as customer acquisition, billing and customer care are likely to be significant and will depend on the CLEC's size, its strategy for entering the local market and its own overhead costs. Such costs must obviously be covered by the gross margin identified in this model in order for a CLEC to have a business case for serving residential customers.
- On the cost side, the model contains assumptions about minutes of local switching, transport and toll. While any assumptions are subject to debate, the *relative* results of the model (comparing one state to others) are not greatly affected by varying these assumptions, since they are applied uniformly across the fourteen states.
- The model's estimates of revenues from features, access and toll are designed to coincide with regionwide averages where disaggregated data were not available. If replaced by state-specific data, the gross margins for some states would increase, while others would decrease in offsetting fashion.
- UNE loop prices used in the model are a weighted average of one or more density zones, chosen so that a large percentage of the access lines are covered in the analysis. In Colorado, for example, Zone 1 coincides with the Base Rate Area and covers 93 percent of the state's access lines. In Iowa, the loop price used is

the weighted average of loop prices in density Zones 1 and 2, covering 89 percent of the Qwest loops in that state.

- New entrants in the residential market may be expected initially to target customers with such characteristics as high usage of additional features and larger toll calling volumes, by offering bundles of services and package pricing. The model addresses this issue by providing four scenarios, profiling customers with varying use of these features.
- The model uses tariff rates for basic local service and does not capture revenue for zone and mileage charged by Qwest. Extended Area Service (EAS) revenues are included (e.g., in Utah and Oregon) when they are either not optional or produce a local calling area serving a community of interest comparable to the local calling area that a CLEC would be able to offer.
- A CLEC serving a customer with UNE-P can use the facilities to provide switched access to an interexchange carrier (or to itself). The model includes these revenues (or opportunity costs) from intrastate and interstate access. However, the model does not estimate the amount of interstate toll traffic that the CLEC might be able to add (or retain) because it has won the local customer. The model also does not capture the savings in transport costs that a CLEC would realize by replacing existing transport arrangements with shared transport. Both of these effects would tend to increase the revenues available to the CLEC.

With this background, here are some conclusions that can be drawn from the analysis.

- First, the relation between the costs of UNE-P and residential revenues varies significantly among the Qwest states. For Case B (Low Additional Revenues), for example, a CLEC's margin varies from a low of minus 13 percent in Idaho to high of 47 percent in Oregon.
- The margins available to a CLEC are determined largely by the extent to which residential customers use toll services and purchase additional calling features. In only one state, Oregon, does the CLEC show a positive gross margin for a residential customer who purchases no features and uses no long distance service. In some states, positive margins are available only if customers purchase a high level of services in addition to basic service.
- While the model illustrates where UNE-P entry in residential markets will be most feasible, it does not explain the actual incidence of competition in the region at this point in its development. As discussed on page 56 above, Iowa and Colorado have the highest levels of competition for residential and small business customers in the region. Yet these two states are in the middle of the pack for the relative margins associated with UNE-P. In the other direction, Oregon has the most favorable UNE-P case of the fourteen states, yet it had the lowest percentage

of residential and small business lines served by CLECs of the Qwest states for which FCC state-specific data are available.

There are several reasons for this seeming anomaly. First, Qwest has only recently made UNE-P widely available and relatively easier to employ. Second, no CLEC has yet made an assault on the residential market anywhere in the region using UNE-P. While McLeod is currently converting its customers to UNE-P in line with its contract with Qwest, many of these customers were served originally using resale of Centrex. Third, factors other than economic feasibility will influence a CLEC's decision to enter the residential market in a state. The size of the market, presence of existing facilities, marketing costs, and synergies with existing marketing efforts are all likely to influence the decision. Finally, other special factors explain the cases cited above: McLeod is a major CLEC in Iowa, which is also its corporate home base; similarly, Colorado is home to AT&T Broadband, which offers residential customers telephony over its broadband cable facilities in that state.

This having been said, the margin analysis in **Appendix B** is relevant because UNE-P is likely to be the predominant mode of entry in residential and small business markets as competition expands in the Qwest region. It may be an open question whether reliance on UNEs will be a permanent feature of local competition or merely a stage in its development, but there can be little doubt about its centrality at this point.

From the model it is clear that, at existing UNE prices, CLECs can realize a positive margin when serving some residential customers, to a greater degree in some states than in others. It is also clear that, absent some noneconomic motivation, CLECs will not choose to use UNE-P to serve "basic service only" residential customers who do not purchase additional features or moderate levels of toll service. Case A in the model shows that the combination of UNE prices and regulated retail prices make that infeasible in nearly every state.

This paper does not attempt to settle the debate about whether this means UNE prices are too high, or retail prices are too low, or neither (or both). Regulators and other policy makers have always balanced competing concerns in setting prices for telecom services. The choice, say, to price toll service and calling features at levels that provide a contribution toward common network costs reflects a certain set of policy goals; a different set of goals might produce a different balance in prices, with other implications for competitive entry. In the end, state regulators are best served if the implications of these decisions are made explicit. This is the purpose of the margin analysis.

		Case A	Case B	Case C	Case D
Arizona	Margin	-8.49	-1.83	4.83	11.49
	Percent	-32%	-7%	18%	43%
Colorado	Margin	-4.31	1.45	6.11	10.76
	Percent	-18%	6%	22%	36%
Idaho	Margin	-10.69	-4.17	2.36	8.89
	Percent	-32%	-13%	7%	27%
Iowa	Margin	-6.41	0.29	7.08	13.87
	Percent	-27%	1%	29%	57%
Minnesota	Margin	-3.70	2.91	9.53	16.14
	Percent	-16%	12%	41%	69%
Montana	Margin	-9.87	-3.21	3.45	10.11
	Percent	-28%	-9%	10%	29%
Nebraska	Margin	-0.23	6.66	13.55	20.45
	Percent	-1%	28%	58%	87%
New Mexico	Margin	-5.81	0.85	7.51	14.17
	Percent	-26%	4%	34%	64%
North Dakota	Margin	-0.64	6.25	13.15	20.04
	Percent	-3%	27%	56%	86%
Oregon	Margin	2.19	8.75	15.32	21.89
	Percent	12%	47%	83%	119%
South Dakota	Margin	-6.86	0.03	6.93	13.82
	Percent	-23%	0%	23%	46%
Utah	Margin	-0.72	4.99	8.95	15.38
	Percent	-4%	24%	38%	65%
Washington	Margin	-4.89	1.74	8.37	14.99
	Percent	-22%	8%	37%	67%
Wyoming	Margin	-0.05	6.84	13.74	20.63
	Percent	0%	24%	49%	73%

Case A – No Add'l Revenue (0%) **Case C – Med Add'l Revenue (100%)**

Case B – Low Add'l Revenue (50%) **Case D – High Add'l Revenue (150%)**

Table 6 -- Summary of CLEC Margins Using UNE-P Under Four Scenarios

10 APPENDIX B

The following tables compare the costs of serving residential customers using the UNE platform with the estimated revenues available to a CLEC under a range of assumptions. This comparison illustrates the possible gross margins (before internal CLEC costs) and relies on certain assumptions about costs and revenues:

Density Zones UNE loop prices used in the model are a weighted average of prices in one or more density zones, chosen so that a large percentage of the access lines are covered in the analysis. In most cases, this is the single zone, Zone 1. The zones employed for each state and the cumulative percentage of lines is shown on lines 1-2.

UNE Prices The prices used are tariff prices for UNE-P effective on October 1, 2001. Component prices are the same as the prices of the unbundled elements with the exception of loops in Colorado and Washington, which exclude the cost of "grooming".

Minutes of Use The model assumes 1800 monthly minutes of use, with 75% of the minutes using shared transport.

Local Revenue Prices for local service and the subscriber line charge use tariff prices in effect on October 1, 2001. Extended area service increments are included where they are either not optional or produce a local calling area serving a community of interest comparable to the local calling area that a CLEC would be able to offer.

Additional Revenue Revenues from calling features are based on a weighted average of retail prices for the most popular features in each state and on data about Qwest's feature revenues regionwide. Revenues for access and intraLATA toll are based on Qwest's access tariffs, ARMIS data, filings in state and federal regulatory proceedings, and on data about Qwest's access and toll revenues regionwide.

There are certain inherent limitations in this model:

- The model does not attempt to estimate the CLECs' internal costs (e.g., customer acquisition, billing, customer care, etc.).
- The revenue estimates do not include recurring revenue from zone charges and mileage charges that may apply to some customers.
- The model uses regionwide average revenues for intraLATA toll and access. If replaced by state-specific data, the gross margins for some states would increase, while others would decrease in offsetting fashion.

Residential Entry Using UNE-Platform

Line No.		AZ	CO	IA	ID	MN	MT	ND
1	UNE Zones Used	Z1	Z1	Z1-Z2	Z1	Z1-Z4	Z1	Z1
2	Percent of Lines Covered	88%	93%	89%	100%	100%	78%	87%
	UNE-P Cost (w/o addl feature costs)							
3	Switch Port	1.61	1.15	1.15	1.34	1.08	1.45	1.27
4	Loop	18.96	17.00	17.99	25.52	18.03	26.69	16.41
5	Switching	5.04	5.09	3.83	5.22	3.24	5.22	4.50
6	Shared Transport	1.06	0.99	0.90	1.07	1.00	1.43	1.15
7	Total UNE-P Cost	26.67	24.23	23.88	33.15	23.35	34.79	23.33
	Local Line Revenues							
8	Local 1FR Rate	13.18	14.92	12.65	17.46	14.76	16.73	17.69
9	EAS Charges						3.19	
10	Subscriber Line Charge	5.00	5.00	4.82	5.00	4.89	5.00	5.00
11	Total Line Revenues	18.18	19.92	17.47	22.46	19.65	24.92	22.69
	Additional Revenues							
12	Features	5.57	5.83	6.04	5.31	5.48	5.57	6.04
13	Inter+Intra Access	5.75	5.75	5.75	5.75	5.75	5.75	5.75
14	IntraLATA Toll	2.00	2.00	2.00	2.00	2.00	2.00	2.00
15	Total Additional Revenues	13.32	13.58	13.79	13.06	13.23	13.32	13.79
	Case A -- No Additional Revenues							
16	Local Line Revenues	18.18	19.92	17.47	22.46	19.65	24.92	22.69
17	Additional Revenues	0	0	0	0	0	0	0
18	UNE-P Cost	26.67	24.23	23.88	33.15	23.35	34.79	23.33
19	Gross Margin	-8.49	-4.31	-6.41	-10.69	-3.70	-9.87	-0.64
20	Margin as Percent over Cost	-32%	-18%	-27%	-32%	-16%	-28%	-3%
	Case B -- Low Additional Revenues -- 50% of Baseline							
21	Local Line Revenues	18.18	19.92	17.47	22.46	19.65	24.92	22.69
22	Additional Revenues	6.66	6.79	6.89	6.53	6.61	6.66	6.89
23	UNE-P Cost	26.67	25.26	24.08	33.15	23.35	34.79	23.33
24	Gross Margin	-1.83	1.45	0.29	-4.17	2.91	-3.21	6.25
25	Margin as Percent over Cost	-7%	6%	1%	-13%	12%	-9%	27%
	Case C -- Medium Additional Revenues -- 100% of Baseline							
26	Local Line Revenues	18.18	19.92	17.47	22.46	19.65	24.92	22.69
27	Additional Revenues	13.32	13.58	13.79	13.06	13.23	13.32	13.79
27	UNE-P Cost	26.67	27.40	24.18	33.15	23.35	34.79	23.33
29	Gross Margin	4.83	6.11	7.08	2.36	9.53	3.45	13.15
30	Margin as Percent over Cost	18%	22%	29%	7%	41%	10%	56%
	Case D -- High Additional Revenues -- 150% of Baseline							
31	Local Line Revenues	18.18	19.92	17.47	22.46	19.65	24.92	22.69
32	Additional Revenues	19.98	20.38	20.68	19.58	19.84	19.98	20.68
33	UNE-P Cost	26.67	29.54	24.28	33.15	23.35	34.79	23.33
34	Gross Margin	11.49	10.76	13.87	8.89	16.14	10.11	20.04
35	Margin as Percent over Cost	43%	36%	57%	27%	69%	29%	86%

Table 10 -- CLEC Margins Using UNE-P, AZ to ND

Residential Entry Using UNE-Platform

Line No.		NE	NM	OR	SD	UT	WA	WY
1	UNE Zones Used	Z1	Z1	Z1	Z1-Z3	Z1	Z1-Z4	Z1
2	Percent of Lines Covered	86%	50%	92%	100%	68%	67%	79%
	UNE-P Cost (w/o addl feature costs)							
3	Switch Port	1.37	1.38	1.26	1.84	0.89	1.34	1.53
4	Loop	13.74	17.75	13.95	21.09	14.41	18.07	19.05
5	Switching	7.44	1.99	2.39	6.24	4.14	2.16	6.76
6	Shared Transport	0.84	0.87	0.86	0.94	0.86	0.82	0.81
7	Total UNE-P Cost	23.38	21.99	18.46	30.11	20.30	22.39	28.15
	Local Line Revenues							
8	Local 1FR Rate	18.15	10.66	12.80	18.25	11.03	12.50	23.10
9	EAS Charges		0.52	2.85		3.55		
10	Subscriber Line Charge	5.00	5.00	5.00	5.00	5.00	5.00	5.00
11	Total Line Revenues	23.15	16.18	20.65	23.25	19.58	17.50	28.10
	Additional Revenues							
12	Features	6.04	5.57	5.38	6.04	5.12	5.51	6.04
13	Inter+Intra Access	5.75	5.75	5.75	5.75	5.75	5.75	5.75
14	IntraLATA Toll	2.00	2.00	2.00	2.00	2.00	2.00	2.00
15	Total Additional Revenues	13.79	13.32	13.13	13.79	12.87	13.26	13.79
	Case A -- No Additional Revenues							
16	Local Line Revenues	23.15	16.18	20.65	23.25	19.58	17.50	28.10
17	Additional Revenues	0	0	0	0	0	0	0
18	UNE-P Cost	23.38	21.99	18.46	30.11	20.30	22.39	28.15
19	Gross Margin	-0.23	-5.81	2.19	-6.86	-0.72	-4.89	-0.05
20	Margin as Percent over Cost	-1%	-26%	12%	-23%	-4%	-22%	0%
	Case B -- Low Additional Revenues -- 50% of Baseline							
21	Local Line Revenues	23.15	16.18	20.65	23.25	19.58	17.50	28.10
22	Additional Revenues	6.89	6.66	6.57	6.89	6.43	6.63	6.89
23	UNE-P Cost	23.38	21.99	18.46	30.11	21.02	22.39	28.15
24	Gross Margin	6.66	0.85	8.75	0.03	4.99	1.74	6.84
25	Margin as Percent over Cost	28%	4%	47%	0%	24%	8%	24%
	Case C -- Medium Additional Revenues -- 100% of Baseline							
26	Local Line Revenues	23.15	16.18	20.65	23.25	19.58	17.50	28.10
27	Additional Revenues	13.79	13.32	13.13	13.79	12.87	13.26	13.79
27	UNE-P Cost	23.38	21.99	18.46	30.11	23.50	22.39	28.15
29	Gross Margin	13.55	7.51	15.32	6.93	8.95	8.37	13.74
30	Margin as Percent over Cost	58%	34%	83%	23%	38%	37%	49%
	Case D -- High Additional Revenues -- 150% of Baseline							
31	Local Line Revenues	23.15	16.18	20.65	23.25	19.58	17.50	28.10
32	Additional Revenues	20.68	19.98	19.70	20.68	19.30	19.89	20.68
33	UNE-P Cost	23.38	21.99	18.46	30.11	23.50	22.39	28.15
34	Gross Margin	20.45	14.17	21.89	13.82	15.38	14.99	20.63
35	Margin as Percent over Cost	87%	64%	119%	46%	65%	67%	73%

Table 11 -- CLEC Margins Using UNE-P, NE to WY