

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)

DOCKET No.: 050693-TL
FILED: Sept. 29, 2005

ALLTEL FLORIDA, INC.

Exhibits to Direct Testimony

of

David C. Blessing

Volume II

DCB-11 to DCB-19

(public version)

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Dkt. No _____
D. Blessing Ex. No. ____ (DCB-11)
Impact of Inefficient Prices

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-11

Agustin J. Ros and Karl McDermott, "Are Residential Local Exchange Prices Too Low? Drivers to Competition in the Local Exchange Market and the Impact of Inefficient Prices," in Michael Crew, *Expanding Competition in Regulated Industries*, Kluwer Academic Publishers, 2000.

**ARE RESIDENTIAL LOCAL EXCHANGE PRICES TOO LOW? DRIVERS TO
COMPETITION IN THE LOCAL EXCHANGE MARKET AND THE IMPACT OF
INEFFICIENTLY-SET PRICES**

Agustin J. Ros¹ and Karl McDermott²

In this paper we examine the major drivers and determinants of local exchange competition and investigate the proposition that inefficiently-set local exchange prices are having an impact on competition and inhibiting competition for residential customers. Examining data as of the end of 1998, we find support for both propositions. Using OLS and GLS estimates we find a significant and positive association between states that have more “balanced” tariffs and residential competition. We also find that those states that have a state-level universal service fund have higher levels of residential competition. This paper provides additional support for setting prices to reflect costs. For two measures of residential competition used in our data, we find that “rebalancing” tariffs by 10% leads to approximately a 9% and 13% increase, respectively, in residential competition.

I. INTRODUCTION

Nearly five years after passage of the Telecommunications Act of 1996 (“the Act”) there is still widespread debate about the status and extent of competition in the local exchange market and whether the Act has succeeded or failed in one of its intended goal of fostering competition. While a consensus appears to have emerged that competition for large business customers in dense metropolitan areas is beginning to take hold, no such consensus exists for other types of customers.³ Specifically, policymakers are asking when they will begin to see a consensus emerge that competition is taking hold for:

- Smaller business customers located in non-urban, rural areas; and
- Residential customers.

¹ Senior Consultant at National Economic Research Associates and Instructor at Northeastern University.

² Vice President at National Economic Research Associates.

³ See section II below.

There are plausible economic reasons why local exchange competition is developing in this manner. It should be no surprise that competition will first occur where the returns to investing are greatest. Only after these major opportunities are fully exploited will competitors seek out less profitable opportunities. For reasons dealing with the relative expense of deploying facilities in urban as opposed to non-urban areas and the volume of demand generated by large business customers as opposed to single-line business or residential customers, one would expect the pattern of local exchange competition to develop in this manner.

However, there may be other valid reasons that help explain this pattern of local exchange competition. Specifically, are there policy-related features of local exchange markets—which may not be what one would find in undistorted competitive markets—that are having an impact? In this paper we concentrate on a unique feature of local exchange markets. In the pursuit of universal service and fully exploiting the positive network externalities present in telecommunications, policy makers have historically priced residential network access below economic costs—i.e., lower than what one would find in competitive markets. The revenue sources that have historically been used to support residential prices include business services. While this policy has helped in permitting the United States to achieve high rates of telephone penetration, is it now distorting the development of local exchange competition and impeding competition for residential customers?

The purpose of this paper is to test this hypothesis. Are inefficiently-set local exchange prices having an impact on the development of local exchange competition and inhibiting the development of residential competition? We attempt to find empirical evidence for this proposition and control for other factors that are impacting local exchange competition and identify major drivers and determinants of local exchange competition. Section II and III provide a background on local competition and the economic predictors of local exchange competition. Section IV presents an econometric analysis.

II. BACKGROUND

The fundamental purpose of TA 96 was to open up local exchange markets to competition in the hope that competitive markets will do a superior job of accommodating the enormous technological changes taking place in the industry than monopolies. The Act opened up the local exchange market by, *inter alia*: eliminating legal barriers to entry; removing technical barriers to entry—e.g., requiring incumbent carriers to offer unbundled network elements (“UNEs”) and to resell retail services at a wholesale discount; and requiring all carriers to interconnect.

A consensus appears to be emerging on the status and extent of local exchange competition: competition is taking hold and becoming robust for certain relevant economic markets—e.g., large business customers in dense urban areas—but is still in its infancy for other relevant economic markets—e.g., residential customers in non-urban areas. This consensus can best be reflected in the statements of many various parties who normally oppose each other in regulatory arenas. For example, the Competitive Telecommunications Association (“Comptel”) stated:

“The effectiveness of this landmark piece of legislation is particularly evident in the market for business service...In particular, competition in the market for residential service has been slow to develop.”⁴

A report by Peter Huber indicated that:

“In the local market, competition has developed rapidly-but only where competition makes strategic sense for new entrants. It makes sense in the business markets of large cities.”⁵

The Consumer Federation of America and the Consumers Union stated:

“To the extent there is competition, it is almost entirely restricted to large urban areas.”⁶

⁴ Comptel Report on the State of Local Competition to the Honorable Tom Bliley, Jr. Chairman U.S. House of Representatives Committee on Commerce, December 9, 1998.

⁵ Peter Huber, *Local Exchange Competition Under the 1996 Act: Red-Lining the Local Residential Customer*.

And, finally, the Department of Justice indicated that:

“without universal service reform, local residential service, except in low-cost urban or other similarly densely populated area...will be uneconomical for competitors to provide.”⁷

III. DRIVERS OF LOCAL EXCHANGE COMPETITION

A. Economic Determinants

Traditional wisdom among economists throughout most of the twentieth century was that local exchange markets were considered to be natural monopolies. For any given level of output, a natural monopoly exists if total industry costs are minimized by having a single firm produce. Natural monopolies and those industries approaching natural monopolies are characterized by efficient firm size being large relative to total industry demand. Beginning in the early 1990s, the view that local exchange markets were natural monopolies began to change especially as it pertained to certain relevant economic markets—e.g., business customers in urban markets. There are two sources that explain this transformation: demand and cost conditions. Any attempt to determine the “drivers” of local exchange competition should account for these two factors.

On the demand side, as the total market demand increases relative to the minimum efficient scale of production more firms are able to efficiently serve the market. Reasons why a change in demand occurs include changes in consumer preferences, income, price of complements or development of complementary products—such as the Internet—that raise the value consumers place on the service. As the market demand shifts upward, the socially optimal output increases relative to efficient firm size and more firms enter. Therefore, in our econometric analysis we include variables that control for the level of demand in each state.

⁶ Mark Cooper and Gene Kimmelman, *The Digital Divide Confronts the Telecommunications Act of 1996*.

⁷ Joel I. Klein, *The Role for Local Competition: A Long Distance Run, Not a Sprint*, Speech to the American Enterprise Institute, November 5, 1997.

Telecommunications costs include a fixed component that does not vary with the level of output and a variable component that does vary with the level of output. A major determinant of efficient firm size is the output level at which economies of scale exhaust and a major determinant of when economies of scale exhaust is the level of fixed costs that are present. As the level of fixed costs decrease two things happen: (i) first, in competitive markets prices track costs and lower prices result in higher demand, and (ii) minimum efficient scale decreases. Both changes mean that the number of firms that can efficiently serve the market increases. In our econometric analysis, we include a variable that controls for the costs—especially the fixed costs—to deploy infrastructure.

B. Regulatory Distortions

An important hypothesis that we test in this paper is the proposition that inefficiently-set local exchange prices are having a significant impact on how local exchange competition is developing. Traditionally, business services have been used a revenue source to keep residential local exchange prices below economically efficient levels. Therefore, once competition is permitted in the local exchange, *at the margin* competitors may inefficiently target business customers and ignore residential customers. That is, under current conditions where business prices are likely above their economic costs there is too little residential competition. CLECs may be ignoring residential customers not because underlying demand and supply conditions justify it but rather because of regulatory distortions. If true, the policy implication is that states should move more aggressively than they have to date in rebalancing prices—i.e., setting residential and business prices in accordance with economic efficiency.

IV. EMPIRICAL ANALYSIS

In this section, we analyze the determinants of local exchange competition and test the hypothesis that inefficiently-set local exchange prices are having an impact on the development of local exchange competition. We begin by describing the data, sources used and presenting descriptive statistics. We continue by discussing our hypotheses and our econometric model. We conclude this section by presenting our results.

A. Data

1. Dependent Variables

Table 1 below presents a description of the data that were used in this study.⁸ The dependent variables used in our study are measures of local exchange competition. We use several different measures of local exchange competition; some examine the extent of facilities-based competition while others examine the extent of resale competition. Furthermore, some of the variables distinguish between business as opposed to residential competition. Each competition variable comes from the Federal Communications Commission’s *Local Exchange Competition: August 1999* which reports the extent of competition as of the end of 1998.⁹

The number of lines provided by CLECs (i.e., not UNEs or resale) are not publicly available although estimates are that about a quarter of all lines provided by CLECs are facilities based.¹⁰ As a result, we rely on variables that are likely proxies for facilities-based competition such as: the number of CLECs holding numbering codes; percent of ILEC lines (residential and other lines) served by switching centers where new entrants have collocation arrangements; and ILEC lines leased to CLECs as UNE loops.¹¹ Variables used for resale competition include: the number of ILEC voice grade lines (residential and other lines) provided to CLECs for resale to end users; and the percent of resold lines serving residential or other than residential customers.

⁸ For both the dependent and independent variables, the data are state-specific—one measure for the state in question. We use data from the RBOCs, GTE and Sprint. For variables such as population, per capita income this presents no issue because the data are collected at the state level. When the variables are company-specific (such as the percent of ILEC lines leased to CLECs as UNE loops) a weighted average based on the number of lines for each company is used.

⁹ Federal Communications Commission, Industry Analysis Division, *Local Competition: August 1999*.

¹⁰ *Ibid.*, at

¹¹ In this paper, ILEC lines leased to CLECs as UNE loops are considered a measure of facilities-based competition because there is the likelihood those CLECs that lease loops are providing their own switching. There is an exception to this general rule in those jurisdictions where the platform approach to local competition has been adopted—i.e., where a CLEC leases a loop, switching and transport. However, for the time period that this study takes place, few jurisdictions had adopted the platform approach to local exchange competition.

2. Independent Variables

There are a host of independent variables used in our analysis that are hypothesized to have an impact on the extent of local exchange competition (both facilities based and resale). Independent variables that control for demand-side effects include: per capita personal income, total gross state product, gross state product for finance, insurance and real estate (“fire”), and gross state product for manufacturing; and the average UNE loop price; and the average resale discount.¹² On the supply side we use lines per square mile as a proxy measuring how expensive or inexpensive it is to deploy facilities and the average resale discount.¹³

As discussed above, we also include two other variables that likely have an impact on the development of local exchange competition—the degree to which local exchange prices are inefficiently-set and whether the state has some type of functioning universal service program. For the degree to which local exchange prices are inefficiently-set, we use two measures. The first measure is the ratio of the monthly rate for a business with a PBX trunk and the monthly residential rate while the second measure is the ratio of the connection charge for a business with a PBX trunk and the connection charge for a residential line.¹⁴

¹² Data for per capita income and gross state product are from the Bureau of Economic Analysis and are for 1997. Data for UNE loop prices are for 1997 and are mainly taken from the National Association of Regulatory Utility Commission (“NARUC”) *Telecommunications Competition Report 1998* and from the National Regulatory Research Institute (“NRRI”) web page.

¹³ Data for the resale discount are for 1997 and are mainly taken from the National Association of Regulatory Utility Commission (“NARUC”) *Telecommunications Competition Report 1998* and from the National Regulatory Research Institute (“NRRI”) web page.

¹⁴ The data are for 1997 and are mainly taken from the Federal Communication Commission’s *Reference Book of Rates Price Indices and Expenditures for Telephone Service*, tables 1.4, 1.5, 1.19 and 1.20. For a few states, information was taken from the Center for Communications Management Information (“CCMI”) and from tariffs obtained directly from the states.

Table 1: Description of Variables

Variable	
Resale	ILEC voice grade lines provided to CLECs for resale to end users as of Dec 31, 1998, (000).
Resale%	Percent of ILEC voice grade lines resold, as of Dec 31, 1998.
Resale_res	ILEC resold lines serving residential customers as of Dec 31, 1998, (000).
Resale_oth	ILEC resold lines serving customers other than residential as of Dec 31, 1998, (000).
Resale_res%	Percent of resold lines serving residential customers as of Dec 31, 1998.
Resale_oth%	Percent of resold lines serving customers other than residential as of Dec 31, 1998.
Une	ILEC lines leased to CLECs as UNE loops as of Dec 31, 1998, (000).
Per_une	Percent of ILEC lines leased as UNEs, as of Dec 31, 1998.
Col_res	Percent of ILEC residential lines served by switching centers where new entrants have collocation arrangements, as of Dec 31, 1998.
Col_oth	Percent of ILEC other lines served by switching centers where new entrants have collocation arrangements, as of Dec 31, 1998.
Col_tot	Percent of ILEC total lines served by switching centers where new entrants have collocation arrangements, as of Dec 31, 1998.
Code	CLECs holding numbering codes as of Dec 31, 1998.
Pop	Population (000) 1997.
Lines	Access lines of all incumbent local exchange carriers in thousands.
Sqmi	Square miles.
Popsqmi	1997 population per square mile.
Linesqmi	1998 access lines per square mile.
GSP_com	1997 Gross state product in communications, (000,000).
GSP_fire	1997 Gross state product in finance, insurance and real estate, (000,000).
GSP_tot	1997 Gross state product all industries, (000,000).
GSP_man	1997 Gross state product in the manufacturing industry, (000,000).
Percap	1997 Per capita personal income.
P_bs	Monthly rate for a business with a PBX trunk, 1997 dollars.
P_rs	Monthly residential rate, 1997 dollars.
Bs_rs	Ratio of monthly rate for a business with a PBX trunk and monthly residential rate.
P_bscn	Connection charges for a business with a PBX trunk, 1997 dollars.
P_rscn	Connection charges for a residential line, 1997 dollars.
Bs_rs_cn	Ratio of PBX connection and residential connection charges.
Resale_dis	Average resale discount in the state.
UNE_price	Average UNE loop price in the state.
US	1 if state has a universal service plan that is either functioning or under revision, 0 otherwise.

For our universal service variable we use a survey report from NRRI.¹⁵ The NRRI report provides the results of a survey that NRRI conducted to examine state commission actions to further and support universal service. The NRRI survey examined the status of each state’s universal service plan as of the early part of 1998. NRRI found that while there were many states that had either approved a state universal service fund or where approval was pending, fewer states indicated that their fund was either functioning or currently under revision. Therefore, we created a dummy variable to identify those states where their fund was either functioning or currently under revision.

Table 2 below presents the descriptive statistics of the variables used in this study. The data indicate that as of the end of 1998 local competition was in its infancy. The average number of resold lines per state was about 50,000 which represented about 1.5 percent of the market. On average, there were fewer UNE loops sold in each state, only about 5,000 which represented about .2 percent of the market. What the data do not show, however, and which is confirmed in the FCC’s *Local Exchange Competition: August 1999* report is that local competition is growing rapidly.¹⁶ The data also indicate that competitors have collocated in end offices that contain about 50 percent or non-residential lines and 37 percent of residential lines. This means that competitors are able to “address” a fairly large percent of the market. In the face of profitable opportunities or the attempt by incumbent carriers to exercise market power, competitors are well positioned to provide alternative services.

The data also indicate that monthly business prices are significantly above residential prices and the same applies, although to a lesser extent, for connection charges. This variable is a measure of the degree to which local exchange prices in each state are inefficiently set— i.e., the degree to which local exchange prices are unbalanced. The data indicate that, on

¹⁵ *State Universal Service Funding and Policy: An Overview and Survey*, Edwin A. Rosenberg and John D. Wilhelm, NRRI, September 1998.

¹⁶ For example, compared to the long distance market at similar points in time, local competition is progressing more rapidly. In the first quarter of 1998, CLECs added more access lines than the RBOCs. The non-AT&T long distance carriers did not have more incremental minutes until a full 10 years after MCI carried its first switched long distance minute.

average, monthly business prices are about 2.9 times above residential prices and business connection charges are about 1.5 times above residential connection charges.

Table 2: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Minimum Value	Maximum Value
Resale	50	46.15648	64.09523	0	284.0132
Resale%	50	1.508219	1.135412	0	5.028401
Resale res	50	20.24232	31.38245	0	165.8662
Resale oth	50	25.96053	37.86764	0	189
Resale res%	50	40.3573	24.79735	0	83
Resale oth%	50	58.57647	24.45114	17	100
Une	50	5.860713	11.39266	0	49
Une%	50	.1884358	.4063425	0	2.69708
Col_res%	50	36.50219	17.81136	4	81.54307
Col_oth%	50	49.39897	18.31369	13.8	91.9
Col_tot%	50	40.90785	18.26937	6.7	84.3
Code	50	8.90	7.11	1	34
Pop	51	5249.874	5844.743	480.043	32182.12
Lines	50	3442.34	3946.51	284	21483
Sqmi	51	69339.97	85516.35	61.4	570373.6
Popsqmi	51	339.5627	1207.503	1.06887	8630212
Linesqm	51	407.9091	2088.823	0	14983.71
GSP_com	51	4149.549	5516.825	238	26311
GSP_fire	51	30790	44733	1930	237282
GSP_tot	51	158886.9	187534.2	15214	1033016
GSP_man	51	27036.69	29276.72	996	146173
Percap	51	24326.63	4003.049	18098	35863
P_bs	51	54.2503	18.91313	25	116.04
P_rs	51	18.66948	4.38621	9.82	27.68
Bs_rs	51	2.888258	.6713013	1.834631	4.620785
P_bscn	51	53.97	19.75	15.10	99.04
P_rscn	51	38.79	10.23	9.82	60.61
Bs_rs_cn	51	1.50	.70	.53	3.40
Resale dis	48	18.18	4.98	9.88	32.75
Une_price	46	20.65	16.89	9.96	121.75
US	51	.275	.451	0	1

Other interesting findings from Table 2 are state policies on pricing of UNE loops, the resale discount and progress on universal service. The data indicate that in 1997 the average resale discount was 18.2 percent and the average UNE loop price was \$20. Also, as of 1998 only about 28 percent of states had a universal service fund that was either functioning or under revision.

B. Econometric Analysis

1. Testable Hypotheses

There are two broad measures of competition in this study: facilities-based and resale. This is further broken into, where possible, residential and business competition. The impact that the independent variables are hypothesized to have on the dependent variable depends on whether the dependent variable is measuring facilities as opposed to resale competition and whether the dependent variable is measuring residential as opposed to business competition. Table 3 below indicates the expected signs of our econometric analysis.

Table 3: Predicted signs of econometric analysis

Independent Variables	Resale		Facilities-Based			
	Residential	Bus.	UNE Loop		Collocation	
			Residential	Bus.	Residential	Bus.
Per-capita Income	+	+	+	+	+	+
GSP Variables	+	+	+	+	+	+
Lines/sq. mile	-	-	-	-	+	+
Bus./res. Ratio	-	+	-	+	-	+
UNE Loop Price	+	+	-	-	+	+
Resale Discount	+	+	-	-	-	-
U.S. Fund	-		+		+	

We predict that the variable measuring the degree to which local exchange prices are inefficiently-set—specifically, the degree to which business rates are being used to support residential rates—will have a negative impact on residential competition regardless of whether the dependent variable is measuring resale or facilities-based competition. On the other hand,

we predict that as the business/residential ratio increases competitors have increased incentives to target business customers and so we expect the sign to be positive when the dependent variable is measuring business competition.

We expect the universal service variable to have a positive impact on facilities-based competition (including UNE competition) when the dependent variable is measuring residential or competition. To the extent residential prices are set below economically efficient levels, the universal service is fund is intended to provide a subsidy to carriers that serve the customer. Because the universal service payment is only for residential an single-line business customers and since our measure of business competition is for more than one line, we do not expect to see an impact when the dependent variable is measuring facilities-based competition for business customers. Also, since universal service payments are not given to carriers that provide service through reselling, we do not expect to see an impact when the dependent variable is measuring resale competition.

We expect the UNE loop price to be negatively related to UNE competition but positively related to other facilities-based competition or resale competition regardless of whether the dependent variable is measuring residential or business competition. As the UNE price increases, other forms of competition become more attractive. The same logic applies for the resale discount. As the resale discount increases other forms of competition become less attractive. Therefore, we expect to see the resale discount positively related to resale competition but negatively related to other facilities-based competition including UNE competition.

Other independent variables include access lines per square mile, the gross state product variables (fire, manufacturing and total) and per-capita income. Access lines per square miles measure how expensive or inexpensive it is to deploy facilities. Therefore, as access lines per square miles increase we expect to observe a positive sign when the dependent variable is facilities-based competition excluding UNE competition. As it becomes cheaper to deploy facilities, competitors are less likely to use UNE loops or resale. Finally, we expect that the gross state product variables and per capital income will likely have a positive impact on all

forms of competition—resale, UNE loop, facilities—and for both residential and business customers.

2. Results

We use the dependent and independent variables mentioned above to run several different econometric models. The models take the following form:

$$(1) \quad Y_i = \beta_0 + \beta_j X_j + e$$

where: Y_i is a vector of local exchange competition variables such as resale or facilities-based and type of customer such as residential or business; X_j is a vector of the independent variables described in Section III A above; β_0 is a constant term and e is a random disturbance variable assumed to be distributed with zero mean and specifiable covariance structure.¹⁷ Equation (1) is estimated using ordinary least squares (“OLS”) except when heteroscedasticity is present and we use generalized least squares (“GLS”). Table 4 presents the results when the dependent variable is a measure of facilities-based competition and Table 5 presents the results when the dependent variable is a measure of resale competition.

Equation (1) in Table 4 is estimated using OLS and uses the number of CLECs assigned numbering codes in each state as the dependent variable (code). The most important variable explaining the variation in the dependent variable is the gross state product for fire—finance, insurance and real estate. GSP_fire is positively related to code at the 5% level.

The results from equation (1) indicate that there is support for our hypothesis that inefficiently-set local exchange prices (Bs_rs) are having an impact on the development of local exchange competition. Specifically, our data set indicates that, holding all other factors constant, as prices are less efficiently set—i.e., more unbalanced—the number of CLECs holding numbering codes increases. The Bs_rs variable has a t-stat of 1.99, which at 46 observations is significant at the 10% level and almost significant at the 5% level. As

¹⁷ The starting assumption is that e is distributed identically and independently with zero mean and finite, constant variance. This assumption can be relaxed to allow for heteroscedasticity (non-identical distribution) and/or serial correlation (non-independent distribution) following tests on the data. We heteroscedasticity is present we estimate equation (1) using GLS.

discussed above, by the end of 1998 much of the competition occurring in local markets was focused toward the business customers. As such, unless a variable specifically measures residential competition—such as the amount of residential resale—measures of generic local exchange competition like code are likely more reflective of business competition. With this interpretation in mind, the results from equation (1) indicate that unbalanced local rates are encouraging competitors to target business customers.

Table 4: Determinants of Facilities-based Competition (Std. Error in parenthesis)

Independent Variable	Dependent Variables		
	Code Equation (1)	Col_res Equation (2)	Col_oth Equation (3)
Linesqm	.000468 (.000314)	-.000084 (.00076)	.00195* (.00034)
GSP_fire	.000114* (.000015)		.000074* (.000032)
Percap		.00122 (.00098)	
Bs_rs	2.01** (1.01)	-5.95** (3.04)	-5.49** (2.96)
US	3.03** (1.57)	12.03* (4.69)	8.05 (5.22)
UNE_price	-.073** (.041)	-.351* (.085)	-.366* (.095)
Constant	.48 (3.35)	29.31 (28.76)	69.32* (10.56)
N	46	46	46
F-stat	F(5, 40) = 15.04*	F(5,40) = 19.30*	F(5,40) = 62.15*
Adj R-squared	.61	.35	.35

*Significant at the 5% level or above; ** significant at the 10% level;

Other interesting finds from equation (1) are the importance of states having some type of functioning universal service fund and the impact of the UNE loop price. According to our data, those states that have a functioning universal service fund or whose fund is currently under revision had approximately three more CLECs holding number codes holding other factors constant. Also, higher UNE loop prices had a negative, though small, impact on the

number of CLECs holding number codes. Both the universal service and UNE loop price variables are statistically significant at the 10% level.

Equation (2) provides additional empirical support for the proposition that inefficiently-set local exchanges prices are impacting the development of local exchange competition and, specifically, inhibiting competition for residential customers. Equation (2) is estimated using GLS. The dependent variable in equation (2)—Col_res—is the percent of ILEC residential lines served by switching centers where new entrants have collocation arrangements. The results from equation (2) indicate that as the prices are less efficiently set—i.e., more unbalanced, the percent of ILEC residential lines served by switching centers where new entrants have collocation arrangements decreases. The Bs_rs variable has a t-stat of 1.96, which at 46 observations is significant at the 10% level and almost significant at the 5% level. When substituting the average value of Bs_rs (2.89) into equation (2), we conclude that rebalancing prices by 10% leads to a 3.2 percentage point increase in the percent of ILEC residential lines served by switching centers where new entrants have collocation arrangements. This is approximately a 9% increase from the average value of the dependent variable.

Other important variables explaining the variation in the dependent variable are, once again, universal service and UNE loop prices. The universal service variable is significant at the 5% level. The coefficient indicates that those states that either have a functioning universal service fund or whose fund is under revision have more residential competition. The magnitude of the US coefficient is quite high. Specifically, when US is one the percent of ILEC residential lines served by switching centers where new entrants have collocation arrangements increases by 12 percentage points. Finally, the UNE loop price is negative and significant at the 5% level, although as in equation (1) the impact is relatively small.

Equation (3) uses the percent of other lines (i.e., non-residential lines) that are served by switching centers where new entrants have collocation arrangements and is estimated using GLS. The results from equation (3) indicate that lines per square miles, GSP_fire, Bs_rs ratio and the UNE loop price explain about 35 percent of the variation in the dependent variable.

Lines per square mile and GSP_fire are both significant and positively related to the dependent variable at the 5% level.

The Bs_rs ratio and the UNE loop price are both significantly related to the dependent variable at the 10% level, however, their signs are negative, the opposite of what we predicted in Table 3 above. A plausible explanation is that the dependent variable is not a perfect measure of facilities-based business competition. Competitors are not required to collocate in order to serve a customer via their own facilities. All that is required is some point of interconnection that need not be in an end office serving customers. What the results of equation (3) may be indicating is that if the Bs_rs ratio is significantly high, competitors will find it more advantageous to pursue a pure facilities-based strategy where collocation is not required. This can also explain why the UNE loop price variable is also negative. As the loop price increases, competitors turn away from purchasing loops and do not need to collocate as much. Further examination of this issue would be fruitful, however, given our data constraint we were not able to pursue this area of inquiry.

Table 5 below presents the results from our econometric analysis when the dependent variables are measuring some type of facilities-based competition. Specifically, equation (4) in Table 5 uses the number of ILEC voice grade lines provide to CLECs for resale to end users (Resale) as the dependent variable while equation (5) uses the number of ILEC resold lines serving residential customers (Resale_res).

Equation (4) was estimated using OLS. The results indicate that based on our data, the major drivers of resale competition are GSP_fire and the level of the resale discount. The degree to which local exchange prices are inefficiently-set have no impact on Resale. GSP_fire is positively related to Resale at the 5% level and the coefficient indicates that each additional \$1 billion in GSP_fire increases resold lines by about 1,300. The level of the resale discount is positively related to Resale at the 5% level and the coefficient indicates that each percentage point increase in the resale discount increases resold lines by about 3,200.

Table 5: Determinants of Resale Competition (Std. Error in parenthesis)

Independent	Dependent Variable	
	Resale	Resale_res

Variable	Equation (4)	Equation (5)
Linesqm		-.00196* (.00064)
GSP_fire	.00126* (.00013)	
Percap	-.00245 (.0017)	
Bs_rs		-5.44 (6.13)
Bs_rs_cn	-9.11 (8.45)	-10.86** (6.25)
Resale_dis	3.20* (1.34)	.879 (.790)
UNE_price	.491 (.350)	
Constant	11.01 (41.86)	37.11 (25.48)
N	44	48
F-stat	F(5, 38) = 20.13*	F(4, 43) = 3.60*
Adj R-squared	.69	.09

*Significant at the 5% level or above; ** significant at the 10% level;

Equation (5) was estimated using GLS and the results provide support for the proposition that inefficiently-set local exchange prices are impacting the development of resale competition for residential customers. While the Bs_rs ratio has no impact on the amount of residential resale competition, the Bs_rs_cn ratio does—i.e., the ratio of the business connection charge to the residential connection charge. The Bs_rs_cn ratio was negatively related to residential competition and was significant at the 10% level. When substituting the average value of Bs_rs_cn into equation (1), the coefficient on Bs_rs_cn indicates that rebalancing prices by 10%—where by rebalancing we mean higher residential prices and lower business prices—leads to an increase in residential resold lines of approximately 2,700 or approximately a 13% increase from the average value of the dependent variable.¹⁸ The other variable of significance was lines per square mile which is a proxy for the cost of deploying

¹⁸ For the “unbalanced” bs_rs_cn value we took the ratio of the P_bs_cn and P_rs_cn which was 1.39. To obtain the 10% “rebalanced” value for the Bs_rs_cn variable, we decreased and increased the average business and residential connection prices, respectively, by 10% and took the ratio of these numbers which turned out to be 1.14.

facilities. Lines per square miles are negatively related to residential resale competition and the variable is significant at the 5% level.

V. CONCLUSIONS

In this paper we examined the major drivers and determinants of local exchange competition and investigated the proposition that inefficiently-set local exchange prices are having an impact on competition and inhibiting competition for residential customers. Examining data as of the end of 1998, we found support for both propositions. Using OLS and GLS estimates we found a significant and positive association between states that have more “balanced” tariffs and residential competition. We also found that those states that have a state-level universal service fund have higher levels of residential competition. This paper provides additional support for setting prices to reflect costs. For two measures of residential competition used in our data, we found that “rebalancing” tariffs by 10% leads to approximately a 9% and 13% increase, respectively, in residential competition.

Dkt. No. _____
D. Blessing Ex. No. ____ (DCB-12)
Gordon Direct Testimony

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-12

Amended Direct Testimony of Dr. Kenneth Gordon On behalf of Verizon Florida Inc., BellSouth Telecommunications, Inc., and Sprint-Florida Inc. Before the Florida Public Service Commission; in Docket No.. 030867-TL, In re: Petition by Verizon Florida Inc. to reform intrastate network access and basic local telecommunications rates in accordance with Section 364.164, Florida Statutes; Docket No.. 030868-TL, In re: Petition by Sprint-Florida, Incorporated to reduce intrastate switched network access rates to interstate parity in revenue-neutral manner pursuant to Section 364.164(1), Florida Statutes; Docket No. 030869-TL, In re: Petition for implementation of Section 364.164, Florida Statutes, by rebalancing rates in a revenue-neutral manner through decreases in intrastate switched access charges with offsetting rate adjustments for basic services, by BellSouth Telecommunications, Inc.; and Docket No. 030961-TI, In re: Flow-through of LEC switched access reductions by IXCs, pursuant to Section 364.163(2), Florida Statutes. See Also Final Order No. PSC-03-1469-FOF-TL, Issued: December 24, 2003.

NATIONAL ECONOMIC
RESEARCH ASSOCIATES

ONE MAIN STREET
CAMBRIDGE, MASSACHUSETTS 02142
TEL 617 621 0444 FAX 617 621 0336
INTERNET: <http://www.nera.com>

ner/a
Consulting Econom.

AMENDED DIRECT TESTIMONY OF DR. KENNETH
GORDON

On behalf of Verizon Florida Inc., BellSouth Telecommunications,
Inc., and Sprint-Florida Inc.

September 30, 2003

AMENDED DIRECT TESTIMONY OF
DR. KENNETH GORDON

1 AMENDED DIRECT TESTIMONY OF DR. KENNETH GORDON

2

3 I. PURPOSE & SUMMARY OF CONCLUSIONS

4 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

5 A. My name is Dr. Kenneth Gordon. My business address is One Main Street, Cambridge,
6 Massachusetts 02142. My C.V. is provided as Attachment A.

7

8 Q. WHAT IS YOUR CURRENT POSITION?

9 A. I am a Special Consultant of National Economic Research Associates, Inc. ("NERA").
10 Previously, I was Senior Vice President at NERA.

11

12 Q. WILL YOU PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL
13 QUALIFICATIONS?

14 A. I am an economist and former Chairman of the Maine Public Utilities Commission
15 ("Maine Commission") and the Massachusetts Department of Public Utilities ("Mass.
16 DPU"). The Mass. DPU is now known as the Massachusetts Department of
17 Telecommunications and Energy. I have been an economist since 1965, and I have been
18 directly involved with developing and establishing regulatory policy at the federal and
19 state levels since 1980, when I became an industry economist at the Federal
20 Communications Commission ("FCC").

21

22 I received my A.B. degree from Dartmouth College in 1960. I received my M.A. degree
23 in 1963 and my Ph.D. degree in 1973, both in economics, from the University of Chicago.
24 I have taught applied microeconomics, industrial organization, and regulation (as well as
25 other subjects) at Georgetown University, Northwestern University, University of

1 Massachusetts at Amherst, and Smith College.

2

3 From 1980 to 1988, I was an industry economist at the FCC's Office of Plans and Policy,
4 where I worked on a full range of regulatory issues, including telecommunications, cable,
5 broadcast, and intellectual property rights. At the FCC, one of the major focuses of my
6 work was activity aimed at introducing competition into communications markets.

7

8 Prior to joining NERA in November 1995, I chaired the Maine Commission (1988 to
9 December 1992) and the Mass. DPU (January 1993 to October 1995). During my term as
10 Chairman of the Mass. DPU, the DPU investigated and approved a price cap incentive
11 regulation plan for NYNEX and also undertook a proceeding to examine interconnection
12 and other issues related to the development of competition at all levels of
13 telecommunications, including basic local service.

14

15 While a regulator, I was active in the National Association of Regulatory Utility
16 Commissioners ("NARUC"), serving on its Communications and Executive Committees.
17 In 1992, I served as President of NARUC. I was also Chairman of the BellCore Advisory
18 Committee and the New England Governor's Conference Power Planning Committee.

19

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 A. Verizon Florida Inc., BellSouth Telecommunications, Inc., and Sprint-Florida Inc., ("the
22 companies") are seeking to restructure their rates for intrastate network access services
23 ("intrastate access") and basic local telecommunications services ("basic local") in

1 accordance with recently passed legislation by the Florida Legislature.¹ The companies'
2 revised plans—which must address the criteria established in the legislation—call for
3 them to restructure their intrastate access and basic local rates in a revenue-neutral
4 manner.

5
6 The companies have asked me to provide an economic and policy analysis of their revised
7 rate plans and to testify on whether I believe those revised plans meet the criteria laid out
8 in the legislation.

9
10 **Q. WHAT ARE YOUR MAJOR CONCLUSIONS?**

11 A. After reviewing the newly-enacted legislation, the evidence in this case—specifically the
12 companies' revised plans and the cost evidence submitted by the companies' witnesses—
13 and based on my general knowledge and expertise on telecommunications economic and
14 regulatory matters, I conclude that the revised plans submitted by the companies meet the
15 criteria contained in the legislation. Specifically, upon implementation, the revised plans
16 will, *inter alia*:

- 17 • Reduce current support for basic local telecommunications services that prevents
18 the creation of a more attractive competitive local exchange market for the benefit
19 of residential consumers; and
20 • Induce enhanced market entry.

21 The companies' revised plans significantly decrease support for basic local service by
22 reducing prices for a service that has historically and purposely been an important
23 source—but by no means the only source—of support for basic local services, namely

¹ See Section II below.

1 intrastate access. In order to achieve revenue neutrality, the companies' revised plans
2 increase residential basic local prices towards cost-based levels, thus creating a more
3 attractive market for potential entrants, ultimately for the benefit of residential consumers.
4 Both theory and empirical evidence show that low residential basic local prices have
5 hindered the development of residential competition. By better aligning residential basic
6 local prices with cost, competitors will have increased incentives to target a broader mix
7 of residential consumers, which is the intent of the Florida legislature.

8
9 In addition, I conclude that the revised plans will enhance economic welfare in Florida by
10 increasing economic activity. As described in the respective testimonies of the
11 companies' cost witnesses, the cost evidence submitted in this proceeding demonstrates
12 that rates for residential basic local service diverge significantly from their underlying
13 costs. A movement toward costs—and, therefore toward more rational economic
14 pricing—will bring with it several economic benefits. These benefits include providing
15 market participants—i.e., customers, the companies and potential and actual
16 competitors—with more cost-based price signals, which will improve economic decision
17 making and lead to more economically rational utilization of telecommunications services.
18 Economic activity in Florida will increase as a result of the companies' revised plans
19 because rebalancing generates substantial consumer benefits. Telephone consumers are
20 better off as a result of moving prices more in line with costs, and will likely increase their
21 purchases of those services whose price has come down. Perhaps of even greater
22 significance, competitive telephone service providers will be seeing better price signals
23 for local service, and will be able to invest without having to face the level of subsidized
24 competition they have faced in the past. New investment by these providers should, at the
25 margin, increase.

1

2 The cost evidence presented by the companies demonstrates that basic local prices are
3 receiving an economic subsidy from other services. The companies submitted forward-
4 looking direct cost evidence to demonstrate that their residential basic local services are
5 priced below the costs the companies incur to provide the services. Forward-looking
6 direct cost is the basis for determining whether a service is receiving an economic subsidy.
7 Moreover, consistent with this Commission's ruling, the companies' cost witnesses, when
8 measuring the economic subsidy flowing to basic local services, correctly assign the entire
9 cost of the loop to basic local.

10

11 I also conclude that the companies' revised plans will not jeopardize universal service in
12 the state of Florida. The companies' residential basic local prices are substantially below
13 the national average and Florida is not a poor state. The Florida Public Service
14 Commission ("Commission") has the flexibility to approve the companies' revised plans
15 and still have residential basic local prices remain affordable. The Florida Legislation
16 requires that any price increase in basic local service not apply to Lifeline consumers and
17 also increased the income eligibility for Lifeline consumers to 125 percent, thus protecting
18 those customers most likely to be sensitive to potential price increases from a rebalancing
19 plan. Importantly, the companies' revised rebalancing plans will lead to lower intrastate
20 toll prices for all consumers. At the end of the day, the mix of services that consumers
21 purchase as a result of the companies' revised plans will make consumers better off
22 overall.

23

24 Finally, the fact that some customers may experience unwanted rate changes should not be
25 an argument for the status quo. Good policy requires weighing and balancing the costs

1 and benefits of particular actions. While it may seem that maintaining current prices is the
2 least objectionable thing to do from a policy perspective, there is an implicit but very real
3 cost to continuing the status quo. The deployment of next generation, advanced networks
4 depends crucially on providing all market participants the sound economic signals that
5 will encourage efficient investment and innovation. Cost-based prices provide the
6 incentives needed to bring to market the new services that customers demand. This
7 cannot be accomplished by distorted prices.

8
9 **Q. YOU HAVE NOTED IN YOUR MAJOR CONCLUSIONS THAT VERIZON
10 FLORIDA INC., BELLSOUTH TELECOMMUNICATIONS, INC., AND SPRINT-
11 FLORIDA INC. HAVE REVISED THEIR RESPECTIVE RATE REBALANCING
12 PLANS FILED ON AUGUST 27, 2003 TO EXTEND THE TIME OVER WHICH
13 INTRASTATE NETWORK ACCESS AND BASIC LOCAL
14 TELECOMMUNICATIONS RATES WILL BE REFORMED. HAVE YOU
15 REVIEWED THESE COMPANIES' REVISED PLANS?**

16 **A. Yes, I have.**

17
18 **Q. DO THESE REVISIONS AFFECT YOUR ANALYSIS OF THE COMPANIES'
19 PLANS OR YOUR TESTIMONY?**

20 **A. No. With the exception of the minor changes — changing “plans” to “revised plans” —
21 as well as this and the previous question and answer, my testimony remains unchanged
22 from the testimony that I filed on August 27, 2003.**

23

1 **II. BACKGROUND**

2 **Q. PLEASE DESCRIBE THE BASIS FOR THE COMPANIES' REQUEST TO**
3 **INCREASE BASIC EXCHANGE PRICES.**

4 A. From an economic perspective, the fact that the companies' current residential basic local
5 prices are not fully recovering their forward-looking economic cost is, by itself, a good
6 enough reason to begin the process of moving them to more economically rational levels.
7 Both theoretical and empirical research have shown that rebalancing rates and moving
8 them toward levels more commensurate with their underlying costs results in significant
9 benefits to telecommunications consumers and, by so doing, benefits the economy as
10 well.² Rebalancing rates has also been demonstrated to have a positive effect on
11 competitive entry into the local exchange market.³

12
13 The immediate catalyst for the companies' revised plans is the recent changes in Florida
14 laws. I have been informed by counsel that the legal authority for the companies' request
15 arises from recent changes in the statutory framework in Florida. During the 2003 regular
16 legislative session, the Legislature passed Senate Bill 654, the Tele-Competition
17 Innovation and Infrastructure Enhancement Act ("Tele-Competition Act"). The Tele-
18 Competition Act implements several important policies, but for our purposes the relevant
19 Section of the Tele-Competition Act is § 364.164 "Competitive market enhancement."

20
21 **Q. WHAT ARE THE IMPORTANT PROVISIONS OF § 364.164?**

22 A. § 364.164 permits local exchange telecommunications companies to petition the

² See Section IV below.

³ See Section III.

1 Commission to reduce their intrastate access rates in a revenue-neutral manner. In
2 reaching its decision, § 364.164 (1) states that the Commission shall consider whether
3 granting the petitions will:

- 4 a. Remove current support for basic local telecommunications services that
5 prevents the creation of a more attractive competitive local exchange
6 market for the benefit of residential consumers;
- 7 b. Induce enhanced market entry;
- 8 c. Require intrastate switched network access rate reductions to parity over a
9 period of not less than 2 years or more than 4 years; and
- 10 d. Be revenue neutral as defined in subsection (7) within the revenue
11 category defined in subsection (2).

12 Throughout my testimony, I will focus on whether the companies' revised plans are
13 consistent with and meet the criteria provided in § 364.164 (1) (a) and (b). Other
14 company witnesses discuss how the companies' revised plans would meet criteria (c) and
15 (d).

16
17 **Q. IN ORDER TO REDUCE INTRASTATE ACCESS RATES IN A REVENUE**
18 **NEUTRAL MANNER, RATES FOR OTHER SERVICES NEED TO BE**
19 **INCREASED. WHAT SERVICES DO YOU BELIEVE SHOULD BE**
20 **INCREASED?**

21 A. The first category of services that should be considered are those services whose current
22 prices do not recover fully their underlying costs, such as residential basic local
23 telecommunications services. Rates for these subsidized services should be increased in
24 order to better reflect their real economic cost. This is confirmed in §364.164 (2), where
25 the legislation calls for the creation of a revenue category mechanism consisting of basic

1 local telecommunications service revenues and intrastate switched network access
2 revenues in order to achieve revenue neutrality. That is, the legislation states that in order
3 to achieve revenue neutrality, if intrastate access prices are reduced, then basic local
4 service prices need to be increased.

5
6 The current rate design for telephone services—where basic local services are priced
7 below cost and other services, including intrastate access service, are priced in such a way
8 so as to provide the support—while in the process of being reduced or eliminated in a
9 number of states, continues to be encountered in state regulation of telephone services.
10 However, as the Florida Legislature wisely recognized, whatever benefits such a rate
11 design policy has arguably achieved in the past, such as helping the United States achieve
12 universal telephone service—the continuation of such policies frustrates another important
13 policy goal of Federal and state regulators, namely, the establishment of efficient
14 competition to as broad a base of business and residential consumers as is economically
15 feasible—not to mention the economic costs that arise from price-cost distortions, *per se*,
16 as I discuss further below.

17
18 The current rate design policy as it pertains to residential basic local services, frustrates
19 that policy goal and by enacting § 364.164, the Florida Legislature has provided the
20 Commission with the direction it needs to make competition work better for all Florida
21 consumers.

22 **Q. ARE THE COMPANIES' REVISED PLANS CONSISTENT WITH § 364.164 (1) (a)**
23 **and (b)?**

24 A. Yes. The companies' revised plans are consistent with and meet the criterion of §
25 364.164(1)(a) and (b). Below in Section III, I fully describe why I believe that the

1 companies' revised plans are consistent with and meet those criteria.

2

3 **Q. DR. GORDON, FROM A POLICY PERSPECTIVE DO YOU BELIEVE THAT IT**
4 **IS APPROPRIATE TO ENGAGE IN THE TYPE OF REBALANCING THAT IS**
5 **BEING CONTEMPLATED BY THE COMPANIES' PLANS?**

6 A. Yes, I do. In this testimony, I describe fully why I believe that the companies' revised
7 plans are consistent with the criteria of the Tele-Competition Act that the Commission
8 shall consider and why the revised plans would likely result in increasing competitive
9 activity in the state of Florida. Specifically, the revised plans will create a more attractive
10 local exchange market for residential consumers and lead to enhanced market entry—two
11 criteria that need to be considered by the Commission in addressing the companies'
12 revised plans. By making the residential local exchange market more attractive,
13 residential consumers will likely see more companies competing for their business, which
14 will, in turn, result in more options for residential consumers, improved services and
15 lower prices for their telecommunications services. From a policy perspective, it is
16 appropriate to accomplish these tasks.

17

18 In addition, I describe below the history of rate design for basic local services in the
19 United States and how the end result of these policies has been uneconomically low
20 residential basic local prices; lower than what one would expect to find in undistorted
21 competitive markets. Of course, states have differed in their implementation of these
22 policies and, as a result, residential basic local service prices vary quite a bit from state to
23 state. In Florida, residential basic local prices are quite low when compared to prices in
24 other states. In Table I below, I list the flat-rate charges for each of the three companies'
25 lowest and highest rate groups compared to the national average flat-rate charges. As can

1 be seen in the table, each of the companies' highest rate group is well below the national
2 average of \$14.55 per month.

3
4 **Table I – Comparison of Verizon, BellSouth and Sprint's flat-rate residential basic**
5 **local charges and National Average flat-rate charges**

Company	Lowest Rate Group	Highest Rate Group	Unweighted Average	National Average (2002)
Verizon	\$9.72	\$12.06	\$10.89	
BellSouth	\$7.57	\$11.04	\$9.31	
Sprint	\$7.63	\$11.48	\$9.56	
National Average (2002)				\$14.55

6 Source: Florida Senate Staff Analysis And Economic Impact Statement, p. 4, April 8, 2003; FCC *Reference*
7 *Book of Rates, Price Indices, and Household Expenditures for Telephone Service*, Table 1.1 July 2003, rates
8 exclude Federal and State subscriber line charges, touch tone charge and taxes, 911 and other charges.

9
10 **Q. HOW DOES THE FACT THAT FLORIDA HAS LOW RESIDENTIAL BASIC**
11 **LOCAL TELECOMMUNICATIONS PRICES RELATE TO THIS**
12 **PROCEEDING?**

13 A. It relates to this proceeding in two important ways. First, the Legislature has correctly
14 perceived that low residential basic local prices have led the residential local exchange
15 market to be less attractive to competitors than would be the case with more economically
16 rational residential basic local prices. In Section III below, I describe fully why, from an
17 economic perspective, I believe the Legislature is absolutely correct on this point. Put

1 simply, holding all other factors constant, the lower the residential basic local price (when
2 set governmentally without regard to whether the prices cover cost), the more unattractive
3 those customers are to actual and potential competitors. Since Florida residential basic
4 local prices are lower than those in many other states, and in fact lower than the national
5 average, the problem facing potential new entrants as a result of these low rates is likely to
6 be even more severe and pronounced in Florida than in other states. For this reason, it is
7 even more important that Florida policymakers tackle this problem sooner rather than
8 later.

9
10 **Q. IS THERE ANY SUPPORT FOR YOUR ASSERTION THAT THE PROBLEM OF**
11 **AN UNATTRACTIVE RESIDENTIAL MARKET MAY BE WORSE IN FLORIDA**
12 **THAN IN OTHER STATES?**

13 A. Yes, there is some support for my assertion. The FCC compiles data on local telephone
14 competition. Its most recent report, released June 12, 2003 included a table that lists, for
15 each state available, the percentage of lines provided to residential and small business
16 customers by ILECs and CLECs.⁴ The FCC provided data on 40 states and of those 40
17 states Florida ranked 30th in the percent of CLEC lines that were sold to residential and
18 small business customers. This means that in 29 out of 40 states, CLECs' served
19 proportionately greater residential customers than in Florida (see Figure 1 at the end of
20 this testimony). Florida ranks below states such as Georgia (58%), Alabama (52%),
21 Louisiana (61%) and Virginia (70%) to name a few, all of which have higher residential
22 prices. This provides some evidence that low residential basic local prices are having a

⁴ See, *Local Telephone Competition: Status as of December 31, 2002*, Table 11, Industry Analysis and Technology Division Wireline Competition Bureau, Federal Communications Commission.

1 negative impact on residential competition in Florida.

2

3 Q. YOU MENTIONED THAT THERE WAS A SECOND REASON WHY YOU
4 BELIEVE THAT FLORIDA'S LOW RESIDENTIAL BASIC LOCAL PRICES, IN
5 COMPARISON WITH OTHER STATES, ARE RELEVANT IN THIS
6 PROCEEDING. WHAT IS THAT SECOND REASON?

7 A. The second reason has to do with affordability considerations and the flexibility this
8 Commission has in rebalancing rates while still maintaining basic residential local rates
9 that are quite affordable for most Florida consumers. As mentioned above, the
10 companies' prices for residential basic local services are generally well below the national
11 average. However, Florida is not a poor state. According to data from the U.S. Bureau of
12 Economic Analysis, Florida is on par with the national average in personal income per
13 capita.⁵ Specifically, as of 2001, the data show that personal income per capita in Florida
14 was \$29,047 compared to the national average of \$30,413. Thus, the Commission has the
15 flexibility to increase residential basic local prices, which are currently well below the
16 national average, to more economically reasonable levels without making the services
17 unaffordable to Florida consumers.

18

19 At the same time, Florida consumers will pay less for intrastate toll calls. The companies'
20 rebalancing plan will lower the access charge component of the cost of producing
21 intrastate toll calls. IXC's are required to pass these cost savings through to consumers in
22 the form of lower prices. Thus, even with the increase in basic residential local rates,
23 telecommunications will be just as affordable to Florida consumers as before, yet

⁵ Bureau of Economic Analysis, Regional Economic Information System, Table SA1-3.

1 consumers will be better off because they will be consuming a different mix of
2 telecommunications services that provides more value than they are currently receiving.

3
4 In addition, the Tele-Competition Act also requires that any increase in basic local service
5 rates not apply to Lifeline customers and that the ILECs increase Lifeline participation to
6 125 percent of federal poverty income level.⁶ These requirements further protect low-
7 income consumers—and it is low-income consumers who would be most prone to
8 disconnections in the face of price increases—thus providing the Commission with even
9 more flexibility to approve the companies' rate rebalancing request with minimal concern
10 that such a rate restructuring would negatively affect subscribership. I discuss this point,
11 and other reasons why I believe the companies' revised plans will not negatively affect
12 subscribership in Florida, in more detail in Section VI below.

13
14 **Q. VERIZON, BELLSOUTH AND SPRINT ARE FILING THEIR REVISED PLANS**
15 **AT THE SAME TIME. IS THERE ANY PUBLIC POLICY BENEFIT TO**
16 **HAVING THE COMMISSION REVIEW THE COMPANIES' REVISED PLANS**
17 **AT THE SAME TIME?**

18 A. Yes. The benefits are at least threefold. First, to the extent that basic local rates are
19 simultaneously adjusted closer to their costs throughout the territory of the three
20 companies serving 98 percent of the ILEC customers, the better competition will be
21 benefited and market entry enhanced. Certain providers who might be positioned to
22 provide facilities-based basic local service (e.g. cable telephony, electric and wireless
23 providers) will not necessarily configure their coverage areas based on the ILECs service

⁶ § 364.10(3)(a).

1 territories. For them the potential staggered implementation of the rebalancing could be
2 an obstacle to competitive entry. There are several areas within Florida where at least
3 two of the three major ILECs provide service where it may be economical for a new
4 entrant to provide service regardless of the ILEC boundary. For example, the
5 Orlando/Central Florida (BellSouth/Sprint) area, Southwest Florida (between Sarasota and
6 Ft. Myers (Verizon/Sprint)) area and the Pensacola - Ft. Walton - Destin -- Panama City
7 (BellSouth/Sprint/BellSouth) area are three relatively compact geographic areas served in
8 part by at least two of the three companies. Each of these areas might appropriately
9 comprise the service territory of a single facilities-based entrant. When the price
10 increases contained in the company plans are implemented and signal to these entrants that
11 pricing distortions are being reduced on a broad basis, the competitors may be able to
12 more efficiently execute their business plans.

13
14 Second, it is also important to avoid unnecessary marketplace distortions that could affect
15 the purchase decisions of end-users. End-users normally make their purchase decisions
16 based in large part on relative price differences among providers. If the rate-rebalancing is
17 not implemented across all companies simultaneously, end-users will make these
18 decisions based on incomplete and imperfect information as they see some providers'
19 rates increasing while other providers' rates remain the same (at least temporarily). The
20 risk will be that regulatory scheduling rather than the relative costs and benefits of various
21 service offerings becomes the driving force behind consumers' decisions. For example, it
22 is easy to imagine a situation involving two or more of the ILECs —where a CLEC might
23 be able to offer service at a legitimate cost savings to all customers, but if re-balancing is
24 not done simultaneously perhaps only one firm's customers would respond to the
25 competitive offer, because the other firm's rate increase had yet to be implemented.

1 Coordinated rate rebalancing across all companies will ensure that potential competitors
2 are not artificially disadvantaged when introducing new service offers by artificial
3 boundaries, and that customers are not disadvantaged by incorrect and incomplete
4 information driving their purchase decisions.

5
6 Third, the magnitude and timing of the access charge price reductions for the three
7 companies would also benefit end users statewide. LXC's will be able to implement more
8 meaningful price reductions if they can aggregate their access cost reductions into a single
9 round of pricing changes.

10

11 **Q. THE LEGISLATION PERMITS A COMPANY TO RESTRUCTURE ITS RATES**
12 **OVER A MINIMUM OF TWO YEARS AND A MAXIMUM OF FOUR. EACH OF**
13 **THE COMPANIES PLANS TO HAVE INTRASTATE ACCESS RATES REACH**
14 **PARITY WITH INTERSTATE RATES OVER A TWO-YEAR PERIOD. DO YOU**
15 **BELIEVE THIS IS A GOOD IDEA?**

16 A. Yes I do, for several reasons. First, it is clearly permitted by the Tele-Competition Act.
17 Second, it is a matter of economic principle that economic welfare is at its highest when
18 prices are based on their underlying forward-looking costs and are not distorted. As I
19 discuss in greater detail in Section III, prices that are distorted provide inferior signals for
20 market participants and result in losses in consumer welfare because investment and
21 purchase decisions by firms and consumers do not reflect the true costs that society incurs
22 to provide the services. The companies' revised plans reduce these pricing distortions in
23 the Florida telecommunications markets sooner rather than later and, by so doing, achieve
24 economic efficiency gains sooner as well.

25

1 Third, a possible reason why one would prefer a more gradual rate restructuring time
2 frame has to do with avoiding consumer "rate shock". As the words imply, rate shock
3 implies that the increase in price proposed by the company is so high, that consumers
4 would be obviously and adversely affected. However, based upon my personal
5 experience as a former commissioner, as well as what I have observed in other states, I do
6 not believe that the yearly increase in basic local prices will result in rate shock.

7
8 **Q. PLEASE EXPLAIN WHY YOU BELIEVE THAT THE COMPANIES' PLANS**
9 **WILL NOT RESULT IN RATE SHOCK.**

10 A. The companies' revised plans will result in relatively minor increases in a customer's
11 basic local price. In addition, as I stated earlier, these price increases will not even apply
12 to current Lifeline consumers and new Lifeline consumers who have become eligible as a
13 result of the Tele-Competition Act raising the income threshold to 125% of the poverty
14 level.

15
16 In addition, with the reduction and elimination of the in-state connection fees, many
17 customers might not even experience a significant change in their total bill. If there is an
18 increase in the customers' bill, it will likely result in large part from increased stimulation
19 from lower long distance charges that represent real gains to consumers because they are
20 now able to make more calls at the new lower prices.

21
22 Finally, the companies' revised plans compare favorably with other states that have
23 approved rate-rebalancing plans that approved much larger increases than the companies'
24 request. Importantly, these states' price adjustments did not jeopardize universal service.
25 In Section VI, I also discuss the experience of some of the states that have already

1 implemented serious rate rebalancing plans, including Massachusetts where I presided as
2 Chairman through one such adjustment.

3

4 **III. THE COMPANIES' REVISED PLANS WILL RESULT IN A**
5 **"MORE ATTRACTIVE COMPETITIVE LOCAL EXCHANGE**
6 **MARKET FOR THE BENEFIT OF RESIDENTIAL CONSUMERS"**
7 **AND WILL INDUCE "ENHANCED MARKET ENTRY"**

8

9 **Q. HOW DO YOU JUDGE WHETHER THE COMPANIES' REVISED PLANS**
10 **MEET THE CRITERIA OF § 364.164 (1) (a) AND (b)?**

11 A. § 364.164 (1) (a) states that the companies' plans should remove the current support for
12 basic local telecommunications services that is impeding the creation of a more attractive
13 competitive local exchange market for the benefit of residential consumers. In order for
14 the companies' revised plans to meet the first criterion, they must show that the revised
15 plans remove—or at a minimum reduce—support for basic local telecommunications. By
16 so doing, they create a more "attractive" competitive local exchange market, because the
17 price to be competed against by new entrants is raised to more closely reflect the real
18 economic costs of doing business. The second criterion for the Commission's
19 consideration is § 364.164 (1) (b) which simply states that the plans should induce
20 enhanced market entry and no distinction is made between residential or business
21 consumers.⁷

22

⁷ There are other criteria in § 364.164 (1) that I do not discuss but that are the subject of the companies' respective witnesses.

1 Therefore, in evaluating whether the companies' revised plans meet the criteria in these
2 sections, I must ascertain whether the revised plans: (1) remove current support for basic
3 local telecommunications services, and (2) will likely result in a more attractive
4 competitive environment that would benefit residential consumers and induce enhanced
5 market entry.

6

7 **Q. DO THE COMPANIES' REVISED PLANS REMOVE CURRENT SUPPORT FOR**
8 **BASIC LOCAL TELECOMMUNICATIONS SERVICES?**

9 A. Yes, the companies' revised plans significantly decrease current support for basic local
10 telecommunications services. The revised plans do this by reducing the prices of a service
11 that has historically been set by regulators to provide an important source—but by no
12 means the only source—of support for basic local services, namely, intrastate switched
13 network access.

14

15 **Q. WHY DO YOU BELIEVE THAT INTRASTATE SWITCHED NETWORK**
16 **ACCESS CURRENTLY SUPPORTS BASIC LOCAL TELECOMMUNICATIONS**
17 **SERVICES?**

18 A. There are two reasons. The first is the historical rate design policy prevalent in
19 telecommunications regulation in Florida and throughout the United States. As I
20 mentioned earlier, historically, telecommunications rate design was premised on the
21 policy goal—at times stated and sometimes left implicit—of keeping the price of basic
22 local telecommunications low or as low as possible. This policy began early on in
23 telecommunications regulation and was accomplished through the rate design mechanisms
24 that were part and parcel of traditional regulation. Traditional regulation required two
25 broad steps. The first was to determine a revenue requirement that was sufficient to meet

1 the prudently incurred operating expenses and a reasonable return on prudently invested
2 capital. The second broad step was the rate design process, which determined the price of
3 each regulated service to ensure that the regulated company had the opportunity to recover
4 its revenue requirement from its regulated service.⁸ Normally, a proper rate design
5 process would require that the price of any service recover at least its underlying cost and,
6 in addition, contribute to the firm's shared and common cost in some manner. At times
7 that manner was consistent with economic efficiency goals—as when demand
8 considerations were taken into account—and at other times it was more reflective of other
9 policy considerations—as when an equal percentage markup was applied across the board
10 to the different services.

11

12 For basic local services, however, in most instances the price was set on a residual basis
13 without taking into consideration the underlying cost of providing basic local
14 telecommunications. That is, the goal of residual pricing was to keep basic local prices
15 low, or as low as possible, and to recover more revenue from other telecommunications
16 services, constrained by what consumers were willing to pay for the non-basic
17 telecommunications services and by—as competition began to become more prevalent in
18 telecommunications markets—the threat of customers bypassing the public switched
19 telecommunications network.

20

21 Prior to divestiture of AT&T in 1984, toll prices provided the bulk of support for basic
22 local telecommunications services. As technological advances lowered the cost of

⁸ I say opportunity to recover its revenue requirement because the regulatory process does not generally guarantee a regulated company a certain return, it only provides the regulated company the opportunity to earn a certain return.

1 providing toll services, toll prices did not decrease commensurately and were used as a
2 means to support basic local telecommunications services—i.e., to keep the prices of basic
3 local lower than would otherwise be the case. After divestiture of AT&T, interstate and
4 intrastate switched network access services were substituted as a means of supporting
5 basic local telecommunications services.

6
7 Notably, even after the substitution of price cap regulation for traditional regulation, the
8 cross subsidies that were present under traditional regulation have been maintained.

9
10 The notion that intrastate switched network access services have been used as a source of
11 support for basic local telecommunications is confirmed in the *Florida Senate Staff*
12 *Analysis and Economic Impact Statement on the Tele-Competition Act*, where it states:

13 According to the commission, intrastate network access service rates were set
14 well above the incremental cost of providing the service in order to keep rates
15 for basic local telecommunications service as low as possible and to encourage
16 subscribership.⁹

17
18 The second reason why I believe that intrastate access services currently support basic
19 local service is cost considerations. As described in the testimonies of their witnesses, the
20 companies have established that the price of residential basic local telecommunications
21 services is below forward-looking direct cost estimates. From an economic perspective,
22 whenever the revenues from a service are insufficient to recover its forward-looking direct
23 costs, that service is said to be in receipt of an economic subsidy. The source of the

⁹ See Senate Staff Analysis and Economic Impact Statement on CS/SB 654, April 8, 2003.

1 subsidy—including that for residential basic local services—comes from all those services
2 that are priced above their respective forward-looking direct costs. As a whole, these
3 services contribute to the support of residential basic local. Because intrastate access
4 services are priced significantly above their forward-looking direct costs, this means that
5 intrastate switched network access services are supporting basic local service.
6

7 **Q. DOES THIS IMPLY THAT THERE MAY BE OTHER SERVICES, BESIDE**
8 **INTRASTATE ACCESS SERVICES, THAT MAY ALSO BE SUPPORTING**
9 **BASIC LOCAL TELECOMMUNICATIONS SERVICES?**

10 A. Yes, that is correct. In general, for multi-product firms, where there are significant
11 amounts of shared and common costs, firms must, in the aggregate, price their services
12 above forward-looking direct costs in order to earn sufficient revenues to remain viable.
13 When one service is priced below its forward-looking direct costs, as is the case for
14 residential basic local telecommunications services, other services that are priced above
15 forward-looking direct costs are supporting the service that is priced below its own
16 forward-looking direct costs.
17

18 The Florida Legislature, however, has specifically determined that it is the support
19 provided by intrastate switched network access that is to be reduced. The Tele-
20 Competition Act calls for rebalancing to take the form of lowering intrastate access rates
21 to parity—over a 2 to 4 year period—with interstate switched network access rates and to
22 simultaneously increase basic local telecommunications services by an amount sufficient
23 to make up the revenue over the same time period. Under this approach, there is still no
24 guarantee that residential basic local services recover at least their forward-looking direct
25 costs once intrastate access rates are set to parity with interstate switched access rates. In

1 fact, according to the companies' evidence, residential rates will still be below forward-
2 looking direct costs even when intrastate switched network access rates reach parity with
3 the interstate rates.

4

5 Therefore, while the companies' revised plans are consistent with the criteria to be
6 considered by the Commission, the plans do not result in the complete rebalancing of
7 rates. Thus, there will still likely be some (lesser) distortions in prices even after the
8 implementation of the plans.

9

10 **Q. AS AN ECONOMIST, DO YOU BELIEVE THAT REBALANCING IS**
11 **COMPLETED ONCE BASIC RESIDENTIAL PRICES ARE SET AT FORWARD-**
12 **LOOKING DIRECT COSTS?**

13 A. While having basic local services recover at least their underlying forward-looking direct
14 costs is a good first step, it would not necessarily result in economically efficient prices.
15 As I discuss in greater detail below in Section IV, economically efficient prices require
16 that a multi-product firm's shared and common costs be recovered through markups on
17 each service or product above forward-looking direct costs in a manner that least distorts
18 economic efficiency. Therefore, to have economically efficient basic local prices would
19 likely require that basic local services be priced above forward-looking direct costs.
20 However, as markets become more competitive, markups will be limited by the need to be
21 competitive with other firms in the market.

22

23 **Q. HAVING ESTABLISHED THAT THE REVISED PLANS REMOVE CURRENT**
24 **SUPPORT FOR BASIC LOCAL, § 364.164 (1) (a) PROVIDES THAT, AS A**
25 **RESULT OF THE REMOVAL, THEY WILL RESULT IN A MORE**

n/e/r/a

Consulting Economists

1 ATTRACTIVE COMPETITIVE LOCAL EXCHANGE MARKET FOR THE
2 BENEFIT OF RESIDENTIAL CONSUMERS. WILL THE COMPANIES'
3 REVISED PLANS MEET THIS CRITERION?

4 A. Yes, the companies' revised plans will create a more attractive competitive local exchange
5 market for the benefit of residential consumers. Economic theory and empirical research
6 both indicate that this will likely be the case. I discuss these two factors below.

7
8 Q. PLEASE DISCUSS WHY YOU BELIEVE THAT ECONOMIC THEORY
9 SUGGESTS THAT THE COMPANIES' REVISED PLANS WILL LIKELY
10 RESULT IN A MORE ATTRACTIVE COMPETITIVE LOCAL EXCHANGE
11 MARKET FOR THE BENEFIT OF RESIDENTIAL CONSUMERS?

12 A. One of the key components of the companies' revised plans is that intrastate access
13 revenues will be decreased in a revenue-neutral manner by increasing the price of (and
14 revenue from) basic local telecommunications services for residential consumers. The
15 cost information provided by the companies in this proceeding indicates that residential
16 basic local telecommunications prices are currently below forward-looking direct costs.
17 Increasing the price of a service, especially a service that is below forward-looking direct
18 costs, will make for a more attractive market for actual and potential competitors.
19 Competitors will not rationally try to compete against heavily subsidized prices.

20
21 Q. WOULD YOU PLEASE EXPLAIN WHY YOU BELIEVE THIS TO BE THE
22 CASE?

23 A. In a market economy, prices are the essential tool that send signals to market participants
24 that, in turn, determine market behavior and outcomes. For example, as prices increase or
25 decrease, consumers alter their consumption decision because the value consumers place

1 on goods and services changes in relation to price. Producers alter their production,
2 investment and research and development decisions as well, because as prices increase or
3 decrease, profits change along with them. It is the search for profits that drives firms to
4 enter or expand into new markets. As prices change, potential entrants into the market
5 will be affected as well. Lower prices may act to keep new firms from entering the
6 market and higher prices more reflective of cost will tend to attract new firms into the
7 market.

8
9 Like any other firm, the investment decision of a telecommunications competitor is based
10 on the present value of the cash flows that the investment project is likely to generate over
11 the useful economic life of the project. Holding all other factors constant, when the price
12 of a service increases, a cash flow analysis would show that the investment project
13 becomes more profitable (or less of a loss) and thus more attractive. In the case before us,
14 an increase in the price of basic local telecommunications service would increase the
15 revenues from residential basic local services in a cash flow analysis, thus increasing the
16 attractiveness of providing those residential services. As a result of rate rebalancing,
17 where the companies plan to raise residential basic local prices, the residential local
18 exchange market will look more attractive to all actual and potential telecommunications
19 providers of residential services.

20
21 **Q. WILL THE COMPANIES' REVISED PLANS ALSO PROVIDE INCREASED**
22 **INCENTIVES FOR OTHER COMPETING TELEPHONY TECHNOLOGIES?**

23 A. Yes. An important reason for opening local telecommunications markets to competition is
24 the belief that technological change is proceeding so rapidly that competitive markets will
25 do a much better job than monopoly of discovering which technologies can or cannot

1 succeed in the long run. For example, access to customers for their telecommunications
2 needs comes in the form of fixed-wireline access, wireless access, cable telephony,
3 Internet, and potentially satellite and even access via electric utilities. Of course, not all of
4 these technologies will necessarily survive in the long run and competition will likely lead
5 to a mix of technologies surviving and providing the lowest possible cost for each
6 consumer's telecommunications needs.

7
8 However, in order for the lowest-cost mix of technologies to remain in the market, prices
9 and the signals they send must not be distorted and must reflect the underlying cost of
10 providing service. The companies' revised plans move positively in this direction and
11 encourage new entrants—regardless of the chosen technology—to enter or expand in the
12 marketplace because even competitors using lower-cost (or more attractive) technologies
13 may not be able to compete against a subsidized ILEC price that does not fully reflect its
14 own costs. This would be a loss for consumers and the Florida economy.

15
16 **Q. IS THERE EVIDENCE THAT OTHER FORMS OF ACCESS ARE COMPETING**
17 **WITH FIXED-WIRELINE ACCESS?**

18 A. Yes. The Florida Commission has recognized the actual and potential substitution
19 occurring between fixed-wireline and other forms of access, including wireless and
20 emerging IP-telephony providers. As the Commission states:

21 Regarding the substitution of technology and services, as they are being found
22 to be close substitutes to traditional wireline services, both wireless and

1 emerging broadband IP-telephony providers must be included in the analysis.¹⁰

2

3 In the same report, the Florida Commission cites nation-wide data indicating that about
4 5% of U.S. wireless subscribers have disconnected wireline service and conclude that
5 substituting wireless for wireline services appears to be a national trend.¹¹ Moreover, as
6 the same report concludes, Florida may be especially susceptible to this phenomenon
7 because of the large population in Florida that also has residences in other states. For
8 many of these consumers, "it makes little sense to continue paying for telephone service
9 that sits idle much of the year when wireless enables them to stay connected wherever
10 they are."¹²

11

12 The Florida Commission has also concluded that cable providers are competing directly
13 with fixed-wireline providers. The Commission cites to national data that shows that by
14 second quarter of 2002, there were 2.5 million cable telephony subscribers and that cable
15 companies expect to see one-third of their digital cable households take cable telephony
16 service by 2005.¹³

17

18 There is evidence that the Tele-Competition Act is already having a positive impact on
19 competitors' incentive to enter and expand in the Florida market. On July 18, 2003,
20 Knology, a provider of broadband and voice telephony services, announced it has entered

¹⁰ See, Florida Public Service Commission, *Telecommunications Market in Florida Annual Report on Competition As of June 30, 2002*, December 2002, p. 6.

¹¹ *Ibid.*, at 7.

¹² *Ibid.*, at 9.

¹³ *Ibid.*, at 10.

1 into a definitive agreement to purchase certain assets from Verizon Media Ventures, Inc.¹⁴
2 Knology offers local and long distance telephone service and its purchase of Verizon's
3 Americast cable system will permit it to compete directly with Verizon. In its press
4 release announcing its decision, Knology stated:

5 In commenting on this transaction, Knology noted that the Tele-Competition
6 Act recently enacted in Florida positively influenced its decision to expand
7 operations in the state. This Act, as written by the Florida Legislature and
8 supported by Governor Bush, laid the foundation for companies like Knology
9 to enter the Florida market, and offer competitive services and products to
10 consumers.

11
12 **Q. IS THERE EMPIRICAL EVIDENCE THAT SUPPORTS YOUR VIEW THAT**
13 **RATE REBALANCING WILL LIKELY MAKE THE RESIDENTIAL LOCAL**
14 **EXCHANGE MARKET MORE ATTRACTIVE?**

15 A. Yes, there is empirical evidence. Two of my colleagues at NERA investigated empirically
16 whether low residential basic local rates were having any impact on competition in the
17 states and, specifically, whether low rates were hindering the development of residential
18 competition.¹⁵ In that paper, the authors hypothesized that inefficient local exchange
19 prices are having an impact on competition and that, specifically, low residential prices
20 are inhibiting competition for residential customers. To test their hypotheses, the authors
21 compared how local competition varied across the different states depending on how

¹⁴ See, Knology Press Release July 18, 2003, *Knology Announces Agreement to Purchase Broadband Asset*.

¹⁵ See, Agustin J. Ros and Karl McDermott, "Are Residential Local Exchange Prices Too Low? Drivers to Competition in the Local Exchange Market and the Impact of Inefficient Prices," in Michael Crew, *Expanding Competition in Regulated Industries*, Kluwer Academic Publishers, 2000.

1 “unbalanced” were local exchange prices. Specifically, the authors estimated several
2 cross-section econometric models of facilities-based competition, controlling for things
3 such as cost and demand considerations in the different states. The authors also included
4 several policy variables, including one that measured the degree to which residential local
5 exchange prices were “distorted” in each state. The authors summarized their results, as
6 they pertained to residential competition, as follows:

7 Using OLS and GLS estimates we found a significant and positive association
8 between states that have more “balanced” tariffs and residential competition.

9 For two measures of residential competition used in our data, we found that
10 “rebalancing” tariffs by 10% leads to approximately a 9% and 13% increase,
11 respectively, in residential competition.¹⁶

12
13 In addition, James Eisner (an FCC staff member) and Professor Dale E. Lehman
14 performed a somewhat similar study.¹⁷ Eisner and Lehman state in their conclusion:

15 ...in some specifications, there appears to be less competitive entry
16 (principally facilities-based) where residential rates are lower. These findings
17 are generally statistically significant at the 90% level.¹⁸

18
19 Finally, another empirical study examined rate rebalancing in Latin America and found
20 that rate rebalancing in some Latin American countries has led to increases in the supply

¹⁶ *Ibid.*, at 167.

¹⁷ See, James Eisner and Dale E. Lehman, *Regulatory Behavior and Competitive Entry*, presented at the 14th Annual Western Conference Center for Research in Regulated Industries, June 28, 2001. The authors' main motivation appears to have been ascertaining how regulatory behavior—as it pertains to unbundled loop prices and 271 entry—affects competitive entry. Nevertheless, they control for local exchange prices as well.

¹⁸ *Ibid.*, p. 25.

1 of main telephone lines by providing better incentives to market participants.¹⁹

2

3 In summary, both economic theory and the empirical literature suggest that the
4 companies' revised plans—by setting residential rates at more economically efficient
5 levels—would likely make the residential local exchange marketplace more attractive to
6 actual and potential competitors.

7

8 **Q. BUT ISN'T IT THE CASE THAT CLECS ALREADY HAVE ENOUGH**
9 **INCENTIVES TO SERVE LUCRATIVE RESIDENTIAL CUSTOMERS?**

10 A. Yes, it is probably the case that CLECs have enough incentive to serve a subset of
11 residential customers, namely those customers that are very profitable either because the
12 cost of serving them is especially low or because their volumes are unusually high. But
13 the promise of the Tele-Competition Act is to ensure that competition for residential
14 customers is as broad and diffuse as is economically feasible, and by better aligning the
15 prices of residential basic local services with their underlying costs, a broader base of
16 residential customers will obtain the benefits of competition.

17

18 **Q. § 364.164 (1) (b) PROVIDES THAT THE COMPANIES' PLANS CONSIDER THE**
19 **EFFECT ON ENHANCED MARKET ENTRY. WILL THE COMPANIES'**
20 **REVISED PLANS MEET THIS PROVISION?**

21 A. Yes, the companies' revised plans will induce enhanced market entry. Above, I have
22 discussed how the revised plans would likely create a more attractive competitive local

¹⁹ See, Agustín J. Ros and Aniruddha Banerjee, "Telecommunications Privatization and Tariff Rebalancing: Evidence from Latin America," *Telecommunications Policy*, 24 (2000) 233-252.

1 exchange market for the benefit of residential consumers. This is an example of how the
2 revised plans will induce enhanced market entry.

3
4 In general, the companies' revised plans will provide for improved entry signals into the
5 local exchange market by diminishing distorted price signals that may encourage
6 uneconomic entry into the overpriced markets. Prices that are free of distortions will lead
7 to several economically-efficient outcomes known as allocative, technical and dynamic
8 efficiencies. First, efficient pricing assumes that the marginal cost that society incurs to
9 produce goods and services reflects the value that consumers place on the good or service
10 consumed, (allocative efficiency). Second, optimal signals are provided to firms in the
11 industry (e.g., whether to increase production or exit the industry) and to potential entrants
12 contemplating entering the market. This ensures that it is the lowest cost firms that stay in
13 the market and provide goods and services. In this way the use of society's scarce
14 resources is minimized (technical efficiency). Third, prices that adequately cover costs
15 ensure that appropriate incentives exist for improvement in technology, increased research
16 and development and higher quality goods and services (dynamic efficiency).

17
18 **Q. UNDER WHAT CONDITIONS CAN IT BE SAID THAT PRICES ARE FREE OF**
19 **DISTORTION, AND ARE THE COMPANIES' CURRENT PRICES FOR BASIC**
20 **LOCAL SERVICES FREE OF DISTORTIONS?**

21 A. Prices are free of distortion when: (1) they recover at least the forward-looking
22 incremental cost of production and (2) for multi-product firms, markups above
23 incremental costs take into account demand characteristics in the market, subject, of
24 course, to the need for the firm to meet competition. As described in the companies' cost
25 testimonies, the companies' prices for basic local residential services are not recovering

1 the forward-looking direct cost of production. As such, prices for these services do not
2 meet the economic criterion that prices should at a minimum recover the forward-looking
3 direct cost of production.

4

5 By adopting the companies' revised plans, however, the Commission will be reducing
6 significantly the distortions in the price of intrastate access and residential basic local
7 services and achieving the economically efficient outcomes described above.

8

9 **IV. OTHER ECONOMIC BENEFITS FROM THE COMPANIES'**
10 **REVISED PLANS**

11

12 **Q. ARE THERE OTHER ECONOMIC BENEFITS THAT WILL LIKELY ARISE**
13 **FROM THE COMPANIES' REVISED REBALANCING PROPOSAL?**

14 A. Yes, there are other economic benefits that will likely arise from the companies' revised
15 rebalancing proposals. Both economic theory and empirical research suggest that rate
16 rebalancing will likely increase economic activity in Florida as increased competition
17 brings benefits to Florida consumers of telecommunications services.

18

19 **Q. WOULD YOU PLEASE DESCRIBE WHY ECONOMIC THEORY SUGGESTS**
20 **THAT RATE REBALANCING WILL INCREASE ECONOMIC ACTIVITY IN**
21 **FLORIDA?**

22 A. Rate rebalancing consists of increasing the prices of services that are priced below
23 forward-looking direct costs and reducing the prices of services that are priced
24 significantly above forward-looking direct costs. As mentioned earlier in my testimony,
25 the history of telecommunications rate design is such that residential basic local prices

1 were set low and usage services (such as toll and intrastate access services) were set high.

2
3 However, economic theory teaches that economic efficiency (and overall consumer
4 welfare) is at its highest level when prices of goods and services in an economy are set at
5 forward-looking direct cost. Of course, in industries where there are significant fixed
6 costs—that give rise to economies of scale—and in multi-product firms where there are
7 significant amounts of shared and common costs, pricing services at forward-looking
8 direct cost does not permit the firm to earn sufficient revenues to recover all its costs.
9 Under such conditions, markups above forward-looking direct costs are required.
10 Specifically, as competition develops, those services that are more price elastic will likely
11 receive a proportionately lower markup above cost than those services that are more price
12 inelastic.

13
14 **Q. PLEASE DESCRIBE HOW REBALANCING RESULTS IN INCREASED**
15 **ECONOMIC ACTIVITY IN FLORIDA?**

16 A. The companies' revised plans will lower intrastate access prices, which will in turn result
17 in lower intrastate toll prices, as required by the Tele-Competition Act. As a result of the
18 reduction in intrastate toll prices, Florida consumers will use more toll services. This will
19 create value for them that they are not now receiving. This, in turn, will reflect an
20 increase in economic activity in Florida. In addition, and of more direct importance to this
21 proceeding, more cost reflective prices for local service will send signals to competitors
22 that will more efficiently guide their investment decisions, and in all likelihood, increase
23 their investment beyond what it is in the face of today's artificially low prices. Thus,
24 rebalancing will generate significant gains in economic activity in Florida. It is important
25 to stress the point that demand for access to the network by consumers depends not only

1 on the price of network access but it also depends on the value that consumers obtain
2 (consumers' surplus) from using the network. While higher network access prices may, in
3 theory, decrease the quantity of access consumed, the concomitant decrease in long
4 distance price will increase the quantity of access consumed. Empirical evidence suggests
5 that, in net, we may well find that rebalancing leads to more consumers subscribing to the
6 network.²⁰

7
8 **Q. IS THERE EMPIRICAL EVIDENCE THAT QUANTIFIES THE AMOUNT OF**
9 **ECONOMIC BENEFIT THAT A REBALANCING PLAN CAN GENERATE?**

10 A. Yes, there is empirical support. There have been several studies that have examined the
11 welfare gains arising from rate rebalancing. One of the first studies found that, for the
12 U.S. as a whole, the loss from overpricing long distance service to business and residential
13 consumers in 1983 was around \$10 billion, a finding that was confirmed in subsequent
14 research.²¹ More recent research confirms the significant gains in economic welfare that
15 can be achieved from more economically rational prices. For example, a 2000 study by
16 Robert Crandall and Leonard Waverman (a NERA colleague) found the total cost of the
17 current rate design—i.e., lower basic local prices and higher long distance prices—to be
18 anywhere between \$2.5 to \$7.0 billion per year, depending on the assumptions made.²²

19

²⁰ See, Hausman, J., T. Tardiff, and A. Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," *The American Economic Review*, Vol. 83, May 1993, pp. 178-184.

²¹ See, John T. Wenders and Bruce L. Egan, "The Implications of Economic Efficiency for U.S. Telecommunications Policy," *Telecommunications Policy* 10 (1986): 33-40 and Lewis Perl, "Social Welfare and Distributional Consequences of Cost-Based Telephone Pricing," Paper presented at the Thirteenth Annual Telecommunications Policy Research Conference, Airhe, Va. April 23, 1985

²² See, Robert Crandall and Leonard Waverman, *Who Pays for Universal Service?: When Telephone Subsidies Become Transparent*, Brookings Institute, (2000), p. 119.

1 V. COST ISSUES

2

3 Q. WHAT IS THE CORRECT COST CONCEPT TO USE FOR DETERMINING
4 WHETHER A SERVICE IS RECEIVING AN ECONOMIC SUBSIDY?

5 A. From an economic perspective, use of forward-looking direct costs (economic costs as
6 opposed to embedded or historical costs) is the proper basis for determining whether a
7 specific service is in receipt of an economic subsidy. The embedded cost or historical cost
8 of an activity is a record of the costs a firm attributes to the pursuit of its activity in a
9 given (past) accounting period. That cost reflects what the firm actually paid for capital
10 equipment,²³ its actual costs of operating and maintaining that equipment, and other costs
11 incurred in operating the enterprise. By contrast, the economic cost of an activity is the
12 actual forward-looking cost of accomplishing that activity in an efficient manner. In
13 contrast to embedded costs, forward-looking costs are those associated with present and
14 future uses of the firm's (or society's) resources. Only these forward-looking costs are
15 relevant for making present and future production and investment decisions, for placing
16 resources in alternative uses, and for setting efficient prices for the services to be provided
17 presently or in the future.

18

19 According to the evidence presented by the companies, their residential basic local rates
20 are below forward-looking direct costs and I conclude, therefore, that those rates are in
21 receipt of an economic subsidy.

22

²³ Embedded costs also include the annual depreciation expenses associated with the stock of equipment that (1) was purchased in the current and previous years and (2) is still in use.

1 Q. THE COMPANIES' REVISED PLANS ARE BASED UPON THE FACT THAT
2 THE LOCAL LOOP IS NOT A SHARED OR COMMON COST AND THAT ITS
3 COST IS CAUSED SIMPLY BY PROVIDING CUSTOMERS ACCESS TO THE
4 TELEPHONE SYSTEM AND CANNOT APPROPRIATELY BE SPREAD
5 AMONG THE REMAINING TELEPHONE SERVICES. DOES THE FLORIDA
6 COMMISSION AGREE WITH THIS APPROACH REGARDING THE LOCAL
7 LOOP?

8 A. Yes, it does. In a report to the Florida Legislature in 1999, the Commission explicitly
9 rejected the notion that the cost of the loop should be recovered from non basic local
10 telecommunications service.²⁴ In that report, the Commission stated:

11 Is the cost of local loop facilities properly attributable to the provision of basic
12 local telecommunications service? By definition, yes. Section 364.02(2),
13 Florida Statutes, defines "basic local telecommunications service as"

14 Voice grade, flat-rate residential and flat-rate single-line business local
15 exchange services which provide dial tone, local usage necessary to
16 place unlimited calls within a local exchange area, dual tone multi-
17 frequency dialing, and access to the following emergency services such
18 as "911," all locally available interexchange companies, directory
19 assistance, operator services, relay services, and an alphabetical
20 directory listing.

21

²⁴ See, "Report of the Florida Public Service Commission on the Relationship Among the Costs and Charges Associated with Providing Basic Local Service, Intrastate Access, and Other Services Provided by Local Exchange Companies, in Compliance with Chapter 98-277, Section 2(1), Laws of Florida," Florida Public Service Commission Tallahassee, Florida February 15, 1999.

1 Given such an identification of the cost object to be studied, the principle of
2 cost causation leads one to the unavoidable conclusion that the decision to
3 have local service leads to the incurrence of loop costs.²⁵
4

5 **VI. UNIVERSAL SERVICE WOULD NOT BE PUT AT RISK AS A**
6 **RESULT OF THE COMPANIES' REVISED PLANS**
7

8 **Q. SHOULD THE COMMISSION BE CONCERNED ABOUT UNIVERSAL**
9 **SERVICE?**

10 A. While it is true that, in theory, as the price of basic local service increases, some
11 consumers may decide the new price is above the value he or she places on the service—
12 and may, as a result, decide to do without telephone service—I do not believe that, in
13 practice, this would occur, or occur to such an extent as to jeopardize universal service in
14 Florida. There are several reasons why I believe this is the case.
15

16 First, although low-income subscribers may be more sensitive to price increases than are
17 middle and higher income users, the Tele-Competition Act does two things to help low
18 income consumers. It provides that, in the event of an increase in residential basic local
19 service prices, low-income consumers who are Lifeline customers will be exempted from
20 the price increase; and, it expands the number of Lifeline-eligible customers to 125
21 percent of the federal poverty level. These steps should go far to address any problems of
22 affordability.
23

²⁵ *Ibid.*, at 51.

1 Second, the price elasticity of demand for access to the network is quite low, meaning that
2 the vast majority of consumers will continue to subscribe. Specifically, the price elasticity
3 of demand measures the percentage impact on demand given a percentage change in price.
4 Previous research has demonstrated that customers generally do not disconnect their
5 phone service when prices for basic local service increase.²⁶

6
7 Third, and very importantly, in addition to its own price, the demand for residential basic
8 local service is determined by the amount of value consumers obtain from using the
9 services produced by the network, i.e., local calling, intraLATA toll, interLATA toll,
10 vertical services and newer services such as broadband Internet access. As prices for
11 these services decrease over time due to competitive pressure and technological
12 innovation, the value that consumers place on having access to the network increases and
13 so, therefore, does their demand to stay on the network.²⁷ The companies' revised plans
14 call for rate increases phased in over a two year period and to the extent that prices for
15 complementary goods decrease so will consumers' desire to remain on the network
16 increase. This helps reduce, or may even offset, the negative effect of the price increase.

17
18 Finally, as discussed above, less distorted prices should provide better incentives for
19 competitors to compete for residential consumers. Competition brings with it improved
20 quality, different selection of goods and services bundled together in a way that customers
21 find attractive, and lower prices. These factors provide additional reasons why during the

²⁶ See, Lester D. Taylor, (1994), *op. cit.*

²⁷ Hausman, J., T. Tardiff, and A. Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," *The American Economic Review*, Vol. 83, May 1993, pp 178-184.

1 phase-in period, customers will likely place increased value on subscribing to the network.
2 thus mitigating the effects of any local rate increase.

3
4 To the extent the Florida Commission is concerned with the few remaining users who may
5 decide to drop off the network it is also important to be aware that alternatives to the fixed
6 network are growing and at least some customers may be turning to alternative means of
7 meeting their communications needs. For example, the extraordinary growth of wireless
8 service, driven by lower wireless prices and pricing plans that include a "bucket" of
9 minutes provides customers with more meaningful opportunities to use wireless service as
10 a substitute to wireline service.

11

12 **Q. SHOULD THE COMMISSION BE CONCERNED IF CUSTOMERS DROP OFF**
13 **THE FIXED NETWORK BUT INSTEAD RELY PRIMARILY ON OTHER**
14 **FORMS OF ACCESS?**

15 A. No. An important goal for policymakers has been to ensure that as many consumers as
16 possible have access to the public switched telecommunications network, irrespective of
17 how that access is obtained. When a customer drops off the fixed-line network and
18 accesses the public network via wireless access, this is simply a substitution effect caused
19 by the customer choosing between fixed and wireless access. This is not a universal
20 service concern for policymakers.

21

22 **Q. DR. GORDON, HAVE OTHER STATES IMPLEMENTED RATE**
23 **REBALANCING?**

24 A. Yes, there are other states that have implemented rate rebalancing including California,
25 Illinois, Ohio, and in Massachusetts where I served as Chairman. Even in Maine, where

1 by statute basic residential services are to be set as low as possible and where I also served
2 as Chairman, they have recently approved a rebalancing plan.

3

4 **Q. WOULD YOU PLEASE DESCRIBE THE RATE REBALANCING PROCESS IN**
5 **MASSACHUSETTS?**

6 A. The process for changing prices in Massachusetts began before I became Chairman of the
7 Massachusetts Commission and continued during my tenure. In Massachusetts,
8 residential fixed monthly charges were increased significantly, with offsetting decreases in
9 business, toll, and carrier access prices. The Massachusetts Commission early on after
10 divestiture recognized the problems that historic pricing policies were creating, as other
11 (especially institutional) barriers to market entry were being eliminated, and thus ordered
12 a change in price structure:

13 "properly defined incremental costs should be used as the primary basis for
14 pricing all services, including local exchange service .. to the extent that
15 current rates do not reflect an appropriate allocation of costs, the [MDPU] will,
16 consistent with the need to avoid major discontinuities in rate levels, move
17 toward that goal." IntraLATA Competition, D.P.U. 1731 (1985), p. 36-38.

18

19 "Traditionally, the pricing of telephone service was based on a method
20 whereby residential monthly exchange rates were priced below cost in order to
21 promote universal service; and long-distance, toll, and business rates were
22 priced above cost in order to subsidize residential exchange rates. While this
23 system succeeded in serving a social purpose, it was a pricing scheme not
24 conducive to the development of a fully-competitive market, in which the
25 benefits associated with competition would be realized by all customers."

1 NET, D.P.U. 93-125 (1994), pp. 10-11.

2

3 In Massachusetts, moving prices more in line with incremental costs required a significant
4 shift in revenue recovery from usage-based prices, such as intraLATA toll and intrastate
5 carrier access, to fixed monthly prices for all classes of customers. In addition, because
6 the MDPU found that there were no significant cost differences in serving different
7 classes of customers, the price-rebalancing process also entailed a further shift in revenue
8 recovery from business customers to residential customers. Of course, the necessary
9 changes were not made overnight. The MDPU established a series of annual, revenue-
10 neutral, price-rebalancing investigations in order to achieve its goal over time.

11

12 When the Massachusetts price-rebalancing process ended in January of 1994 (with the
13 adoption of a price cap plan), the price for basic residential dial-tone service (1MR) had
14 risen from about \$3.00 per month in 1990 to \$9.91 per month in 1994 (net of the SLC).²⁸
15 Comparable increases also occurred for residential flat-rate service (1FR), which was the
16 most popular service in Massachusetts, at that time. Flat rate residential prices had ranged
17 from \$9.95 in rural areas to \$12.38 in urban areas. The rebalancing process moved flat
18 rate residential prices to \$16.85 state wide. During this period, the average increase for
19 residential consumers was \$2.18 per year over four years and, according to the DTE,
20 record evidence shows virtually no impact on residential telephone subscriber
21 penetration.²⁹ Because the price-rebalancings were revenue-neutral, these increases were

²⁸ I was Chairman of the MDPU for the last of these annual investigations.

²⁹ See, "Re Verizon New England, Inc. dba Verizon Massachusetts D.T.E. 01-31-Phase II," *Public Utilities Reports - 223 PUR4th*, p. 397.

1 completely offset by decreases in prices for other services, notably residential and
2 business intraLATA toll and carrier switched access.

3
4 Massachusetts was one of the first states to open toll and local markets to competitive
5 entry, and the price rebalancing helped to lessen opportunities for uneconomic bypass and
6 thus promoted the development of an efficient competitive process.

7
8 More recently, Massachusetts has continued to better align prices with their underlying
9 costs by reducing switched access and increasing residential dial-tone rates. Specifically,
10 the DTE authorized the ILEC to implement a one-time increase of \$2.44 to its residential
11 dial-tone line charge. In commenting on its decision, the DTE stated:

12 Moreover, the department finds that with the \$2.44 increase in the dial-tone
13 line charge, competitive local exchange carriers (CLECs) can profitably enter
14 and serve the residential telephone market in Massachusetts.³⁰

15
16 The DTE concluded that a \$2.44 increase will not harm the Department's universal
17 service goals, based on similarity to the several, annual \$2.18 increase in the early 1990s
18 rebalancing plans and comparable increases in several other states and in the Federal
19 subscriber line charge since 2000. For example, the Maine PUC approved a \$1.78
20 increase in Verizon's basic monthly per line rate in May 2001 and the New York Public
21 Service Commission authorized a two-year Incentive Plan which permitted an increase of
22 \$1.85 on March 1, 2002 and another \$0.65 on March 1, 2003 for a total increase of \$2.50
23 in the space of a year. The FCC's Federal subscriber line charge has increase from \$4.35

³⁰ *Ibid*, p. 361.

1 in July 2000 to \$6.50 in July 2003.

2
3 **Q. PLEASE DISCUSS MAINE'S EXPERIENCE WITH RATE REBALANCING?**

4 A. Significant rate rebalancing has been achieved in Maine in recent years, with no
5 noticeable impact on telephone subscribership levels. In 1997, the Maine legislature
6 (M.R.S.A. 35-A, §7101-B) directed the Maine Public Utility Commission to establish,
7 notwithstanding any other provision of state law, intrastate access rates that are less than
8 or equal to interstate access rates established by the FCC (*i.e.*, parity with interstate access
9 rates) by May 30, 1999. At the time, Bell Atlantic's intrastate access rates were \$0.26 per
10 minute, significantly higher than its then-current Federal interstate access rate of about
11 \$0.07 per minute.

12
13 Subsequently, on March 17, 1998, the Commission approved an Order (Docket No. 94-
14 123 reopened) that approved a stipulation between Bell Atlantic-Maine (now known as
15 Verizon-Maine) and a group of intervenors, including the Commission's Advocacy Staff
16 and the Public Advocate. This stipulation allowed Bell Atlantic-Maine to increase its
17 basic local exchange rates by a total of \$3.50 by May 30, 1999, with steps of \$1.50 in
18 1998 and \$2.00 in 1999. This was followed by another increase of \$1.78 in 2000.

19
20 Maine continues to have the highest telephone penetration rate in the country—about 98
21 percent of Maine's households have telephone service.³¹ In addition, lower intrastate toll
22 rates have benefited some customer classes, especially those customers in rural areas with
23 relatively small toll-free calling areas.

³¹ MPUC Annual Report 2002, pp. 43.

1

2 **Q. WHAT OTHER STATE EXPERIENCES DO YOU BELIEVE ARE RELEVANT?**

3 A. In California in 1994, the Commission approved a rebalancing plan for GTE and Pacific
4 Bell. GTE's residential rates immediately went from \$9.75 to \$17.25 while Pacific's
5 residential rates went from \$8.35 to \$11.25.³² Recently, as part of a rebalancing plan for
6 Sprint's local telephone company in Ohio where intrastate access fees were lowered to
7 mirror Federal charges, the Commission approved the creation of an end user charge of
8 \$4.10 for residential customers and \$6.00 for single-line business.³³

9

10 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

11 A. Yes.

³² See, Decision 94-09-065, *et. al.*, September 15, 1994.

³³ See, The Public Utilities Commission of Ohio, Case No. 00-127-TP-COI and 01-1266-TP-UNC, June 28, 2001.

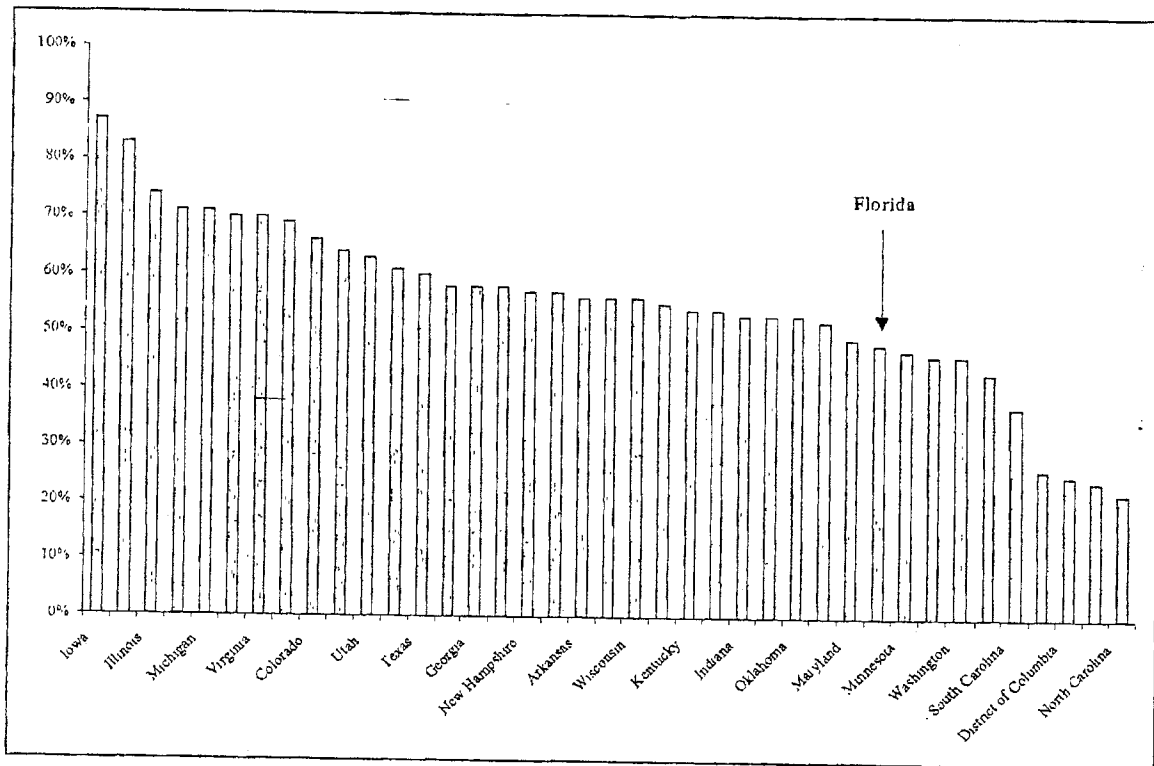
DIRECT TESTIMONY OF DR.
KENNETH GORDON

ATTACHMENT A

ATTACHMENT B

FIGURE 1 – PERCENT OF CLEC LINES SOLD TO RESIDENTIAL AND SMALL
BUSINESS CUSTOMERS BY STATE, AS OF DECEMBER 31, 2002

SOURCE: FCC, *Local Telephone Competition: Status as of December 31, 2002*



NATIONAL ECONOMIC
RESEARCH ASSOCIATES

ONE MAIN STREET
CAMBRIDGE, MASSACHUSETTS 02142
TEL: 617 621 0444 FAX: 617 621 0336
INTERNET: <http://www nera.com>

ner/a
Consulting Econom.

**AMENDED DIRECT TESTIMONY OF DR. KENNETH
GORDON**

**On behalf of Verizon Florida Inc., BellSouth Telecommunications,
Inc., and Sprint-Florida Inc.**

August 27 September 30, 2003

1 AMENDED AMENDED DIRECT TESTIMONY OF DR. KENNETH
2 GORDON DIRECT TESTIMONY OF DR. KENNETH GORDON

3
4 I. PURPOSE & SUMMARY OF CONCLUSIONS

5 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

6 A. My name is Dr. Kenneth Gordon. My business address is One Main Street, Cambridge,
7 Massachusetts 02142. My C.V. is provided as Attachment A.

8
9 Q. WHAT IS YOUR CURRENT POSITION?

10 A. I am a Special Consultant of National Economic Research Associates, Inc. ("NERA").
11 Previously, I was Senior Vice President at NERA.

12
13 Q. WILL YOU PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL
14 QUALIFICATIONS?

15 A. I am an economist and former Chairman of the Maine Public Utilities Commission
16 ("Maine Commission") and the Massachusetts Department of Public Utilities ("Mass.
17 DPU"). The Mass. DPU is now known as the Massachusetts Department of
18 Telecommunications and Energy. I have been an economist since 1965, and I have been
19 directly involved with developing and establishing regulatory policy at the federal and
20 state levels since 1980, when I became an industry economist at the Federal
21 Communications Commission ("FCC").

22
23 I received my A.B. degree from Dartmouth College in 1960. I received my M.A. degree
24 in 1963 and my Ph.D. degree in 1973, both in economics, from the University of Chicago.
25 I have taught applied microeconomics, industrial organization, and regulation (as well as

1 other subjects) at Georgetown University, Northwestern University, University of
2 Massachusetts at Amherst, and Smith College.

3

4 From 1980 to 1988, I was an industry economist at the FCC's Office of Plans and Policy,
5 where I worked on a full range of regulatory issues, including telecommunications, cable,
6 broadcast, and intellectual property rights. At the FCC, one of the major focuses of my
7 work was activity aimed at introducing competition into communications markets.

8

9 Prior to joining NERA in November 1995, I chaired the Maine Commission (1988 to
10 December 1992) and the Mass. DPU (January 1993 to October 1995). During my term as
11 Chairman of the Mass. DPU, the DPU investigated and approved a price cap incentive
12 regulation plan for NYNEX and also undertook a proceeding to examine interconnection
13 and other issues related to the development of competition at all levels of
14 telecommunications, including basic local service.

15

16 While a regulator, I was active in the National Association of Regulatory Utility
17 Commissioners ("NARUC"), serving on its Communications and Executive Committees.
18 In 1992, I served as President of NARUC. I was also Chairman of the BellCore Advisory
19 Committee and the New England Governor's Conference Power Planning Committee.

20

21 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

22 A. Verizon Florida Inc., BellSouth Telecommunications, Inc., and Sprint-Florida Inc., ("the
23 companies") are seeking to restructure their rates for intrastate network access services

1 ("intrastate access") and basic local telecommunications services ("basic local") in
2 accordance with recently passed legislation by the Florida Legislature.¹ The companies'
3 revised plans—which must address the criteria established in the legislation—call for
4 them to restructure their intrastate access and basic local rates in a revenue-neutral
5 manner.

6
7 The companies have asked me to provide an economic and policy analysis of their revised
8 rate plans and to testify on whether I believe those revised plans meet the criteria laid out
9 in the legislation.

10
11 **Q. WHAT ARE YOUR MAJOR CONCLUSIONS?**

12 A. After reviewing the newly-enacted legislation, the evidence in this case—specifically the
13 companies' revised plans and the cost evidence submitted by the companies' witnesses—
14 and based on my general knowledge and expertise on telecommunications economic and
15 regulatory matters, I conclude that the revised plans submitted by the companies meet the
16 criteria contained in the legislation. Specifically, upon implementation, the revised plans
17 will, *inter alia*:

- 18 • Reduce current support for basic local telecommunications services that prevents
19 the creation of a more attractive competitive local exchange market for the benefit
20 of residential consumers; and
21 • Induce enhanced market entry.

22 The companies' revised plans significantly decrease support for basic local service by
23 reducing prices for a service that has historically and purposely been an important

¹ See Section II below.

1 source—but by no means the only source—of support for basic local services, namely
2 intrastate access. In order to achieve revenue neutrality, the companies' revised plans
3 increase residential basic local prices towards cost-based levels, thus creating a more
4 attractive market for potential entrants, ultimately for the benefit of residential consumers.
5 Both theory and empirical evidence show that low residential basic local prices have
6 hindered the development of residential competition. By better aligning residential basic
7 local prices with cost, competitors will have increased incentives to target a broader mix
8 of residential consumers, which is the intent of the Florida legislature.

9
10 In addition, I conclude that the revised plans will enhance economic welfare in Florida by
11 increasing economic activity. As described in the respective testimonies of the
12 companies' cost witnesses, the cost evidence submitted in this proceeding demonstrates
13 that rates for residential basic local service diverge significantly from their underlying
14 costs. A movement toward costs—and, therefore toward more rational economic
15 pricing—will bring with it several economic benefits. These benefits include providing
16 market participants—i.e., customers, the companies and potential and actual
17 competitors—with more cost-based price signals, which will improve economic decision
18 making and lead to more economically rational utilization of telecommunications services.
19 Economic activity in Florida will increase as a result of the companies' revised plans
20 because rebalancing generates substantial consumer benefits. Telephone consumers are
21 better off as a result of moving prices more in line with costs, and will likely increase their
22 purchases of those services whose price has come down. Perhaps of even greater
23 significance, competitive telephone service providers will be seeing better price signals
24 for local service, and will be able to invest without having to face the level of subsidized
25 competition they have faced in the past. New investment by these providers should, at the

1 margin, increase.

2

3 The cost evidence presented by the companies demonstrates that basic local prices are
4 receiving an economic subsidy from other services. The companies submitted forward-
5 looking direct cost evidence to demonstrate that their residential basic local services are
6 priced below the costs the companies incur to provide the services. Forward-looking
7 direct cost is the basis for determining whether a service is receiving an economic subsidy.
8 Moreover, consistent with this Commission's ruling, the companies' cost witnesses, when
9 measuring the economic subsidy flowing to basic local services, correctly assign the entire
10 cost of the loop to basic local.

11

12 I also conclude that the companies' revised plans will not jeopardize universal service in
13 the state of Florida. The companies' residential basic local prices are substantially below
14 the national average and Florida is not a poor state. The Florida Public Service
15 Commission ("Commission") has the flexibility to approve the companies' revised plans
16 and still have residential basic local prices remain affordable. The Florida Legislation
17 requires that any price increase in basic local service not apply to Lifeline consumers and
18 also increased the income eligibility for Lifeline consumers to 125 percent, thus protecting
19 those customers most likely to be sensitive to potential price increases from a rebalancing
20 plan. Importantly, the companies' revised rebalancing plans will lead to lower intrastate
21 toll prices for all consumers. At the end of the day, the mix of services that consumers
22 purchase as a result of the companies' revised plans will make consumers better off
23 overall.

24

25 Finally, the fact that some customers may experience unwanted rate changes should not be

1 an argument for the status quo. Good policy requires weighing and balancing the costs
2 and benefits of particular actions. While it may seem that maintaining current prices is the
3 least objectionable thing to do from a policy perspective, there is an implicit but very real
4 cost to continuing the status quo. The deployment of next generation, advanced networks
5 depends crucially on providing all market participants the sound economic signals that
6 will encourage efficient investment and innovation. Cost-based prices provide the
7 incentives needed to bring to market the new services that customers demand. This
8 cannot be accomplished by distorted prices.

9
10 Q. YOU HAVE NOTED IN YOUR MAJOR CONCLUSIONS THAT VERIZON
11 FLORIDA INC., BELLSOUTH TELECOMMUNICATIONS, INC., AND SPRINT-
12 FLORIDA INC. HAVE REVISED THEIR RESPECTIVE RATE REBALANCING
13 PLANS FILED ON AUGUST 27, 2003 TO EXTEND THE TIME OVER WHICH
14 INTRASTATE NETWORK ACCESS AND BASIC LOCAL
15 TELECOMMUNICATIONS RATES WILL BE REFORMED. HAVE YOU
16 REVIEWED THESE COMPANIES' REVISED PLANS?

17 A. Yes, I have.

18
19 Q. DO THESE REVISIONS AFFECT YOUR ANALYSIS OF THE COMPANIES'
20 PLANS OR YOUR TESTIMONY?

21 A. No. With the exception of the minor changes — changing “plans” to “revised plans” —
22 as well as this and the previous question and answer, my testimony remains unchanged
23 from the testimony that I filed on August 27, 2003.

24

1 **II. BACKGROUND**

2 **Q. PLEASE DESCRIBE THE BASIS FOR THE COMPANIES' REQUEST TO**
3 **INCREASE BASIC EXCHANGE PRICES.**

4 A. From an economic perspective, the fact that the companies' current residential basic local
5 prices are not fully recovering their forward-looking economic cost is, by itself, a good
6 enough reason to begin the process of moving them to more economically rational levels.
7 Both theoretical and empirical research have shown that rebalancing rates and moving
8 them toward levels more commensurate with their underlying costs results in significant
9 benefits to telecommunications consumers and, by so doing, benefits the economy as
10 well.² Rebalancing rates has also been demonstrated to have a positive effect on
11 competitive entry into the local exchange market.³

12
13 The immediate catalyst for the companies' revised plans is the recent changes in Florida
14 laws. I have been informed by counsel that the legal authority for the companies' request
15 arises from recent changes in the statutory framework in Florida. During the 2003 regular
16 legislative session, the Legislature passed Senate Bill 654, the Tele-Competition
17 Innovation and Infrastructure Enhancement Act ("Tele-Competition Act"). The Tele-
18 Competition Act implements several important policies, but for our purposes the relevant
19 Section of the Tele-Competition Act is § 364.164 "Competitive market enhancement."

20
21 **Q. WHAT ARE THE IMPORTANT PROVISIONS OF § 364.164?**

22 A. § 364.164 permits local exchange telecommunications companies to petition the

² See Section IV below.

³ See Section III.

1 Commission to reduce their intrastate access rates in a revenue-neutral manner. In
2 reaching its decision, § 364.164 (1) states that the Commission shall consider whether
3 granting the petitions will:

- 4 a. Remove current support for basic local telecommunications services that
5 prevents the creation of a more attractive competitive local exchange
6 market for the benefit of residential consumers;
- 7 b. Induce enhanced market entry;
- 8 c. Require intrastate switched network access rate reductions to parity over a
9 period of not less than 2 years or more than 4 years; and
- 10 d. Be revenue neutral as defined in subsection (7) within the revenue
11 category defined in subsection (2).

12 Throughout my testimony, I will focus on whether the companies' revised plans are
13 consistent with and meet the criteria provided in § 364.164 (1) (a) and (b). Other
14 company witnesses discuss how the companies' revised plans would meet criteria (c) and
15 (d).

16

17 **Q. IN ORDER TO REDUCE INTRASTATE ACCESS RATES IN A REVENUE**
18 **NEUTRAL MANNER, RATES FOR OTHER SERVICES NEED TO BE**
19 **INCREASED. WHAT SERVICES DO YOU BELIEVE SHOULD BE**
20 **INCREASED?**

21 A. The first category of services that should be considered are those services whose current
22 prices do not recover fully their underlying costs, such as residential basic local
23 telecommunications services. Rates for these subsidized services should be increased in
24 order to better reflect their real economic cost. This is confirmed in §364.164 (2), where
25 the legislation calls for the creation of a revenue category mechanism consisting of basic

1 local telecommunications service revenues and intrastate switched network access
2 revenues in order to achieve revenue neutrality. That is, the legislation states that in order
3 to achieve revenue neutrality, if intrastate access prices are reduced, then basic local
4 service prices need to be increased.

5
6 The current rate design for telephone services—where basic local services are priced
7 below cost and other services, including intrastate access service, are priced in such a way
8 so as to provide the support—while in the process of being reduced or eliminated in a
9 number of states, continues to be encountered in state regulation of telephone services.
10 However, as the Florida Legislature wisely recognized, whatever benefits such a rate
11 design policy has arguably achieved in the past, such as helping the United States achieve
12 universal telephone service—the continuation of such policies frustrates another important
13 policy goal of Federal and state regulators, namely, the establishment of efficient
14 competition to as broad a base of business and residential consumers as is economically
15 feasible—not to mention the economic costs that arise from price-cost distortions, *per se*,
16 as I discuss further below.

17
18 The current rate design policy as it pertains to residential basic local services, frustrates
19 that policy goal and by enacting § 364.164, the Florida Legislature has provided the
20 Commission with the direction it needs to make competition work better for all Florida
21 consumers.

22 **Q. ARE THE COMPANIES' REVISED PLANS CONSISTENT WITH § 364.164 (1)**
23 **(a) and (b)?**

24 **A.** Yes. The companies' revised plans are consistent with and meet the criterion of §
25 364.164(1)(a) and (b). Below in Section III, I fully describe why I believe that the

1 companies' revised plans are consistent with and meet those criteria.

2

3 **Q. DR. GORDON, FROM A POLICY PERSPECTIVE DO YOU BELIEVE THAT IT**
4 **IS APPROPRIATE TO ENGAGE IN THE TYPE OF REBALANCING THAT IS**
5 **BEING CONTEMPLATED BY THE COMPANIES' PLANS?**

6 A. Yes, I do. In this testimony, I describe fully why I believe that the companies' revised
7 plans are consistent with the criteria of the Tele-Competition Act that the Commission
8 shall consider and why the revised plans would likely result in increasing competitive
9 activity in the state of Florida. Specifically, the revised plans will create a more attractive
10 local exchange market for residential consumers and lead to enhanced market entry—two
11 criteria that need to be considered by the Commission in addressing the companies'
12 revised plans. By making the residential local exchange market more attractive,
13 residential consumers will likely see more companies competing for their business, which
14 will, in turn, result in more options for residential consumers, improved services and
15 lower prices for their telecommunications services. From a policy perspective, it is
16 appropriate to accomplish these tasks.

17

18 In addition, I describe below the history of rate design for basic local services in the
19 United States and how the end result of these policies has been uneconomically low
20 residential basic local prices; lower than what one would expect to find in undistorted
21 competitive markets. Of course, states have differed in their implementation of these
22 policies and, as a result, residential basic local service prices vary quite a bit from state to
23 state. In Florida, residential basic local prices are quite low when compared to prices in
24 other states. In Table I below, I list the flat-rate charges for each of the three companies'
25 lowest and highest rate groups compared to the national average flat-rate charges. As can

1 be seen in the table, each of the companies' highest rate group is well below the national
2 average of \$14.55 per month.

3
4 **Table I – Comparison of Verizon, BellSouth and Sprint's flat-rate residential basic**
5 **local charges and National Average flat-rate charges**

Company	Lowest Rate Group	Highest Rate Group	Unweighted Average	National Average (2002)
Verizon	\$9.72	\$12.06	\$10.89	
BellSouth	\$7.57	\$11.04	\$9.31	
Sprint	\$7.63	\$11.48	\$9.56	
National Average (2002)				\$14.55

6 Source: Florida Senate Staff Analysis And Economic Impact Statement, p. 4. April 8, 2003; FCC *Reference*
7 *Book of Rates, Price Indices, and Household Expenditures for Telephone Service*, Table 1.1 July 2003, rates
8 exclude Federal and State subscriber line charges, touch tone charge and taxes, 911 and other charges.

9
10 **Q. HOW DOES THE FACT THAT FLORIDA HAS LOW RESIDENTIAL BASIC**
11 **LOCAL TELECOMMUNICATIONS PRICES RELATE TO THIS**
12 **PROCEEDING?**

13 A. It relates to this proceeding in two important ways. First, the Legislature has correctly
14 perceived that low residential basic local prices have led the residential local exchange
15 market to be less attractive to competitors than would be the case with more economically
16 rational residential basic local prices. In Section III below, I describe fully why, from an
17 economic perspective, I believe the Legislature is absolutely correct on this point. Put

1 simply, holding all other factors constant, the lower the residential basic local price (when
2 set governmentally without regard to whether the prices cover cost), the more unattractive
3 those customers are to actual and potential competitors. Since Florida residential basic
4 local prices are lower than those in many other states, and in fact lower than the national
5 average, the problem facing potential new entrants as a result of these low rates is likely to
6 be even more severe and pronounced in Florida than in other states. For this reason, it is
7 even more important that Florida policymakers tackle this problem sooner rather than —
8 later.

9
10 **Q. IS THERE ANY SUPPORT FOR YOUR ASSERTION THAT THE PROBLEM OF**
11 **AN UNATTRACTIVE RESIDENTIAL MARKET MAY BE WORSE IN FLORIDA**
12 **THAN IN OTHER STATES?**

13 A. Yes, there is some support for my assertion. The FCC compiles data on local telephone
14 competition. Its most recent report, released June 12, 2003 included a table that lists, for
15 each state available, the percentage of lines provided to residential and small business
16 customers by ILECs and CLECs.⁴ The FCC provided data on 40 states and of those 40
17 states Florida ranked 30th in the percent of CLEC lines that were sold to residential and
18 small business customers. This means that in 29 out of 40 states, CLECs' served
19 proportionately greater residential customers than in Florida (see Figure 1 at the end of
20 this testimony). Florida ranks below states such as Georgia (58%), Alabama (52%),
21 Louisiana (61%) and Virginia (70%) to name a few, all of which have higher residential
22 prices. This provides some evidence that low residential basic local prices are having a

⁴ See, *Local Telephone Competition: Status as of December 31, 2002*, Table 11, Industry Analysis and Technology Division Wireline Competition Bureau, Federal Communications Commission.

1 negative impact on residential competition in Florida.

2

3 Q. YOU MENTIONED THAT THERE WAS A SECOND REASON WHY YOU
4 BELIEVE THAT FLORIDA'S LOW RESIDENTIAL BASIC LOCAL PRICES, IN
5 COMPARISON WITH OTHER STATES, ARE RELEVANT IN THIS
6 PROCEEDING. WHAT IS THAT SECOND REASON?

7 A. The second reason has to do with affordability considerations and the flexibility this
8 Commission has in rebalancing rates while still maintaining basic residential local rates
9 that are quite affordable for most Florida consumers. As mentioned above, the
10 companies' prices for residential basic local services are generally well below the national
11 average. However, Florida is not a poor state. According to data from the U.S. Bureau of
12 Economic Analysis, Florida is on par with the national average in personal income per
13 capita.⁵ Specifically, as of 2001, the data show that personal income per capita in Florida
14 was \$29,047 compared to the national average of \$30,413. Thus, the Commission has the
15 flexibility to increase residential basic local prices, which are currently well below the
16 national average, to more economically reasonable levels without making the services
17 unaffordable to Florida consumers.

18

19 At the same time, Florida consumers will pay less for intrastate toll calls. The companies'
20 rebalancing plan will lower the access charge component of the cost of producing
21 intrastate toll calls. IXCs are required to pass these cost savings through to consumers in
22 the form of lower prices. Thus, even with the increase in basic residential local rates,
23 telecommunications will be just as affordable to Florida consumers as before, yet

⁵ Bureau of Economic Analysis, Regional Economic Information System, Table SA1-3.

1 consumers will be better off because they will be consuming a different mix of
2 telecommunications services that provides more value than they are currently receiving.

3
4 In addition, the Tele-Competition Act also requires that any increase in basic local service
5 rates not apply to Lifeline customers and that the ILECs increase Lifeline participation to
6 125 percent of federal poverty income level.⁶ These requirements further protect low-
7 income consumers—and it is low-income consumers who would be most prone to
8 disconnections in the face of price increases—thus providing the Commission with even
9 more flexibility to approve the companies' rate rebalancing request with minimal concern
10 that such a rate restructuring would negatively affect subscribership. I discuss this point,
11 and other reasons why I believe the companies' revised plans will not negatively affect
12 subscribership in Florida, in more detail in Section VI below.

13
14 **Q. VERIZON, BELLSOUTH AND SPRINT ARE FILING THEIR REVISED PLANS**
15 **AT THE SAME TIME. IS THERE ANY PUBLIC POLICY BENEFIT TO**
16 **HAVING THE COMMISSION REVIEW THE COMPANIES' REVISED PLANS**
17 **AT THE SAME TIME?**

18 **A.** Yes. The benefits are at least threefold. First, to the extent that basic local rates are
19 simultaneously adjusted closer to their costs throughout the territory of the three
20 companies serving 98 percent of the ILEC customers, the better competition will be
21 benefited and market entry enhanced. Certain providers who might be positioned to
22 provide facilities-based basic local service (e.g. cable telephony, electric and wireless
23 providers) will not necessarily configure their coverage areas based on the ILECs service

⁶ § 364.10(3)(a).

1 territories. For them the potential staggered implementation of the rebalancing could be
2 an obstacle to competitive entry. There are several areas within Florida where at least
3 two of the three major ILECs provide service where it may be economical for a new
4 entrant to provide service regardless of the ILEC boundary. For example, the
5 Orlando/Central Florida (BellSouth/Sprint) area, Southwest Florida (between Sarasota and
6 Ft. Myers (Verizon/Sprint)) area and the Pensacola – Ft. Walton – Destin -- Panama City
7 (BellSouth/Sprint/BellSouth) area are three relatively compact geographic areas served in
8 part by at least two of the three companies. Each of these areas might appropriately
9 comprise the service territory of a single facilities-based entrant. When the price
10 increases contained in the company plans are implemented and signal to these entrants that
11 pricing distortions are being reduced on a broad basis, the competitors may be able to
12 more efficiently execute their business plans.

13
14 Second, it is also important to avoid unnecessary marketplace distortions that could affect
15 the purchase decisions of end-users. End-users normally make their purchase decisions
16 based in large part on relative price differences among providers. If the rate-rebalancing is
17 not implemented across all companies simultaneously, end-users will make these
18 decisions based on incomplete and imperfect information as they see some providers'
19 rates increasing while other providers' rates remain the same (at least temporarily). The
20 risk will be that regulatory scheduling rather than the relative costs and benefits of various
21 service offerings becomes the driving force behind consumers' decisions. For example, it
22 is easy to imagine a situation involving two or more of the ILECs —where a CLEC might
23 be able to offer service at a legitimate cost savings to all customers, but if re-balancing is
24 not done simultaneously perhaps only one firm's customers would respond to the
25 competitive offer, because the other firm's rate increase had yet to be implemented.

1 Coordinated rate rebalancing across all companies will ensure that potential competitors
2 are not artificially disadvantaged when introducing new service offers by artificial
3 boundaries, and that customers are not disadvantaged by incorrect and incomplete
4 information driving their purchase decisions.

5

6 Third, the magnitude and timing of the access charge price reductions for the three
7 — companies would also benefit end users statewide. IXCs will be able to implement more
8 meaningful price reductions if they can aggregate their access cost reductions into a single
9 round of pricing changes.

10

11 **Q. THE LEGISLATION PERMITS A COMPANY TO RESTRUCTURE ITS RATES**
12 **OVER A MINIMUM OF TWO YEARS AND A MAXIMUM OF FOUR. EACH OF**
13 **THE COMPANIES PLANS TO HAVE INTRASTATE ACCESS RATES REACH**
14 **PARITY WITH INTERSTATE RATES OVER A TWO-YEAR PERIOD. DO YOU**
15 **BELIEVE THIS IS A GOOD IDEA?**

16 A. Yes I do, for several reasons. First, it is clearly permitted by the Tele-Competition Act.
17 Second, it is a matter of economic principle that economic welfare is at its highest when
18 prices are based on their underlying forward-looking costs and are not distorted. As I
19 discuss in greater detail in Section III, prices that are distorted provide inferior signals for
20 market participants and result in losses in consumer welfare because investment and
21 purchase decisions by firms and consumers do not reflect the true costs that society incurs
22 to provide the services. The companies' revised plans reduce these pricing distortions in
23 the Florida telecommunications markets sooner rather than later and, by so doing, achieve
24 economic efficiency gains sooner as well.

25

1 Third, a possible reason why one would prefer a more gradual rate restructuring time
2 frame has to do with avoiding consumer "rate shock". As the words imply, rate shock
3 implies that the increase in price proposed by the company is so high, that consumers
4 would be obviously and adversely affected. However, based upon my personal
5 experience as a former commissioner, as well as what I have observed in other states, I do
6 not believe that the yearly increase in basic local prices will result in rate shock.

7

8 **Q. PLEASE EXPLAIN WHY YOU BELIEVE THAT THE COMPANIES' PLANS**
9 **WILL NOT RESULT IN RATE SHOCK.**

10 A. The companies' revised plans will result in relatively minor increases in a customer's
11 basic local price. In addition, as I stated earlier, these price increases will not even apply
12 to current Lifeline consumers and new Lifeline consumers who have become eligible as a
13 result of the Tele-Competition Act raising the income threshold to 125% of the poverty
14 level.

15

16 In addition, with the reduction and elimination of the in-state connection fees, many
17 customers might not even experience a significant change in their total bill. If there is an
18 increase in the customers' bill, it will likely result in large part from increased stimulation
19 from lower long distance charges that represent real gains to consumers because they are
20 now able to make more calls at the new lower prices.

21

22 Finally, the companies' revised plans compare favorably with other states that have
23 approved rate-rebalancing plans that approved much larger increases than the companies'
24 request. Importantly, these states' price adjustments did not jeopardize universal service.
25 In Section VI, I also discuss the experience of some of the states that have already

1 implemented serious rate rebalancing plans, including Massachusetts where I presided as
2 Chairman through one such adjustment.

3

4 **III. THE COMPANIES' REVISED PLANS WILL RESULT IN A**
5 **"MORE ATTRACTIVE COMPETITIVE LOCAL EXCHANGE**
6 **MARKET FOR THE BENEFIT OF RESIDENTIAL CONSUMERS"**
7 **AND WILL INDUCE "ENHANCED MARKET ENTRY"**

8

9 **Q. HOW DO YOU JUDGE WHETHER THE COMPANIES' REVISED PLANS**
10 **MEET THE CRITERIA OF § 364.164 (1) (a) AND (b)?**

11 A. § 364.164 (1) (a) states that the companies' plans should remove the current support for
12 basic local telecommunications services that is impeding the creation of a more attractive
13 competitive local exchange market for the benefit of residential consumers. In order for
14 the companies' revised plans to meet the first criterion, they must show that the revised
15 plans remove—or at a minimum reduce—support for basic local telecommunications. By
16 so doing, they create a more "attractive" competitive local exchange market, because the
17 price to be competed against by new entrants is raised to more closely reflect the real
18 economic costs of doing business. The second criterion for the Commission's
19 consideration is § 364.164 (1) (b) which simply states that the plans should induce
20 enhanced market entry and no distinction is made between residential or business
21 consumers.⁷

22

⁷ There are other criteria in § 364.164 (1) that I do not discuss but that are the subject of the companies' respective witnesses.

1 Therefore, in evaluating whether the companies' revised plans meet the criteria in these
2 sections, I must ascertain whether the revised plans: (1) remove current support for basic
3 local telecommunications services, and (2) will likely result in a more attractive
4 competitive environment that would benefit residential consumers and induce enhanced
5 market entry.

6
7 **Q. DO THE COMPANIES' REVISED PLANS REMOVE CURRENT SUPPORT FOR**
8 **BASIC LOCAL TELECOMMUNICATIONS SERVICES?**

9 A. Yes, the companies' revised plans significantly decrease current support for basic local
10 telecommunications services. The revised plans do this by reducing the prices of a service
11 that has historically been set by regulators to provide an important source—but by no
12 means the only source—of support for basic local services, namely, intrastate switched
13 network access.

14
15 **Q. WHY DO YOU BELIEVE THAT INTRASTATE SWITCHED NETWORK**
16 **ACCESS CURRENTLY SUPPORTS BASIC LOCAL TELECOMMUNICATIONS**
17 **SERVICES?**

18 A. There are two reasons. The first is the historical rate design policy prevalent in
19 telecommunications regulation in Florida and throughout the United States. As I
20 mentioned earlier, historically, telecommunications rate design was premised on the
21 policy goal—at times stated and sometimes left implicit—of keeping the price of basic
22 local telecommunications low or as low as possible. This policy began early on in
23 telecommunications regulation and was accomplished through the rate design mechanisms
24 that were part and parcel of traditional regulation. Traditional regulation required two
25 broad steps. The first was to determine a revenue requirement that was sufficient to meet

1 the prudently incurred operating expenses and a reasonable return on prudently invested
2 capital. The second broad step was the rate design process, which determined the price of
3 each regulated service to ensure that the regulated company had the opportunity to recover
4 its revenue requirement from its regulated service.⁸ Normally, a proper rate design
5 process would require that the price of any service recover at least its underlying cost and,
6 in addition, contribute to the firm's shared and common cost in some manner. At times
7 that manner was consistent with economic efficiency goals—as when demand
8 considerations were taken into account—and at other times it was more reflective of other
9 policy considerations—as when an equal percentage markup was applied across the board
10 to the different services.

11

12 For basic local services, however, in most instances—the price was set on a residual basis
13 without taking into consideration the underlying cost of providing basic local
14 telecommunications. That is, the goal of residual pricing was to keep basic local prices
15 low, or as low as possible, and to recover more revenue from other telecommunications
16 services, constrained by what consumers were willing to pay for the non-basic
17 telecommunications services and by—as competition began to become more prevalent in
18 telecommunications markets—the threat of customers bypassing the public switched
19 telecommunications network.

20

21 Prior to divestiture of AT&T in 1984, toll prices provided the bulk of support for basic
22 local telecommunications services. As technological advances lowered the cost of

⁸ I say opportunity to recover its revenue requirement because the regulatory process does not generally guarantee a regulated company a certain return, it only provides the regulated company the opportunity to earn a certain return.

1 providing toll services, toll prices did not decrease commensurately and were used as a
2 means to support basic local telecommunications services—i.e., to keep the prices of basic
3 local lower than would otherwise be the case. After divestiture of AT&T, interstate and
4 intrastate switched network access services were substituted as a means of supporting
5 basic local telecommunications services.

6
7 Notably, even after the substitution of price cap regulation for traditional regulation, the
8 cross subsidies that were present under traditional regulation have been maintained.

9
10 The notion that intrastate switched network access services have been used as a source of
11 support for basic local telecommunications is confirmed in the Florida *Senate Staff*
12 *Analysis and Economic Impact Statement on the Tele-Competition Act*, where it states:

13 According to the commission, intrastate network access service rates were set
14 well above the incremental cost of providing the service in order to keep rates
15 for basic local telecommunications service as low as possible and to encourage
16 subscribership.⁹

17
18 The second reason why I believe that intrastate access services currently support basic
19 local service is cost considerations. As described in the testimonies of their witnesses, the
20 companies have established that the price of residential basic local telecommunications
21 services is below forward-looking direct cost estimates. From an economic perspective,
22 whenever the revenues from a service are insufficient to recover its forward-looking direct
23 costs, that service is said to be in receipt of an economic subsidy. The source of the

⁹ See Senate Staff Analysis and Economic Impact Statement on CS/SB 654, April 8, 2003.

1 subsidy—including that for residential basic local services—comes from all those services
2 that are priced above their respective forward-looking direct costs. As a whole, these
3 services contribute to the support of residential basic local. Because intrastate access
4 services are priced significantly above their forward-looking direct costs, this means that
5 intrastate switched network access services are supporting basic local service.
6

7 **Q. DOES THIS IMPLY THAT THERE MAY BE OTHER SERVICES, BESIDE**
8 **INTRASTATE ACCESS SERVICES, THAT MAY ALSO BE SUPPORTING**
9 **BASIC LOCAL TELECOMMUNICATIONS SERVICES?**

10 A. Yes, that is correct. In general, for multi-product firms, where there are significant
11 amounts of shared and common costs, firms must, in the aggregate, price their services
12 above forward-looking direct costs in order to earn sufficient revenues to remain viable.
13 When one service is priced below its forward-looking direct costs, as is the case for
14 residential basic local telecommunications services, other services that are priced above
15 forward-looking direct costs are supporting the service that is priced below its own
16 forward-looking direct costs.
17

18 The Florida Legislature, however, has specifically determined that it is the support
19 provided by intrastate switched network access that is to be reduced. The Tele-
20 Competition Act calls for rebalancing to take the form of lowering intrastate access rates
21 to parity—over a 2 to 4 year period—with interstate switched network access rates and to
22 simultaneously increase basic local telecommunications services by an amount sufficient
23 to make up the revenue over the same time period. Under this approach, there is still no
24 guarantee that residential basic local services recover at least their forward-looking direct
25 costs once intrastate access rates are set to parity with interstate switched access rates. In

1 fact, according to the companies' evidence, residential rates will still be below forward-
2 looking direct costs even when intrastate switched network access rates reach parity with
3 the interstate rates.

4
5 Therefore, while the companies' revised plans are consistent with the criteria to be
6 considered by the Commission, the plans do not result in the complete rebalancing of
7 rates. Thus, there will still likely be some (lesser) distortions in prices even after the
8 implementation of the plans.

9
10 **Q. AS AN ECONOMIST, DO YOU BELIEVE THAT REBALANCING IS**
11 **COMPLETED ONCE BASIC RESIDENTIAL PRICES ARE SET AT FORWARD-**
12 **LOOKING DIRECT COSTS?**

13 A. While having basic local services recover at least their underlying forward-looking direct
14 costs is a good first step, it would not necessarily result in economically efficient prices.
15 As I discuss in greater detail below in Section IV, economically efficient prices require
16 that a multi-product firm's shared and common costs be recovered through markups on
17 each service or product above forward-looking direct costs in a manner that least distorts
18 economic efficiency. Therefore, to have economically efficient basic local prices would
19 likely require that basic local services be priced above forward-looking direct costs.
20 However, as markets become more competitive, markups will be limited by the need to be
21 competitive with other firms in the market.

22
23 **Q. HAVING ESTABLISHED THAT THE REVISED PLANS REMOVE CURRENT**
24 **SUPPORT FOR BASIC LOCAL, § 364.164 (1) (a) PROVIDES THAT, AS A**
25 **RESULT OF THE REMOVAL, THEY WILL RESULT IN A MORE**

1 ATTRACTIVE COMPETITIVE LOCAL EXCHANGE MARKET FOR THE
2 BENEFIT OF RESIDENTIAL CONSUMERS. WILL THE COMPANIES'
3 REVISED PLANS MEET THIS CRITERION?

4 A. Yes, the companies' revised plans will create a more attractive competitive local exchange
5 market for the benefit of residential consumers. Economic theory and empirical research
6 both indicate that this will likely be the case. I discuss these two factors below.

7

8 **Q. PLEASE DISCUSS WHY YOU BELIEVE THAT ECONOMIC THEORY**
9 **SUGGESTS THAT THE COMPANIES' REVISED PLANS WILL LIKELY**
10 **RESULT IN A MORE ATTRACTIVE COMPETITIVE LOCAL EXCHANGE**
11 **MARKET FOR THE BENEFIT OF RESIDENTIAL CONSUMERS?**

12 A. One of the key components of the companies' revised plans is that intrastate access
13 revenues will be decreased in a revenue-neutral manner by increasing the price of (and
14 revenue from) basic local telecommunications services for residential consumers. The
15 cost information provided by the companies in this proceeding indicates that residential
16 basic local telecommunications prices are currently below forward-looking direct costs.
17 Increasing the price of a service, especially a service that is below forward-looking direct
18 costs, will make for a more attractive market for actual and potential competitors.
19 Competitors will not rationally try to compete against heavily subsidized prices.

20

21 **Q. WOULD YOU PLEASE EXPLAIN WHY YOU BELIEVE THIS TO BE THE**
22 **CASE?**

23 A. In a market economy, prices are the essential tool that send signals to market participants
24 that, in turn, determine market behavior and outcomes. For example, as prices increase or
25 decrease, consumers alter their consumption decision because the value consumers place

1 on goods and services changes in relation to price. Producers alter their production,
2 investment and research and development decisions as well, because as prices increase or
3 decrease, profits change along with them. It is the search for profits that drives firms to
4 enter or expand into new markets. As prices change, potential entrants into the market
5 will be affected as well. Lower prices may act to keep new firms from entering the
6 market and higher prices more reflective of cost will tend to attract new firms into the
7 market.

8

9 Like any other firm, the investment decision of a telecommunications competitor is based
10 on the present value of the cash flows that the investment project is likely to generate over
11 the useful economic life of the project. Holding all other factors constant, when the price
12 of a service increases, a cash flow analysis would show that the investment project
13 becomes more profitable (or less of a loss) and thus more attractive. In the case before us,
14 an increase in the price of basic local telecommunications service would increase the
15 revenues from residential basic local services in a cash flow analysis, thus increasing the
16 attractiveness of providing those residential services. As a result of rate rebalancing,
17 where the companies plan to raise residential basic local prices, the residential local
18 exchange market will look more attractive to all actual and potential telecommunications
19 providers of residential services.

20

21 **Q. WILL THE COMPANIES' REVISED PLANS ALSO PROVIDE INCREASED**
22 **INCENTIVES FOR OTHER COMPETING TELEPHONY TECHNOLOGIES?**

23 A. Yes. An important reason for opening local telecommunications markets to competition is
24 the belief that technological change is proceeding so rapidly that competitive markets will
25 do a much better job than monopoly of discovering which technologies can or cannot

1 succeed in the long run. For example, access to customers for their telecommunications
2 needs comes in the form of fixed-wireline access, wireless access, cable telephony,
3 Internet, and potentially satellite and even access via electric utilities. Of course, not all of
4 these technologies will necessarily survive in the long run and competition will likely lead
5 to a mix of technologies surviving and providing the lowest possible cost for each
6 consumer's telecommunications needs.

7
8 However, in order for the lowest-cost mix of technologies to remain in the market, prices
9 and the signals they send must not be distorted and must reflect the underlying cost of
10 providing service. The companies' revised plans move positively in this direction and
11 encourage new entrants—regardless of the chosen technology—to enter or expand in the
12 marketplace because even competitors using lower-cost (or more attractive) technologies
13 may not be able to compete against a subsidized ILEC price that does not fully reflect its
14 own costs. This would be a loss for consumers and the Florida economy.

15
16 **Q. IS THERE EVIDENCE THAT OTHER FORMS OF ACCESS ARE COMPETING**
17 **WITH FIXED-WIRELINE ACCESS?**

18 A. Yes. The Florida Commission has recognized the actual and potential substitution
19 occurring between fixed-wireline and other forms of access, including wireless and
20 emerging IP-telephony providers. As the Commission states:

21 Regarding the substitution of technology and services, as they are being found
22 to be close substitutes to traditional wireline services, both wireless and

1 emerging broadband IP-telephony providers must be included in the analysis.¹⁰

2
3 In the same report, the Florida Commission cites nation-wide data indicating that about
4 5% of U.S. wireless subscribers have disconnected wireline service and conclude that
5 substituting wireless for wireline services appears to be a national trend.¹¹ Moreover, as
6 the same report concludes, Florida may be especially susceptible to this phenomenon
7 because of the large population in Florida that also has residences in other states. For
8 many of these consumers, "it makes little sense to continue paying for telephone service
9 that sits idle much of the year when wireless enables them to stay connected wherever
10 they are."¹²

11
12 The Florida Commission has also concluded that cable providers are competing directly
13 with fixed-wireline providers. The Commission cites to national data that shows that by
14 second quarter of 2002, there were 2.5 million cable telephony subscribers and that cable
15 companies expect to see one-third of their digital cable households take cable telephony
16 service by 2005.¹³

17
18 There is evidence that the Tele-Competition Act is already having a positive impact on
19 competitors' incentive to enter and expand in the Florida market. On July 18, 2003,
20 Knology, a provider of broadband and voice telephony services, announced it has entered

¹⁰ See. Florida Public Service Commission, *Telecommunications Market in Florida Annual Report on Competition As of June 30, 2002*, December 2002, p. 6.

¹¹ *Ibid*, at 7.

¹² *Ibid*, at 9.

¹³ *Ibid*, at 10

1 into a definitive agreement to purchase certain assets from Verizon Media Ventures, Inc.¹⁴
2 Knology offers local and long distance telephone service and its purchase of Verizon's
3 Americast cable system will permit it to compete directly with Verizon. In its press
4 release announcing its decision, Knology stated:

5 In commenting on this transaction, Knology noted that the Tele-Competition
6 Act recently enacted in Florida positively influenced its decision to expand
7 operations in the state. This Act, as written by the Florida Legislature and
8 supported by Governor Bush, laid the foundation for companies like Knology
9 to enter the Florida market, and offer competitive services and products to
10 consumers.

11
12 **Q. IS THERE EMPIRICAL EVIDENCE THAT SUPPORTS YOUR VIEW THAT**
13 **RATE REBALANCING WILL LIKELY MAKE THE RESIDENTIAL LOCAL**
14 **EXCHANGE MARKET MORE ATTRACTIVE?**

15 A. Yes, there is empirical evidence. Two of my colleagues at NERA investigated empirically
16 whether low residential basic local rates were having any impact on competition in the
17 states and, specifically, whether low rates were hindering the development of residential
18 competition.¹⁵ In that paper, the authors hypothesized that inefficient local exchange
19 prices are having an impact on competition and that, specifically, low residential prices
20 are inhibiting competition for residential customers. To test their hypotheses, the authors
21 compared how local competition varied across the different states depending on how

¹⁴ See, Knology Press Release July 18, 2003, *Knology Announces Agreement to Purchase Broadband Asset*.

¹⁵ See, Agustin J. Ros and Karl McDermott, "Are Residential Local Exchange Prices Too Low? Drivers to Competition in the Local Exchange Market and the Impact of Inefficient Prices," in Michael Crew, *Expanding Competition in Regulated Industries*, Kluwer Academic Publishers, 2000.

1 "unbalanced" were local exchange prices. Specifically, the authors estimated several
2 cross-section econometric models of facilities-based competition, controlling for things
3 such as cost and demand considerations in the different states. The authors also included
4 several policy variables, including one that measured the degree to which residential local
5 exchange prices were "distorted" in each state. The authors summarized their results, as
6 they pertained to residential competition, as follows:

7 Using OLS and GLS estimates we found a significant and positive association
8 between states that have more "balanced" tariffs and residential competition.
9 For two measures of residential competition used in our data, we found that
10 "rebalancing" tariffs by 10% leads to approximately a 9% and 13% increase,
11 respectively, in residential competition.¹⁶

12
13 In addition, James Eisner (an FCC staff member) and Professor Dale E. Lehman
14 performed a somewhat similar study.¹⁷ Eisner and Lehman state in their conclusion:

15 ...in some specifications, there appears to be less competitive entry
16 (principally facilities-based) where residential rates are lower. These findings
17 are generally statistically significant at the 90% level.¹⁸

18
19 Finally, another empirical study examined rate rebalancing in Latin America and found
20 that rate rebalancing in some Latin American countries has led to increases in the supply

¹⁶ *Ibid.*, at 167.

¹⁷ See, James Eisner and Dale E. Lehman, *Regulatory Behavior and Competitive Entry*, presented at the 14th Annual Western Conference Center for Research in Regulated Industries, June 28, 2001. The authors' main motivation appears to have been ascertaining how regulatory behavior—as it pertains to unbundled loop prices and 271 entry—affects competitive entry. Nevertheless, they control for local exchange prices as well.

¹⁸ *Ibid.*, p. 25.

1 of main telephone lines by providing better incentives to market participants.¹⁹

2

3 In summary, both economic theory and the empirical literature suggest that the
4 companies' revised plans—by setting residential rates at more economically efficient
5 levels—would likely make the residential local exchange marketplace more attractive to
6 actual and potential competitors.

7

8 **Q. BUT ISN'T IT THE CASE THAT CLECS ALREADY HAVE ENOUGH**
9 **INCENTIVES TO SERVE LUCRATIVE RESIDENTIAL CUSTOMERS?**

10 A. Yes, it is probably the case that CLECs have enough incentive to serve a subset of
11 residential customers, namely those customers that are very profitable either because the
12 cost of serving them is especially low or because their volumes are unusually high. But
13 the promise of the Tele-Competition Act is to ensure that competition for residential
14 customers is as broad and diffuse as is economically feasible, and by better aligning the
15 prices of residential basic local services with their underlying costs, a broader base of
16 residential customers will obtain the benefits of competition.

17

18 **Q. § 364.164 (1) (b) PROVIDES THAT THE COMPANIES' PLANS CONSIDER THE**
19 **EFFECT ON ENHANCED MARKET ENTRY. WILL THE COMPANIES'**
20 **REVISED PLANS MEET THIS PROVISION?**

21 A. Yes, the companies' revised plans will induce enhanced market entry. Above, I have
22 discussed how the revised plans would likely create a more attractive competitive local

¹⁹ See, Agustin J. Ros and Aniruddha Banerjee, "Telecommunications Privatization and Tariff Rebalancing: Evidence from Latin America," *Telecommunications Policy*, 24 (2000) 233-252.

1 exchange market for the benefit of residential consumers. This is an example of how the
2 revised plans will induce enhanced market entry.

3
4 In general, the companies' revised plans will provide for improved entry signals into the
5 local exchange market by diminishing distorted price signals that may encourage
6 uneconomic entry into the overpriced markets. Prices that are free of distortions will lead
7 to several economically-efficient outcomes known as allocative, technical and dynamic
8 efficiencies. First, efficient pricing assumes that the marginal cost that society incurs to
9 produce goods and services reflects the value that consumers place on the good or service
10 consumed, (allocative efficiency). Second, optimal signals are provided to firms in the
11 industry (e.g., whether to increase production or exit the industry) and to potential entrants
12 contemplating entering the market. This ensures that it is the lowest cost firms that stay in
13 the market and provide goods and services. In this way the use of society's scarce
14 resources is minimized (technical efficiency). Third, prices that adequately cover costs
15 ensure that appropriate incentives exist for improvement in technology, increased research
16 and development and higher quality goods and services (dynamic efficiency).

17
18 **Q. UNDER WHAT CONDITIONS CAN IT BE SAID THAT PRICES ARE FREE OF**
19 **DISTORTION, AND ARE THE COMPANIES' CURRENT PRICES FOR BASIC**
20 **LOCAL SERVICES FREE OF DISTORTIONS?**

21 A. Prices are free of distortion when: (1) they recover at least the forward-looking
22 incremental cost of production and (2) for multi-product firms, markups above
23 incremental costs take into account demand characteristics in the market, subject, of
24 course, to the need for the firm to meet competition. As described in the companies' cost
25 testimonies, the companies' prices for basic local residential services are not recovering

1 the forward-looking direct cost of production. As such, prices for these services do not
2 meet the economic criterion that prices should at a minimum recover the forward-looking
3 direct cost of production.

4
5 By adopting the companies' revised plans, however, the Commission will be reducing
6 significantly the distortions in the price of intrastate access and residential basic local
7 services and achieving the economically efficient outcomes described above.

8
9 **IV. OTHER ECONOMIC BENEFITS FROM THE COMPANIES'**
10 **REVISED PLANS**

11
12 **Q. ARE THERE OTHER ECONOMIC BENEFITS THAT WILL LIKELY ARISE**
13 **FROM THE COMPANIES' REVISED REBALANCING PROPOSAL?**

14 A. Yes, there are other economic benefits that will likely arise from the companies' revised
15 rebalancing proposals. Both economic theory and empirical research suggest that rate
16 rebalancing will likely increase economic activity in Florida as increased competition
17 brings benefits to Florida consumers of telecommunications services.

18
19 **Q. WOULD YOU PLEASE DESCRIBE WHY ECONOMIC THEORY SUGGESTS**
20 **THAT RATE REBALANCING WILL INCREASE ECONOMIC ACTIVITY IN**
21 **FLORIDA?**

22 A. Rate rebalancing consists of increasing the prices of services that are priced below
23 forward-looking direct costs and reducing the prices of services that are priced
24 significantly above forward-looking direct costs. As mentioned earlier in my testimony,
25 the history of telecommunications rate design is such that residential basic local prices

1 were set low and usage services (such as toll and intrastate access services) were set high.

2

3 However, economic theory teaches that economic efficiency (and overall consumer
4 welfare) is at its highest level when prices of goods and services in an economy are set at
5 forward-looking direct cost. Of course, in industries where there are significant fixed
6 costs—that give rise to economies of scale—and in multi-product firms where there are
7 significant amounts of shared and common costs, pricing services at forward-looking
8 direct cost does not permit the firm to earn sufficient revenues to recover all its costs.
9 Under such conditions, markups above forward-looking direct costs are required.
10 Specifically, as competition develops, those services that are more price elastic will likely
11 receive a proportionately lower markup above cost than those services that are more price
12 inelastic.

13

14 **Q. PLEASE DESCRIBE HOW REBALANCING RESULTS IN INCREASED**
15 **ECONOMIC ACTIVITY IN FLORIDA?**

16 A. The companies' revised plans will lower intrastate access prices, which will in turn result
17 in lower intrastate toll prices, as required by the Tele-Competition Act. As a result of the
18 reduction in intrastate toll prices, Florida consumers will use more toll services. This will
19 create value for them that they are not now receiving. This, in turn, will reflect an
20 increase in economic activity in Florida. In addition, and of more direct importance to this
21 proceeding, more cost reflective prices for local service will send signals to competitors
22 that will more efficiently guide their investment decisions, and in all likelihood, increase
23 their investment beyond what it is in the face of today's artificially low prices. Thus,
24 rebalancing will generate significant gains in economic activity in Florida. It is important
25 to stress the point that demand for access to the network by consumers depends not only

1 on the price of network access but it also depends on the value that consumers obtain
2 (consumers' surplus) from using the network. While higher network access prices may, in
3 theory, decrease the quantity of access consumed, the concomitant decrease in long
4 distance price will increase the quantity of access consumed. Empirical evidence suggests
5 that, in net, we may well find that rebalancing leads to more consumers subscribing to the
6 network.²⁰

7

8 **Q. IS THERE EMPIRICAL EVIDENCE THAT QUANTIFIES THE AMOUNT OF**
9 **ECONOMIC BENEFIT THAT A REBALANCING PLAN CAN GENERATE?**

10 A. Yes, there is empirical support. There have been several studies that have examined the
11 welfare gains arising from rate rebalancing. One of the first studies found that, for the
12 U.S. as a whole, the loss from overpricing long distance service to business and residential
13 consumers in 1983 was around \$10 billion, a finding that was confirmed in subsequent
14 research.²¹ More recent research confirms the significant gains in economic welfare that
15 can be achieved from more economically rational prices. For example, a 2000 study by
16 Robert Crandall and Leonard Waverman (a NERA colleague) found the total cost of the
17 current rate design—i.e., lower basic local prices and higher long distance prices—to be
18 anywhere between \$2.5 to \$7.0 billion per year, depending on the assumptions made.²²

19

²⁰ See, Hausman, J, T. Tardiff, and A. Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," *The American Economic Review*, Vol. 83, May 1993, pp. 178-184.

²¹ See, John T. Wenders and Bruce L. Egan, "The Implications of Economic Efficiency for U.S. Telecommunications Policy." *Telecommunications Policy* 10 (1986): 33-40 and Lewis Perl, "Social Welfare and Distributional Consequences of Cost-Based Telephone Pricing." Paper presented at the Thirteenth Annual Telecommunications Policy Research Conference, Airhe, Va. April 23, 1985.

²² See, Robert Crandall and Leonard Waverman, *Who Pays for Universal Service?: When Telephone Subsidies Become Transparent*, Brookings Institute, (2000), p. 119.

1 V. COST ISSUES

2

3 Q. WHAT IS THE CORRECT COST CONCEPT TO USE FOR DETERMINING
4 WHETHER A SERVICE IS RECEIVING AN ECONOMIC SUBSIDY?

5 A. From an economic perspective, use of forward-looking direct costs (economic costs as
6 opposed to embedded or historical costs) is the proper basis for determining whether a
7 specific service is in receipt of an economic subsidy. The embedded cost or historical cost
8 of an activity is a record of the costs a firm attributes to the pursuit of its activity in a
9 given (past) accounting period. That cost reflects what the firm actually paid for capital
10 equipment,²³ its actual costs of operating and maintaining that equipment, and other costs
11 incurred in operating the enterprise. By contrast, the economic cost of an activity is the
12 actual forward-looking cost of accomplishing that activity in an efficient manner. In
13 contrast to embedded costs, forward-looking costs are those associated with present and
14 future uses of the firm's (or society's) resources. Only these forward-looking costs are
15 relevant for making present and future production and investment decisions, for placing
16 resources in alternative uses, and for setting efficient prices for the services to be provided
17 presently or in the future.

18

19 According to the evidence presented by the companies, their residential basic local rates
20 are below forward-looking direct costs and I conclude, therefore, that those rates are in
21 receipt of an economic subsidy.

22

²³ Embedded costs also include the annual depreciation expenses associated with the stock of equipment that (1) was purchased in the current and previous years and (2) is still in use.

1 Q. THE COMPANIES' REVISED PLANS ARE BASED UPON THE FACT THAT
2 THE LOCAL LOOP IS NOT A SHARED OR COMMON COST AND THAT ITS
3 COST IS CAUSED SIMPLY BY PROVIDING CUSTOMERS ACCESS TO THE
4 TELEPHONE SYSTEM AND CANNOT APPROPRIATELY BE SPREAD
5 AMONG THE REMAINING TELEPHONE SERVICES. DOES THE FLORIDA
6 COMMISSION AGREE WITH THIS APPROACH REGARDING THE LOCAL
7 LOOP?

8 A. Yes, it does. In a report to the Florida Legislature in 1999, the Commission explicitly
9 rejected the notion that the cost of the loop should be recovered from non basic local
10 telecommunications service.²⁴ In that report, the Commission stated:

11 Is the cost of local loop facilities properly attributable to the provision of basic
12 local telecommunications service? By definition, yes. Section 364.02(2),
13 Florida Statutes, defines "basic local telecommunications service as"

14 Voice grade, flat-rate residential and flat-rate single-line business local
15 exchange services which provide dial tone, local usage necessary to
16 place unlimited calls within a local exchange area, dual tone multi-
17 frequency dialing, and access to the following emergency services such
18 as "911," all locally available interexchange companies, directory
19 assistance, operator services, relay services, and an alphabetical
20 directory listing.

21

²⁴ See, "Report of the Florida Public Service Commission on the Relationship Among the Costs and Charges Associated with Providing Basic Local Service, Intrastate Access, and Other Services Provided by Local Exchange Companies, in Compliance with Chapter 98-277, Section 2(1), Laws of Florida," Florida Public Service Commission Tallahassee, Florida February 15, 1999.

1 Given such an identification of the cost object to be studied, the principle of
2 cost causation leads one to the unavoidable conclusion that the decision to
3 have local service leads to the incurrence of loop costs.²⁵

4
5 **VI. UNIVERSAL SERVICE WOULD NOT BE PUT AT RISK AS A**
6 **RESULT OF THE COMPANIES' REVISED PLANS**

7
8 **Q. SHOULD THE COMMISSION BE CONCERNED ABOUT UNIVERSAL**
9 **SERVICE?**

10 A. While it is true that, in theory, as the price of basic local service increases, some
11 consumers may decide the new price is above the value he or she places on the service—
12 and may, as a result, decide to do without telephone service—I do not believe that, in
13 practice, this would occur, or occur to such an extent as to jeopardize universal service in
14 Florida. There are several reasons why I believe this is the case.

15
16 First, although low-income subscribers may be more sensitive to price increases than are
17 middle and higher income users, the Tele-Competition Act does two things to help low
18 income consumers. It provides that, in the event of an increase in residential basic local
19 service prices, low-income consumers who are Lifeline customers will be exempted from
20 the price increase; and, it expands the number of Lifeline-eligible customers to 125
21 percent of the federal poverty level. These steps should go far to address any problems of
22 affordability.

23

²⁵ *Ibid*, at 51.

1 Second, the price elasticity of demand for access to the network is quite low, meaning that
2 the vast majority of consumers will continue to subscribe. Specifically, the price elasticity
3 of demand measures the percentage impact on demand given a percentage change in price.
4 Previous research has demonstrated that customers generally do not disconnect their
5 phone service when prices for basic local service increase.²⁶

6
7 Third, and very importantly, in addition to its own price, the demand for residential basic
8 local service is determined by the amount of value consumers obtain from using the
9 services produced by the network, i.e., local calling, intraLATA toll, interLATA toll,
10 vertical services and newer services such as broadband Internet access. As prices for
11 these services decrease over time due to competitive pressure and technological
12 innovation, the value that consumers place on having access to the network increases and
13 so, therefore, does their demand to stay on the network.²⁷ The companies' revised plans
14 call for rate increases phased in over a two year period and to the extent that prices for
15 complementary goods decrease so will consumers' desire to remain on the network
16 increase. This helps reduce, or may even offset, the negative effect of the price increase.

17
18 Finally, as discussed above, less distorted prices should provide better incentives for
19 competitors to compete for residential consumers. Competition brings with it improved
20 quality, different selection of goods and services bundled together in a way that customers
21 find attractive, and lower prices. These factors provide additional reasons why during the

²⁶ See, Lester D. Taylor, (1994), *op. cit.*

²⁷ Hausman, J., T. Tardiff, and A. Belinfante, "The Effects of the Breakup of AT&T on Telephone Penetration in the United States," *The American Economic Review*, Vol. 83, May 1993, pp. 178-184.

1 phase-in period, customers will likely place increased value on subscribing to the network,
2 thus mitigating the effects of any local rate increase.

3

4 To the extent the Florida Commission is concerned with the few remaining users who may
5 decide to drop off the network it is also important to be aware that alternatives to the fixed
6 network are growing and at least some customers may be turning to alternative means of
7 meeting their communications needs. For example, the extraordinary growth of wireless
8 service, driven by lower wireless prices and pricing plans that include a "bucket" of
9 minutes provides customers with more meaningful opportunities to use wireless service as
10 a substitute to wireline service.

11

12 **Q. SHOULD THE COMMISSION BE CONCERNED IF CUSTOMERS DROP OFF**
13 **THE FIXED NETWORK BUT INSTEAD RELY PRIMARILY ON OTHER**
14 **FORMS OF ACCESS?**

15 A. No. An important goal for policymakers has been to ensure that as many consumers as
16 possible have access to the public switched telecommunications network, irrespective of
17 how that access is obtained. When a customer drops off the fixed-line network and
18 accesses the public network via wireless access, this is simply a substitution effect caused
19 by the customer choosing between fixed and wireless access. This is not a universal
20 service concern for policymakers.

21

22 **Q. DR. GORDON, HAVE OTHER STATES IMPLEMENTED RATE**
23 **REBALANCING?**

24 A. Yes, there are other states that have implemented rate rebalancing including California,
25 Illinois, Ohio, and in Massachusetts where I served as Chairman. Even in Maine, where

1 by statute basic residential services are to be set as low as possible and where I also served
2 as Chairman, they have recently approved a rebalancing plan.

3

4 **Q. WOULD YOU PLEASE DESCRIBE THE RATE REBALANCING PROCESS IN**
5 **MASSACHUSETTS?**

6 A. The process for changing prices in Massachusetts began before I became Chairman of the
7 Massachusetts Commission and continued during my tenure. In Massachusetts,
8 residential fixed monthly charges were increased significantly, with offsetting decreases in
9 business, toll, and carrier access prices. The Massachusetts Commission early on after
10 divestiture recognized the problems that historic pricing policies were creating, as other
11 (especially institutional) barriers to market entry were being eliminated, and thus ordered
12 a change in price structure:

13 "properly defined incremental costs should be used as the primary basis for
14 pricing all services, including local exchange service ...to the extent that
15 current rates do not reflect an appropriate allocation of costs, the [MDPU] will,
16 consistent with the need to avoid major discontinuities in rate levels, move
17 toward that goal." IntraLATA Competition, D.P.U. 1731 (1985), p. 36-38.

18

19 "Traditionally, the pricing of telephone service was based on a method
20 whereby residential monthly exchange rates were priced below cost in order to
21 promote universal service; and long-distance, toll, and business rates were
22 priced above cost in order to subsidize residential exchange rates. While this
23 system succeeded in serving a social purpose, it was a pricing scheme not
24 conducive to the development of a fully-competitive market, in which the
25 benefits associated with competition would be realized by all customers."

1 NET, D.P.U. 93-125 (1994), pp. 10-11.

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In Massachusetts, moving prices more in line with incremental costs required a significant shift in revenue recovery from usage-based prices, such as intraLATA toll and intrastate carrier access, to fixed monthly prices for all classes of customers. In addition, because the MDPU found that there were no significant cost differences in serving different classes of customers, the price-rebalancing process also entailed a further shift in revenue recovery from business customers to residential customers. Of course, the necessary changes were not made overnight. The MDPU established a series of annual, revenue-neutral, price-rebalancing investigations in order to achieve its goal over time.

When the Massachusetts price-rebalancing process ended in January of 1994 (with the adoption of a price cap plan), the price for basic residential dial-tone service (1MR) had risen from about \$3.00 per month in 1990 to \$9.91 per month in 1994 (net of the SLC).²⁸ Comparable increases also occurred for residential flat-rate service (1FR), which was the most popular service in Massachusetts, at that time. Flat rate residential prices had ranged from \$9.95 in rural areas to \$12.38 in urban areas. The rebalancing process moved flat rate residential prices to \$16.85 state wide. During this period, the average increase for residential consumers was \$2.18 per year over four years and, according to the DTE, record evidence shows virtually no impact on residential telephone subscriber penetration.²⁹ Because the price-rebalancings were revenue-neutral, these increases were

²⁸ I was Chairman of the MDPU for the last of these annual investigations.

²⁹ See, "Re Verizon New England, Inc. dba Verizon Massachusetts D.T.E. 01-31-Phase II." *Public Utilities Reports - 223 PUR4th*, p. 397.

1 completely offset by decreases in prices for other services, notably residential and
2 business intraLATA toll and carrier switched access.

3
4 Massachusetts was one of the first states to open toll and local markets to competitive
5 entry, and the price rebalancing helped to lessen opportunities for uneconomic bypass and
6 thus promoted the development of an efficient competitive process.

7
8 More recently, Massachusetts has continued to better align prices with their underlying
9 costs by reducing switched access and increasing residential dial-tone rates. Specifically,
10 the DTE authorized the ILEC to implement a one-time increase of \$2.44 to its residential
11 dial-tone line charge. In commenting on its decision, the DTE stated:

12 Moreover, the department finds that with the \$2.44 increase in the dial-tone
13 line charge, competitive local exchange carriers (CLECs) can profitably enter
14 and serve the residential telephone market in Massachusetts.³⁰

15
16 The DTE concluded that a \$2.44 increase will not harm the Department's universal
17 service goals, based on similarity to the several, annual \$2.18 increase in the early 1990s
18 rebalancing plans and comparable increases in several other states and in the Federal
19 subscriber line charge since 2000. For example, the Maine PUC approved a \$1.78
20 increase in Verizon's basic monthly per line rate in May 2001 and the New York Public
21 Service Commission authorized a two-year Incentive Plan which permitted an increase of
22 \$1.85 on March 1, 2002 and another \$0.65 on March 1, 2003 for a total increase of \$2.50
23 in the space of a year. The FCC's Federal subscriber line charge has increase from \$4.35

³⁰ *Ibid*, p. 361.

1 in July 2000 to \$6.50 in July 2003.

2

3 **Q. PLEASE DISCUSS MAINE'S EXPERIENCE WITH RATE REBALANCING?**

4 A. Significant rate rebalancing has been achieved in Maine in recent years, with no
5 noticeable impact on telephone subscribership levels. In 1997, the Maine legislature
6 (M.R.S.A. 35-A, §7101-B) directed the Maine Public Utility Commission to establish,
7 notwithstanding any other provision of state law, intrastate access rates that are less than
8 or equal to interstate access rates established by the FCC (*i.e.*, parity with interstate access
9 rates) by May 30, 1999. At the time, Bell Atlantic's intrastate access rates were \$0.26 per
10 minute, significantly higher than its then-current Federal interstate access rate of about
11 \$0.07 per minute.

12

13 Subsequently, on March 17, 1998, the Commission approved an Order (Docket No. 94-
14 123 reopened) that approved a stipulation between Bell Atlantic-Maine (now known as
15 Verizon-Maine) and a group of intervenors, including the Commission's Advocacy Staff
16 and the Public Advocate. This stipulation allowed Bell Atlantic-Maine to increase its
17 basic local exchange rates by a total of \$3.50 by May 30, 1999, with steps of \$1.50 in
18 1998 and \$2.00 in 1999. This was followed by another increase of \$1.78 in 2000.

19

20 Maine continues to have the highest telephone penetration rate in the country—about 98
21 percent of Maine's households have telephone service.³¹ In addition, lower intrastate toll
22 rates have benefited some customer classes, especially those customers in rural areas with
23 relatively small toll-free calling areas.

³¹ MPUC Annual Report 2002, pp. 43.

1

2 Q. WHAT OTHER STATE EXPERIENCES DO YOU BELIEVE ARE RELEVANT?

3 A. In California in 1994, the Commission approved a rebalancing plan for GTE and Pacific
4 Bell. GTE's residential rates immediately went from \$9.75 to \$17.25 while Pacific's
5 residential rates went from \$8.35 to \$11.25.³² Recently, as part of a rebalancing plan for
6 Sprint's local telephone company in Ohio where intrastate access fees were lowered to
7 mirror Federal charges, the Commission approved the creation of an end user charge of
8 \$4.10 for residential customers and \$6.00 for single-line business.³³

9

10 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

11 A. Yes.

³² See, Decision 94-09-065, *et. al.*, September 15, 1994.

³³ See, The Public Utilities Commission of Ohio, Case No. '00-127-TP-COI and 01-1266-TP-UNC, June 28, 2001.

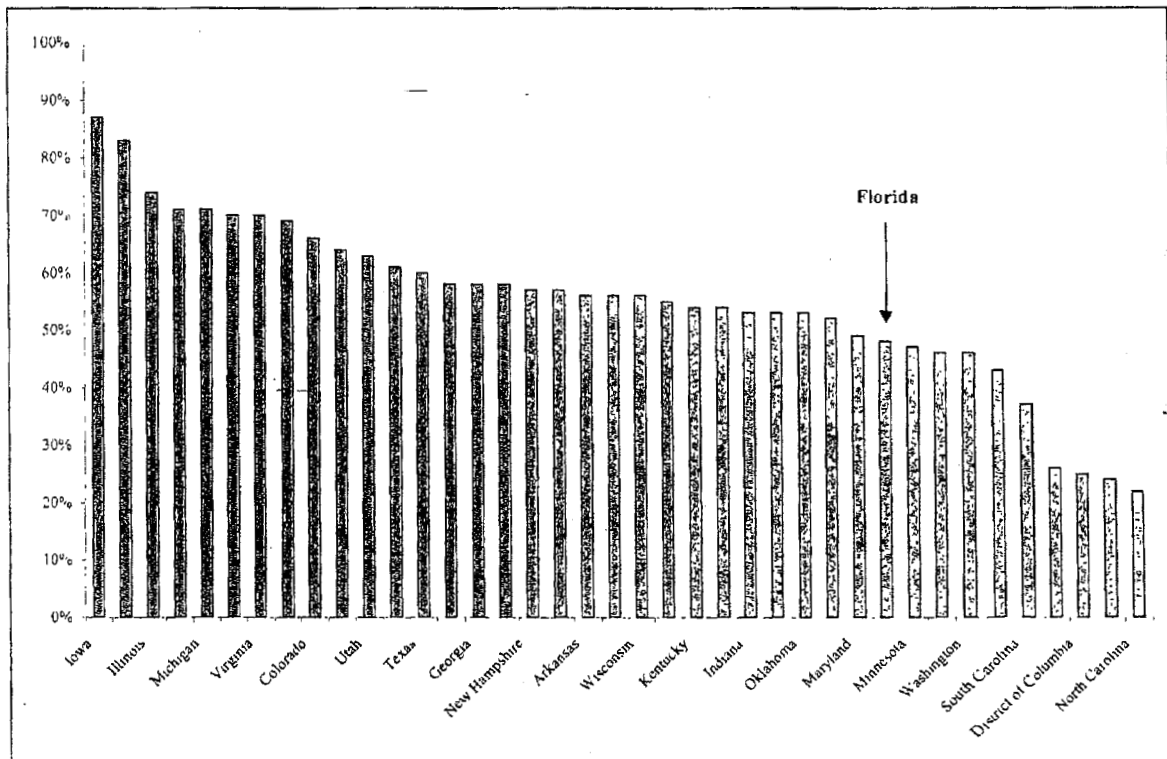
DIRECT TESTIMONY OF DR.
KENNETH GORDON

ATTACHMENT A

ATTACHMENT B

FIGURE 1 – PERCENT OF CLEC LINES SOLD TO RESIDENTIAL AND SMALL
BUSINESS CUSTOMERS BY STATE, AS OF DECEMBER 31, 2002

SOURCE: FCC, *Local Telephone Competition: Status as of December 31, 2002*



Dkt. No _____
D. Blessing Ex. No. ____ (DCB-13)
Competitive Entry

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-13

James Eisner and Dale E. Lehman, *Regulatory Behavior and Competitive Entry*,
presented at the 14th Annual Western Conference Center for Research in Regulated
Industries, June 28, 2001; p. B24.

Regulatory Behavior and Competitive Entry

James Eisner
Federal Communications Commission

and

Dale E. Lehman
Fort Lewis College

for presentation at the
14th Annual Western Conference
Center for Research in Regulated Industries
June 28, 2001

*The views expressed are those of the authors and not of any organization with which they are affiliated. The authors wish to thank Dennis Weisman and James Zolnierек for insightful discussion of our results.

ABSTRACT

The Telecommunications Act of 1996 provided for three forms of competitive entry into local telephone markets. First, entrants could use their own facilities to provide services, and interconnection with incumbent networks was mandated. Second, entrants to use total service resale to resell incumbent services at a discount to be based on avoided cost. Third, entrants could lease unbundled network elements (UNEs), possibly in combination with their own facilities, to provide services. UNEs were to be priced "based on costs." Since the passage of the Act, debate has raged in academic circles, hearing rooms and courtrooms on virtually every aspect of the terms for setting the relevant rates. Relatively little evidence on the effects on competitive entry has been provided: primarily due to a lack of comprehensively available data. This study uses new data collected by the Federal Communications Commission on all three forms of competitive entry. We examine a variety of models aimed at determining the effect of regulatory decisions on entry. Our approach is descriptive – what does the data suggest? We find states with low UNE prices have less facilities-based entry, with more ambiguous effects on the other two forms of entry. We find that long-distance entry (the *quid pro quo* provided by the Act in exchange for opening local markets to competition) has a large positive impact on entry, but the causation is unclear. Further, long-distance entry appears to complicate modeling the effect of UNE prices.

Introduction

In the wake of the Telecommunications Act of 1996, opinions abound concerning the ways in which regulatory behavior may or may not have affected the rate and type of competitive entry. Of particular interest has been the pricing of unbundled network elements (UNEs) and the setting of resale discounts. State regulators have been charged with setting these wholesale prices, subject to rules enacted by the Federal Communications Commission (FCC). A lengthy and continuing legal battle has ensued regarding jurisdictional issues over how much guidance (if any) the FCC has over the way in which state regulators set these prices. The Supreme Court finally established the right of the FCC to specify rules for the state to follow, but is still to decide on the merits of those rules. Amidst the legal wrangling, extreme views have prevailed regarding the impact of the FCC rules and the way in which the states have implemented them:

"Entrants will make efficient decisions about the mix of resale and facilities-based competition only if their access to existing networks is provided at prices that accurately reflect economic costs. Subsidizing services by providing them at TSLRIC sends the wrong price signals and leads to incorrect decisions. When prices are too low, excessive use of underpriced facilities will result and thus distort the decisions of resellers. The entry and expansion of resellers is thus not only encouraged, but also financed by underpriced facilities. Moreover, when network services are priced too low, the building of competing facilities is likely to be discouraged. Thus, rather than stimulating facilities-based competition, TSLRIC pricing discourages it."¹

"Appropriate pricing of unbundled network elements, transport, and access termination is crucially important for promoting effective competition. The extent to and the speed with which competition will develop depend critically on having prices for unbundled network elements and services that are as close to efficient economic costs as possible. The more prices exceed efficient economic costs, the less entry there will be. The less entry there is, the less likely it will be that effective competition will develop in local exchange markets, and, if effective competition does develop, it will happen more slowly. There is only one cost measure that fulfills that cost measure is the long-run forward-looking economic cost, or Total Element Long run Incremental Costs."²

¹Sidak and Spulber (1997), page 1152.

²Nicholas Economides (1999), pp. 455-483.

Much ink has been spilled and many trees felled debating the appropriate economic principles for satisfying the Act's requirements that wholesale prices be "based on cost."³ Somewhat less evidence is available for determining the actual effects that regulatory decisions about prices have had. The Eighth Circuit found that the argument that "competing carriers will incur only minimal costs in gaining access to incumbent LECs' networks and have no incentive to build their own is merely speculative at best."⁴ This paper provides evidence on how differing state pricing decisions have differentially affected the rate and types of competitive entry.

We know of only two other papers that present empirical evidence on this question. The conclusion of one:

"we examined the major drivers and determinants of local exchange competition and investigated the hypothesis that inefficient local exchange prices are having an impact on competition and the hypothesis that they are inhibiting competition for residential customers. Examining data as of the end of 1998, we found support for both hypotheses."⁵

That paper found evidence that higher UNE prices reduced collocation activity, reduced the number of CLECs that enter, and that higher resale discounts tend to promote resale entry. All of these results were small, however, and of limited statistical significance. Our results are somewhat different. Our findings suggest *that states with lower UNE prices have less facilities-based entry*. Contrary to expectations, we find no evidence that states with lower UNE prices have more non-facility entry. Instead, we have the puzzling result that in some specifications, states with lower UNE rates also have less CLEC entry; however this depends on whether and

³ For a good survey of these debates, see Alleman and Noam (1999).

⁴ Iowa Utils. Bd. v. FCC, 120 F.3d at 816 (8th Cir. 1996).

⁵ Ros and McDermott (2000).

how we account for 271 approval in the model. Our findings also suggest that there is less entry in states with higher residential retail rates although our evidence for this is not conclusive.

Data

There are two data sources that can be used to examine competitive entry, both from the FCC. From 1997 to 1999 the FCC collected voluntary information from ILECs on UNEs and resold lines used by CLECs. Beginning in December of 1999, the FCC used Form 477, requiring reporting from both ILECs and CLECs and including CLEC lines provided solely over its own facilities as well as UNE and resold lines. The differences between the two data sets are summarized in Table 1:

Table 1: FCC Data on Local Competition

	Voluntary Filings	Form 477
Time period used	1997-1999	1999 -
voluntary/compulsory	Voluntary	Compulsory for all Carriers with over 10,000 lines in a state
publicly available?	yes	Limited data available due to confidentiality concerns. Firm level data and some state level data is not available.
data collected	resold lines, UNE lines, # of CLECs authorized by state, % of end-user lines served out of wire centers in which there are collocation agreements	resold lines, UNE lines, facilities-based lines, # CLECs, # zip codes with competitive alternatives

The present study is the first to use the new (and not publicly available) CLEC data. The earlier data has the advantage of being publicly available with the disadvantages of being voluntary, limited (in particular, no facilities-based data from CLECs), and no longer in use. The new data, while superior in terms of coverage and mandatory reporting, has the disadvantage of the underlying data not being publicly available.

Unlike previous studies, we exclusively focus on the UNE prices and discount rates of RBOC jurisdictions. We assume that most of the CLEC entry is occurring in RBOC jurisdictions. The strategies, cost characteristics, and regulatory histories are more uniform across these than for other ILECs. This provides us with 48 jurisdictions (including the District of Columbia, but excluding Wyoming because the latter does not have regulator-determined UNE rates).

One additional note on the data is in order. The effect of regulatory policy on competitive entry is uniquely suited to the American environment, given the large number of state jurisdictions reaching independent determinations on wholesale and retail rates. The ability to use this diversity in the future, however, may be increasingly constrained. The combination of mergers and interLATA entry conditions have systematically been reducing the variation among the states. Merger conditions have frequently included discounts on UNE rates from the state-determined rates. The reviews of RBOC 271 applications have included comparisons of UNE rates across different states with the result of pressures to conform UNE rates to those in the initial states in which 271 approval has been granted (New York and Texas). For example, in its review of SBC Communications Inc.'s 271 application in Kansas and Oklahoma,

"Justice noted that the rates SW Bell charges competitors for the use of UNEs are 'significantly higher' in Kansas and Oklahoma than in Texas, where the telco recently obtained FCC permission to offer interLATA services."⁶

This was followed by a voluntary change in SW Bell's UNE prices:

"In an attempt to allay regulators' concerns about the rates it charges interconnecting carriers, Southwestern Bell Telephone Co. is offering competitors in Kansas and Oklahoma discounted rates for unbundled network elements (UNEs), as well as other concessions."⁷

As the diversity of UNE rates across states diminishes, it will be more difficult to study the effects of differing state regulatory decisions as well as increasingly difficult to maintain accurate data. The present study may well be the last opportunity to use data relatively "untainted" by these considerations.

The Models

We have examined competitive entry data for the three distinct forms of entry envisioned by the Act: total service resale, use of UNEs, and complete facilities-based entry. Ideally, these would be modeled as a simultaneous system since these entry decisions are interdependent. However, given the limited degrees of freedom and (as we shall see) the similarity of the models for the different forms of entry, two and three stage least squares models have not performed well.⁸ We did conduct Hausman simultaneity tests for facilities and non facilities-based lines ($p = .87$) and for UNE and resold lines ($p = .95$). This tests the hypothesis that the difference in coefficients between the two-stage and OLS (independent equations) approaches is not systematic. In both

⁶ *Telecommunications Reports*, December 11, 2000, page 8. The other paper is Jamison (2001).

⁷ *Telecommunications Reports*, January 8, 2001, page 12.

⁸ The signs of the coefficients are consistent with the results we will show, but there are few statistically significant coefficients in the second stage equations.

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cases we find no evidence to support the need for simultaneous estimation. Hence, we will approach the three forms of entry through independent OLS estimation.

Table 2: Independent Variables and their Sources

variable	description	source	mean standard deviation
Arb dev from cost	average UNE rate minus 1999 embedded cost, as a percent	arbitration data from <i>State Arbitration Monitor</i> , <i>State Telephone Regulation Report</i> , 1997	21.7%
			23.5%
employment	1999 statewide employment	<i>Demographics Magazine</i>	2,704,448
			2,739,244
pricecap	1999 regulatory regime: 1=price caps; 0=Rate of Return; 0.5=sharing	State Telephone Regulation Report <i>White Paper</i> , April 3 and 17, 1998	74% with price caps
average UNE rate	statewide average UNE rate (interim)	<i>State Arbitration Monitor</i>	\$17.24
			\$5.79
density	population density: persons/mi ²	census data	397
			1419
1999cost	1999 average embedded loop cost for the RBOC	NECA universal service costs	\$22.44
			\$4.45
resale discount	average statewide resale discount	industry contacts	18.21%
			3.05%
business discount	average statewide discount for 1FB service	industry contacts	17.96%
			3.52%
low UNE	lowest UNE price available - the final rate is used if there has been a final cost decision	<i>State Arbitration Monitor</i> and updated through industry contacts	\$15.64
			\$5.51
UNE-cost	average UNE rate minus 1999 embedded cost	derived from above	\$-5.21
			\$3.92
HCPM loop	statewide average forward-looking loop cost estimated in the FCC HCPM model	FCC	\$22.41
			\$4.50
employment change	change in state employment 1990-2000	<i>Demographics Magazine</i>	544,253
			605,785
busrate, resrate, BUSRES	average 1FB rate, 1FR, and their ratio	<i>Bell Operating Companies Exchange Service Telephone Rates</i> , Dec. 31, 1995, NARUC	busrate: \$35.97 (\$8.62)
			resrate: \$13.90 (\$3.79)
271	dummy variable for states with approved interLATA entry, as of April, 2001. ⁹		4 states with

⁹ Our dependent variables are as of June 30, 2000 at which time only 1 state had 271 approval. In order to protect the confidentiality of the UNE line counts, we use 4 states in our 271 variable, including OK and KS that obtained

Our dependent variables, dated June 30, 2000, are summarized next:

Variable	Mean	Std. Deviation	Minimum	Maximum	N
# of CLECs	5.23	4.79	0	21	48
resold lines	87,151	126,583	0	623,515	48
UNE lines	83,500	181,959	0	1,114,451	48
facilities-based lines	86,923	114,704	0	573,455	48
Total CLEC lines	257,574	394,156	0	2,157,618	48

So, total CLEC lines are almost equally split between the three alternate forms of entry.¹⁰

Facilities-Based Entry

All of these regressions¹¹ use total facilities-based lines by state as the dependent variable. A combination of wholesale prices, retail prices, state demographics, costs, and regulatory variables were used as independent variables. Table 3 reports the regression results for each model.

271 approval after June 30, 2000, and TX in which SBC gained 271 approval on June 30, 2000. As of this writing, there is an additional state (MA) with 271 approval.

¹⁰ We use the term "facilities-based" entry to denote lines served *totally* over CLEC facilities. Lines served with a combination of UNEs and CLEC facilities are denoted "UNE lines." Note that this differs from the usage in Ros and McDermott, where "facilities-based" refers to entry that uses UNEs.

¹¹ Note that all regressions were run including CLEC line counts from "voluntary" providers of data - carriers with less than 10,000 lines in a state. There is approximately a 2% difference in total CLEC lines when voluntary data is included, and the regression results are not affected to any noticeable degree.

Table 3: Regression Models for Facilities-based Entry

Independent Variables	Dependent Variable: Total Facilities-based Lines by State: Model #											
	1	2	3	4	5	6	7	8	9	10	11	
Arb dev from cost	-658 (.019)											
employment	.0413 (.000)	.0415 (.000)	.0412 (.000)	.0409 (.000)	.0407 (.000)	.04 (.000)	.0395 (.000)	.0402 (.000)	.0447 (.000)	.0407 (.000)	.0398 (.000)	
pricecap	5425 (.689)	8495 (.562)	9362 (.51)	10137 (.489)	2064 (.89)							
average UNE		2485 (.05)	4334 (.01)	4371 (.013)		3606 (.007)		3531 (.003)	3741 (.002)	4186 (.009)	3649 (.002)	
1999cost			-3334 (.09)	-3616 (.086)	-1877 (.365)							
resale discount				-403 (.852)	-4.45 (.998)	508 (.795)				966 (.642)		
low UNE					2482 (.173)							
UNE-cost							3768 (.01)					
HCPM loop						-3961 (.011)	-1960 (.152)	-4034 (.008)	-4055 (.006)	-4291 (.01)	-4423 (.003)	
employment change									-.0262 (.051)			
residential rates											2630 (.070)	
271										-17,858 (.49)		
Adjusted R ²	.88	.88	.88	.88	.87	.89	.89	.90	.90	.89	.90	

Notes: The numbers in each cell are the raw coefficients. The numbers in parentheses below are the p values (2-sided test). We also tried population density (positive coefficient, p=.62), business retail rates (positive coefficient, p = .537), the ratio of business to residential rates (negative coefficient, p=.43), and log-linear forms, but these did not produce any improvements

and the coefficients for the variables shown in the table did not change materially. We also tried GLS with almost identical results to OLS.

Our particular interest is in the regulatory variables. We found no evidence that regulatory regime matters for facilities-based entry, except through its effect on the UNE rates that a state adopts. We also found no evidence that retail business rates or their relation to residential rates matter, contrary to Ros and McDermott. They used a different business rate variable, the PBX trunk rate rather than the 1FB rate.¹² However, their finding that retail rates matter is confirmed by our result that higher retail residential rates tend to promote facilities-based entry. Our prior on the effect of residential rates on CLEC entry is ambiguous. Residential CLEC entry may be more profitable in states with higher residential rates due to arbitrage opportunities. An alternative hypothesis would be that states where the PUC set higher residential rates would have set lower business rates, thus reducing the incentive for CLECs to provide telephone service to business customers.

The four variables with fairly consistent significance are:

- employment: scale effects are clearly present with larger states (measured by total employment) having more facilities-based entry, *ceteris paribus*;
- UNE rates: the higher the statewide UNE rate for unbundled loops, the lower facilities-based entry;

¹² Although our business rate variable may or may not be the best one to use, there is some intuition that the level of business rates or the degree of price distortion may not matter. Business rates have historically been set at such high levels, that it is not clear that it matters if one state's rates are higher than another's. Competition should be expected to erode these noncompetitive rates in any case.

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- HCPM loop: used as a proxy for the cost of building facilities in a state, this shows that more costly it is to build facilities, the less facilities-based entry will occur;
- resrate: higher retail local residential rates tend to promote facilities-based entry.

Resale

Our regression results for models with resold lines as the dependent variable appear in Table 4:

Table 4: Regression Models for Resale Entry

Independent Variables	Dependent Variable: Resold Lines: Model #							
	12	13	14	15	16	17	18	19
Arb dev from cost								
employment	.0538 (.000)	.0393 (.000)	.0381 (.000)	.0384 (.000)	.0394 (.000)	.0389 (.000)	.0385 (.000)	.0511 (.000)
pricecap								
average UNE	2730 (.082)	3241 (.119)		2567 (.218)	3254 (.122)	2615 (.189)	2451 (.221)	1576 (.389)
1999cost								
resale discount		2837 (.362)	1889 (.543)	2246 (.466)	2862 (.365)	2345 (.430)		
business discount							2114 (.410)	
low UNE								
UNE-cost								
HCPM loop	-5005 (.012)	-5300 (.03)	-3649 (.10)	-4513 (.065)	-5441 (.042)	-6317 (.009)	-6806 (.009)	-4430 (.029)
employment change	-.0821 (.000)							-.0789 (.000)
BUSRES				-26,526 (.135)				
busrate					188 (.888)			
resrate						8089 (.030)	8462 (.027)	1843 (.344)
271								43,028 (.161)
Adjusted R ²	.85	.78	.77	.79	.78	.80	.80	.86

These results indicate clear scale effects. There is also evidence that resale entry is more common in states with low growth rates. The coefficient on the resale discounts has the expected sign (higher discounts tend to increase resale) but are not statistically significant.

Resold lines decrease with the cost of facility-based entry (represented by the HCPM loop proxy). That is, CLECs are reselling more lines in states with lower cost.

UNE Lines

Our regression models for UNE based lines appear in Table 5:

Table 5: Regression Models for UNE Entry

Independent Variables	Dependent Variable: UNE lines: Model #							
	20	21	22	23	24	25	26	27
Arb dev from cost								
employment	.0581 (.0000)	.0357 (.000)	.0350 (.000)	.0360 (.000)	.0468 (.000)	.0466 (.000)	.0384 (.000)	.0678 (.002)
average UNE	9985 (.022)		847 (.863)		11,644 (.017)			4368 (.333)
1999cost								
resale discount		-4672 (.437)	-4568 (.483)	-4104 (.509)	3976 (.576)	-462 (.948)	-3109 (.606)	
low UNE							3616 (.343)	
UNE-cost		9.05 (.923)		UNE-HCPM 1493 (.725)		10,710 (.057)		
HCPM loop	-7606 (.152)		-2154 (.663)		-8226 (.136)			-3100 (.502)
employment change	-.0606 (.218)							employment squared -2.55x10 ⁻⁹ (.092)
271		316,619 (.000)	311,182 (.000)	305,579 (.000)			321,389 (.000)	259,680 (.001)
resrate							7223 (.292)	
Adjusted R ²	.47	.61	.60	.61	.46	.44	.62	.63

Observations

- Our UNE models are the least satisfactory, both statistically and intuitively.
- Scale effects are evident.

- States with 271 approval appear to have significantly more UNE lines.
- UNE prices do not have statistically significant impacts on UNE lines -- if anything, the effect appears to be a that higher UNE prices go along with *more* UNE entry. We discuss this puzzling result later in the paper.

The 271 variable is not surprising. However, it is consistent with (at least) two quite different hypotheses or a mixture of the two. First, it may be that 271 entry is granted where there is more UNE based entry. That is, CLEC entry is more likely in states that have satisfied the conditions of 271. Second, 271 approval may trigger additional entry via UNEs. Since facilities lines showed no relationship with the 271 variable but facilities-based entry takes more time, it is possible that one CLEC response to 271 approval is to accelerate entry via UNEs. So, it is not clear which causes which. To the extent that 271 entry is granted only after sufficient UNE-based entry, it is inappropriate to include 271 entry as an explanatory variable. To the extent that increased UNE-based entry is a response to 271 approval, then it should be included.¹³ To complicate matters further, the statistical significance of the UNE rates appears to depend critically on whether or not 271 entry is included as an independent variable. We will return to this issue when we examine total CLEC entry below.

Findings From the Voluntary Survey on Resold Lines and Collocation

We used data from the June 1999 voluntary survey to corroborate our finding on resold lines and UNE loops. The earlier FCC data is consistent with our current findings. We re-estimated Model #13 with the earlier data. Resold lines were found to be a function of:

¹³ In truth, 271 approval and entry are simultaneously determined. Unfortunately, there are too many unobservable variables (e.g., strategic and political factors) to estimate such a model satisfactorily.

variable	coefficient	p value
employment	.0303	< .0001
average UNE	2301	.09
resale discount	454	.034
HCPM	-254	.874

$R^2 = .81$.

These results are largely consistent with those in Model #13 although the resale discount is much more significant and the HCPM loop cost is much less significant.

We also estimated Model #22 from the earlier FCC data. There were so few UNE loops and little variation across the states that the number of UNE loops was not a viable dependent variable. Instead, we used the percent of lines served out of wire centers in which there were collocation agreements (this variable was also examined by Ros and McDermott). Collocation indicates a likelihood that UNEs are either being used or the intention is to use UNEs. The model yielded the following results:

variable	coefficient	p value
employment	1.14	.000
271	-583,696	.477
resale discount	-55,985	.252
average UNE	62,369	.060
HCPM	-96,127	.013

$R^2 = .92$

These results are generally consistent with those in Model #22. We show that the UNE-HCPM variable is positive and significant, corroborating our result that higher UNE rates tend to be positively associated with greater use of UNEs. The coefficient on the 271 variable in June 1999 was statistically insignificant. This regression provides little insight as to whether UNE lines increased in New York and Texas before or after 271 as compared to other states. The

percentage of wire centers that have collocation agreements is an imperfect proxy for UNEs especially since UNE loops nationwide grew by over 250% between June 1999 and June 2000.

Interestingly, if we use % collocation as the dependent variable (that is how the FCC reported the data) in place of the number of lines available to collocators, the average UNE rate has a *significant negative* impact ($p = .034$). This matches the finding in Ros and McDermott (2000). Superficially, this seems to indicate that UNE use is inversely related to UNE rates. However, this only means that lower UNE rates contribute to the coverage of collocation agreements, not that there is actually more UNE use.

Discussion

The UNE rate variable is the most ambiguous, and potentially counterintuitive result. We expected that lower UNE rates would promote UNE entry, but there is no evidence of this. In order to further investigate this effect, we also constructed some models with total nonfacilities entry (UNE+ resold lines) and total CLEC entry as dependent variables. The results are in Table 6:

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Table 6: Additional Regression Models for Aggregate CLEC Entry

Independent Variables	Dependent Variable								
	Resold + UNE lines	Resold + UNE lines	Resold + UNE lines	Total CLEC lines	Total CLEC lines	Total CLEC lines	Total CLEC lines	Total CLEC lines	Facilities Lines
Model	#28	#29	#30	#31	#32	#33	#34	#35	#36
arb dev from cost	-1786 (.164)								-493 (.05)
employment	.0896 (.000)	.1120 (.000)	.0734 (.000)	.1250 (.000)	.1257 (.000)	.1126 (.000)	.1632 (.000)	.1834 (.000)	.0339 (.000)
pricecap	27,984 (.657)								
average UNE		12308 (.023)	3242 (.62)	19,189 (.007)	20,831 (.003)	5925 (.407)	19,285 (.012)	25,302 (.001)	
HCPM loop		-12,382 (.066)	-6976 (.307)	-21,289 (.009)	-19,750 (.014)	-13,966 (.068)	-20,015 (.012)	-21,190 (.007)	
employment change		-.1426 (.025)			-383,029 (.110)			-461,487 (.053)	
employment squared							-3×10^{-9} (.233)	-4.7×10^{-9} (.062)	
resale discount			-2401 (.787)	1807 (.861)	1284 (.902)	2604 (.787)	3178 (.751)	-4102 (.695)	
resrate				15,900 (.204)		21,145 (.062)	16,927 (.17)		
271			336,103 (.004)			326,004 (.009)			
nonfacilities lines									.0824 (.009)
adjusted R ²	.62	.67	.70	.77	.77	.80	.77	.78	.90

It appears that the statistical significance of the average UNE rate for total CLEC entry disappears in the presence of the 271 variable. Given the size of the coefficient on the 271 variable and the sensitivity of the UNE coefficient to its presence or absence, we ran some

further regressions using interaction terms between UNE rates and 271 entry. Table 7 contains these results:

Table 7: More Total CLEC Line Models

independent variables	Dependent Variable: Total CLEC Lines				
	Model #37	Model #38	Model #39	Model #40 47 states	Model #41 47 states
employment	.1049 (.000)	.1369 (.000)	.1484 (.000)	.1032 (.000)	.0862 (.000)
Change in employment		-.2049 (.001)	-.1936 (.003)		.0834 (.03)
HCPM loop	-14,224 (.047)	-14,261 (.026)	-13,593 (.029)	-8451 (.023)	-7701 (.031)
resrate	13,490 (.047)	8390 (.170)	10,809 (.097)	6224 (.085)	7815 (.028)
Average UNE				5205 (.075)	3585 (.211)
UNE rate x 271	-26,038 (.143)	-39,580 (.017)	Using low UNE in place of average UNE -105,375 (.577)		
UNE rate x not-271	7980 (.194)	9869 (.073)	13,843 (.012)		
271	1,083,754 (.010)	1,440,943 (.000)	1,883,378 (.423)		
Adjusted R ²	.82	.86	.85	.90	.91

There are two interaction terms to permit the UNE rate coefficient to vary between states with 271 approval and those without. The difference between the coefficients is statistically significant at the 5% level, although neither coefficient is by itself.¹⁴ Given the size of the 271 impact and its apparent relationship with the effect of UNE rates, and given the likelihood that

¹⁴ This was confirmed by running an additional regression in which average UNE and the interaction of average UNE and 271 were separate independent variables. The sign on the latter was negative and statistically significant.

271 entry and strategic decisions¹⁵ may create simultaneity problems, models #40 and #41 omit the one state which had 271 approval in June, 2000.

In most of these models, CLEC lines increase with residential rates and the effect is significant at the 90 percent significance level. Note also that (model #41) states with higher rates of employment growth tend to have significantly more total entry, once 271 is omitted. This is consistent with an expectation that markets with higher growth rates would be easier to enter (from both a cost and marketing perspective).

There is also no evidence that states with lower UNE rates have more entry, except in states with 271 approval – and that raises a variety of strategic issues that seem to call for a more complex simultaneous model. There are several possible explanations for failing to find an inverse relationship between UNE rates and the use of UNEs:

- First, the complementary nature of these two forms of entry may be sufficiently strong that the negative effect on facilities-based entry carriers over to UNE entry as well.
- Second, capital markets may sufficiently punish non facilities-based CLECs that access to capital forces there to be less UNE entry when facilities-based entry is deterred (via lower UNE prices).
- Third, lower UNE prices would be expected to lead to more nonprice discrimination.¹⁶ To the extent this is feasible, it may inhibit entry more than the lower UNE prices could enhance it.

¹⁵ Some of the strategic possibilities are examined in Laffont and Tirole (2000).

¹⁶See, for example Weisman, and Kang (2001) or Weisman and Kondaurova (2001).

- Fourth, lower UNE prices may appear to be more unsustainable upon predicted court challenges to the rates that regulators set.
- Fifth, as competition erodes the high margins on retail business rates, the UNE rates may become an effective floor on retail business rates. If this were the case, then higher UNE rates would represent increased profit potential in the long-run for CLECs and ILECs alike.¹⁷
- Sixth, high UNE rates could be correlated with unobservable factors that encourage CLEC entry. Note, for example, that UNE rates are determined by state commissions and could be measuring unobservable characteristics of those commissions.
- Seventh, average UNE prices in a state are the weighted average of the often deaveraged zone level UNE rates. Thus our UNE variable measures the average rate that CLECs pay for UNE loops, not the marginal price they face at the point of entry. Optimally we would have CLEC line counts at the zone level.
- Eighth, we have relatively small sample size and degrees of freedom, thus it may be difficult to separate out regulatory effects from price effects.

We attempted to test the third reason by examining states where the interim UNE rates were subsequently raised when setting final UNE rates. We used a dummy variable for those states that increased the average UNE rates, as well as those where the urban UNE rate was subsequently raised. Neither variable came close to statistical significance (p values well above .50). Thus, this measure provides no support for the hypothesis that the sustainability of low UNE prices was a factor discouraging the use of UNEs.

¹⁷ Of course, this depends on the eventual nature of competitive dynamics in the industry. In particular, in an umbrella pricing scenario, the above reasoning could be valid.

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We also examined two possible omitted variables that could account for our results. We had limited data (30 states) for non-recurring charges which are an additional cost of competitive entry. The coefficient on non-recurring charges was positive and not statistically significant. We also included a variable indicating whether or not a state had deaveraged UNE prices. The coefficient was again positive, but statistically insignificant.

Our results differ from those in Ros and McDermott (2000). There are several reasons for this. First, they did not have access to the data that we used in this paper. Second, we focused on RBOC jurisdictions whereas they included all state jurisdictions. Third, their major finding was that retail price distortions affect competitive entry while we did not find evidence of this. Their retail price data differed from ours - especially their business rates. We used 1FB rates (where available, otherwise usage was imputed to the available measured service plans) while they used the PBX trunk rate. Fourth, their UNE rate data appears to differ from ours - possibly by inclusion of some GTE rates from some jurisdictions. The most important difference, however, was that they did not have direct data on the three forms of competitive entry that we used in this study.

Other studies have used the number of CLECs as a dependent variable, so we examined the relationship between number of CLECs in a state jurisdiction and our independent variables.

Two suggestive models are:

Independent variable	Dependent variable: # of CLECs	
employment	1.48×10^{-6} (.000)	2.85×10^{-6} (.102)
employment squared		-1.13×10^{-13} (.000)
average UNE price	-.0199 (.755)	.0888 (.102)
HCPM loop	-.125 (.129)	-.1373 (.035)
resrate	.060 (.461)	-.0098 (.879)
adjusted R²	.81	.89

Of particular interest is the effect of UNE prices on the number of competitors. Our results are inconclusive.

Although both Ros and McDermott and Jamison find that lower UNE prices increase the number of CLECs (both find statistically significant results), our results do not point in that direction. It is possible that their results are affected by their inclusion of RBOC and non-RBOC jurisdictions, while we focus exclusively on RBOC jurisdictions. In particular (formerly) GTE UNE rates have generally been set higher than RBOC rates and there may be less extensive competitive entry in those jurisdictions for reasons other than UNE prices. The potential for additional variation in entry strategies according to whether the incumbent is an RBOC or not is one reason why we choose to focus on RBOC jurisdictions in this paper.

Conclusions

We summarize our conclusions in terms of the types of variables that might affect competitive entry.

- Demographic: there are clear scale effects with larger jurisdictions having more competitive entry. There is some indication that the effect is nonlinear. In addition, there is suggestive evidence that there is less entry in states that have been growing the most rapidly.
- Cost: there is less facilities-based entry where such entry is more costly (proxied by the HCPM loop costs). Resale and UNE-based entry appear to be similarly affected, although the statistical results are inconclusive.
- Retail rates: in some specifications, there appears to be less competitive entry (principally facilities-based) where residential rates are lower. These findings are generally statistically significant at the 90% level. We did not find any meaningful evidence that the degree of rate distortions between business and residential rates matters, although this may be due to incorrect measures of rate distortions.
- Wholesale prices: resale discount rates appear to have no predictive power for any form of entry. States with higher UNE rates have more facility-based entry. The effect of UNE rates on CLEC entry is positive, and in some specifications statistically significant if states with 271 approval are excluded. Further research is needed to investigate this puzzling result.
- 271 approval appears to have a significant impact (positive) on UNE-based entry, although the direction of causation is unclear. 271 approval leads to considerable complications in understanding the impacts of UNE prices on entry decisions – also a subject for further analysis.

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Dkt. No _____
D. Blessing Ex. No. ____ (DCB-14)
Tariff Rebalancing: Latin America

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-14

Agustin J. Ros and Aniruddha Banejee, "Telecommunications Privatization and Tariff Rebalancing: Evidence from Latin America," *Telecommunications Policy*, 24 (2000) 233-252

Telecommunications Privatization and Tariff Rebalancing: Evidence from Latin America

Agustin J. Ros, Ph.D. and Aniruddha Banerjee, Ph.D.¹

National Economic Research Associates

One Main Street, 5th floor

Cambridge, MA 02142

(617) 621-0444

Agustin.Ros@NERA.com

Abstract: Using panel data on 23 countries, we find a positive and statistically significant relationship between privatization and network expansion and efficiency in the Latin American region. We also find that excess demand for basic service is strongly and negatively related to tariff rebalancing, suggesting that an increase in residential service prices can mitigate unmet demand for basic service in the Latin American region by, in the long run, increasing the supply of main lines. According to our results, a 10 percent increase from the average residential price in Latin America is likely to reduce unmet demand by approximately 4.1 percent. Finally, we find that privatization is negatively related to unmet demand. In particular, privatization reduces unmet demand by approximately 28 percent. This indicates that, even after controlling for tariff rebalancing, there are concrete efficiency gains from privatization.

I. INTRODUCTION

Latin America's biggest privatization occurred in July 1998 when TeleBrazil ("Telebras") was sold for approximately US\$19 billion.² The selling of Telebras continues the trend, especially in Latin America, of eliminating the state's equity stake in telecommunications. Since the Telebras privatization, other countries have also considered privatization. In a recent paper, one of us found evidence that telecommunications privatization and competition are positively correlated with technical efficiency and that privatization is

¹ We thank participants in the Transportation & Public Utilities Group at the 1999 American Economic Association meetings in New York and Rutgers University's Advanced Workshop in Regulation and Competition, Newport RI, May 1999. Special thanks are due to Edgardo Sepulveda and the anonymous referees for their helpful comments.

² Telebras was the name of the state-owned phone company in Brazil. In July 1998, the government sold 12 companies: three fixed-line companies, one long distance and international company, and eight cellular holdings.

positively correlated with network expansion.³ Using data from the International Telecommunications Union ("ITU") and various other sources, the paper examined telecommunications reform in developed and developing countries for the period 1986-1995. The same article also found that monthly residential access prices were *positively* correlated with network expansion. That brought into question whether positive network externalities could be captured through lower prices for residential access services.⁴

The purpose of this paper is to build upon previous work and extend the literature in three specific ways. First, we examine a subset of the data used in the previous paper and attempt to replicate the results. For this purpose, we concentrate on the Latin American region alone because of the number of telecommunications privatizations that have occurred over the last 15 or so years in that part of the world. The large numbers of privatizations allow for greater variation in the privatization variable and, by focusing on Latin America, we are able to examine how robust policy implications are for different regions of the world.

Second, we examine qualitatively the way that privatizations have been carried out in Latin American telecommunications markets. This permits us to better understand the privatization process itself and identify what it is about privatization that may explain previously results. While other studies have quantified the impact of privatization (see below), we examine other important factors that often accompany privatization—such as tariff rebalancing—and whether, after controlling for those factors, privatizations by themselves still have a significant impact on key variables.

Finally, and most importantly, we test whether tariff rebalancing has had any effect on network expansion. Many privatizations have been carried out simultaneously with tariff rebalancing. We develop a quantitative variable measuring the degree to which residential

³ Ros, A.J., Does Ownership or Competition Matter? The Effects of Telecommunications Reform on Network Expansion and Efficiency. *Journal of Regulatory Economics*, 1999, 15:65-92.

⁴ The main explanation for this result is that low penetration rates in many developing countries arise not from a lack of effective demand but rather from supply-side constraints. Because residential access prices are likely to be below their economic costs and, therefore, below equilibrium levels, holding other factors constant, the decrease in quantity demanded that results from higher residential prices is more than offset by the greater supply that results from increased prices.

access prices are “unbalanced” and develop an excess demand model to investigate how waiting lists are affected by a host of independent variables including the quantitative measure of the degree to which residential prices are “unbalanced.” This part of the paper tests the hypothesis that some of the benefits of privatization found in previous studies may be explained, in part, by exogenous factors such as tariff rebalancing that occurred just prior to privatization.

Policymakers undertake telecommunications reform in order to improve the efficiency of the sector and to provide service to as many consumers as possible. As many of these countries seek to “liberalize” their telecommunications sector—which were hitherto mostly government-run monopolies—they have to shape public policy with respect to competition, privatization, tariff rebalancing, elimination of cross-subsidies, licensing, and regulation or settlement of disputes. In order to determine the proper sequence for introducing such reforms, it is vital to learn about the relative impacts on market development of each individual reform. Our paper is intended to contribute a piece to this understanding by measuring the likely impact of privatization and tariff rebalancing.

II. EFFECTS OF PRIVATIZATION

A comprehensive review of the literature regarding the effects of telecommunications privatization and competition appears in a previous study.⁵ For purposes of this paper, we summarize the most important findings of the relevant literature in this section. We begin with information on why countries have chosen to privatize their telecommunications assets.

A. Reasons to privatize

Between 1986 and 1995 (the period studied empirically in this paper), the main provider of basic telecommunications services in 17 countries was at least fifty percent owned by the

⁵ *Op cit.*, ref. 3.

private sector.⁶ Ten of those countries (listed in Table 1 below) are in Latin America. Since 1995, the most notable addition has been Brazil where, in the summer of 1998, the government sold the Telebras network to outside investors. As mentioned above, Brazil raised \$19 billion from the sale, with the average bid exceeding by 64 percent the combined asking price of \$11.8 billion.⁷

Table 1: Countries in which the main provider of basic services is owned by the private sector (at least fifty percent of assets/shares) 1986-1995.⁸

Hong Kong	(1986 or earlier)	Mexico	(1990)
Philippines	(1986 or earlier)	New Zealand	(1990)
Spain	(1986 or earlier)	Argentina	(1991)
United Kingdom	(1986 or earlier)	Bolivia	(1995)
Barbados	(1986 or earlier)	Chile	(1987)
Belize	(1986 or earlier)	Guyana	(1991)
Canada	(1986 or earlier)	Peru	(1994)
United States	(1986 or earlier)	Venezuela	(1991)
Jamaica	(1989)		

There are many reasons why governments privatize their telecommunications assets. First, in developing countries, privatization emerged as a policy issue amidst the debt crisis and worsening financial performance of the early 1980s.⁹ Second, there is also the belief in developing countries that privatization *per se* leads to the development or "crowding-in" of a nascent private sector and ameliorates any downward trend in aggregate private sector investment (such as that occurred during the 1980s). Finally, countries expect substantial improvements in the efficiency of the telecommunications sector. For example, some of the

⁶ For purposes of this paper, privatization is defined as the sale of at least fifty percent of the assets to the private sector. Privatization can take other forms as well, e.g., (1) partial privatization (less than fifty percent sale of assets by the state), (2) transfer of assets to the private sector under leasing arrangements, and (3) introduction of management contracting arrangements.

⁷ Mercosur telecommunications update, July 29, 1998.

⁸ Sources: Wellenius, B., and Stern, P., *Implementing Reforms in the Telecommunications Sector: Lessons from Experience*. Washington D.C.: World Bank, 1994, and Molano, W.T., *The Logic of Privatization: The Case of the Telecommunications in the Southern Cone of Latin America*. Greenwood Press, Westport, CT, and London, 1997.

⁹ Adam, C., Cavendish, W., and Mistry, P.S., *Adjusting Privatization: Case Studies from Developing Countries*, Portsmouth, New Hampshire: Reed Publishing, 1992. See also Ramamurti, R., The Impact of Privatization on the Latin American Debt Problem. *Journal of International Business Studies*, 23:93-125.

major telecommunications problems in developing countries are: long wait times for obtaining service, poor service quality, low productivity, and an inability to meet the increasing and sophisticated telecommunication demands of the private sector which, in turn, encourages bypass of the system.¹⁰ Given the links between telecommunications and economic growth, it is hoped that improvements in the performance of the telecommunications sector will lead to discernible increases in economic growth and the establishment or growth of an information-age economy.¹¹

B. Predicted effects of privatization

As the state decreases its equity stake in telecommunications, what do economists predict will happen to technical efficiency and network expansion? The new institutional economics (NIE) provides important insights into the incentive effects of differing types of ownership structure.¹² According to the NIE literature, the type of ownership has a significant effect on technical efficiency because, at the margin, changes in property rights alter incentive structures faced by decision-makers. Predicted efficiency improvements associated with privatization are primarily due to changes in the principal-agent relationship and the concomitant change in transaction costs associated with supervision.

The effect on network expansion is not as clear for a variety of reasons. Applying a principal-agent framework provides important insights into the question of whether there is likely to be, on average, a significant change in network expansion as a result of privatization.

¹⁰ Wellenius, B., et. al. (1994) *op. cit.*, ref. 8.

¹¹ See Saunders, R.J., *Telecommunications and Economic Development*. Washington D.C.: The World Bank, 1994, for an extensive review of the effects of telecommunications on economic development. Also see Cronin, F.J., Parker, E.B., Colleran, E.K. and Gold, M.A., *Telecommunications Infrastructure Investment and Economic Development. Telecommunications Policy*, 1993, August:415-430; Cronin, F.J., Colleran, E.K., Herbert, P.L. and Lewitzky, S., *Telecommunications and Growth. Telecommunications Policy*, 1993, December:677-690; and Dholakia, R.R. and Harlam, B., *Telecommunications and Economic Development. Telecommunications Policy*, 1994, 18:470-477.

¹² North, D.C., 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, 1990 and Levy, B. and Spiller, P.T., *Regulations, Institutions, and Commitment: Comparative Studies of Telecommunications*. Cambridge University Press, 1996. The new institutional economics is a way of reasoning and approaching political economic problems. Its objective is to broaden and modify the microeconomic foundation of economic theory by taking into account the important effects that institutions have on the performance of economies over time.

Some researchers reject the notion that differences between public and private enterprises are intrinsic.¹³ Instead, differences are grounded in the disparity between the objective function of public and private sector owners. Institutional factors in many countries—especially the strong political element of telecommunications policy—increase the likelihood that an important component in the objective function of state-owned telecommunications firms is the provision of basic services to as many individuals as possible—especially residential consumers—at prices that may be below the incremental costs incurred. The inefficient prices that support that objective can only artificially inflate the quantity of basic telecommunications service demanded. Thus, holding other factors constant, a change from public to private ownership during a regime of inefficiently low prices may lead to a very different objective function on the part of the new owners and may negatively affect network expansion. In a private company, shareholders may be reluctant to increase the number of lines in operation unless doing so is profitable or is mandated by concessions.¹⁴

This brings us to an assertion that had been tested in previous work¹⁵ and remains the basis for this paper. If a government's objective is to provide service to as many individuals as possible at prices below incremental costs, why is it the case that many developing countries—where telecommunications is in state hands—have extremely low penetration rates?¹⁶ One possibility is that in many developing countries, low penetration rates are the result of supply rather than demand-side constraints. For example, Brazil has had a high level of *unmet* demand for basic services as reflected by the willingness of the public to make substantial lump-sum payments simply to queue for telecommunications services. A thriving resale market exists

¹³ *Op cit.*, ref. 8.

¹⁴ For this reason, some of the privatizations that were carried out contained explicit network expansion goals in the concessions. This was the case in Mexico regarding network expansion in rural areas.

¹⁵ *Op cit.*, ref. 3.

¹⁶ For a comparison of penetration rates in Latin America see Ros, A.J., When, Where, and How? Implementing Effective Telecommunications Competition and Regulatory Policy. *The Journal of Project Finance*, 1997, 3:33-42.

with daily valuations of rates reported in many local newspapers and individuals willing to pay substantially above the official rates required just to queue for service.¹⁷ Penetration is low not due to insufficient demand at current prices but rather due to insufficient supply. Prices for residential basic (access) service are below equilibrium levels and lead to excess demand. As a result, we should expect higher prices to be associated with greater supply and less unmet demand, in light of the typically low price elasticity of demand for access to basic service. We test this hypothesis in Section IV below.

C. Empirical review

To date, there have been surprisingly few empirical studies focused solely on analyzing the effects of ownership or competition on the telecommunications industry. A previous study used newly released data from the ITU to examine the effects of privatization and competition on network expansion and technical efficiency.¹⁸ In that study, the sample data pertained to over 100 countries for the period 1986-1995. The study used a fixed-effects panel data model and controlled for the possible endogeneity of privatization and competition by employing a discrete choice instrumental variable approach.¹⁹ The dependent variables were various measures of network expansion and technical efficiency, while the independent variables were dummy variables for privatization and competition and additional control variables such as prices, investment per line, and per capita income. Table 2 below summarizes the most important results of that study. ML100 and ML100G are, respectively, main lines per 100 inhabitants and growth in main lines per 100 inhabitants, while MLEmp and MLEmpG are, respectively, main lines per employee and growth in main lines per employee.

¹⁷ *Ibid.*

¹⁸ *Op cit.*, ref. 3.

¹⁹ The econometric model used is explained in greater detail below.

Table 2: Coefficient estimates from previous study: important independent variables only (percent impact in parentheses)²⁰

Independent Variable	Dependent Variable			
	ML100	ML100G	MLEmp	MLEmpG
Pvtmaj	0.293* (34)	0.671*** (96)	0.685* (98)	1.47** (330)
Comp	n.s.	n.s.	0.361* (43)	n.s.

*Statistically significant at the 1% level, ** at the 5% level, and *** at the 10% level, n.s. (not significant).

As these results show, while privatization appeared to have a statistically significant impact on all measures of network expansion and technical efficiency considered, competition appeared to have a relatively less important role with a statistically significant effect only on main lines per employee.

The other important finding from this study pertained to the effect of residential service prices on network expansion. Specifically, it was found that initial residential connection charges and monthly residential subscription charges are *positively* and significantly correlated with main lines per 100 inhabitants. In addition, for countries with real 1990 GDP per capita less than US\$10,000, there was evidence that monthly residential subscription charges are positively and significantly correlated with *growth* in main lines per 100 inhabitants. This finding raises important questions regarding the wisdom of trying to generate positive network externalities through inefficiently low residential basic service prices. Since generation of those externalities is frequently the cornerstone of government policy on telecommunications pricing, we examine the matter in some detail below.

Other studies provide additional insights on these relationships. One econometric study of the effects of privatization and competition on Total Factor Productivity (TFP) concluded that competition to AT&T and privatization of British Telecom (BT) have both produced significant gains in productivity: 17 percent and 25 percent respectively.²¹ Another study compared BT's performance with those of five telecommunications enterprises elsewhere in Europe using the

²⁰ *Op cit.*, ref. 3.

²¹ Kwoka, J.E. The Effects of Divestiture, Privatization, and Competition on Productivity in U.S. and U.K. Telecommunications. *Review of Industrial Organization*, 1993, 8:49-61.

TFP measure and concluded that BT was less efficient than the control group.²² A study of telecommunication privatizations in Mexico, Argentina, Jamaica and Venezuela concluded: "the most striking and consistent short-run result in the telecommunications sector was the rapid expansion of the network after privatization."²³ Finally, a study of telecommunications in 10 OECD countries found that private ownership increases productivity but that any relationship between the presence of facilities-based long distance competition and productivity growth is statistically insignificant.²⁴

III. TELECOMMUNICATION PRIVATIZATIONS IN LATIN AMERICA

A. Characteristics

As described in Table 1 above, 10 countries in Latin America had privatized their telecommunications network by 1995. Two of those countries, Belize and Barbados, had been privately owned prior to 1986, the first year of our data. We summarize the salient features of some of the remaining eight countries. We examine only those countries where tariff rebalancing occurred just prior to privatization and/or whether there was a network expansion commitment in the concession contract.²⁵ This information will be used in Section IV of this

²² Foreman-Peck, J., and Manning, D., *How Well is BT Performing? An International Comparison of Telecommunications Total Factor Productivity*. University of Newcastle, Department of Economics, Newcastle-upon-Tyne, England, 1988.

²³ Ramamurti, R. *Privatizing Monopolies: Lessons from the Telecommunications and Transport Sectors in Latin America*. Baltimore: The Johns Hopkins University Press, 1996, p. 26. Specifically, the study found that three to four years after privatization, the network grew annually at 13 percent in both Mexico and Argentina, more than 15 percent in Venezuela, and 18 percent in Jamaica. According to Ramamurti, these figures are double or triple historic growth rates and exceed the targets set by governments. In addition, he found that labor productivity (as measured by number of lines in service per employee) grew annually by double digits in Venezuela, 13 percent in Mexico, and 19 percent in Argentina.

²⁴ Staranczak, G. A., Sepulveda, E. R., Dilworth, P. A., and Shaikh, S. A., *Industry Structure, Productivity and International Competitiveness: The Case of Telecommunications*. *Information Economics and Policy*, 1994, 6:121-142.

²⁵ To the extent that we unintentionally exclude information on some countries that have rebalanced their tariffs, our econometric model should control for this. As discussed below in greater detail, we create a variable measuring the degree to which prices in all countries deviate from prices in the countries that *have* rebalanced their tariffs. To the extent some countries have rebalanced their tariffs but are not included in the "base" (or pool of countries from which the average *rebalanced* residential basic access service price is calculated), their deviation from the base is expected to be minimal.

paper to develop an independent variable measuring the degree to which prices in some countries are "unbalanced" and deviate significantly from their underlying costs. Table 3 below summarizes the qualitative findings.

Chile was among the first Latin American countries to privatize telecommunications networks. Since privatization in 1987, prices in Chile have been based on a theoretical model that estimates long run incremental costs.²⁶ Beginning in 1988, the model was used to phase out cross-subsidies over a five year period.²⁷ Apparently, there were also network expansion provisions in the concession contract that accompanied the privatization, although it is not clear what they were.²⁸

Mexico privatized its telecommunications network in 1990. Network expansion was an important element in the concession contract set up for that privatization.²⁹ The concession contract called for annual average growth of 12 percent for the first four years after privatization. Within three months of the announcement (in 1989) that the Salinas administration was going to privatize TELMEX, the publicly owned company was permitted to raise rates substantially. It is noteworthy that just prior to the transfer of ownership, prices of most services were as high as, or substantially higher than, prices of equivalent services in the United States.³⁰

Argentina rebalanced tariffs just prior to its privatization in 1991 and also included a network expansion provision in its concession contract.³¹ The price increases that followed were confined primarily to local and long distance usage charges, although those price increases were significant even in real terms. At the time, Argentina was experiencing peak

²⁶ Melo, J.R., *Liberalization and Privatization in Chile*, in Wellenius, B. and Stern, P.A., *op cit.*, ref. 9.

²⁷ Galal, A., *Chile: Regulatory Specificity, Credibility of Commitment, and Distributional Demands*, in Levy, B. and Spiller, P.T., *op cit.*, ref. 11.

²⁸ *Op cit.*, ref. 24.

²⁹ Gonzalez, A.E., Gupta, A. and Deshpande, S., *Telecommunications in Mexico. Telecommunications Policy*, 1998, 22:341-358.

³⁰ *Op cit.*, ref. 22.

³¹ *Ibid.*

hyperinflation. The concession contract called for an initial annual growth rate of 6.5 percent that dropped to 2.8 percent between 1995 and 1996.

The telecommunications sector in Venezuela was privatized in 1991. Network expansion was a formal commitment and a condition of privatization. Venezuela established annual goals for various regions within the country and policymakers expected demand to be met fully by the year 2000.³² As was the case with Argentina and Mexico, Venezuela raised its tariffs significantly at the time of privatization. The connection charge for residential customers increased from 3,500 bolivars in 1990 to 6,700 bolivars in 1992, an increase of 91 percent in nominal terms.

Finally, privatization in Jamaica was not accompanied by significant tariff rebalancing or network expansion contracts.³³ In contrast, privatization was accompanied by concession contracts in Guyana,³⁴ while, in Peru, tariff rebalancing in the early 1990s preceded privatization in 1994 and network expansion requirements were placed in the concession contract.³⁵

Table 3: Tariff rebalancing and network expansion requirements in some privatizations³⁶

Country	Year privatized	Tariff rebalancing prior to privatization	Network expansion requirements
Chile	1987	Price set by long run incremental cost model	Yes
Jamaica	1989	No	No
Mexico	1990	Yes	Yes
Argentina	1991	Yes	Yes
Venezuela	1991	Yes	Yes
Guyana	1991	No	Yes
Peru	1994	Yes	Yes

³² *Ibid.*

³³ *Ibid.*

³⁴ *Op. cit.*, ref. 9.

³⁵ See <http://www.osiptle.gob.pe>

³⁶ Source: *op cit.*, refs 9, 11, 24, and 27.

B. Does privatization affect network expansion and efficiency?

To answer this question, we employ the same econometric model that was used in previous work.³⁷ In the present exercise, however, we apply the data only from Latin American countries.³⁸ The large number of privatizations in Latin America allows for greater variation in the privatization variable and, by focusing on Latin America, we are able to examine how robust policy implications are for different regions of the world. Subsequently, in Section IV of the paper, we expand the analysis to explore the effects of tariff rebalancing as well.

1. Data and variables

Table 1 above lists the countries that privatized telecommunications between 1986-1995.³⁹ From this list, we select the ten countries in the Latin American region (i.e., South America, Central America, and the Caribbean). To these ten countries that had privatized at some point between 1986 and 1995, we add 14 other Latin American countries that had not privatized by 1995 (although Brazil privatized in 1998). The 23 countries in the present study are: Argentina, Barbados, Belize, Chile, Guyana, Jamaica, Mexico, Peru, and Venezuela (all privatized) and Bahamas, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Suriname, Trinidad and Tobago, and Uruguay (all not privatized). All requisite data for these countries are taken from an ITU publication.⁴⁰ This results in a panel of data with 23 cross-sections (countries) and 10 time periods (years).

³⁷ *Op cit.*, ref. 3.

³⁸ We also do not examine the effects of competition in the present study because of the lack of data of requisite quality.

³⁹ As explained earlier, a country is said to have privatized if at least fifty percent of telecommunications assets are in private hands.

⁴⁰ International Telecommunications Union, *Yearbook of Statistics: Telecommunication Services 1986-1995*. Geneva, Switzerland, 1997. The ITU is an international organization through which governments and the private sector coordinate global telecommunications networks and services. It is the leading publisher of telecommunication technology, regulatory and standards information, and provides data for approximately 130 countries worldwide.

We assemble data on the two main dependent variables of interest: (1) main lines per 100 inhabitants and (2) main lines per employee.⁴¹ Apart from these variables, we also assemble annual data on: the wait list for main lines, faults per 100 main lines, investment in telecommunications equipment, and tariff information such as residential and business network access connection prices, residential and business monthly recurring network access prices, and the price of a 3 minute local call. We use consumer price index and exchange rate data to adjust and express prices in all countries in equivalent 1990 real US dollars. Finally, we assemble macroeconomic and demographic data such as GDP and population from which we construct other variables like GDP per capita. Apart from the ITU data, we use a dummy variable for privatization (taking the value 1 if a country has privatized, and 0 otherwise). Table 4 below describes some of the variables used in this part of the study.

Table 4: Description of variables

Variable	Description
ML100	Main lines per 100 inhabitants
ML100G	Annual growth in ML100
Wait	Waiting list for main lines, in thousands
MLEmp	Main lines per employee
MLEmpG	Annual growth in MLEmp
Faults	Faults per 100 main lines per year
Prcon	Price paid by residential user for initial connection to the network (1990 US\$)
Pbcon	Price paid by business user for initial connection to the network (1990 US\$)
Prmsub	Price paid by residential user for monthly network access (1990 US\$)
Pbmsub	Price paid by business user for monthly network access (1990 US\$)
P3min	Price of a 3 minute local call, peak rate (1990 US\$)
InvesL	Annual telecommunications investment per main line (thousands of 1990 US\$)
GDP	Gross Domestic Product per capita (thousands of 1990 US\$)
Pvtmaj	1 if 50% of assets of main provider of basic services privately held, 0 otherwise

⁴¹ Main lines per employee is used as a proxy for productivity growth. While this is a commonly-used measure of the efficiency for the local exchange carriers in the U.S., it is not a measure of TFP growth which, ideally, should be used. As a result, there may be problems with the use of this measure, particularly because of the strong political appeal of absorbing labor into any state-owned sector.

2. Econometric model

For our econometric analysis, we employ a cross-section/time series (panel) data model with the following semi-logarithmic functional form:

$$(1) \ln y_{it} = \alpha + \beta'x_{it} + \delta'd_{it} + v_i + \varepsilon_{it}$$

where i ($=1,2,\dots,M$) is the subscript for the cross-sectional dimension (country) and t ($=1,2,\dots,T$) is the subscript for the time series dimension (year). In this study, $M=23$ and $T=10$. In addition, y_{it} is a $T \times 1$ vector representing, alternately, main lines per 100 inhabitants and main lines per employee.⁴² This provides two separate regressions based on equation (1). α is a 1×1 scalar constant, β is a $K \times 1$ vector of coefficients, x_{it} is a $T \times K$ matrix of observations for each country on K exogenous variables, d_{it} is a dummy variable, δ is the coefficient of that dummy variable, v_i is a $T \times 1$ vector of the effects of omitted individual-specific (here, country-specific) variables, and ε_{it} is a random disturbance variable assumed to be distributed with zero mean and specifiable covariance structure.⁴³ Treating v_i as fixed parameters leads to the *fixed effects* form of the panel data model, while treating v_i as a random variable with known distribution leads to the *random effects* form of the panel data model.⁴⁴

3. Model estimation and interpretation

Table 5 presents the results of estimating the specified panel data model for 23 Latin American countries over 10 years. The results pertain to the random-effects form of the model and are feasible generalized least squares (FGLS) estimates that correct for heteroscedasticity and first-

⁴² In the previous paper, see *op cit.*, ref. 3, the *growth* in main lines per 100 inhabitants and in main lines per employee had also been used as dependent variables. Attempts to replicate those regressions with the Latin American dataset did not produce the statistically significant relationships that had been observed in the previous paper (employing worldwide data) and are, hence, not reported.

⁴³ The starting assumption can be that ε_{it} is distributed identically and independently with zero mean and finite, constant variance. This assumption can be relaxed to allow for heteroscedasticity (non-identical distribution) and/or serial correlation (non-independent distribution) following tests on the data.

⁴⁴ The fixed effects model adds M parameters (the v_i for all M countries) while the random effects model renders the intercept term for each country random. The best known test for discriminating between these competing models is the Hausman test: Hausman, J.A., Specification Tests in Econometrics. *Econometrica*, 1978, 49:1251-1271. Also see Hsiao, C., *Analysis of Panel Data*, New York: Cambridge University Press, 1986, Ch. 3.

order serial correlation that varies by country.⁴⁵ The exogenous variables used in the two regressions based on equation (1) are the privatization dummy and GDP per capita lagged one year.⁴⁶ When interpreting the coefficient estimates, it should be remembered that the percentage impact on y of a dummy variable is given by $e^{\delta} - 1$, while β gives the impact on y of a unit change in an exogenous variable x .⁴⁷

Table 5: Regression results: effects on network expansion and technical efficiency (t-statistics in parentheses for coefficient estimates)⁴⁸

Independent Variable	Dependent Variable	
	ML100	MLEmp
Pvtmaj	0.20 (5.14)	0.22 (3.58)
GDPlag	0.25 (11.46)	0.06 (2.60)
Constant	1.25 (15.33)	4.00 (41.01)
N (no. of obs.)	215	195
Log Likelihood	253.2	161.4
χ^2 statistic	171.5	27.5

⁴⁵ A Bartlett M test confirmed the presence of heteroscedasticity in the two regressions. The computed M statistic (with a χ^2 distribution) had a value of 149.6 and 369.9 respectively for the two regressions. At 22 degrees of freedom, these χ^2 values were highly statistically significant at conventional levels of significance. This test is proposed for panel data regression by Baltagi, B.H., *Econometric Analysis of Panel Data*, New York: John Wiley, 1995, p. 80, and is described in Judge, G.G., Griffiths, W.E., Hill, R.C., Lutkepohl, H., and Lee, T.C., *The Theory and Practice of Econometrics*, New York: John Wiley, 1985, p. 448.

⁴⁶ In a previous study, *op. cit.*, ref. 3, investment and price variables were included as exogenous variables. Those variables are excluded here because their estimated coefficients are statistically insignificant and their omission improves the log likelihood values.

⁴⁷ Halvorsen, R. and Palmquist, R., The Interpretation of Dummy Variables in Semilogarithmic Equations. *American Economic Review*, 1980, 70:474-5.

⁴⁸ In a previous study, *op. cit.*, ref. 3, the privatization variable was found to be jointly endogenous (i.e., correlated with the regression disturbance term). As a result, an instrumental variable technique was used to estimate the coefficient of the privatization variable. Specifically, the decision to privatize was modeled as a discrete choice using a logit model. The predicted probabilities were then interacted with the observed dummy variables and used as instruments in the second stage estimation process. See Donald, S.G., and Sappington, S.E.M., Choosing Among Regulatory Options in the United States Telecommunications Industry. *Journal of Regulatory Economics*, 1997, 12:227-243, and Duncan, G.M. The Endogeneity of Union Status: An Empirical Test. *Journal of Labor Economics*, 1985, 3:385-402. In this paper, we tested whether the Latin American data set also displayed the same endogeneity problem. After performing the Hausman test on the two regression equations, however, there was no evidence to indicate that the privatization variable and the individual-specific disturbance terms are correlated.

Degrees of freedom	(2)	(2)
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All estimated coefficients are statistically significant at the 1% level.

Comparison of the privatization coefficients in Table 5 with their counterparts in Table 2 confirms that privatization is still a significant factor positively affecting network expansion and technical efficiency. The magnitude of the impact in Latin America compared to the rest of the world, however, is smaller. According to the results, ML100 and MLEmp are, on average, 22 and 25 percent higher, respectively in the Latin American countries that have privatized. This compares with figures of 34 and 98 percent, respectively, when world-wide data were used.

IV. EFFECT OF TARIFF REBALANCING

The third, and most important, objective of this paper is to examine whether tariff rebalancing has had any effect on network expansion and whether, after controlling for tariff rebalancing, privatization remains an important factor. Previous work had established a *positive* correlation between prices for residential basic access service and network expansion.⁴⁹ In that study, as also in the present one, network expansion was measured by trends in main lines per 100 inhabitants. At first blush, therefore, the finding about the positive correlation would appear to defy the law of demand.

A closer inspection of conditions in most countries—and especially those in our sample of 23 Latin American countries—reveals, however, that a positive correlation is indeed an expected outcome. Main lines per 100 inhabitants is *not* a measure of *total* demand for basic service, but rather only a measure of *met* demand, i.e., the portion of total demand that has actually been satisfied at a given point in time. Viewed differently, met demand is the level of demand that can be served under current conditions of supply. If supply constraints prevent the provision of service to all individuals or households that have requested it, then really a met demand variable like main lines per 100 inhabitants is a measure of actual current supply at

⁴⁹ *Op cit.*, ref. 3.

prevailing prices. Under these circumstances, total demand exceeds met demand—i.e., actual supply—and the supply constraint is binding because the prevailing service price is too *low*, not because it is too *high*. Therefore, low penetration for basic service in these countries is not a problem of unaffordably high prices, but rather of prices that are too low to induce service providers to meet the level of demand that is being expressed in the market.

If this conjecture is true, then a testable hypothesis and a policy implication should flow from it. First, we should be able to test that the supply constraint is relieved (and the level of unmet demand relative to the level of met demand is reduced) as the price of basic service rises. Second, if that hypothesis is confirmed, then the conventional wisdom of pricing basic service—at least to residential consumers—below cost in order to harness positive network externalities and encourage progress toward universal service would be called into question. From a public policy standpoint, it would then be important to give more credence to price-induced supply constraints as a possible cause of low penetration for basic service than to other demand-side considerations.⁵⁰

A. Previous work on shortages and excess demand

The notion that low penetration rates for basic services is primarily the result of supply, rather than demand, constraints is not new and our work is a contribution to the existing literature. Previous work by the World Bank indicates that with proper pricing policies— tariff rebalancing that more closely aligns prices with underlying costs—telecommunications investments may be expected to yield rates of return between 13 and 25 percent.⁵¹ The World Bank has called into the question the policy of stimulating residential consumption through lower prices in developing countries where demand typically exceeds supply.⁵²

⁵⁰ As we noted earlier, even casual empiricism seems to confirm this possibility in a country like Brazil where individuals make large lump sum payments simply to queue for telecommunications services and a thriving resale (black) market for those services exists.

⁵¹ See *op. cit.*, 11.

⁵² *Ibid.*, at 277.

Another body of work relevant to the present paper pertains to shortages and excess demand in socialist and state-dominated economies.⁵³ This literature explains why shortages were a persistent feature of socialist economies and sheds light on the effects of subsidies on micro-level performance.⁵⁴

B. Excess demand model

As in previous works cited, we hypothesize here that low actual penetration and significant and persistent levels of unmet demand for basic service are the direct result of monthly recurring prices for access to basic service that are too low, perhaps even below incremental cost. In the absence of cost data, it is impossible to verify directly whether basic service prices—particularly to residential consumers—are indeed below cost. However, we conjecture that indirect evidence may be available by testing the relationship between those prices and the level of *excess* or unmet demand over time. Stated differently, countries that have rebalanced their tariffs and allowed residential basic service prices to increase gradually should have succeeded relatively more at relieving their supply constraints—i.e., undertaking network expansion—and reducing excess demand than countries that have not raised those prices.⁵⁵

For purposes of this study, total expressed demand is the sum of met demand—i.e., the level of service actually supplied at prevailing prices—and unmet demand represented by the

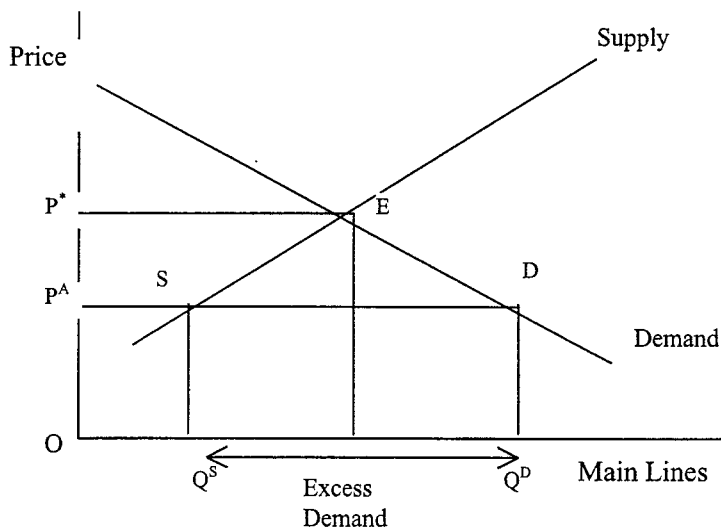
⁵³ For a review of this literature, see van Brabant, J.M., *Socialist Economics: The Disequilibrium School and the Shortage Economy*. *Journal of Economic Perspectives*, 1990, 4:157-175.

⁵⁴ Kornai, J., *The Socialist System: The Political Economy of Communism*. Princeton University Press, 1992. Kornai develops the concept of the soft budget constraint whereby a firm's expectation that losses will be made up from other sources in the economy or that "profits" will be diverted to other firms negatively affects its efficiency and contributes to systematic shortages in an economy.

⁵⁵ Even though we refer to the raising of residential basic service prices by the convenient shorthand "tariff rebalancing," it should be understood that rebalancing entails moving *all* service prices closer to underlying incremental costs. That is, under comprehensive rebalancing both below-cost prices should rise and above-cost prices should fall. In this study, we focus exclusively on the more sensitive issue of how *residential* basic service prices have moved. We assume that *business* basic service prices have always been compensatory (i.e., at or above cost) and have not contributed to the problem of excess demand to anywhere near the same degree that low residential service prices may have. It should be noted that the count of main lines includes *both* business and residential lines in service. We assume, however, that the count of excess demand—wait list for service—comprises mainly, if not only, residential lines.

number of lines that have been demanded but are still waiting to be served at prevailing prices. This can be understood by reference to Figure 1. In Figure 1, the intersection of the supply and demand curves for main lines (at E) depicts the point of equilibrium: supply equals demand at a price of P^* . However, if for whatever reason, actual price were set at P^A , actual expressed demand (Q^D) would exceed demand actual supply (Q^S) by the distance SD (or the span of the double-arrowed line under the horizontal axis). Met demand would be the distance OQ^S . As Figure 1 shows, raising the price from P^A in the direction of P^* would both expand supply and reduce total demand and, thus, shrink excess demand—causing unmet demand as a percentage of total demand to fall. In this supply-constrained situation, the price is not too *high* to discourage demand; suppression of demand cannot happen until the actual price exceeds the equilibrium price under current market conditions. Of course, as income growth and a greater taste for telecommunications shifts the demand curve itself to the right and more efficient technologies and delivery systems also move the supply curve to the right, the equilibrium level of service may itself rise. However, without more precise knowledge of how much supply and demand would both shift, it is difficult to predict from Figure 1 alone what would happen to the level of the equilibrium price and the relative levels of met demand and unmet demand—if any.

Figure 1. Graphical view of excess demand



Given that excess demand is the gap between total demand and supply, any attempt to model excess demand in a reduced form specification would necessarily imply that excess demand is a function of all variables that are expected to influence both total demand and supply. Economic theory suggests that demand is a function of own-price, prices of substitutes and complements, income, and other sometimes unobservable characteristics like taste, consumer knowledge, and demographics. Similarly, supply is a function of the offer price, level and type of supply technology, and supply conditions like government and institutional constraints—e.g., constraints on competition, privatization, and pricing based on public policy goals. Therefore, excess demand should be, in theory, a function of some—if not all—of all these drivers of supply and demand.

C. Key variables

To test our hypothesis, we measure the excess demand variable by the wait list for basic service as a percent of total demand—i.e., main lines in service *plus* the wait list. By construction, this variable lies in the range from zero to one. The disappearance of excess demand would be signified in this formulation by the percentage measure going to zero.

Our tariff rebalancing variable measures how close the monthly price of basic service to residential consumers is to the average residential price for those countries that have rebalanced tariffs and moved their residential prices to more closely approximate equilibrium or compensatory prices. To construct the tariff rebalancing variable, our point of departure is the observation that in many, though not all, of the 23 Latin American countries in our sample, the price of basic service to residential consumers has tended to rise through the 1990s and, in some instances, level off. This trend is best displayed for countries that have privatized—though not all at the same time—namely, Mexico, Peru, and Venezuela. Other countries of interest are Argentina and Chile. In Argentina, the inflation and exchange rate-adjusted monthly price for residential basic service has actually *fallen* through the 1990s; however, that price has stabilized of late at the presumed equilibrium level. In Chile, the price of residential basic service has been set to cover long run incremental cost for several years; its price is, hence, arguably cost-based and at the equilibrium level.

Tariff rebalancing—moving the price of residential basic service toward cost—is not always associated with, and not necessarily a function of, privatization. Other countries (including Costa Rica, Ecuador, and Uruguay) that have not privatized have also displayed a trend toward higher prices. However, to the extent that rate rebalancing may have been a precursor to, or a concomitant element of, a policy of privatization, we believe that the five countries listed above provide the basis for constructing at least a *baseline* average price for residential basic service by which pricing trends in the other 18 countries may be measured.⁵⁶

Based on this reasoning, we define a tariff rebalancing variable for our study in two steps. First, we compute an average price for residential basic service for the above mentioned five countries in 1995, the last year of our sample. We choose the last year because of the observed trend of prices in these countries to stabilize around their 1995 levels. This average or baseline price is calculated as US \$10.64 per residential main line. Second, we measure the deviation of the price of residential basic service from this baseline price in *every* country in our sample for *every* year spanned by our sample.

Two alternate, but equivalent, measures are possible: (1) the ratio of that price for any given country in any given year to the baseline price and (2) the percent deviation of that price for any given country in any given year from the baseline price.⁵⁷

D. Model specification

To test our hypothesis that the wait list percentage—excess demand—is reduced as residential basic service prices approach the baseline average price, i.e., tariffs are rebalanced—we specify a variant of the econometric model in Equation 1.

$$(2) \quad z_{it} = \alpha + \beta'x_{it} + \delta'd_{it} + v_i + \varepsilon_{it}$$

⁵⁶ This exercise is complicated by serious data limitations mostly in the form of the unavailability of price data in the countries of the region for every year in the 10-year period studied. These gaps in the data mean that price trends in only a subset of the 23 countries can be reliably assessed and that the data panels constructed for those countries are necessarily unbalanced.

⁵⁷ Where the ratio exceeds (falls below) one, the percent deviation is positive (negative).

We retain the panel data specification but do not first take the logarithmic transform of the dependent variable z_{it} which, in this case, is a ratio variable that lies in the range from zero to one.⁵⁸

The exogenous variables employed for this regression reflect the mix of price and non-price variables that, as we discussed earlier, are usually considered drivers of demand and supply. Specifically, non-price variables employed here include:

Demand side: GDP per capita (current and lagged)

Supply side: percent of main lines served by digital switches and lagged investment per line (both measures of technology)

Unlike the model used to test for the effects of privatization on network expansion and technical efficiency, in the present model we use only a single price variable, namely, the tariff rebalancing variable as defined above.⁵⁹ Because of the manner in which it is constructed, this variable makes it unnecessary to separately specify the average monthly residential basic service price as an exogenous variable. The average monthly business basic service price is not considered because that price is generally considered to be *above* cost and the wait list is believed to include very few (if any) business consumers. The one-time charges for connection to the network are considered unlikely to have any significance for the wait percentage in a *supply-constrained* environment and are, hence, omitted. The peak-hour price of a 3-minute call is omitted for the same reason. Finally, as before, we use a dummy variable to account for the effects of privatization.

We hypothesize that the relationship between the dependent variable and each of the exogenous variables—in particular, the tariff rebalancing variable—will be negative signifying

⁵⁸ Although our dependent variable is bounded by zero and one, it is *not* a binary variable that only takes on discrete values. Instead, that variable is continuous on the interval between zero and one for the entire population.

⁵⁹ As noted previously, our tariff rebalancing variable was created by dividing residential monthly prices by US \$10.64. Dividing a variable by a constant does not affect the significance of a regression, it merely alters the magnitude of the coefficient for that variable. For our purposes, dividing by US \$10.64 permits us to measure in ratio form the *relative difference* between each country's price and prices that are more reflective of underlying costs.

that increments to any of the exogenous variables will cause the wait list percentage to be reduced. We also expect privatization to have a negative effect on the wait list percentage. By including privatization we are testing whether, after controlling for tariff rebalancing, there are still concrete efficiency gains from privatization.

E. Model results

We estimate the model in Equation 2 by FGLS with heteroscedasticity and country-specific serial correlation correction.⁶⁰ The estimation routine we use takes account of the unbalanced nature of the panel on account of missing data.⁶¹ Table 6 reports the regression results from the best-fit model (from which all exogenous variables with insignificant coefficients are dropped).⁶² The new variables in Table 6 are MLDig (the percent of main lines served by digital switches) and tariff rebalancing (the ratio of residential basic service price to the average baseline "efficient" price).

⁶⁰ The Bartlett M test confirmed the presence of heteroscedasticity in the regression. The computed M statistic (with a χ^2 distribution) had a value of 157.8 which, at 22 degrees of freedom, was highly statistically significant at conventional levels of significance.

⁶¹ Missing data in panels do not cause biased estimates if they are missing at random and the probability of those data being missing is independent of the observed or missing responses (of the dependent variable). See Jones, R.H., *Longitudinal Data with Serial Correlation: A State-Space Approach*, New York: Chapman and Hall, 1993, p.21.

⁶² Other model estimates were obtained by use of GLS without correction for heteroscedasticity or serial correlation, the basic random effects model, and robust estimation. The reported model remained superior with the smallest standard errors for the coefficient estimates (efficiency) and highest log likelihood values (goodness of fit). Likelihood ratio tests were also used to establish significant improvements in fit from dropping exogenous variables with insignificant coefficients.

Table 6: Regression results: effects on wait list percentage (excess demand), feasible generalized least squares, (t-statistics in parentheses for coefficient estimates).⁶³

Independent Variable	Dependent Variable: Wait list percentage
Pvtmaj	-0.037*** (-1.736)
Rebalancing	-0.068* (-4.343)
MLDig	-0.001* (-4.065)
Constant	0.324* (14.223)
N (no. of obs.)	
	71
Log likelihood	
	195.25
χ^2 statistic	
	67.83*
Degrees of freedom	
	(3)

* Statistically significant at 1% level, ** at 5% level, and *** at 10% level.

The wait list percentage—our measure of excess demand—appears to respond most strongly to the tariff rebalancing variable (as was hypothesized in this study) and the measure of technology embodied in the percent of main lines served by digital switches. The coefficients of both variables are highly statistically significant. The effect of privatization is somewhat less statistically significant (with a probability value of 0.083) but would pass the significance test at the 10 percent level.

⁶³ As noted previously, our excess demand variable (the dependent variable) varies continuously on the interval [0,1]. The sample with which we have estimated the model does *not* contain data that are, in some manner, censored as would be the case if only values above or below a certain threshold were observed. Therefore, being neither binary and discrete nor censored, it is unnecessary to use estimation techniques that are suited to limited dependent variables—such as logit, probit or tobit models. However, purely for comparison, we also estimated a tobit model for equation 2, with “censoring” assumed at values 0 and 1. Our estimates for the coefficients of privatization, rebalancing, and technology variables (with t-statistics in parentheses) were: -0.095 (-8.740), -0.017 (-1.874) and -0.001 (-4.989), respectively. While these results appear to place a higher weight on privatization but less so on rebalancing, we believe, for reasons mentioned above, that it is more appropriate to estimate equation 2 using FGLS than a tobit model. Predicted values for our dependent variable from the two sets of estimates were relatively similar, with a correlation between them of approximately 0.8.

While all of the variables reported in Table 6 have coefficients with the expected signs,⁶⁴ their magnitudes of response are harder to judge. The coefficients measure the impact of each variable on the wait list as a percent of total demand (i.e., wait list plus lines in service). For example, our estimates indicate that privatization reduces waits—as a percent of total demand—by 3.7 percentage points. In order to make this figure more meaningful, however, we calculate the reduction due to privatization and tariff rebalancing in the actual *number* of lines waiting to be served. For tariff rebalancing, we first measure the impact on the dependent variable of a 10 percent increase in price from the average residential price in Latin America of US \$7.28. We then use the change in the dependent variable to calculate just how much the wait list would be reduced by tariff rebalancing.⁶⁵ According to our calculations, a 10 percent increase in the average residential price leads to a 4.1 percent reduction in the average number of lines on the wait list. Using the same methodology, privatization leads to a 28 percent reduction in the average number of lines on the wait list.

While the magnitudes of the impacts appear reasonable, more and independent confirmation of these results would be helpful. These results provide two important findings: (1) in supply-constrained environments, abandoning the policy of below-cost pricing of residential basic service may actually relieve the supply bottleneck and *increase* the proportion of met demand and the penetration rate for basic services,⁶⁶ and (2) controlling for tariff rebalancing, privatization leads to reductions in unmet demand indicating that there are concrete efficiency gains resulting from privatization.

⁶⁴ Using the estimated coefficients in Table 6, we generated predicted values for the dependent variable and found that none of them was below zero or above one, confirming that the model did not generate predicted values that were outside the range within which all values for the wait list percentage were contained in the population.

⁶⁵ The change in the dependent variable, i.e., the change in wait list percentage involves four items: the number of lines on the wait list in the *previous* year, the total demand in the *previous* year, the total demand in the *present* year (all of which are known), and the number of lines on the wait list in the *present* year (which has to be solved for). Thus, evaluating this relationship at the average level for all items (e.g., average number of lines on the wait list in Latin America in the previous year is approximately 218,000), we calculate the average number of lines on the wait list in the present year.

⁶⁶ This, of course, assumes that governments do not institute formal or informal mechanisms for providing subsidies that support the pricing of residential basic service below cost.

V. CONCLUSIONS

Privatization of telecommunications in several countries of Latin America during the 1980s and 90s altered significantly the prospects for the development of the all-important telecommunications sector in that part of the world. Several events happened concurrently or almost concurrently to further shake up the status quo in telecommunications and improve performance, prominent among them being the rebalancing of tariffs for basic service.

The purpose of this paper has been to sort out the effects of these events on some important measures of telecommunications network participation by the inhabitants of the Latin American region. The number of main lines in service is often used as an indicator of penetration (market demand). Building on previous work that showed a positive correlation between that variable and the level of residential basic service prices, we made the case that such a positive correlation means that the number of main lines in service at any point is not *total* demand but rather only the level of *met* demand in a supply-constrained environment. That is, network expansion in the countries of the region is more likely to be driven by an *increase* in the price of residential basic service—from below cost levels—than by any decrease in it. When prices are below efficient levels—e.g., below incremental cost—demand outstrips supply and creates a condition of excess demand that can only be relieved by raising those prices up to efficient levels. Therefore, the main lines in service in the presence of inefficiently low prices represent only the amount of supply forthcoming, which is typically insufficient to meet all of the demand at those prices. That is, the main lines in service is a measure of met demand or, equivalently, actual supply in an environment in which supply is constrained by inefficiently low prices.

This paper extended previous work in three directions. First, it tested the robustness of results obtained earlier from a worldwide sample of data regarding the impact of privatization on network expansion and technical efficiency. Using a sample of 23 countries in Latin America for the 10-year period between 1986 and 1995, we successfully replicated the finding from previous work that privatization has a significant positive impact on both network expansion and technical efficiency.

Second, we explored qualitatively some of the factors that may have prompted so many Latin American countries—a disproportionate share of countries worldwide—to privatize their telecommunications sectors by transferring at least fifty percent of telecommunications assets into private hands. Those countries may have seen positive efficiency gains from private ownership and a way out of the trap of low penetration. As previous work and follow-up work in this study showed, there is definitely evidence from the region that privatization altered incentives sufficiently to relieve the supply bottlenecks from the days of public ownership and increased the supply of main lines.

Third, we tested the hypothesis that low penetration rates in Latin America arise from service prices that are too low. We tested this hypothesis with an econometric model and concluded that tariff rebalancing, privatization, and network technology upgrades all have the effect of reducing the proportion of unmet demand for residential basic service in a country. Specifically, a 10 percent increase in monthly subscription charges (relative to the average residential price in Latin America) leads to a reduction in unmet demand of approximately 4.1 percent. And, most importantly, even after controlling for tariff rebalancing, privatization appears to reduce unmet demand by approximately 28 percent.

The public policy implications of this study are twofold. First, privatization generates concrete efficiency gains that are over and beyond those generated by tariff rebalancing. Second, instead of relying on artificially low prices to trigger greater use of the telecommunications network—on the theory that low prices enable consumers to harness network externalities and increase penetration rates—it is more pragmatic to allow telecommunications operators, especially in countries that have privatized, to recover their costs by charging compensatory prices. A country may be able to generate “high” levels of demand by a deliberate policy of maintaining prices below cost or at low levels, but—as long as it does not provide subsidy support for such prices—it is only by increasing actual supply that the country can actually expect to see service delivered to consumers. Therefore, while privatization clearly favors supply-led growth and network expansion, the all-important role of

tariff rebalancing and compensatory pricing cannot be overlooked in sustaining that expansion and reducing unmet demand.

Dkt. No _____
D. Blessing Ex. No. ____ (DCB-15)
2004 Competition Report

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-15

Florida Public Service Commission, *Annual Report To The Florida Legislature On The Status Of Competition In The Telecommunications Industry In Florida as of May 31, 2004*, p. 75.

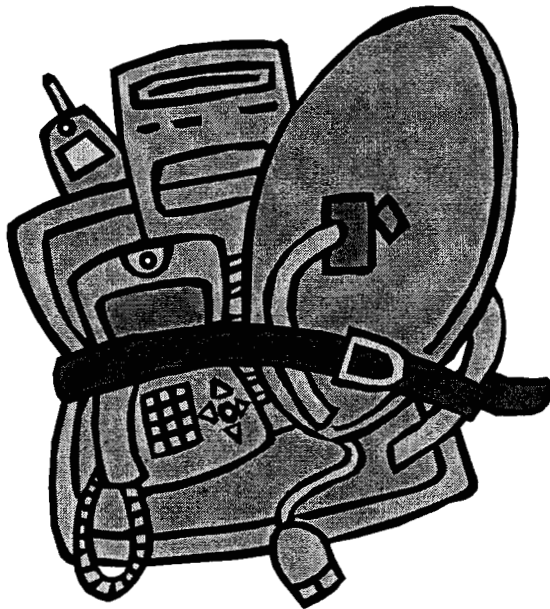
**ANNUAL REPORT TO THE
FLORIDA LEGISLATURE**

ON THE STATUS OF

COMPETITION

IN THE
**TELECOMMUNICATIONS
INDUSTRY IN FLORIDA**

AS OF MAY 31, 2004



FLORIDA PUBLIC SERVICE COMMISSION

This report was prepared by the Florida Public Service Commission's
Office of Market Monitoring and Strategic Analysis

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LIST OF ACRONYMS

ALEC	Alternative Local Exchange Company
BEBR	Bureau of Economic and Business Research
BOC	Bell Operating Company
CLEC	Competitive Local Exchange Company
Commission	Florida Public Service Commission
CTIA	Cellular Telecommunications & Internet Association
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
FCC	Federal Communications Commission
IP	Internet Protocol
ISP	Internet Service Provider
ILEC	Incumbent Local Exchange Carrier
IXC	Interexchange Carrier
Joint Board	Federal-State Joint Board
LATA	Local Access and Transport Area
MSO	Multiple System Operator
NANPA	North American Numbering Plan Administrator
NCTA	National Cable and Telecommunications Association
NXX	End Office Code
NPA	Area Code
OPC	Office of Public Counsel
OSS	Operational Support Systems
PSTN	Public Switched Telecommunications Network
RBOC	Regional Bell Operating Company
SLC	Subscriber Line Charge
SMSA	Standard Metropolitan Statistical Area
TELRIC	Total Element Long-Run Incremental Cost
TRO	Triennial Review Order
UNE	Unbundled Network Element
UNE-P	Unbundled Network Element - Platform
USOA	Uniform System of Accounts
UWB	Ultra Wideband
VoIP	Voice over Internet Protocol

EXECUTIVE SUMMARY

This report is pursuant to the statutory requirements set forth in Section 364.386 and Section 364.161(4), Florida Statutes.

Chapter I: Introduction and Background

In addition to providing the annual overview and analysis of local telecommunications competition in Florida, this year's report includes a closer examination of the trends in the access line market.¹

Chapter II: An Introduction to the Changing Competitive Landscape

Chapter II provides context to the report by discussing the evolving competitive landscape to which providers of communications services – including incumbents and competitors – are subject. The chapter discusses, among other subjects, the emergence of advanced communications platforms and the impact of competition on providers of wireline telecommunications services.

Chapter III: Status of Local Wireline Telecommunications Competition in Florida

Section A of Chapter III discusses Incumbent Local Exchange Carrier (ILEC) and Competitive Local Exchange Company (CLEC) market share in the local wireline telecommunications sector in Florida. As an overview, responses from ILECs and CLECs to the Florida Public Service Commission (Commission) data requests indicate that as of May 31, 2004, in Florida:

- CLECs have increased their overall market share from 16% in 2003 to 17% in 2004.
- The CLECs' share of the business market has remained stable, 30% in both 2004 and 2003.
- The CLECs' share of the residential market has increased from 9% in 2003 to 10% in 2004.

¹ With this report, a change was made in the reporting period to provide additional time for companies to respond to the data request and for Commission staff to analyze the data. The data contained herein represents a snapshot of Competitive Local Exchange Company (CLEC) activities on May 31, 2004, with the report year running from July 1, 2003, to May 31, 2004 (as opposed to June 30th as in prior reports).

- Total local exchange access lines in Florida continue to decline – even as Florida’s population continues to grow.²

Section B discusses changing market trends in this sector. Section B also discusses the potential impacts of recent regulatory changes on the market for local wireline telecommunications.

Chapter IV: Advanced Communications Landscape

Innovation, competition, and regulatory change are rapidly changing the communications landscape of the country generally, and in Florida specifically. Various platforms are competing for mass market and business customers. Innovation and competition are resulting in enhanced service offerings and falling prices for consumers. ILECs, CLECs, and Interexchange Carriers (IXCs) are certain to face increased competition from wireless, cable telephony, and VoIP. Chapter IV discusses the subjects of intermodal competition and broadband.

Chapter V: Discussion of Items Required by Chapter 364, Florida Statutes

Chapter V sets forth the Commission’s specific findings required pursuant to Section 364.386(1), Florida Statutes. These findings are supported by the information and data contained in this report.

Furthermore, pursuant to Section 363.161(4), Florida Statutes, Chapter V and Appendix D address CLEC complaints filed against ILECs. Notably, the number of complaints continued to decline from 81 in the 2002 report to 58 in 2003, and to 41 in this year’s 11-month report period. Also, the Commission received 254 negotiated agreements and 10 requests for arbitration between July 1, 2003, and May 31, 2004. Since June 1996, the Commission has reviewed and approved 2,871 negotiated interconnection agreements.

Chapter VI: State Activities

Chapter VI discusses select state activities in which the Commission has been engaged as part of its ongoing efforts to promote wireline telecommunications competition in Florida.

In implementing the Tele-Competition Innovation and Infrastructure Enhancement Act of 2003, the Commission found, based on the record before it, that intrastate access rates currently provide support for basic local telecommunications services. The Commission further found that the existence of such support prevents the creation of a more attractive competitive local exchange market because it keeps local rates at artificially low levels. This results in an artificial barrier for market entry by efficient competitors.

² This decline in local exchange access lines does not result solely from telephone subscribers switching to alternative voice providers. The decline reflects a combination of voice lines being replaced by data connections (including residential broadband connections), as well as subscribers choosing alternatives to local exchange access for their voice communications.

The Commission also:

- Concluded a summary docket on collocation,
- Implemented the requirements of the Federal Communications Commission's (FCC) Triennial Review Order (TRO) dockets,
- Continues its work in performance metrics relating to ILECs,
- Oversaw the return of \$4.5 million from Sprint and BellSouth, under Service Guarantee Programs, to their customers for missing service installations and out of service repair,
- Continues its work in the Florida Telecommunications Competitive Interests Forum, and
- Continues to work to increase Lifeline awareness and subscribership among eligible Floridians.

Chapter VII: Federal Activities

The Commission has continued to monitor and, as necessary, provide comments, on key federal issues such as:

- The Triennial Review Order and its subsequent partial vacatur and remand,
- The regulatory framework for broadband wireline access to the Internet,
- The regulatory framework for IP-Enabled Services (or Voice over Internet Protocol),
- Intercarrier compensation,
- Universal service,
- Reporting requirements for ILECs,
- Review of TELRIC pricing rules for UNEs, and
- Local number portability and
- NASUCA Truth in Billing

CHAPTER I: INTRODUCTION AND BACKGROUND

Chapter 364, Florida Statutes, sets forth the guiding principles by which the Commission regulates wireline telecommunications companies. Regulation is primarily focused on incumbent local exchange companies (ILECs). Competitive local exchange companies (CLECs) and intrastate interexchange carriers (IXCs) are subject to minimal regulation. The Commission does *not* regulate wireless service³, Voice over Internet Protocol service (VoIP)⁴, cable modem service, or satellite service.

Chapter 364 requires the Commission to prepare and deliver a report on “the status of competition in the telecommunications industry” to the Governor and Legislature by December 1 of each year. Specifically, Section 364.386, Florida Statutes, requires that the report address the following issues:

- The overall impact of local exchange telecommunications competition on the continued availability of universal service.
- The ability of competitive providers to make functionally equivalent local exchange services available to both residential and business customers at competitive rates, terms, and conditions.
- The ability of customers to obtain functionally equivalent services at comparable rates, terms, and conditions.
- The overall impact of price regulation on the maintenance of reasonably affordable and reliable high-quality telecommunications services.
- What additional services, if any, should be included in the definition of basic local telecommunications services, taking into account advances in technology and market demand.
- Any other information and recommendations which may be in the public interest.

A 1997 amendment to Section 364.161(4), Florida Statutes, requires the inclusion of a summary of all complaints filed by CLECs against ILECs.

³ Federal law preempts states from regulating rates of wireless providers unless a state petitions the FCC and demonstrates the market is failing to protect consumers from unjust prices or wireless is a substantial substitute for wireline. 47 U.S.C. §§ 332(c)(3)(A). Federal law does not prohibit states from regulating “other terms and conditions of service.” Florida law exempts wireless from Commission jurisdiction (Section 364.02(13)(c)). As set forth more thoroughly in Chapter II, Florida’s deregulatory approach to wireless has resulted in the development of a highly robust, competitive wireless market in the state.

⁴ Certain VoIP providers have *voluntarily* pursued and obtained CLEC certificates. VoIP generally is not regulated by the Commission in accordance with Sections 364.01(3), F.S. (The Legislature further finds that the provision of voice-over-Internet protocol (VoIP) free of unnecessary regulation, regardless of the provider, is in the public interest.) and 364.02(12), F.S. (“Service” is to be construed in its broadest and most inclusive sense. The term “service” does not include voice-over-Internet protocol service for purposes of regulation by the commission. Nothing herein shall affect the rights and obligations of any entity related to the payment of switched network access rates or other intercarrier compensation, if any, related to voice-over-Internet protocol service.)

In prior years, the data presented a snapshot of CLEC activities on June 30, with the report year running from July 1 of the previous year through June 30 of the current year. This year, the snapshot of data is taken on May 31, with the reporting period running from July 1, 2003 through May 31, 2004. This change provided additional time for companies to respond to the data requests and for Commission staff to analyze the data. Beginning with the 2005 report, the report year will run from June 1 of the previous year through May 31 of the current year, with May 31 continuing as the snapshot date.

Prior to discussing the required topics (Chapter V), this report begins with an introduction and overview in Chapter I of the federal Telecommunications Act of 1996 (the 1996 Act) and Chapter 364, Florida Statutes. Chapter I also discusses the approach used in preparing this report, including efforts to streamline the data gathering process and reduce the reporting burden on non-facilities based CLECs.

Chapter II gives context to the rest of the report by discussing the evolving competitive landscape to which providers of wireline telecommunications – including incumbents and competitors – are subject. Chapter II discusses competing communications platforms and the changing nature of competition.

Chapter III provides a detailed analysis of the status of local wireline telecommunications competition in Florida, examining the data by percentage of market share, number of access lines, and by various areas, such as exchange and ILEC territory. Chapter III also discusses some of the potential impacts on the market for local wireline telecommunications of the FCC's Triennial Review Order (TRO) and its subsequent partial vacatur by the D.C. Circuit Court of Appeals (known as the USTA II decision).

Chapter IV discusses how the communications landscape is changing rapidly due to innovation, competition, and regulatory change. Competition for mass market and business customers is resulting in enhanced service offerings and lower prices for consumers. Wireline telecommunications providers, including ILECs, CLECs, and IXCs, are facing increased intermodal competition from wireless, cable, and VoIP providers. Chapter IV also discusses the broadband market.

Chapter V discusses issues required by Chapter 364, Florida Statutes. Chapter VI and Chapter VII contain reviews of key state and federal activities, respectively.

The appendices include tables containing the CLECs providing service in Florida, the exchanges with providers, the percentage of CLEC access lines by exchange, the summary of CLEC complaints, and the list of certificated CLECs as of May 31, 2004. A glossary of telecommunications terms is provided after the appendices.

A. PROVISIONS AND GOALS OF CHAPTER 364, FLORIDA STATUTES, AND THE TELECOMMUNICATIONS ACT OF 1996

1. Chapter 364, Florida Statutes

In 1995, the Florida Legislature amended Chapter 364, Florida Statutes, to provide for competition in the state's telecommunications industry. The Legislature found that "the competitive provision of telecommunications services, including local exchange telecommunications service, is in the public interest and will provide customers with freedom of choice, encourage the introduction of new telecommunications service, encourage technological innovation, and encourage investment in telecommunications infrastructure." The 1995 Florida Act, together with the 1996 Act (federal), spurred the development of a CLEC industry. Since 1995, the communications landscape has evolved dramatically, with wireless, cable telephony, and IP-enabled communications offering many consumers alternatives to plain old telephone service ("POTS").

As of May 31, 2004, 420 CLECs were certificated by the Commission to operate in Florida, down from 432 in 2003. In 2004, 175 CLECs reported offering service, a slight decrease from 179 in 2003.⁵ Unlike the ILECs, CLECs are not required to file tariffs for Commission acknowledgment. Instead, each CLEC is only required to file a price list if it offers basic local telecommunications service. In addition, Section 364.337(2), Florida Statutes, states in part, that "[T]he basic local telecommunications service provided by a competitive local exchange telecommunications company must include access to operator services, '911' services, and relay services for the hearing impaired." CLECs must also provide a flat-rate pricing option for basic local telecommunications services; the statute states that "mandatory measured service for basic local telecommunications services shall not be imposed."

2. Federal Telecommunications Act of 1996 (the 1996 Act)

The 1996 Act established a national framework to promote competition in the local telecommunications marketplace. The FCC's Local Competition Order specified that opening the local exchange and exchange access markets to competition was intended to "pave the way for enhanced competition in all telecommunications markets."⁶ Additionally, the opening of all telecommunications markets to all providers was expected to blur traditional industry distinctions. As such, not only have CLECs entered the local market, but less traditional providers such as wireless, cable and broadband communications providers have also entered this market using existing or new technologies to compete against traditional wireline providers for a share of the market for voice communications.

⁵ The number of CLECs providing service in 2003 was erroneously reported as 150 in the 2003 Annual Report on Competition. The correct number was 179.

⁶ FCC 96-325, CC Docket No. 96-98, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, Paragraph 4.

The 1996 Act established three methods by which CLECs can enter the local exchange market: resale, leasing of unbundled network elements (UNEs), and investing in their own facilities.⁷ Because ILECs dominate the last mile of the local network, CLECs must either use the ILEC's local loops, build their own facilities, or enable facilities currently in place (e.g., cable networks) to provide local telephone service. A brief description of each entry strategy provided for in the 1996 Act follows.

Resale

Resale is a method of market entry often used as a starting point for non facilities-based CLECs to gain exposure in the marketplace. Under this method, CLECs are able to purchase at a discount and resell any telecommunications services that ILECs offer to retail customers. Those CLECs that focus on serving customers who have been disconnected by the ILEC or who prefer prepaid service may view resale as a long-term strategy.

Unbundled Network Elements (UNEs)

UNEs are the building blocks of ILEC networks used to provide telecommunications services. This method of entry requires ILECs to unbundle their networks and lease the piece parts or elements to CLECs at rates based on a total element long-run incremental cost (TELRIC) methodology.

Facilities

Facilities-based CLECs are those that have invested in facilities that may consist of loops and/or switching equipment to serve end-users. Frequently, CLECs enter the market using resale or UNE-based services while investing the financial resources necessary to build a telecommunications network that, in whole or in part, allows services to be provided independent of the ILECs. CLECs deploying facilities typically do so to serve the business market. Because of the high costs of deploying facilities, the residential market does not provide sufficient economies of scale to cover the costs of deployment.

According to a recent court decision, the purpose of the 1996 Act "is to stimulate competition – preferably genuine, facilities-based competition."⁸ The resale components of the 1996 Act confine a competitor to deriving revenue between resale and retail rates. Resale may not be a viable long-term strategy for many CLECs and may discourage optimal facilities investment. Unbundling connotes an unbundling of existing (static) facilities. Many facility owners believe that there is little or no incentive to invest in upgrades and improvements if they will ultimately be required to unbundle those same upgrades and improvements.

⁷ Other policies such as number portability, interconnection, pricing, etc. also facilitate CLECs' entry into this market.

⁸ 359 F. 3d 554 (D.C. Cir. 2004) (known as USTA II), pets. for cert. filed, Nos. 04-12, 04-15, 04-18. June 30, 2004.

Many CLECs serve the residential and small business markets primarily by leasing ILEC unbundled loops, transport and switching (known as UNE-Platform, or UNE-P), and to a much lesser extent, through resale. Other CLECs, such as Florida Digital Network, provide voice service using their own facilities.

While true facilities-based competition in the local wireline telecommunications market is not yet widespread, intermodal and facilities-based competition currently exists in the advanced telecommunications market primarily through cable companies, wireless providers and a handful of wireline providers that mainly target the business market. In the mass-market (residential and small business consumers), competition from wireless and cable companies is growing. In other words, in many markets, consumers may soon be able to choose between multiple platforms offering voice service.

B. METHODOLOGY

As in prior years, the Commission prepared this report based on responses by CLECs and ILECs to data requests. The annually updated data request consists of both quantitative questions (e.g., access line counts) and qualitative questions (e.g., has a company experienced any significant barriers in entering the Florida market). To ensure that the report better reflects the changing nature of the communications industry as a whole, questions on VoIP were added this year. Because the vast majority of VoIP providers would not have received the data request, responses are understandably limited.

The data are only as valid as the quality and completeness of the responses received. As part of our on-going effort to increase efficiency and to reduce the reporting burden where possible, the Commission made several changes to the data gathering process. Staff revised the data requests again this year to streamline them and reduce reporting requirements. Draft versions of the CLEC data request were provided to some of the larger CLECs in order to elicit their feedback. Commission staff then conducted conference calls with these CLECs and revised many of the questions based on CLEC input. In an effort to streamline the data request process, the Word and Excel files comprising the ILEC and CLEC data requests were made available on the Commission's website. This saved time for both the responding companies and the Commission by eliminating the need for companies to individually request Commission staff to provide electronic copies of the data requests. As in previous years, the Commission requested companies to provide their responses on disk, by CD or electronic mail so that Commission staff would not have to manually enter responses into a database.

Commission staff are confident that the data presented and the analyses that follow are reasonably accurate based on the information provided by the ILECs and the reporting CLECS. As in previous years, precise market share calculations are impossible because a number of CLECs failed to respond; however the response rate has been increasing. The 2004 response rate was 85% compared to 80% in 2003. Lack of a 100% response from CLECs may result in understatement of market share; however, this should not materially affect the conclusions reached in this report regarding the data.

CHAPTER II: AN INTRODUCTION TO THE CHANGING COMPETITIVE LANDSCAPE

This Chapter provides an introduction to the rapidly evolving landscape that wireline telecommunications providers – both incumbents and competitors – now face.⁹ While much of this report is focused on traditional ILEC versus CLEC competition, policymakers cannot ignore substantial changes in the broader communications market that are unquestionably impacting Florida's local telecommunications market. Fortunately for Florida's consumers, innovation and investment by competitors across platforms is providing an array of new products and services, and price wars among both new and old competitors are breaking out.

Part A discusses the rapid pace of innovation that is occurring in the market. Part B discusses the decline of the traditional telecommunications sector.

A. INNOVATION IN A RAPIDLY CONVERGING MARKET

Convergence of voice, video, and data technologies into multi-faceted product offerings by numerous providers has drastically changed the communications industry. In addition to competition from rival telephone companies, both incumbent and competitive telephone companies now face competition from wireless, VoIP, cable companies, and others. Consider the following:

- “A battle royal between cable and telephone companies for the residential phone market is about to sweep the country....By the end of 2006, more than half of all 110 million or so households in the U.S. will likely have the option of getting phone service from their cable companies. By 2008, cable companies will be selling phone service to 17.5 million subscribers, compared with 2.8 million at the end of 2003, according to an estimate by research firm Yankee Group.”¹⁰
- “In Omaha, Neb., cable giant Cox Communications Inc. has toppled the regional Bell and become the area's largest phone company. Over in New York, Cablevision Systems Corp. has signed up 115,000 phone customers.”¹¹
- “Over the past four years, the nation's largest phone companies have lost local phone lines by the millions as consumers fled to cellphones and e-mail. Many customers are giving up their second, and even their primary, phone lines. The intrusion by cable

⁹ Chapter IV provides an in-depth discussion of the advanced communications landscape, which continues to rapidly evolve, and the technologies that are driving innovation and investment and that are increasing the choices available to consumers.

¹⁰ Grant, Peter. “Here Comes Cable...and it Wants A Big Piece Of The Residential Phone Market.” The Wall Street Journal. September 13, 2004. p. R6.

¹¹ Latour, Almar. “Free for All.” The Wall Street Journal. September 13, 2004. p. R1.

companies only made things worse, forcing the Bells to expand into other areas that promise more growth, such as wireless, high-speed Internet and television.”¹²

- Email & Instant Messaging continue to be used as substitutes for voice communications. For example, among high-speed Internet users, instant messaging displaced 20% of local calls and email displaced 24% of such calls. Among dial-up Internet users, instant messaging displaced 18% of local calls, and email displaced 23% of local calls.¹³
- EarthLink has announced a new service that will let subscribers make free telephone calls using the Internet.¹⁴
- “According to Synergy Research Group Inc., Internet phones will account for about a third of the nearly 35 million business lines expected to be added this year, up from 18% last year and less than 4% in 2001.”¹⁵

The following subsections highlight several of the advanced communications technologies that are driving innovation and investment and are spurring this non-traditional, but extremely promising, form of competition in the communications sector.

1. Wireless

In Florida and across the nation, the wireless industry has proven the success of competitive markets that are not overly burdened with costly and unnecessary regulations. Wireless competition is fierce and empowers consumers to make informed choices among numerous options. Approximately 98% of Americans can choose from at least 3 wireless providers, and 83% have a choice of 5 or more wireless carriers.¹⁶ As a result, prices have continually declined (1993 average wireless bill = \$61.49, as compared to 2003 average bill = \$38.73).¹⁷ In fact, the FCC reported a 13% decrease in the price per minute in 2003.¹⁸ Though

¹² Latour, Almar. “Free for All.” The Wall Street Journal. September 13, 2004. p. R1.

¹³ J.D. Power & Associates. “2003 Residential Internet Service Provider Study (August 2003).”

¹⁴ Earthlink Free Online Calling. <<http://www.earthlink.net/extras/onlinecalling/>>. Accessed November 3, 2004.

¹⁵ Totty, Michael. “Is Now the Time For Net Calling.” The Wall Street Journal. September 13, 2004. p. R6.

¹⁶ “Innovation: The Keystone of the Commercial Mobile Wireless Experience.” Cellular Telecommunications & Internet Association (CTIA) Presentation to FCC. April 2004.
<<http://files.ctia.org/pdf/CMRSINNOVATIONmar04.pdf>>.

¹⁷ “The Wireless Industry and Its Contributions.” Cellular Telecommunications & Internet Association (CTIA) Presentation to FCC Wireline Competition Bureau. September 2004.
<http://files.ctia.org/ppt/WCB_Wireless_Contributions_Presentation.ppt>.

¹⁸ “Ninth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services.” FCC. WT Docket No. 04-111. September 28, 2004. Page A-11.

wireless prices are decreasing, the wireless industry continues to invest heavily in its network and in innovative new products and services. These trends will be discussed in the following section, along with a focus on Florida's market-based approach regarding the wireless sector and a glance at a few initiatives by the wireless industry to address consumer needs despite the lack of regulatory mandates.

a. Florida's Market-Based Approach to Wireless

In Florida, the Legislature has taken a "hands-off" approach to wireless services generally, allowing the industry to flourish and the state's consumers to benefit from the competition. Commercial mobile radio service (CMRS) (i.e., wireless) providers are expressly excluded from the statute that confers jurisdiction to the Commission over "telecommunications companies."¹⁹ Due to this wireless exemption, the Commission does not make eligible telecommunications carrier (ETC) designations for purposes of universal service funding for Florida CMRS providers; instead, the FCC determines eligibility.²⁰ Florida CMRS providers do, however, remain expressly liable for certain taxes prescribed by statute and any universal service or other fees pursuant to statute.

Florida's approach to the wireless industry has been extremely successful. Florida's consumers today enjoy the benefits of a vigorously competitive market for cellular service. Approximately 23 wireless competitors serve the state, including all six nationwide providers. Some 77% of Floridians have a choice of five or more wireless carriers. Statewide subscribership is high at over 10 million.²¹ With the express statutory exemption, regulatory risk is minimized, and carriers are demonstrably more willing to invest in the state. Finally, consumer welfare is maximized. Florida's consumers benefit from an array of services, offered at competitive prices, by numerous and fiercely competitive providers.

b. Wireless Investment & Innovation

The substantial investment and constant innovation by the wireless industry suggest the effectiveness of deregulatory approaches (like Florida's) with respect to such competitive markets. Even as prices decline, wireless carriers have invested approximately \$146 billion

¹⁹ Under Section 364.01(1), Florida Statutes, the Commission has jurisdiction over "telecommunications companies," and Section 364.02(13)(c), Florida Statutes, excludes CMRS providers from the statutory definition of a "telecommunications company."

²⁰ Designation as an ETC allows a company to receive universal service support. The 1996 Act places responsibility on the states to determine which carriers are qualified for universal service funding. However, in cases where the state, like Florida, does not have jurisdiction to make the ETC designation, the FCC will determine eligibility according to 47 U.S.C. § 214(e)(6).

²¹ FCC Report on Local Competition: Status as of December 31, 2003. Released June 2004.

nationwide, including over \$19 billion in 2003 alone.²² This investment includes a 17% increase in cell sites in service from year-end 2002 to year-end 2003,²³ which expands coverage and improves overall quality of service.

Wireless carriers are also constantly innovating in order to either meet competitors' offerings or to gain a competitive edge with new features. CMRS-related patents in the United States have increased from 876 in 1996 to a record high of 2,390 in 2003 (not including unlicensed wireless, Wi-Fi, or Ultra Wideband (UWB) patents, which are also on the rise).²⁴ Innovations such as walkie-talkie functionality, digital camera additions, and voice dialing have become more of a standard feature due to consumer demand and have increased consumer value. While new features are being added, phones are continually decreasing in size, and calling areas are expanding.²⁵ Carriers are rapidly adding digital services, such as e-mail, calendar, Internet access, and text message functionality, to their cell phones and plans. By year-end 2003, the wireless industry had achieved 140 million digital subscribers.²⁶ Wireless carriers are also increasingly providing wireless broadband functionality to consumers – directly competing with the popular cable modem and DSL broadband options that together account for the vast majority of the broadband market. These and other substantial strides by the wireless industry – and the resulting benefits for consumers – are occurring in a relatively unregulated market.

c. Wireless Voluntary Efforts

Competitive markets can and do respond to the needs and demands of consumers. In fact, in industries that are as fiercely competitive as the wireless industry, a focus on consumer satisfaction is critical to survival. The following subsections provide a few examples of the wireless industry's voluntary efforts to address consumer issues. These show that market forces work in competitive arenas.

i. Voluntary Consumer Code

In September 2003, CTIA unveiled its “Voluntary Consumer Code,” which is designed to encourage greater wireless carrier communication and disclosure to consumers on a voluntary

²² “The Wireless Industry and Its Contributions.” Cellular Telecommunications & Internet Association (CTIA) Presentation to FCC Wireline Competition Bureau. September 2004.
<http://files.ctia.org/ppt/WCB_Wireless_Contributions_Presentation.ppt>.

²³ “CTIA’s Semi-Annual Wireless Industry Survey Results.” CTIA. 2004.

²⁴ “Innovation: The Keystone of the Commercial Mobile Wireless Experience.” Cellular Telecommunications & Internet Association (CTIA) Presentation to FCC. April 2004.
<<http://files.ctia.org/pdf/CMRSINNOVATIONmar04.pdf>>.

²⁵ Luke, Robert. “Cingular: From Elite to Everyman.” The Atlanta Journal-Constitution. October 4, 2004.

²⁶ “Innovation: The Keystone of the Commercial Mobile Wireless Experience.” Cellular Telecommunications & Internet Association (CTIA) Presentation to FCC. April 2004.
<<http://files.ctia.org/pdf/CMRSINNOVATIONmar04.pdf>>.

basis.²⁷ Among other aspects, “the Code” requires companies to disclose key rates and terms of service,²⁸ requires various disclosures in product advertising, and calls for trial usage periods, better billing of taxes and fees, and stronger privacy policies. The Code also includes a promise to work with state agencies like the Commission to better coordinate responses and resolve consumer complaints, even though wireless companies are not subject to Commission jurisdiction.

Ultimately, either wireless providers will respond effectively to the concerns of their customers, or they will suffer a quick demise as customers migrate to one of their numerous competitors. This basic reality serves to police this industry without the need for the heavy hand of regulation seen in other venues. In competitive markets such as this one, voluntary disclosure of terms and conditions of service is far preferable to regulation of those terms and conditions. Such regulation imposes often-substantial transaction costs on carriers, and these transaction costs are, directly or indirectly, passed on to consumers. The bottom line is that, in a competitive market like wireless, the market will respond to consumer needs better – and at less cost – than will simply more regulation.

ii. Voluntary Anti-SPAM Efforts

The wireless industry has been proactive in stamping out text-messaging spam. On March 11, 2004, the FCC considered a Notice of Proposed Rulemaking (NPRM) and Further NPRM to protect consumers from unwanted mobile service commercial messages under the CAN-SPAM Act. Congress directed the FCC to take into consideration the “unique technical aspects” of wireless devices, including their small screen size and limited keyboards, when formulating such rules. In committing to working with the FCC to address this issue, Steve Largent, the President & CEO of CTIA, stated, “CAN-SPAM not only limits unwanted messages, but also governs all types of commercial e-mail. Mobile devices, with their smaller screens, limited keyboards and finite message lengths present a special challenge for commercial messages, which must include such extras as an easy way to opt-out.”

iii. Voluntary Consumer Complaint Assistance

Even prior to the Voluntary Consumer Code, many wireless carriers worked with states (regardless of state jurisdiction over wireless providers) to quickly resolve wireless complaints received by state commissions and other relevant state agencies. For example, although the Commission has no jurisdiction over wireless providers, several wireless carriers provide the

²⁷ See CTIA’s website at http://www.ctia.org/wireless_consumers/consumer_code/index.cfm for a list of carriers that have “fully implemented and adopted the Consumer Code.”

²⁸ Many wireless carriers provide consumers with detailed information on their websites regarding billing, terms and conditions of service, and “frequently asked questions,” to better assist consumers in making informed decisions. As but one example, Cingular Wireless’ website at: www.cingular.com includes helpful links such as “plan terms,” “return policy,” “common questions,” and “understanding your bill,” presumably aimed at providing consumers with information they seek.

Commission with phone numbers of individuals within their companies that will be able to provide more direct assistance to the consumer.

2. Voice over Internet Protocol (VoIP)

Florida leads the nation in recognizing the potential benefits of voice over Internet protocol (VoIP) technologies for consumers. Consistent with the goal of promoting competition and in order to allow the technology to flourish in the state, the Florida Legislature took the proactive step of declaring VoIP “free of unnecessary regulation” and exempting it from the statutory definition of “service” for purposes of Commission regulation. This model has already spurred several companies, such as Vonage, AT&T, and Bright House Networks, to offer VoIP service – a technology that makes use of a broadband connection to deliver voice service, at least in part, over the Internet – in Florida.

As Forbes recently reported:

Unlike the regulated monopolies of old, VoIP service is inherently competitive--even hyper-competitive. A customer's VoIP phone company (such as AT&T or Vonage) no longer needs to own the physical wire into their customers' homes. Instead, the calls hitch a free ride on customers' existing broadband Internet connections. The result: Instead of one phone company having a lock on a consumer, an unlimited number of VoIP companies like Vonage and AT&T can compete for a customer's business.²⁹

VoIP service providers, an ever-growing group of diverse companies, are driving innovation. AT&T, for instance, offers innovative call-conferencing features as well as a “do not disturb” feature to block unwelcome calls.³⁰ Vonage and Boingo Wireless recently announced their partnership to make voice over Wi-Fi services available to customers, specifically targeting the business traveler by providing greater mobility of the Vonage VoIP product.³¹ Internet service providers (ISPs) are also offering Internet-based phone services. Earthlink, for example, has followed AOL’s lead by recently announcing a new service that will allow its subscribers to make **free calls** using the Internet so long as there is a computer on the other end that is connected to the Internet and has added the capability to receive such calls.³²

²⁹ Woolley, Scott. “Cheap Talk.” Forbes.com. October 4, 2004. <http://www.forbes.com/2004/10/04/cz_sw_1004voip.html>.

³⁰ AT&T CallVantage Plans & Pricing. <<https://www.callvantage.att.com/signup/OfferDetails?offerid=CPCVU&soac=76613>>. Accessed November 3, 2004.

³¹ Vonage Holdings Corporation. “Boingo Wireless And Vonage Team to Simplify Wireless VoIP Services.” Press Release. October 18, 2004. <http://www.vonage.com/corporate/press_index.php?PR=2004_10_18_0>. Accessed November 3, 2004.

³² Earthlink Free Online Calling. <<http://www.earthlink.net/extras/onlinecalling/>>. Accessed November 3, 2004.

Price wars between VoIP providers have already begun. Following AT&T's³³ October 1, 2004 announcement that it was dropping the price of its CallVantage offering to \$30 per month, Vonage announced the same day that it was dropping its price to \$25 per month.³⁴ In its coverage of this price war, Forbes.com has found that the local Bells stand to lose from this trend, noting that, "According to the U.S. Federal Communications Commission, local phone service is the only major telecom service whose price has risen in this century."³⁵ The article adds that, "The recent price cuts will make old-fashioned phone service look even more expensive."³⁶ Some of the Bells are even responding with offers to match some of the more popular elements of their VoIP competitors' products. For instance, SBC is the latest Bell company to offer a single messaging system, allowing subscribers of SBC's local phone service to access messages from home phones, cellphones (provided a subscriber of Cingular, an SBC affiliate), e-mail, and faxes in a single place by checking by phone or over the Internet.³⁷

While VoIP is not an exact substitute for traditional telephone service, in terms of technology, it is nonetheless benefiting consumers – even those that stick with traditional landline service. VoIP's competition with local telephone companies may lead to more competitive plans and pricing by the local providers than might have otherwise occurred. Perhaps more importantly, VoIP provides options for consumers. VoIP options often include many enhanced features beyond traditional voice service that a consumer may value more than those attributes they have given up by switching to an alternative technology. Though some might discount VoIP's significance in the telecommunications industry, the low costs to enter the voice market via this technology, the ease of adding marketable features to the service, and the relatively hands-off regulatory treatment (at least in states like Florida), would appear to make it a viable contender for the consumer communications dollar.

In determining the optimal regulatory treatment of VoIP, policymakers might consider the success of the relatively "hands off" regulatory approach taken with respect to the wireless industry. Although initially underestimated as a competitor to traditional phone service, wireless service now offers features that today's standard wireline phone has not matched – such as instant messaging, calendars, cameras – all in addition to mobility – and at prices that consumers find competitive.

³³ AT&T CallVantage Plans & Pricing. <<http://www.usa.att.com/callvantage/plans/index.jsp?soac=64528>>. Accessed November 3, 2004.

³⁴ Vonage Premium Unlimited Plan. <http://vonage.com/products_premium.php>. Accessed November 3, 2004.

³⁵ Woolley, Scott. "Cheap Talk." Forbes.com. Oct. 4, 2004. <http://www.forbes.com/2004/10/04/cz_sw_1004voip.html>.

³⁶ Ibid.

³⁷ SBC Unified Communications Lite Pricing. <http://www05.sbc.com/Products_Services/Residential/ProdInfo_1/1,,1351--12-3-12,00.html>. Accessed November 3, 2004.

3. Broadband over Power Line

Broadband over power line communications (BPL or Access BPL), another promising technology in the competitive telecommunications arena, uses the largely untapped communications capabilities of the nation's power grid. Because power lines reach virtually every home and community, BPL provides potential to become an additional major communications pipe into the home. The Federal Energy Regulatory Commission (FERC) and the Federal Communications Commission (FCC) have been examining the technology and its ability to improve communications for the American public and enhance power supply system management.

By a joint statement on October 14, 2004, Chairman Pat Wood III of the FERC and Chairman Michael K. Powell of the FCC agreed that BPL holds great promise for the American public. Specifically, FERC Chairman Wood and FCC Chairman Powell stated that:

- Ubiquitous broadband deployment is important to the economic, educational, social, medical, and cultural welfare of the country. In order to achieve this goal, national policies should facilitate rapid deployment of all broadband technologies, including BPL. Policymakers at all levels should coordinate their efforts to promote a minimally intrusive policy framework for such technologies.
- The provision of high-speed communications capabilities over utility poles and electric power lines provides an opportunity to increase the competitive broadband choices that are available to customers and the power supply system management options of utilities.
- These services should be allowed to develop according to market demands with minimal regulation.

Chairman Wood and Chairman Powell have urged utilities to pursue new and developing technologies, such as BPL. In addition, they agreed to continue to encourage the development of new technologies that provide additional competitive broadband options, promote continued U.S. leadership in broadband technology, and improve power supply system security, reliability, and efficiency. They also agreed to monitor experience with Access BPL to ensure that existing regulations do not stifle the development of this nascent technology.

As part of its goal to promote access to broadband services for all Americans and to encourage new facilities-based broadband platforms, the FCC also adopted changes to its rules to encourage the development of Access BPL systems while safeguarding existing licensed services against harmful interference.³⁸ In areas where consumers already have broadband access, BPL can enhance competition by providing another broadband alternative.

³⁸ Report and Order (FCC 04-245). Federal Communications Commission. ET Docket No. 04-37. October 14, 2004.

The Southern Company recently shared its evaluation of BPL technology with the Commission.³⁹ It referred to recent and anticipated advances, including: improved technology, multiple active BPL vendors, and faster computing capability in chip sets. Southern listed some factors that may create a window of opportunity, including: growth in broadband demand; increased penetration rates for DSL and cable modems; and concerns about availability and reliability of DSL and/or cable in some areas. Southern said that many utilities are testing BPL. Southern concluded that BPL technology works; the question now shifts to “how well.”

B. DECLINE OF TRADITIONAL TELECOM SECTOR

According to the October 2004 U.S. Chamber of Commerce Report, “Sending the Right Signals: Promoting Competition Through Telecommunications Reform,” post-1996 Telecom Act losses have been substantial. Market capitalization in telecommunications plummeted from \$1,135 billion in March 2000 to \$375 billion by July 2004 – a staggering 67% decline. A similar trend was observed with respect to the communications equipment manufacturers, experiencing a 74% decline in market capitalization (\$1,282 billion to \$338 billion) over the same time period. Job losses followed suit, with a loss of 380,500 jobs between March 2001 and May 2004 in telecom service, Internet service, and equipment manufacturing. In fact, 29% of jobs lost during this period were in telecommunications.⁴⁰

The U.S. Chamber’s report suggests that some federal and state regulatory policies are depriving the communications sector of substantial innovation and investment that could put the ailing sector on the road to recovery. The report maintains that “. . . regulators are regulating for a world that no longer exists, one of limited telecommunications technologies and limited competition in the field.”⁴¹ While not all customers have numerous alternatives to traditional telephone service today, the decline of the traditional telecom sector – and the emergence of alternatives to traditional telephony - are hard to ignore. ILEC access lines are decreasing, due at least in part to competitive technologies such as wireless, broadband, and VoIP.

Florida-specific data supports this trend of declining ILEC access lines. Specifically, ILECs lost 12% of their lines to CLECs and intermodal competitors between 2001 and 2004.⁴² Even in the face of continued Florida population growth, the net number of residential access lines continues to decline. In the most recent reporting period, ILEC residential losses of almost

³⁹ Presentation to the Florida Public Service Commission on Broadband over Power Line Technology by the Southern Company. Florida Public Service Commission Internal Affairs Meeting. August 16, 2004.

⁴⁰ “Sending the Right Signals: Promoting Competition Through Telecommunications Reform.” U.S. Chamber of Commerce. October 6, 2004. The Commission notes that its reference to this study should not suggest an endorsement of the policies or conclusions contained therein.

⁴¹ “Sending the Right Signals: Promoting Competition Through Telecommunications Reform.” U.S. Chamber of Commerce. October 6, 2004. Page 3.

⁴² Responses to Commission Data Requests.

399,000 lines were slightly offset by approximately 3,400 additional CLEC lines.⁴³ While some of this line loss is attributable to secondary phone lines (used for dial-up Internet access) being replaced with DSL or cable modem service, other intermodal competitors such as wireless and VoIP service providers are believed to account for some of the difference as well.

Not even the regional Bell companies are protected from the risks of today's increasingly competitive market, as they too are facing the pressures of access line loss in their core business along with other ILECs. "The threat [to the phone companies] from cable is not theoretical," says Scott Cleland, CEO of Precursor, a research firm that serves institutional investors. "It is real, and it is devastating." He notes that in Orange County, California, and Omaha, Cox [Cable] has a 40 percent market share for voice.⁴⁴ As one Wall Street Journal reporter put it, "For the Bells, it's time to adapt or die."⁴⁵ The Bells are losing a substantial number of access lines to competitors – to wireline competitors and to newer rivals such as wireless companies and VoIP providers.

Wall Street has observed this trend and has reservations about the outlook for traditional phone companies, including those that sprung from Ma Bell. In September 2004, the Wall Street Journal reported that:

Sometime in the next week, Standard & Poor's, citing a deterioration in their core phone businesses, likely will lower its credit rating for the three biggest Baby Bell telephone companies: Verizon Communications Inc., SBC Communications Inc. and BellSouth Corp. Such a move would be the first time the ratings firm has acted against these three companies at once... The potential downgrade highlights how significantly the business has changed for the nation's three largest local phone companies, which once had near monopolies in their regions. In the past few years, though, they have lost millions of local phone lines as people switch to wireless phones and Internet phone service provided by cable-television companies and upstart phone companies such as Vonage Holdings Corp. Five years ago, BellSouth was rated Triple-A, S&P's highest rating, while Verizon hasn't seen its rating cut in more than four years.⁴⁶

Even as the Bells attempt to address their relative weaknesses in providing the complete bundle of voice, video, and data by investing in concepts such as movies on demand over the Internet, telecom investors show apprehension, and shares remain relatively flat.⁴⁷

⁴³ Responses to Commission Data Requests.

⁴⁴ Pethokoukis, James. "War of the Wires." U.S. News & World Report. Sept. 27, 2004. <<http://www.usnews.com/usnews/issue/040927/tech/27cable.htm>>.

⁴⁵ Rhoads, Christopher. "Outside the Lines." The Wall Street Journal. September 13, 2004. Page R6.

⁴⁶ Brown, Ken and Lucchetti, Aaron. "Downgrades Toll For 3 Baby Bells As Core Lines Weaken." The Wall Street Journal. September 27, 2004. p. C1.

⁴⁷ Latour, Almar. "Free For All." The Wall Street Journal. September 13, 2004. p. R1.

While there are numerous policy proposals aimed at reversing the continued decline of the traditional telecommunications sector, the aforementioned U.S. Chamber of Commerce study serves as a recent example. To promote investment, the Chamber recommends the following reforms: (1) Phase out rules that require network-sharing, and end regulated wholesale rates set at theoretical costs; (2) Increase availability of prime radio spectrum to commercial wireless providers; (3) Exempt both high-speed cable modem and DSL from common carrier regulations through classification as “information services,” and preempt state regulation altogether; (4) Exempt all regulation of VoIP through classification as an “information service,” and preempt state regulation altogether; (5) Collect funds for achieving universal service goals in a competitively neutral manner, such as appropriations from general tax revenues; and (6) Disperse universal service funds directly to targeted consumers to allow consumers to choose among communications alternatives. By implementing these six recommendations, the Chamber estimates substantial economic improvements, including \$58 billion in new capital investment over five years, increased productivity, increase in average employment levels of over 212,000 jobs in five years, accelerated rollout of innovative products and services, added consumer value, achievement of social policy objectives like universal service, and enhanced U.S. competitiveness in the global arena.⁴⁸ The Commission notes that it has neither analyzed nor endorsed this study. Whether its conclusions or recommendations have merit, the study points out that the health of the telecommunications sector is of significant enough importance to our economy to warrant close examination by policymakers.

⁴⁸ “Sending the Right Signals: Promoting Competition Through Telecommunications Reform.” U.S. Chamber of Commerce. October 6, 2004.

CHAPTER III : STATUS OF LOCAL COMPETITION IN FLORIDA

A. WIRELINE MARKET SHARE ANALYSIS⁴⁹

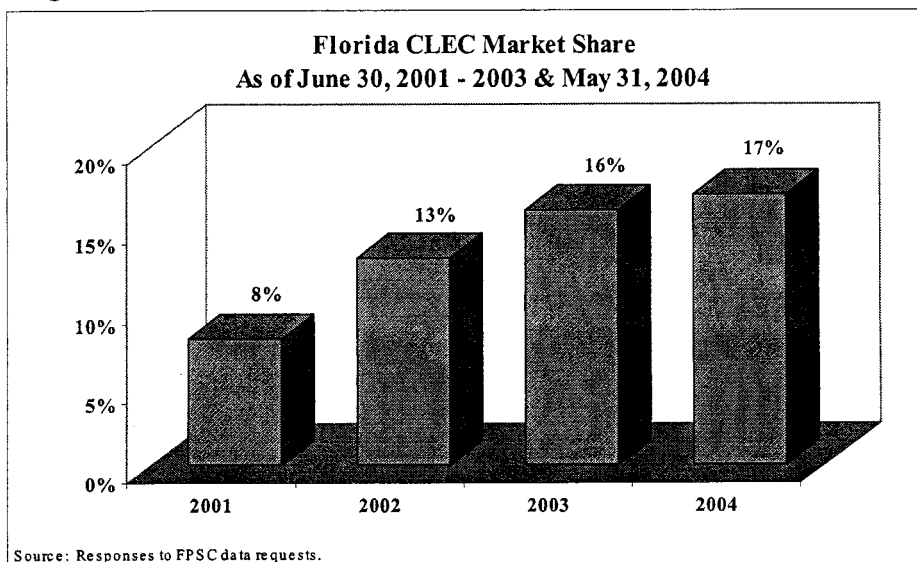
1. CLEC Market Share Growth⁵⁰

Calculations based on responses to the Commission's data request indicate the following Florida market share information as of May 31, 2004:⁵¹

- Overall CLEC market share increased to 17% from 16% last year.
- CLEC business market share is 30%, the same as last year.
- CLEC residential market share increased to 10% from 9% last year.

Figure 1 provides the overall CLEC market shares for 2001 through 2004.

Figure 1



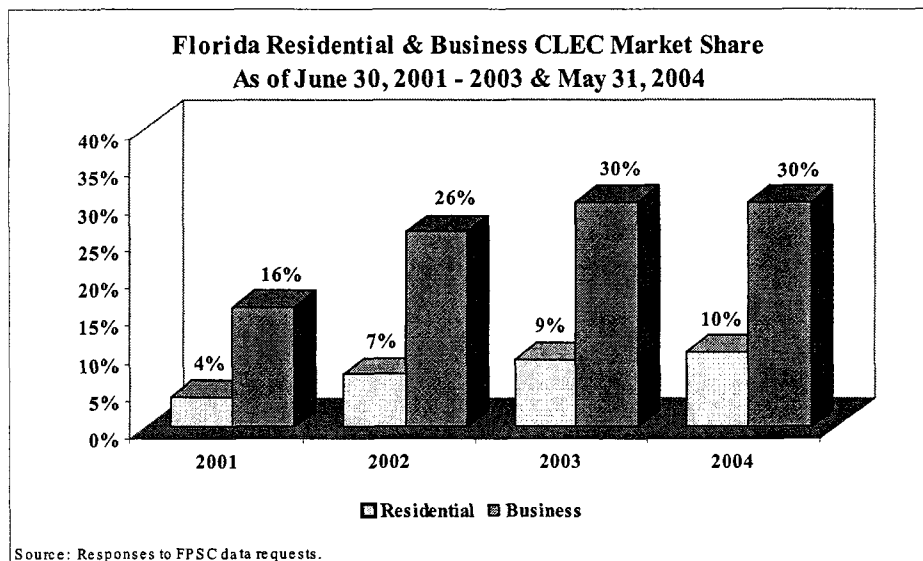
⁴⁹ This section discusses data regarding the market shares of incumbent and competitive local exchange providers. It does not analyze the overall market for voice communications or the market share of non-jurisdictional companies (e.g., wireless or VoIP providers).

⁵⁰ CLEC business line counts reported in the 2003 Annual Report on Competition have been restated for the 2004 report. This revision was necessary because a CLEC that reported a substantial number of lines for the 2004 report failed to submit its data in time to be included in the 2003 report. Restating the 2003 lines results in more comparable year-to-year figures. The restated 2003 data affected business lines only and are reflected in Figures 2 through 4, 6 through 9, and Tables 1 through 5 that follow.

⁵¹ Commission results may differ from that reported by the FCC for comparable periods due to FCC procedures that capture data only from CLECs serving 10,000 or more access lines.

Figure 2 provides a breakdown of the CLEC residential and business market shares.

Figure 2



2. Access Line Comparisons

Based on responses to the Commission's data requests, local exchange companies were serving 11,715,986 lines in Florida as of May 31, 2004. Table 1 summarizes the changes in access lines for both ILECs and CLECs for the 2001 through 2004 reporting periods. Total access lines in Florida declined approximately 1/2% in the reporting period, the third straight year of decline. Business lines showed a strong increase during the year, but were offset by a significant loss of residential lines, presumably to broadband, wireless and VoIP providers. Total access lines in Florida have declined 3% since 2001. Over this same period, ILECs have lost 12% of their lines to CLECs, broadband and intermodal providers. CLEC lines have increased by 107% since 2001. However, the number of CLEC lines has increased by only 6% since 2003. (See further discussion of access line trends in Section II.B.)

Table 1 Florida Access Line Comparison

	2001			2002			2003			2004			Increase over 2001
	Residential	Business	Total	Residential	Business	Total	Residential	Business	Total	Residential	Business	Total	
ILECs	7,931,047	3,139,959	11,071,006	7,513,073	2,748,419	10,261,492	7,203,749	2,688,870	9,892,619	6,804,789	2,925,322	9,730,111	<12%>
CLECs	366,653	594,223	960,876	546,040	959,294	1,505,334	726,638	1,143,936	1,870,574	730,094	1,255,781	1,985,875	107%
Total	8,297,700	3,734,182	12,031,882	8,059,113	3,707,713	11,766,826	7,930,387	3,832,806	11,763,193	7,534,883	4,181,103	11,715,986	<3%>

Source: Responses to FPSC data requests.

3. CLEC Market Penetration by ILEC Service Area

Table 2 provides a breakdown of ILEC access lines by the three major ILECs (BellSouth, Sprint, and Verizon) and a total line count for the rural ILECs (ALLTEL, Frontier, GT Com, ITS, Northeast Florida, Smart City and TDS/Quincy). The rural ILECs' lines are combined to preserve the confidentiality of CLEC lines. CLECs show the heaviest market penetration in BellSouth's territory, followed by the territories of Verizon and Sprint, then the rural ILECs.

ILEC	ILEC			CLEC			Total			CLEC Share		
	Res	Bus	Total	Res	Bus	Total	Res	Bus	Total	Res	Bus	Total
BellSouth	3,724,738	1,677,735	5,402,473	665,725	895,036	1,560,761	4,390,463	2,572,771	6,963,234	15%	35%	22%
Verizon	1,580,228	597,162	2,177,390	24,140	231,631	255,771	1,604,368	828,793	2,433,161	2%	28%	11%
Sprint	1,357,953	599,258	1,957,211	37,275	125,738	163,013	1,395,228	724,996	2,120,224	3%	17%	8%
Rural ILEC	141,870	51,167	193,037	2,954	3,376	6,330	144,824	54,543	199,367	2%	6%	3%
Grand Total	6,804,789	2,925,322	9,730,111	730,094	1,255,781	1,985,875	7,534,883	4,181,103	11,715,986	10%	30%	17%

Source: Responses to FPSC data requests.

Figure 3, showing CLEC market share by ILEC, reflects some growth in CLEC penetration during the reporting period, although less growth than in previous years. Data also show CLEC market share in BellSouth's territory is more than double that achieved in Verizon's territory and almost triple that achieved in Sprint's territory. The key factors underlying this differential are that BellSouth has lower UNE rates and its territory includes the most densely populated areas of the state. These factors combined offer more favorable conditions for CLECs to compete.

Figure 3

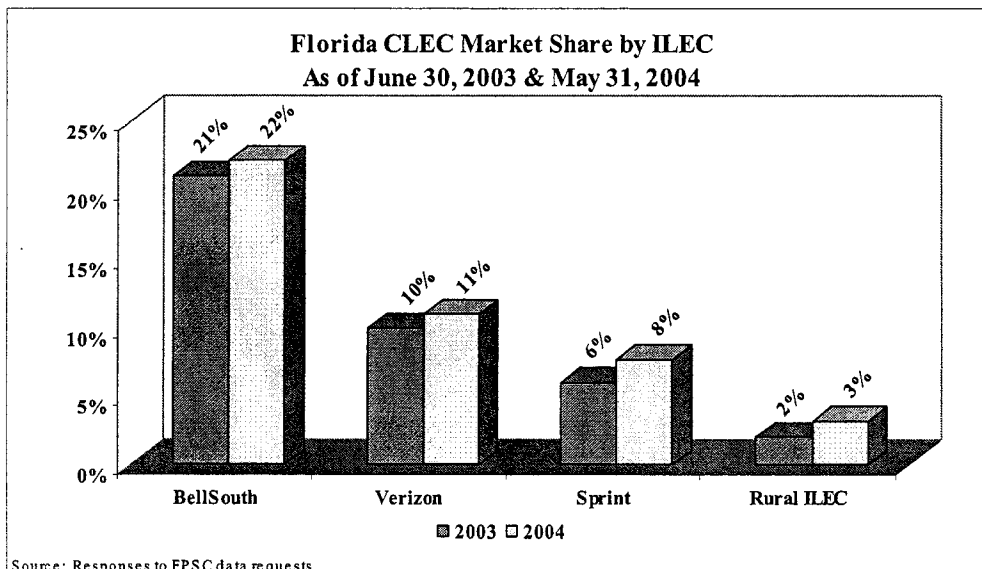
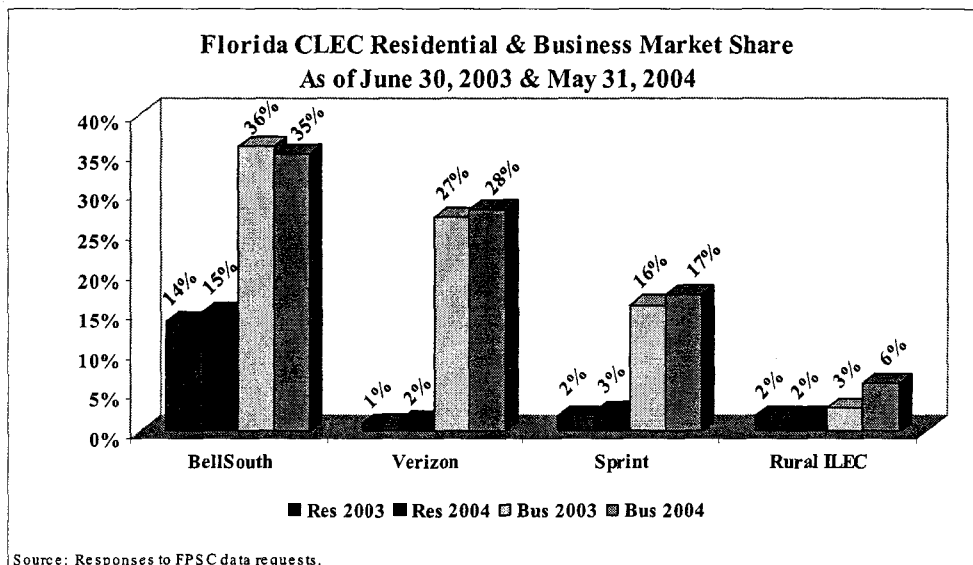


Figure 4 shows CLEC share of the residential and business markets by ILEC. The figure highlights that substantial residential competition is taking place mainly in BellSouth's territory. As will be discussed later, CLECs currently rely primarily on UNE-P to serve the residential

market, and UNE-P rates are lowest in BellSouth's territory. While additional reasons may exist, CLECs appear to have found it less profitable to enter the residential markets (at least using the UNE-P strategy) in Verizon's and Sprint's territories due to low margins between the ILEC's local rates (which ILECs and some facilities-based CLECs argue are artificially low) and the UNE-P rates (which many CLECs argue are too high).

Figure 4



4. Competitive Presence by Exchange

Table 3 shows that the number of exchanges with three or more competitors continues to increase, although at slower rates of increase than in previous years.⁵² The number of exchanges with three or more CLECs increased from 243 in 2003 to 248 in 2004. Three or more CLECs now compete in 90% of Florida exchanges compared to 87% last year. However, the number of exchanges without CLEC providers increased from 8 in 2003 to 13 this year. Overall, approximately 95% of Florida exchanges have at least one CLEC competitor.

⁵² The 2003 Report erroneously stated that the number of exchanges with two or more CLECs was 12; the correct number was 11.

Table 3 Summary of Florida Exchanges With & Without CLEC Providers			
	2002	2003	2004
Exchanges with one CLEC provider	20	15	13
Exchanges with two CLEC providers	14	11	3
Exchanges with three or more CLEC providers	229	243	248
Exchanges without a CLEC provider	14	8	13
Exchanges without a business CLEC provider	61	57	56
Exchanges without a residential CLEC provider	19	13	17
Total exchanges in Florida	277	277	277

Source: Responses to FPSC data requests.

As the following tables indicate, CLECs concentrate on larger metropolitan areas. As discussed in our 2003 report, there are a number of reasons for this. The majority of Florida's most populated exchanges are in BellSouth's territory. Higher population densities improve economies of scale. These economies are reflected in BellSouth's costs and resulting UNE rates and explains in part why each exchange shown in Table 4 is in BellSouth's territory.

Table 4 Florida Exchanges with the Most CLEC Providers						
Exchange	Residential		Business		Total CLEC Providers	
	(2003)	(2004)	(2003)	(2004)	(2003)	(2004)
Miami	78	85	65	81	98	110
Fort Lauderdale	73	82	54	70	91	106
West Palm Beach	68	82	53	67	86	105
Orlando	67	76	53	62	88	104
Jacksonville	67	76	49	64	84	103
Hollywood	69	77	45	59	47	100
Coral Springs	53	77	35	61	67	99
North Dade	64	71	53	57	84	92
Perrine	55	66	42	52	74	87
Daytona Beach	54	56	41	52	75	82

Source: Responses to FPSC data requests.

Table 5 further illustrates the concentration of CLECs in the larger metropolitan areas. This table shows that 58% of CLEC access lines are concentrated in the ten largest Florida exchanges, whereas these exchanges serve 44% of total access lines in Florida. Six of the largest exchanges are in BellSouth's territory, three are in Verizon's, and one is in Sprint's. For reasons mentioned previously, CLECs have achieved significant residential market penetration only in the BellSouth exchanges.

Exchange		ILEC	Total Lines in Exchange			CLEC Total			CLEC Market Share		
			Res	Bus	Total	Res	Bus	Total	Res	Bus	Total
1	Miami	BellSouth	661,666	536,100	1,197,766	115,057	180,308	295,365	17%	34%	25%
2	Tampa	Verizon	445,673	338,277	783,950	10,486	110,541	121,027	2%	33%	15%
3	Fort Lauderdale	BellSouth	300,925	253,998	554,923	60,408	106,105	166,513	20%	42%	30%
4	Jacksonville	BellSouth	303,666	233,391	537,057	59,271	90,282	149,553	20%	39%	28%
5	West Palm Beach	BellSouth	326,746	166,876	493,622	43,550	53,658	97,208	13%	32%	20%
6	Orlando	BellSouth	268,556	216,786	485,342	42,987	89,883	132,870	16%	41%	27%
7	Hollywood	BellSouth	221,784	95,220	317,004	54,997	37,285	92,282	25%	39%	29%
8	St. Petersburg	Verizon	213,830	101,524	315,354	2,729	25,346	28,075	1%	25%	9%
9	Clearwater	Verizon	199,073	103,788	302,861	1,757	37,755	39,512	1%	36%	13%
10	Tallahassee	Sprint	101,155	119,575	220,730	4,343	18,352	22,695	4%	15%	10%
Grand Total			3,043,074	2,165,535	5,208,609	395,585	749,515	1,145,100	13%	35%	22%
% of Total Lines in FL			40%	52%	44%	54%	60%	58%			

Source: Responses to FPSC data requests.

A complete listing of CLEC providers by exchange is shown in Appendix B. The listing indicates that in the majority of Florida's exchanges, the number of CLEC providers has increased in both the residential and business marketplace.

B. STATUS OF COMPETITIVE MARKETS

1. Changing Market Trends

The previous section provided a description of the current market share positions of the Florida ILEC and CLEC providers. This section examines the underlying changes in access lines since 2001. This examination includes a closer look at the growth trends indicated by the data in Table 1 on page 21.

a. *Overall Access Line Trends*

The first trend discussed is the disparate growth rates for Florida residential access lines and Florida business access lines. From 2001 to 2002, total Florida access lines declined for the first time. However, as Figure 5 shows, business lines have since recovered and exhibited a particularly strong growth of 9% in 2004. This points to a strong business climate in Florida as an underlying factor. Residential lines, in contrast, show continued declines. A drop of 5% in 2004 represents the largest annual percentage loss to date. This decline indicates that traditional access lines are likely being lost to residential broadband providers and intermodal competitors. Intermodal competitors are those such as cable and wireless carriers providing service using their own technology and facilities rather than traditional telephone facilities.

Figure 5

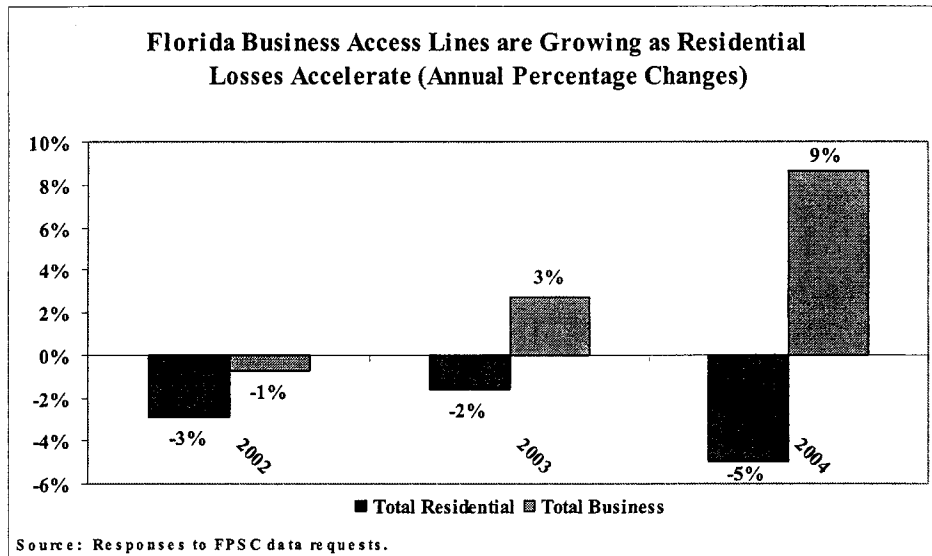
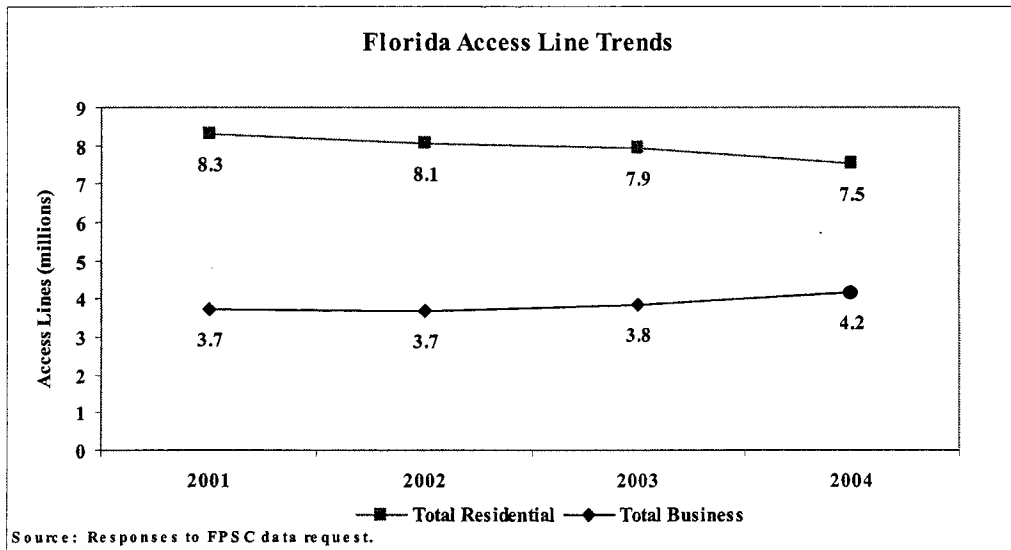


Figure 6 presents the data in terms of absolute line counts. This shows a loss of nearly 763,000 residential access lines over the past three years, with total residential access lines declining to 7.5 million lines. In the same period, businesses have added approximately 447,000 lines to total approximately 4.2 million.

Figure 6



b. ILEC versus CLEC Line Trends

Examining CLEC and ILEC access line growth, the data appear to indicate that both CLECs and ILECs are finding it increasingly difficult to compete in today's market and regulatory environment. Revealing that CLECs are not the beneficiaries of the recent ILEC access line decline, Figure 7 shows a large reduction in CLEC access line growth since 2001. While CLECs achieved 57% gains in overall access lines in 2002, and 24% growth in 2003, there was only marginal overall growth of 6% in 2004. This was comprised entirely of gains in the business market where annual growth was 10%. In the residential market, CLECs essentially had no growth, down from a 49% growth rate only two years earlier.

Figure 7

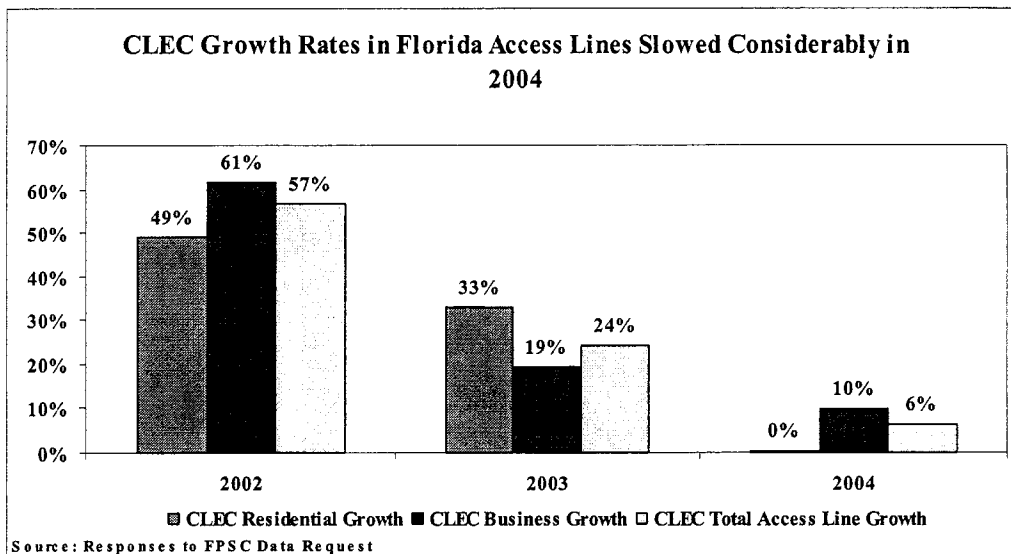
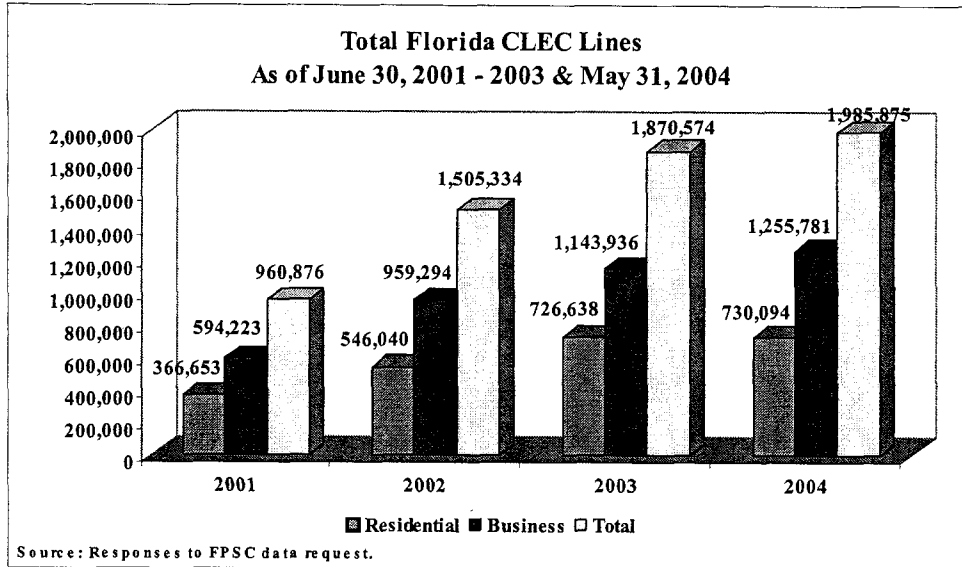


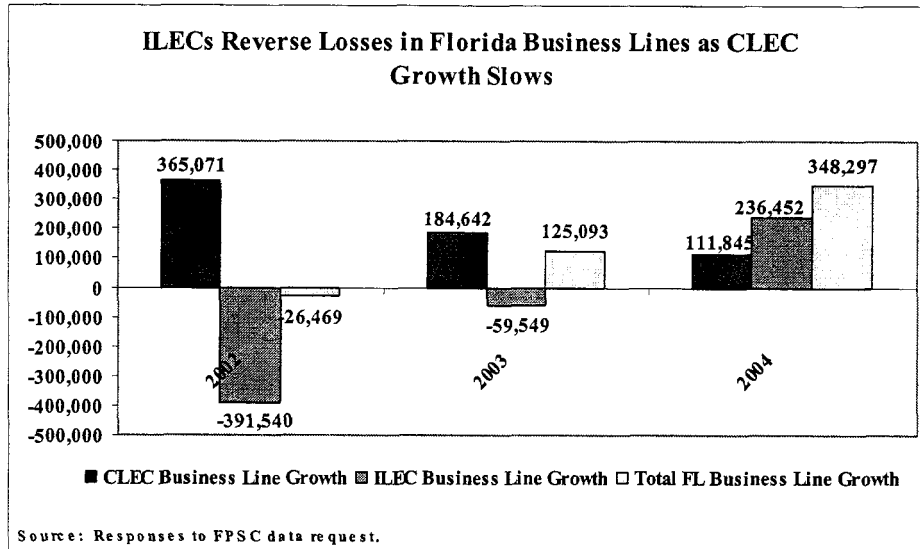
Figure 8 illustrates the percentage growth in CLEC access line counts for the most recent three years. The number of CLEC residential and business access lines each doubled from 2001 to 2004. The slow growth in 2004 is again distinguished from the strong gains of previous years.

Figure 8



Since Florida markets were opened to competition with the 1995 Florida act and the 1996 federal act, CLECs have made the greatest penetration in the business market. In competition with CLECs, ILECs have been offering discounted services to small and medium-sized businesses willing to sign extended contracts. These ILEC programs appear to be effective, as indicated by recent trends in business access lines. While total business line growth in 2004 was 9% (as shown in Figure 5) and CLECs maintained business line growth of 10% (Figure 7), this data does not capture the true magnitude of the shift in new business market share. Figure 7 above reveals that CLEC business line growth has fallen dramatically since the 61% growth posted in 2002. Further, Figure 9 below shows that the recent trend of ILEC business line losses and strong CLEC gains has reversed in 2004. In 2002 ILECs lost almost 400,000 business lines and CLECs gained over 365,000 such lines. In 2004 CLECs gained only 111,845 business lines, while ILECs gained over 236,000, accounting for 68% of the 2004 business line growth. Net business gains by both ILECs and CLECs, which occurred for the first time since 2001, indicate an improving business climate for the state as a whole.

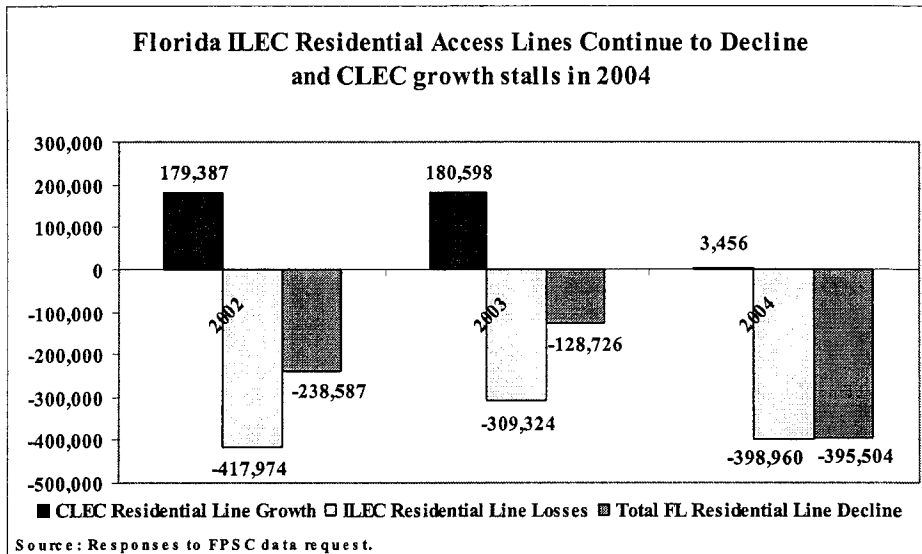
Figure 9



Just as in the business market, CLECs have seen strong growth rates in residential lines sharply curtailed in 2004. After gaining over 180,000 lines in 2003, as shown in Figure 10, CLECs saw only a marginal increase of 3,456 residential access lines in 2004. This decline in growth rates may be attributable to a number of factors, including: an overall depressed telecom sector; decreases in the level of capital flowing from Wall Street to the CLEC community; regulatory uncertainty regarding the fate of UNE-P; BellSouth's re-entry into the long distance market; price and service competition from ILECs' and others' bundled service offerings,⁵³ and competition from intermodal competitors such as wireless, cable and VoIP carriers.

⁵³ These bundled offerings may include choices of local, long distance, DSL, and now satellite TV and wireless services at discounted prices.

Figure 10



While the net number of business lines increased for this reporting period, the net number of residential access lines continued to decline, even in the face of continued Florida population growth. The largest net loss to date occurred in the 2004 reporting period when ILEC residential losses totaled approximately 399,000 lines and CLECs added only 3,456 residential lines. This points to the growing number of lines replaced by broadband connections and the influence of intermodal competition in the residential voice market. Intermodal competition is discussed in greater detail in Chapter IV.

Section 271 of the 1996 Act also has contributed to the development of the competitive environment faced by market participants today. Section 271 allowed the RBOCs to re-enter the market for long distance services, subject to an extensive pre-qualification process by the FCC and state commissions. BellSouth began offering long distance service in Florida after receiving FCC approval for the Florida market in December 2002. Upon re-entry into long distance, RBOCs quickly achieved significant market share. In July 2004, BellSouth announced a total of 5.1 million long distance customers and 39.7% penetration of its mass market customers region-wide. In Georgia and Louisiana, where BellSouth first gained 271 approval two years ago, the penetration rate is up to 44.1%. In Florida and Tennessee, where BellSouth has been competing for only six quarters, the penetration rate is 35.8%.⁵⁴ Verizon reported even stronger long distance results, with 45% long distance penetration of regional access lines as of the first quarter of 2004.⁵⁵

⁵⁴ BellSouth Investor News. April 22, 2004. <http://www.bellsouth.com/investor/pdf/1q04p_news.pdf>.

⁵⁵ Verizon 1Q 2004 Earnings slide presentation. April 27, 2004. <<http://investor.verizon.com/financial/quarterly/VZ/1Q2004/>>.

2. Impact of Regulatory Changes

In addition to competition from other local exchange providers and from intermodal competitors, ILECs and CLECs faced significant regulatory uncertainty this past year. As discussed in this report, UNE-P is currently the most prevalent strategy used by CLECs in Florida. By combining an ILEC's switching with its loop and transport elements, UNE-P allows CLECs to compete with little or no investment in their own facilities. Facilities-based competitors, like Florida Digital Network and Knology, combine their own switching facilities with existing loop and transport facilities of the ILEC (sometimes called the "bottleneck" facilities) to provide service. The majority of Florida CLECs have, thus far, relied on UNE-P to serve the mass market and have built a substantial customer base by offering unlimited local and long distance services for a single discounted price. The prevalence of UNE-P will likely change in the near future, however, due to regulatory and related court decisions aimed at promoting facilities-based strategies and due to CLECs' efforts to modify their business plans accordingly.

While there are numerous regulatory decisions by the FCC and state commissions that are impacting ILECs and CLECs, the following discussion focuses on those regulatory changes that have implications on the future of the UNE-P strategy as well as on the future of facilities-based strategies.

a. TRO and Its Appeal

On August 21, 2003, the FCC released its *Triennial Review Order (TRO)*,⁵⁶ which contained revised unbundling rules and responded to the D.C. Circuit Court of Appeals' remand decision in *USTA I*.⁵⁷ The TRO had eliminated enterprise switching as a UNE on a national basis. For other UNEs (e.g., mass market switching, high capacity loops, dedicated transport), the FCC made a national finding of impairment, but acknowledged there may be areas where impairment does not exist; the FCC delegated to the states the task of identifying these areas.⁵⁸ In addition, the TRO imposed new obligations on ILECs (e.g., commingling and conversion of special access to Enhanced Extended Links (EELs)). The TRO did not address the issues of UNE pricing or retail rates charged by ILECs or CLECs. The TRO was subsequently appealed to the D.C. Circuit Court of Appeals.

⁵⁶ In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket Nos. 01-338, 96-98, 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, rel. August 21, 2003.

⁵⁷ *United States Telecom Association v. FCC*, 290 F.3d 415 (D.C. Cir. 2002) (*USTA I*).

⁵⁸ The FCC directed the states to make their determinations within nine months of the effective date of the order. In response to the *TRO*, the Commission opened three dockets. See Chapter VI for more information on the Commission dockets regarding implementation of the *TRO*.

On March 2, 2004, the D.C. Circuit Court of Appeals, in *United States Telecom Ass'n v. FCC*⁵⁹ (*USTA II*), vacated and remanded certain provisions of the TRO. Among other holdings, the D.C. Circuit held that:

- The FCC cannot delegate its authority to the states, except for fact-finding and other limited circumstances.⁶⁰
- The states cannot be granted the authority by the FCC to make the impairment findings that the law requires the FCC to make.
- The FCC used an improper analysis in concluding that mass market switching was impaired nationally.
- The FCC used an improper analysis in concluding that certain dedicated transport was impaired nationally.

The FCC did not appeal the D.C. Circuit decision to the U.S. Supreme Court. In addition, the Solicitor General of the United States did not appeal the decision. Certain parties in the proceeding did appeal. The United States Supreme Court, however, declined to hear the appeal, and the D.C. Circuit decision stands.

The D.C. Circuit's ruling has provided guidance to the FCC regarding its unbundling duties under the 1996 Act. The Court specifically rejected the FCC's delegation of impairment findings to state commissions. The Court indicated the FCC could weigh other goals of the 1996 Act against impairment. The Court ruled that the market test for elements should not be too specific and must consider the *ability* of a CLEC to enter the market. The Court provided clarity by specifically upholding certain FCC decisions in the TRO, including not requiring ILECs to unbundle the broadband capabilities of hybrid copper-fiber loops and fiber-to-the-home loops. The Court also sent guidance through the following statement regarding the purpose of the 1996 Act:

The purpose of the Act is not to provide the widest possible unbundling, or to guarantee competitors access to ILEC network elements at the lowest price that government may lawfully mandate. Rather, its purpose is to stimulate competition – preferably genuine, facilities-based competition.⁶¹

⁵⁹ 359 F. 3d 554 (D.C. Cir. 2004) (*USTA II*), cert. denial, Nos. 04-12, 04-15, 04-18 (October 12, 2004).

⁶⁰ Specifically, the Court states: “We therefore vacate, as an unlawful subdelegation of the Commission’s §251(d)(2) responsibilities, those portions of the Order that delegate to state commissions the authority to determine whether CLECs are impaired without access to network elements, and in particular we vacate the Commission’s scheme for subdelegating mass market switching determinations. (This holding also requires that we vacate the Commission’s subdelegation scheme with respect to dedicated transport elements, discussed below.)” *USTA II* at 18.

⁶¹ *USTA II* at 31.

b. *FCC's Interim and Final Rules*

As a result of the Court's mandate, the FCC released an *Order and Notice* ("*Interim Rules*")⁶² on August 20, 2004, requiring ILECs to continue providing unbundled access to mass market local circuit switching, high capacity loops, and dedicated transport until the earlier of the effective date of final FCC unbundling rules or six months after Federal Register publication of the *Order and Notice*. Additionally, the rates, terms, and conditions of these UNEs are required to be those that applied under ILEC/CLEC interconnection agreements as of June 15, 2004.⁶³ In the event that the interim six months expires without final FCC unbundling rules, the *Order and Notice* contemplates a second six-month period during which CLECs would retain access to these network elements for existing customers, at transitional rates. Besides establishing interim measures, the *Order and Notice* seeks comment on, among other things, alternative unbundling rules that will respond to *USTA II*.

The FCC is seeking to finalize its rules by year end 2004. On August 23, 2004, certain ILECs filed a *Mandamus Petition*⁶⁴ with the D.C. Circuit in response to the FCC's *Order and Notice*, specifically seeking vacatur of the interim Triennial Order. Most notably, the ILECs strongly objected to the FCC allowing the addition of new customers during the first six months and the continued availability of switching, dedicated transport, and enterprise loops despite the lack of any impairment finding. On October 6, 2004, the Court entered an order holding the matter in abeyance until January 4, 2005. Numerous parties have indicated that if the FCC does not produce its final rules by year end 2004, they will seek a court order finding no impairment for switching, dedicated transport, and enterprise loops and a determination that such order be binding on states.

On September 13, 2004, the Interim Rules went into effect, and the FCC seems poised to issue final rules by year end 2004. Many expect the FCC's final unbundling rules (pursuant to the *USTA II* decision) to provide for CLECs to transition off of ILEC switches and to their own switches over some period of time at least in certain circumstances.⁶⁵ The final rules may also provide for stepped increases for access to ILEC switching during an interim period. It is unclear precisely how future rates for local switching will be established, and who will set such rates.

⁶² In the Matter of Unbundled Access to Network Elements, WC Docket No. 04-313; In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket No. 01-338, Order and Notice of Proposed Rulemaking, FCC 04-179, rel. August 20, 2004 (Order and Notice).

⁶³ Except to the extent the rates, terms, and conditions have been superseded by 1) voluntarily negotiated agreements, 2) an intervening FCC order affecting specific unbundling obligations (e.g., an order addressing a petition for reconsideration), or 3) a state commission order regarding rates.

⁶⁴ *United States Telecom Association v. FCC*, Petition for a Writ of Mandamus to Enforce the Mandate of the Court, August 23, 2004 (*Mandamus Petition*).

⁶⁵ Companies like Florida Digital Network, Supra, and Knology currently have self-provision switching.

If local switching is unbundled pursuant to section 271, the FCC has concluded that it must satisfy the "just and reasonable" standard,⁶⁶ a conclusion affirmed in USTA II.⁶⁷ There is substantial controversy as to whether such rates are subject to the section 252 arbitration process, with the states adjudicating any dispute concerning the appropriate rates for local switching, or instead are subject to review by the FCC.⁶⁸ It is unknown when these matters will be resolved.

As with any regulatory change, the extent to which companies doing business in Florida are impacted will vary. CLECs that are serving the mass market via a UNE-P strategy and that are operating at the margins may be negatively impacted. In contrast, some facilities-based CLECs serving the mass market will likely be positively impacted.

The final rules will undoubtedly have an impact on CLEC business plans. Some CLECs, like Supra Telecom, that are providing service via both UNE-P and their own facilities, may increase reliance on their own switches/facilities. Other CLECs may merge, as Florida Digital Network and ITC DeltaCom have done, in order to obtain a larger footprint and greater economies of scale. While some CLECs may choose to exit the market, other CLECs may change their product offerings. Z-Tel Communications announced in July that it would stop seeking new customers for local and long distance telephone service in 43 of the 48 states it now serves.⁶⁹ Rather than a nationwide approach based on UNE-P, Z-Tel stated their new business model is to be based on targeting select urban centers with the company's own facilities, loops leased from the incumbents (UNE-L), and VoIP as the service method. Tampa, Florida is one of the metro areas Z-Tel intends to continue marketing. In addition, AT&T recently announced it was ending efforts to gain new residential customers in the traditional landline voice business. The company said it will no longer pursue long distance or local customers, except via its new VoIP undertaking, which the company is rolling out nationwide.⁷⁰ As of September 30, 2004, AT&T was offering residential VoIP service in 170 major markets throughout the U.S., covering 62% of U.S. households.⁷¹ MCI also reported in its 10-Q report filed with the SEC on August 9,

⁶⁶ TRO, paragraph 663 states:

Thus, the pricing of checklist network elements that do not satisfy the unbundling standards in section 251(d)(2) are reviewed utilizing the basic just, reasonable, and nondiscriminatory rate standard of sections 201 and 202 that is fundamental to common carrier regulation that has historically been applied under most federal and state statutes, including (for interstate services) the Communications Act. Application of the just and reasonable and nondiscriminatory pricing standard of sections 201 and 202 advances Congress's intent that Bell companies provide meaningful access to network elements.

⁶⁷ "Of course, the independent unbundling under §271 is presumably governed by the general nondiscrimination requirement of §202." USTA II at 53.

⁶⁸ See BellSouth Emergency Petition for Declaratory Rule and Preemption of State Action, WC Docket No. 04-245, Federal Communications Commission.

⁶⁹ Rodgers, Will. "Z-Tel CEO Outlines Survival Strategy." Tampa Tribune. July 29, 2004 <<http://money.tbo.com/money/MGBB7FC68XD.html>>.

⁷⁰ AT&T press release. July 22, 2004. <<http://www.att.com/ir/tn/>>.

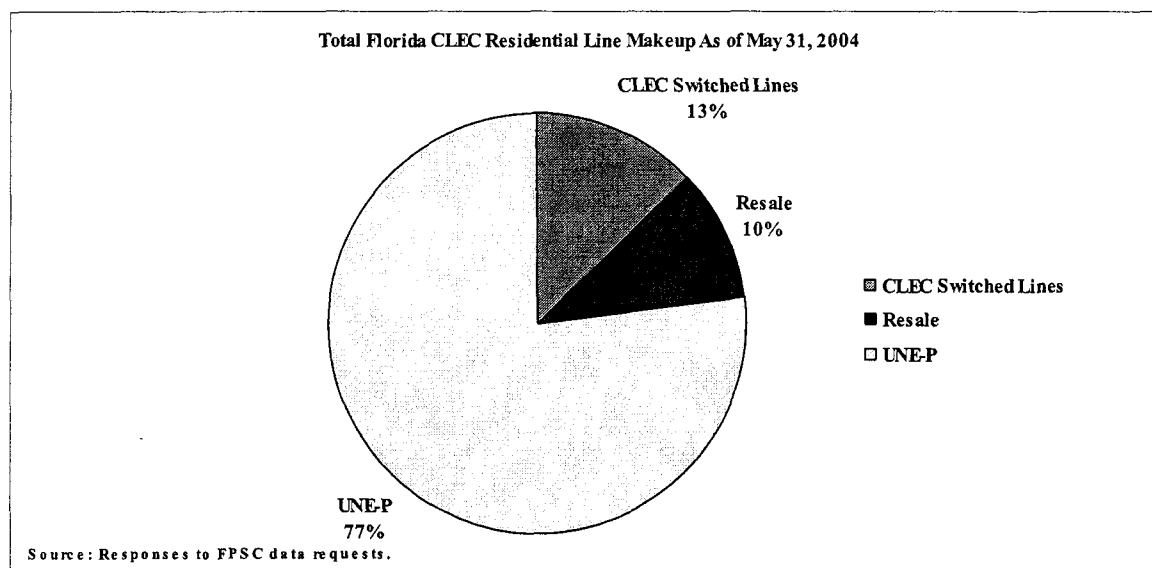
⁷¹ "AT&T announces Third-Quarter 2004 Earnings." AT&T Press Release. October 21, 2004.

2004, that the company “may be forced to raise residential phone services prices in some markets and pull out of others, and has reduced its sales efforts pending clarity on its future pricing structure.”⁷²

Past Commission reports on competition have highlighted the importance of UNE-P to a CLEC’s ability to compete for mass market customers. By combining switching with the loop and transport elements, UNE-P allows CLECs to compete with little or no investment in facilities (using resale to serve customers also requires no investment in facilities). CLECs in Florida, such as AT&T, MCI and Supra, have relied mainly on UNE-P to serve the mass market and have built a substantial customer base by offering unlimited local and long distance services for a single discounted price.

Figure 11 illustrates that a majority of CLECs in Florida have chosen a UNE-P strategy, as opposed to a UNE-L or total facilities-based strategy. Currently, 77% of CLEC residential lines are served via UNE-P, while another 10% are served through resale. Only 13% of CLEC residential lines are served through CLEC switches, and the majority of these lines are provisioned over cable company facilities that use traditional circuit switching technology.

Figure 11

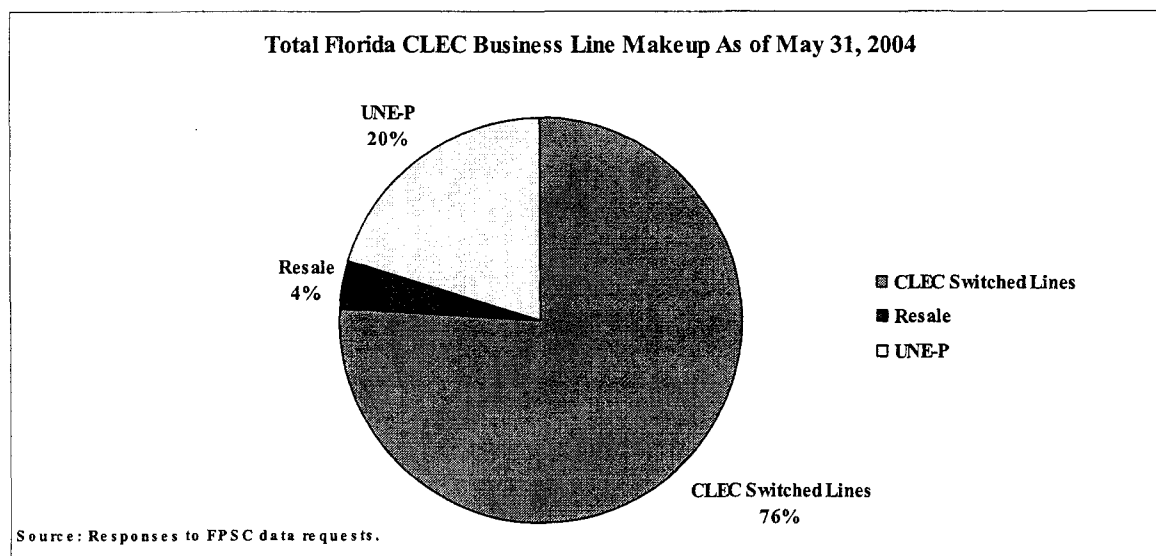


In the case of business offerings, the predominant method of service is facilities-based. These are lines served by CLEC switches and some combination of CLEC or ILEC loops and transport. Figure 12 shows that 76% of CLEC business lines are facilities-based, while 20% are served via UNE-P. Generally, these UNE-P lines are serving the small business market. Substantial increases in switching rates may make it unprofitable for some CLECs to serve such customers. The outcome of the FCC’s new rules regarding UNEs on the margins faced by

⁷² MCI Form 10-Q. Page 29. August 9, 2004. <http://global.mci.com/about/investor_relations/sec/>.

facilities-based CLECs is unclear. In particular, CLECs providing their own switching could still be subject to price increases for high-capacity loops, transport and enhanced extended links (EELs).

Figure 12



3. Market Shifts

As discussed in this report, major developments in the technological, competitive and regulatory arenas are contributing to significant shifts in the structure of the telecommunications market. The traditional telephone and cable networks have evolved into broadband digital networks capable of providing various combinations of voice, data and video applications. The competitive front in the voice market has progressed from not only an ILEC/CLEC focus, but to one that also takes into account the growing presence of intermodal competition. The Section 271 process of the 1996 Act also broadened the scope of competitive offerings as RBOCs reentered the market for long distance services, subject to an extensive pre-qualification process by the FCC and state commissions. In addition, the FCC's final unbundling rules will likely result in many CLECs shifting business plans away from UNE-P based offerings.

In this rapidly developing telecommunications marketplace, there may be an increased level of uncertainty regarding the future structure of competition. Some industry analysts believe incumbent voice providers could acquire market power in wireline communications. Others maintain that the future market for telecommunications could be concentrated around a small group of ILECs and cable providers resulting in reduced incentives for competition. However, some analysts believe that intermodal competition from wireless and cable providers will prevent such market contingencies. These analysts point to increasing price competition taking place among intermodal providers as evidence that it is already doing so. While the evidence of extreme outcomes, such as market power, is lacking, there is likely to be much debate about the future of telecommunications competition as the market evolves.

This chapter discussed certain data relating to ILEC and CLEC market share trends in Florida's market for wireline telephony. Specifically, the data cover certain shifts in residential and business share between Florida ILECs and CLECs. The following chapter discusses some of the macro trends which may be underlying market shifts in Florida, as well as the nation.

CHAPTER IV: ADVANCED COMMUNICATIONS LANDSCAPE

A. INTERMODAL COMPETITION

As discussed previously, major transitions taking place in the telecommunications industry have impacted the competitive pressures on providers seeking to serve mass-market consumers. Technological innovation and market conditions (e.g., limited pool of venture capital or financing for an increasing number of competitors) will undoubtedly impact how firms compete (and which firms win or lose). Some analysts predict that providers of traditional voice communications will face substantial competitive pressures (i.e., some firms will not survive) as intermodal providers emerge to serve mass-market consumers without reliance on ILEC telephone networks. Cable, wireless and other intermodal providers could bring in the anticipated vibrant, facilities-based competition that would forever change the face of the telecommunications market. As the Wall Street Journal recently reported:

The cable and telecommunications industries are raiding each other's turf at such a dizzying pace that the lines between them are blurring like never before. Indeed, it's becoming almost impossible for communications companies to stay competitive without branching into a whole new business. Nearly all of the large cable operators in the U.S. are offering phone service over the Internet.⁷³ All of the regional Bells have formed partnerships with satellite operators to offer TV service, as SBC has done, and some, like Verizon, are building fiber-optic networks so they can offer television signals over their phone lines. For consumers, the competition means lower prices and more choice...⁷⁴

In an August 2004 interview, Sprint CEO, Gary Forsee, predicted substantial competition from the cable and wireless sectors, stating:

What the government has to pay attention to is overall competition. Is cable going to be able to gain traction and become a viable competitor to the RBOCs? I think that's probably the case. Wireless is a real competitive threat to the local-access business. The Vonage types, the power-line types, those are niches around the edge and will gain some share, but real competition will come from cable and wireless.⁷⁵

A Wall Street Journal article bluntly noted the threat these other sources – cable, wireless, and VoIP – are posing to traditional telecommunications providers. “The cable industry’s push into the phone business and a torrent of innovations such as Internet calling and

⁷³ Although there is a common misconception that all VoIP traffic travels over the Internet, the large cable companies actually offer VoIP over cable plant using Internet protocol.

⁷⁴ Latour, Almar, “Free for All,” The Wall Street Journal, September 13, 2004, p. R1.

⁷⁵ Pappalardo, Denise and Paul McNamara. “Forsee Talks Telecom.” Network World. August 9, 2004. <<http://www.nwfusion.com/>>.

advanced wireless technology are threatening the foundations of the nation's \$300 billion telecom industry."⁷⁶ The scale of competitive rollout is an unprecedented challenge to ILECs. Comcast plans to have 95% of its cable network VoIP-capable by 2006. This would provide the ability to offer VoIP service to approximately 40 million homes.⁷⁷ Time Warner plans to have its Digital Phone service available to the nearly 19 million homes in its service territory by the end of 2004.⁷⁸ Cablevision already offers voice service throughout its service territory of over four million households⁷⁹ and Cox Communications currently has over one million customers using traditional and Internet-based voice service.⁸⁰

Fortunately for consumers, the competition from these non-traditional voice providers is resulting in lower prices in some areas:

In response to \$29.95 digital-subscriber-line phone (DSL) service from telecom rival Verizon, Cablevision decided to do a little discount pricing itself. In June, the nation's sixth-largest cable operator, with 3 million subscribers in New York, New Jersey, and Connecticut, began temporarily offering new customers a "triple play" bundle of high-speed Internet service, unlimited phone service, and, of course, digital cable TV, for \$90 per month for the first year. That dramatically undercut Verizon's combined voice, DSL, and satellite TV package of \$135.⁸¹

The following discussion centers on these emerging intermodal competitors and the opportunities they bring to the market.

1. Voice over Internet Protocol

Voice over Internet Protocol (VoIP) is a technology that uses a broadband connection for voice communications over the public Internet or private IP-based networks. Although VoIP has been around for nearly a decade, entering 2003 it was still a relatively obscure technology used

⁷⁶ Brown, Ken and Almar Latour. "Heavy Toll: Phone Industry Faces Upheaval as Ways of Calling Change Fast." Wall Street Journal. August 25, 2004. p. A1.

⁷⁷ Hibbard, Justin. "Comcast's Virile VOIP Story." Light Reading. May 27, 2004. <http://www.lightreading.com/document.asp?doc_id=53568&site=lightreading>. Accessed November 8, 2004.

⁷⁸ Greene, Tim. "Supercomm keynote: VoIP has Potential For Cable Companies." Network World Fusion. June 23, 2004. <<http://www.nwfusion.com/edge/news/2004/0623sccable.html>>. Accessed November 8, 2004.

⁷⁹ Maiella, Jim. "Cablevision Announces First Widescale Digital Voice-Over-Cable Deployment." Cablevision Website, Corporate Information. November 11, 2003.

⁸⁰ Senia, Al. "Exclusive: Cox Decides VoIP is Ready for Prime Time." America's Network Enews. September 13, 2004. <<http://www.americasnetwork.com/americasnetwork/article/articleDetail.jsp?id=122134>>. Accessed November 8, 2004.

⁸¹ Pethokoukis, James. "War of the Wires." U.S. News & World Report. Sept. 27, 2004. <<http://www.usnews.com/usnews/issue/040927/tech/27cable.htm>>.

mainly by tech-savvy individuals for computer-to-computer voice communications. VoIP gained substantial momentum during 2003 as start-up companies like Vonage, Packet8 and Net2Phone began offering VoIP service that provided much of the functionality of traditional telephone service. Subscribers could make calls using a standard handset plugged into a device connected to the customer's broadband line, and call quality was much improved.

VoIP's momentum has grown since 2003 as signalled by a dramatic increase in subscribers and numerous service launch announcements by major cable Multiple System Operators (MSOs).⁸² As year 2004 has progressed, VoIP's momentum has increased such that it appears to have made the transition from a technology-driven to a market-driven service.⁸³ Vonage has emerged as a market leader in 2004 with approximately 215,000 subscribers and an average of 10,000 new VoIP lines added per month.⁸⁴ In perhaps a more significant signal of VoIP's emergence, major MSOs have launched an all out assault on the market with aggressive schedules for VoIP service rollouts over the next two years. (See discussion of cable telephony later in this chapter, in Section 3.) The MSO rollouts are significant in several respects. In communities where MSOs offer service, subscribers have been signing up at a rapid pace, and some industry analysts expect these companies to gain the lead quickly over alternative voice providers like Vonage.⁸⁵ Moreover, if the MSOs meet their timetables, service will be available to a significant percentage of the nation's households by the end of 2006.

Adding further to VoIP's momentum, traditional telephone companies have entered the race. Verizon,⁸⁶ the nation's largest RBOC, and AT&T,⁸⁷ the largest IXC and CLEC, have launched service nationwide. Another RBOC, Qwest, also has announced that it will roll out business services nationwide by year-end and residential services thereafter.⁸⁸ Additionally, AT&T is not the only major CLEC entering the fray. Covad also sees a future in VoIP as it

⁸² An MSO is a company that operates more than one cable TV system.

⁸³ "VoIP Finds Its Sweet Spots – You May Be Surprised Where." Connecticut Research, Inc. <www.connecticutresearch.net>.

⁸⁴ Vonage website. <<http://www.vonage.com/>>.

⁸⁵ Yankee Group press release. August 2, 2004.

⁸⁶ Verizon. "Verizon Rings In Next Generation of Voice Services With VoiceWing Broadband Phone Service." News Release. July, 22, 2004. <<http://newscenter.verizon.com/proactive/newsroom/release.vtml?id=86115>>. Accessed November 8, 2004.

⁸⁷ AT&T. "AT&T Introduces New Residential VoIP Plan." News Release. October 14, 2004. <<http://www.att.com/news/item/0,1846,13281,00.html>>. Accessed November 8, 2004.

⁸⁸ Qwest. "Qwest Launches Integrated Voice and Data Service Using VoIP Technology." Press Release. October 4, 2004. <http://www.qwest.com/about/media/pressroom/1,1720,1604_archive,00.html>. Accessed November 8, 2004.

plans to launch service in all 100 of its MSAs by the end of 2004.⁸⁹ MCI also has stated its intention to offer mass market VoIP service, but has not yet announced a launch date.⁹⁰

As VoIP gains momentum, other ILECs may see a need to have their own VoIP offerings in order to compete. Offering VoIP may have both offensive and defensive purposes. ILECs can take the offensive by crossing territorial boundaries to compete for customers, because service can be provided over any broadband connection. Defensively, VoIP offerings may be needed to fight off the very real threat from cable companies' newer networks and triple-play offerings.

VoIP's impact on both the competitive and regulatory landscapes will be significant. Some experts believe that VoIP has the potential to become the long-awaited 'killer app' that may spur further broadband growth. Additionally, the technology may represent "the most significant paradigm shift in the entire history of modern communications, since the invention of the telephone," said FCC chairman Michael Powell earlier this year to journalists at the World Economic Forum.⁹¹ As if to show he was not exaggerating, Chairman Powell re-emphasized that statement in a prediction to U.S. telecommunications groups that "a wave of competition from internet-based telephone calls would turn the industry on its head."⁹²

The rapid growth of alternative providers like Vonage is possible, because VoIP can be provisioned without investment in extensive infrastructure; service can ride on broadband infrastructures built out by other companies. Low capital requirements will help fuel growth that by some estimates is expected to capture some 17.5 million users, about 16% of U.S. homes, by the end of 2008.⁹³ (See Figure 13) The majority of these are expected to be served by cable companies,⁹⁴ because their ubiquitous networks extending to customer premises and triple-play service offerings could provide a significant advantage over other alternative providers. VoIP may be a key weapon in cable's bundled service offerings in an all-out war to win consumers away from ILECs.

⁸⁹ Covad. "Covad Launches Voice over IP Services Based on Cisco Equipment that Provides Enhanced Performance to Customers Nationwide." News Room. August 31, 2004. <http://covad.com/companyinfo/pressroom/pr_2004/083104_news.shtml>. Accessed November 8, 2004.

⁹⁰ MCI. "MCI and Time Warner Cable Partner to Deliver Next Generation, IP-Enabled Communications." Press Release. December 8, 2003. <<http://consumer.mci.com/cablevoice/timeWarnerPR.jsp>>. Accessed November 8, 2004.

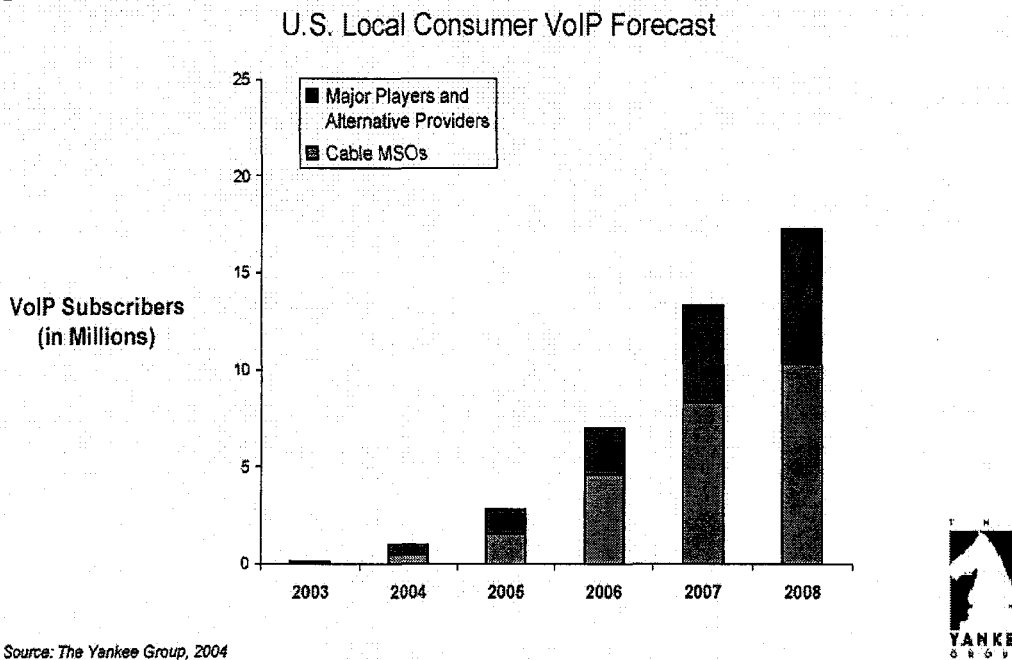
⁹¹ Statement by FCC Chairman Michael K. Powell at the World Economic Forum in Davos, Switzerland on January 22, 2004.

⁹² Remarks of FCC Chairman Michael K. Powell at the NCTA Convention on May 4, 2004.

⁹³ The Yankee Group news release. August 30, 2004.

⁹⁴ Ibid.

Figure 13



VoIP appears to be making significant inroads into the business market as well. According to Gartner analysts, VoIP is moving toward mainstream acceptance. While about 15% of all telephones shipped to businesses today use VoIP, shipments are expected to exceed 50% by 2006. Lower cost is an important component in adopting IP telephony systems and most enterprises are waiting for replacement cycles to remove older digital and analog telephone systems. The results of a ZDNet survey of over 400 IT professionals reveal that one third have paved the way for VoIP by converging a significant part of their voice and data networks. In addition to cost savings and integrated collaboration features such as videoconferencing, the benefit of increased productivity is cited as a key factor in adopting IP telephony.⁹⁵

The proliferation of VoIP raises some potentially thorny regulatory issues that are under considerable debate. Some state utility commissions, such as California, Minnesota and New York, have asserted jurisdiction over VoIP services, although these rulings have been challenged in the courts. In Florida, the legislature found in 2003 that the provision of VoIP free of unnecessary regulation, regardless of provider, is in the public interest.⁹⁶ The Florida legislature specifically excluded VoIP from the definition of telecommunications service for purposes of regulation by the Commission. This exclusion is subject to the reservation of rights and obligations of any entity with respect to payment of access charges or other intercarrier compensation, if any, related to VoIP. Recently, the Commission submitted comments to the FCC that a national policy framework, consistent with Florida's deregulatory approach, would

⁹⁵ Farber, Dan. "Top Strategic Technologies for 2005." April 2004.

⁹⁶ Chapter 364.01(3), Florida Statutes.

best ensure that this new consumer-friendly technology is not squelched by a patchwork of varying state regulations.

At the federal level, both the U.S. Senate and House of Representatives have introduced legislation on the appropriate regulatory framework for VoIP calls. While bills in both chambers would prohibit states from extending their jurisdiction over VoIP, the Senate Committee on Commerce approved a bill that would allow state regulation in three areas: universal service, 911 services, and access charges. House legislation would give the FCC exclusive jurisdiction over VoIP in those three areas. Congress also has indicated interest in a complete rewrite of the Telecommunications Act that would address VoIP and other important issues. Meanwhile, the FCC may preempt state regulation of VoIP in a proceeding it currently has underway. Underscoring the magnitude of the proceeding, Chairman Powell stated that it “is really the curtain going up on a new era of communications” and “is the most important item in communications history, in some ways.”⁹⁷ Other issues under consideration at the FCC deal with access of VoIP subscribers to emergency 911 services and law enforcement access for wiretapping under the Communications Assistance for Law Enforcement Act (CALEA).

One controversial regulatory issue is that VoIP providers currently do not pay many of the federal and state taxes and charges imposed upon traditional telephone companies. Telecommunications taxes are a significant source of state revenues, and states may seek to impose “old” taxes on this “new” technology. Other fees that currently do not apply to VoIP are Universal Service charges used to keep rates affordable in high-cost service areas and to subsidize low income subscribers. The debate over whether or not VoIP providers should pay the same taxes and fees as other voice providers will likely intensify as more voice traffic migrates off the PSTN and onto IP networks. At this point, it is unknown how and when the VoIP regulatory issues will be resolved.

With the migration of circuit-switched to packet-switched networks and advancements in VoIP protocols, VoIP may eventually reshape the entire competitive telecommunications landscape as we know it today. This reshaping, however, will take time as standardization of protocols and procedures will be needed for networks to interoperate.⁹⁸ Additionally, because existing data networks are designed for delivery of data traffic, not time-sensitive voice traffic, emphasis continues to be on improving ways to ensure optimal voice traffic delivery through enhanced routing protocols⁹⁹ and bandwidth management applications that shape, prioritize, compress and accelerate traffic to give real-time voice traffic higher quality and reliability than other types of traffic.¹⁰⁰

⁹⁷ Statement by FCC Chairman Michael K. Powell, IP-Enabled Services, WC Docket No. 04-36 (rel. March 10, 2004).

⁹⁸ Taaffe, Quida. “AT&T Aims to Get an Edge with Network Upgrade.” September 2003. Accessed Sept 15, 2003.

⁹⁹ Lancaster, Tom. “Routing and Switching: OSPF Configuration.” May 2004. Accessed May 11, 2004.

¹⁰⁰ Rendon, Jim. “Engineering VoIP Savings with Bandwidth Management.” April 2004. Accessed April 26, 2004.

2. Wireless

Demand for wireless telephone service continues to grow, and some of this growth appears to be occurring at the expense of local exchange company access lines. According to the FCC, the number of mobile wireless subscribers nationwide has grown 5% since 2002, with subscribership at 54%¹⁰¹ of the U.S. population as of December 31, 2003. In contrast, local exchange companies saw another 6.1 million drop in access lines nationwide in 2003, a 3.3% decline from the previous year.¹⁰² While it is unknown what share of wireline losses are attributable to wireless, a growing number of wireless subscribers either see wireline service as unnecessary, or consider their wireless telephone to be their primary telephone. The FCC concluded in a recent study while evaluating the merger between Cingular and AT&T Wireless that while the switch from wireless to wireline is a fairly recent occurrence and is not widespread, it has the potential to become a "substantial source of facilities-based competition in the future."¹⁰³

It is yet to be seen whether there will be widespread acceptance of wireless as a substitute for wireline. The FCC has found that, "...Consumers tend to use wireless and wireline services in a complementary manner and view the services as distinct because of differences in functionality."¹⁰⁴ Currently, about 7.5 million Americans use wireless telephones as their only telephones.¹⁰⁵ According to a report issued by In-Stat/MDR, 14.4% of U.S. consumers currently use a wireless telephone as their primary telephone.¹⁰⁶ Of the remaining 85.6% still using landline as their primary telephone, 26.4% of those would consider replacing it with wireless. This signifies considerable potential for wireline displacement over the next few years.¹⁰⁷ In-Stat/MDR predicts that by 2008, nearly a third of all U.S. wireless subscribers will no longer have a landline in their homes.¹⁰⁸ This trend seems to be confirmed by Florida consumer surveys conducted for this Commission by the University of Florida Bureau of Economic and Business Research (BEBR). These surveys reveal that a growing number of Florida's residential subscribers are considering dropping traditional wireline service in favor of wireless. Currently, 32% are considering the switch (Figure 14).

¹⁰¹ FCC Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Radio Services, *Ninth Report*. FCC 04-216. Released September 28, 2004.

¹⁰² FCC Report on Local Telephone Competition: Status as of December 31, 2003. Released June 2004.

¹⁰³ FCC Memorandum Opinion & Order. FCC 04-255. Paragraph 242. Released October 26, 2004.

¹⁰⁴ FCC Memorandum Opinion & Order. FCC 04-255. Paragraph 239. Released October 26, 2004.

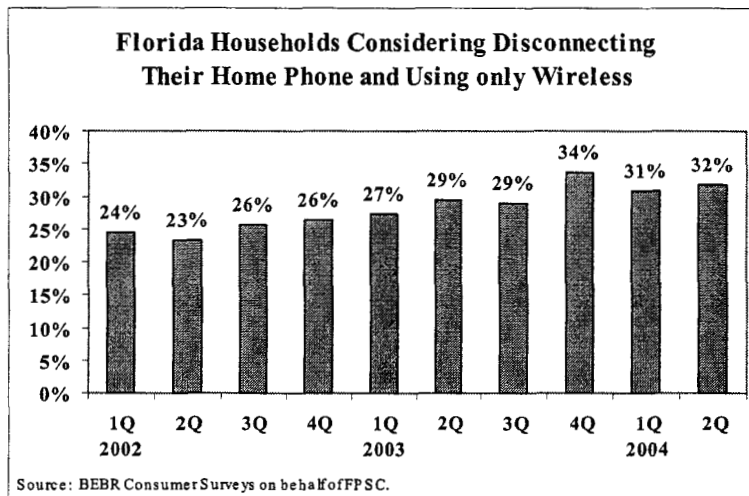
¹⁰⁵ <<http://www.myrateplan.com/wireless/knowledge/totally.php>>. CTIA cited as source.

¹⁰⁶ This statistic only shows those that use wireless telephones as their primary telephones. This does not necessarily mean that they have disconnected their landline connection.

¹⁰⁷ Skedd, Kirsten. "Landline Displacement to Increase as More Wireless Subscribers Cut the Cord." InStat/MDR Press Room. February 25, 2004. <<http://www.instat.com/press.asp?Sku=IN0401644MCM&ID=895>>. Accessed May 3, 2004.

¹⁰⁸ *Ibid.*

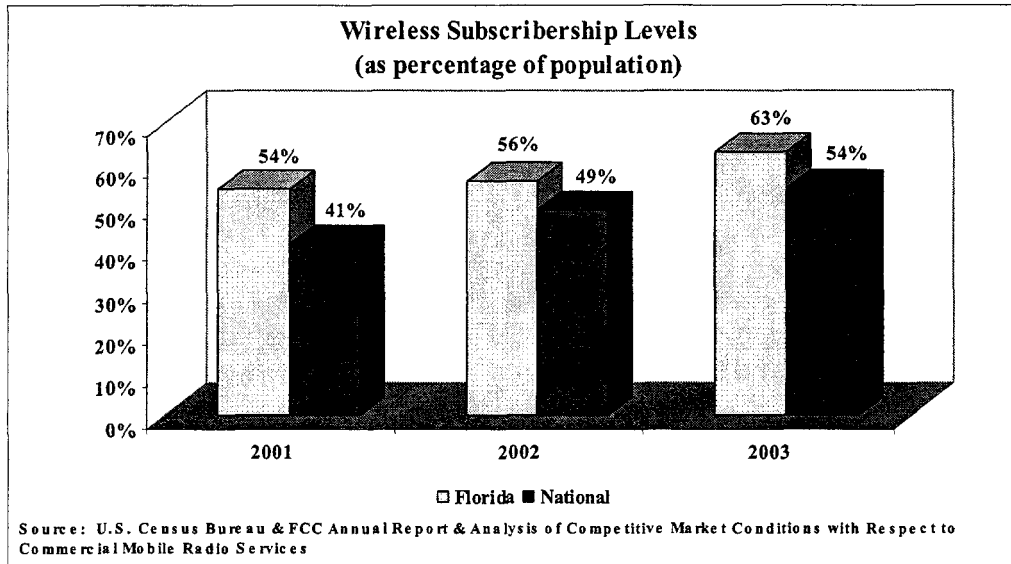
Figure 14



Following the national trend, Florida wireless subscribership grew from 56% in 2002 to 63%¹⁰⁹ in 2003. Subscribership levels in Florida remain higher than the national average, which may indicate that Florida local exchange companies are more vulnerable to wireless substitution. Figure 15 reflects FCC and census data comparing Florida subscribership to national subscribership levels for the years 2001, 2002, and 2003.

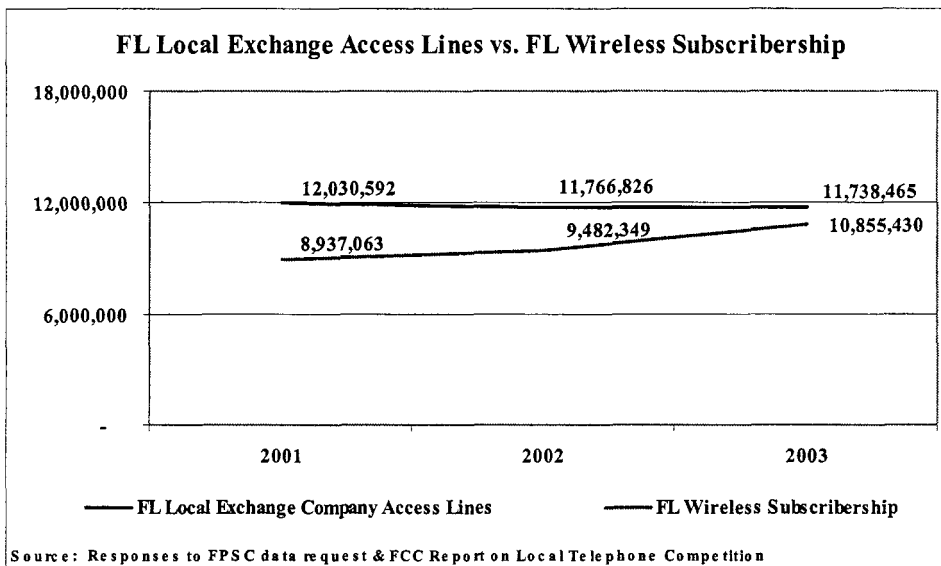
¹⁰⁹Calculation based on Total Population from the February 2004 FL Demographic Estimating Conference as reported by the Florida Legislature, Office of Economic and Demographic Research and Mobile Wireless Subscribership as reported in the FCC Report on Local Telephone Competition: Status as of December 31, 2003. Released June 2004.

Figure 15



While the number of wireless subscribers has grown to 10,855,430, an increase of almost 1.4 million, local exchange company access lines in Florida have slowly declined since 2001.¹¹⁰ However, it is unknown exactly how much of the wireline displacement is attributable to wireless substitution. (Figure 16)

Figure 16



¹¹⁰FCC Report on Local Telephone Competition: Status as of December 31, 2003. Released June 2004.

The wireless industry's significant growth in revenues and displacement of wireline minutes of use (MOU) also testifies to its impact on the telecommunications landscape. Wireless revenues nationwide have increased from approximately \$482 million in 1985¹¹¹ to over \$88 billion in 2003.¹¹² Wireless MOU showed similar dramatic increases over the same period. According to research by the Yankee Group, U.S. wireless subscribers used on average 490 minutes per month in 2002, surpassing the 480 minutes per person each month for wireline service.¹¹³ According to the FCC's 9th Annual Report on wireless competition, wireless usage had further increased to 500 MOU per month by the end of 2003.¹¹⁴ The FCC's 9th Annual Commercial Mobile Radio Service report estimated that 23% of voice minutes in 2003 were wireless. This is an increase of 16% since 2000.¹¹⁵ The displacement of wireline MOU with wireless usage is seen most dramatically when comparing long distance calls. Users reported that they now use their wireless telephones to make 43% of long distance calls.¹¹⁶

Wireless service is becoming more desirable due to attractive pricing plans and a broad array of services made possible by technological innovation in wireless handsets and wireless networks. Wireless now provides most of the same options as wireline service with the added benefits of mobility and new technologies such as e-mail, Internet access and text messaging that are exclusive to wireless service. Technological innovation has further stimulated consumer demand through introduction of wireless handsets that also can be used as a camera, a computer and to watch TV or videos. The industry is also moving to integrate wireless with wireline service. AT&T is working with Sprint on trials of VoIP-enabled Wi-Fi handsets that would run over AT&T's new CallAdvantage VoIP service. Results of the trials are at least 18 months out, however.¹¹⁷ Deployment of third generation (3G) high-speed wireless networks have made these features and services possible. Furthermore, deployment of next generation networks with much higher bandwidth are not far off. The speed of these networks should further stimulate demand by greatly enhancing the consumer's experience when using bandwidth intensive services.

The benefits of the flourishing wireless competition appear evident as wireless carriers battle to gain and keep customers through a steady stream of unique service plans and lower

¹¹¹ FCC Report on Local Telephone Competition: Status as of December 31, 2003. Released June 2004.

¹¹² FCC Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Radio Services, *Ninth Report*. FCC 04-216. Released September 28, 2004.

¹¹³ Rosenbluth, Todd. "Time to Hang Up on SBC." *BusinessWeek Online*. June 27, 2003.

¹¹⁴ FCC Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Radio Services, *Ninth Report*. FCC 04-216. Released September 28, 2004.

¹¹⁵ *Ibid.*

¹¹⁶ Griffin, Katie. "U.S. Consumers Long Distance Calling Is Increasingly Wireless, Says Yankee Group." Yankee Group News Releases. March 23, 2004.
<http://www.yankeegroup.com/public/news_releases/news_release_detail.jsp?ID=PressReleases/News_03232004_cts_2.htm>. Accessed June 21, 2004.

¹¹⁷ "AT&T to Offer Wireless Services to Consumers and Businesses Nationwide Through Agreement with Sprint." AT&T News Release. May 18, 2004.

prices. For example, AT&T Wireless¹¹⁸ is marketing a plan that includes 1,000 anytime minutes and unlimited nights and weekends for \$40. Similar plans had cost \$10 to \$20 more, and AT&T now begins nighttime minutes at 7 p.m., 2 hours earlier than in previous plans.¹¹⁹ Sprint PCS recently announced its new Fair & Flexible Plan, which eliminates overage charges by automatically adjusting a consumer's monthly rate plan based on their usage patterns.¹²⁰ Other companies offer their own unique features such as push-to-talk and free mobile-to-mobile calls. These examples of price cutting and greater flexibility show little signs of abating as competition further heats up.

Wireless service is becoming indispensable to consumers, and its popularity is not being ignored by wireline providers. Many ILECs now offer wireless as part of their bundled packages. Combining wireless with local/long distance, broadband, and satellite TV services gives local exchanges companies a "home run" package to counter the triple play offerings of cable companies. In response, some cable companies are attempting to counter telephone company entry into their core video market by adding wireless to their vaunted triple play set of video, broadband and voice services.¹²¹ Some in the CLEC community also consider wireless to be a strategic addition to their portfolio of services. AT&T Wireless is now looking to re-enter the game by reselling wireless service through Sprint Corp.

Consumers now find it easier and more appealing to switch from one wireless carrier to another, or to wireless-only service thanks to local number portability. The FCC ordered wireless carriers to implement local number portability in the 100 largest MSAs effective November 24, 2003. This enables customers to keep their wireless telephone numbers when switching from one wireless carrier to another. The local number portability requirement for all other areas went into effect May 24, 2004. According to the FCC's rules, wireline telephone companies, including both ILEC and CLEC providers, also had to implement wireline to wireless number portability. Currently, the most porting activity is taking place between customers wanting to switch from one wireless provider to another. However, according to Neustar, a number portability administrator, up to 10% of the nine or ten million numbers ported in 2004 will be from landline carriers to wireless carriers.¹²² Porting volume from wireline to

¹¹⁸ AT&T Wireless recently merged with Cingular.

¹¹⁹ Bialik, Carl & Jesse Drucker. "AT&T Wireless Lowers Prices on Plans, Wireless Telephones." The Wall Street Journal Online. April 1, 2004. <http://online.wsj.com/article_print/0,,SB108078083153471029,00.html>. Accessed April 5, 2004.

¹²⁰ Sprint PCS Service Plans.
http://www1.sprintpcs.com/explore/servicePlansOptionsV2/PlansOptions.jsp?FOLDER%3C%3Efolder_id=1477207&CURRENT_USER%3C%3EATR_SCID=ECOMM&CURRENT_USER%3C%3EATR_PCode=None&CURRENT_USER%3C%3EATR_cartState=group&bmForm=SFPsprintZipCodeToCSA&bmFormID=1099497473589&bmUID=1099497473589&bmHash=04a51dc4b72704c228a0ec9c4817abc6950e0171>. Accessed November 3, 2004.

¹²¹ Drucker, Jesse. "How AT&T Got Back in the Wireless Game." The Wall Street Journal Online. May 30, 2004. <<http://online.wsj.com/article/0,,SB108587513619824627,00.html>>. Accessed June 3, 2004.

¹²² Engebretson, Joan. "ANALYSIS: Number Portability Trends Underscore Line Loss Concerns." America's Network Enews. June 14, 2004. <<http://www.americasnetwork.com/americasnetwork/article/articleDetail.jsp?id=98835>>. Accessed June 15, 2004..

wireless reached a peak of 79,080 telephone numbers in March of 2004.¹²³ When asked, consumers stated convenience as the number one reason for considering dropping their landline and going wireless only.¹²⁴

Enhanced 911 (E911) service is a factor that consumers must consider when deciding to disconnect a landline. E911 service provides a dispatcher with additional location specific information on wireless 911 calls. The FCC considers this an imperative service for public safety and has implemented a two-phase process, to be completed by December 31, 2005, for developing and implementing this new technology. Phase I requires carriers to report the wireless telephone number and the location of the antenna that received the call. Phase II requires carriers to provide specific location data of the wireless telephone, in most cases within 50 to 100 meters of the actual telephone's location.¹²⁵ According to a report issued by the General Accounting Office (GAO), only 24 states will have Phase II implemented by the 2005 deadline. The cost of deployment is estimated to be more than \$8 billion, which must be funded by wireless carriers, states, and localities.¹²⁶ While this is a difficult process, providing E911 capability may bring wireless one step closer as a viable replacement for wireline service. Florida is working hard to meet these obligations. As stated in the 2004 Annual Report issued by Florida's Wireless 911 Board, 47 counties have deployed Phase I with one or more providers and 26 counties have deployed Phase II with one or more providers.¹²⁷

3. Cable

In 2003, there was no clear indication of exactly when the cable industry would launch its much-anticipated wide-scale rollout of voice service. A few cable companies have been in the voice business since 2000 and have gained subscribers fairly rapidly. At the end of 2003, 2.5 million customers nationwide received voice service from cable MSOs. As of the end of the first quarter 2004, the number of subscribers served by MSOs had grown to approximately 2.7 million across the country.¹²⁸ The vast majority of those subscribers, however, are served by just two companies, Comcast and Cox, using legacy circuit-switched technology. However, these

¹²³ FCC Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Radio Services, *Ninth Report*. FCC 04-216. Released September 28, 2004.

¹²⁴ InStat/MDR. "Into Thin Air: Residential Wireline Erosion from Wireless and Other Access Alternatives." June 25, 2004. <<http://www.instat.com/catalog/pcatalogue.asp?ID=94>>. Accessed June 25, 2004.

¹²⁵ Federal Communications Commission. 911 Services page. March 10, 2004. <<http://www.fcc.gov/911/enhanced/>>. May 10, 2004.

¹²⁶ United States General Accounting Office. *Telecommunications Uneven Implementation of Wireless Enhanced 911 Raises Prospect of Piecemeal Availability for Years to Come*. Report to the Chairman, Subcommittee on Communications, Committee on Commerce, Science, and Transportation, U.S. Senate. November 2003.

¹²⁷ Florida Wireless 911 Board Report. February 28, 2004.

¹²⁸ National Cable and Telecommunications Association website. <<http://www.ncta.com/?PageID=326>>.

circuit-switched offerings may have plateaued because cable companies have banked their future telephony plans on the nascent technology known as VoIP.

Many of the major MSOs were in various stages of VoIP trials in 2003, but few had launched commercial service. This past year, however, the momentum of cable telephony has shifted and the industry is in an accelerated stage of rollout. After spending nearly \$85 billion since 1996 upgrading their networks from analog to digital capability, cable operators are finally beginning full-scale offerings of the much heralded “triple play” services (voice, data and video) over a single cable connection.¹²⁹ Whereas there were only a few VoIP launches planned a year ago, most major MSOs are now conducting multiple trials, and plan to stage launches of commercial service around the nation over the next three years. A few of the major MSO rollout plans follow.

- Cablevision has led the pack in VoIP deployment by making telephone service available across its entire footprint of more than 4 million homes in November 2003.¹³⁰ The company has averaged 3,200 new subscribers per week and now has more than 100,000 VoIP subscribers.¹³¹
- Time Warner had launched VoIP service in 16 of its markets by June 2004, and the company plans to rollout VoIP in nearly all of its 31 divisions by year-end.¹³²
- Charter Communications plans to make its VoIP service available to one million homes by year-end 2004.¹³³
- Cox made its first commercial rollout of VoIP service in Roanoke, Va. last December, and has plans to launch service in several more markets this year.¹³⁴
- Comcast, the nation’s largest cable provider with over 21 million cable TV subscribers,¹³⁵ plans to offer VoIP to half of its footprint by the end of 2005 and to 95% of its footprint in 2006.¹³⁶

¹²⁹ “Too Late to Party?” New Paradigm Resource Group, Inc. Chicago Business Wire. May 17, 2004.

¹³⁰ Maiella, Jim. “Cablevision Announces First Widescale Digital Voice-Over-Cable Deployment.” Cablevision Website, Corporate Information. November 11, 2003.

¹³¹ Breznick, Alan. “MSOs Step Up VoIP Pace, Shrug Off Vonage As Rival.” Cable Datacom News. June 1, 2004.

¹³² Ibid.

¹³³ Fitchard, Kevin. “Charter Signals VoIP Expansion with Termination Deals.” TelephonyOnline.com. August 31, 2004.

¹³⁴ “WHITEPAPER: Voice over Internet Protocol: Ready for Prime Time.” Cox Communications Website. May 2004.

¹³⁵ Comcast Website. Investor Fact Sheet. November 2004.

By adding voice to their portfolio of services, cable companies may expect to stem losses of customers to satellite TV and broadband Internet access competitors. Experience seems to show that bundled service offerings, especially those that include voice, significantly reduces customer defections, or churn. Cox Communications, for example, reports a 50% reduction in churn when a residential customer subscribes to all three services: cable, broadband and telephony.¹³⁷ Research also has shown that customers want a single bill for all services.¹³⁸ Data from this Commission's surveys show that 52% of respondents prefer to have all communications services provided by one company.

Many cable companies and industry analysts expect cable VoIP offerings to present a formidable challenge to telephone company dominance of the residential local voice market. Time Warner captured 10% of telephone households just 10 months after rollout in Portland, Maine,¹³⁹ and aims to capture a third of the local telephone market in its Charlotte, North Carolina region within the next few years.¹⁴⁰ Charter is targeting a 10% penetration of telephone households within 60 days of its market launch and 30% penetration within five years, while Mediacom believes that 15% to 20% penetration can be achieved in the early stages of market launch.¹⁴¹ As to industry analysts, MRG, a digital media research firm, projects that cable companies could penetrate 10% of the residential telephone market by 2007, if they act fast enough.¹⁴² The investment firm, Goldman Sachs, estimates that telephone companies could lose 7% of residential lines to cable by 2006, and nearly 20% in the next 10 years.¹⁴³ John Hodulik, of the investment firm UBS, states "the Bells likely will lose 30% of their telephone market to cable companies over 10 years. However, losses may be limited to 15% if telecom companies can provide video, because consumers are more likely to remain with a carrier when they purchase a bundle of services."¹⁴⁴ According to Yankee Group estimates, there will be in excess of 12 million cable VoIP subscribers in 2008. (Figure 17)

¹³⁶ Fitchard, Kevin. "Comcast Puts Numbers on VoIP Rollout." Primedia Publication, Telephony Online. May 31, 2004.

¹³⁷ Smiles, Elaine. Cable Telephony Today. <TMCNet.com/it/0504/specialfocus.htm>.

¹³⁸ "Comcast Pushes into Phone Service." Wall Street Journal. May 26, 2004.

¹³⁹ Nowlin, Sanford. "Time Warner Launches First Battle in San Antonio Phone Wars." San Antonio Express-News. July 16, 2004.

¹⁴⁰ Mildenberg, David. "Time Warner Readies Telephone Push." BizJournals. June 4, 2004.

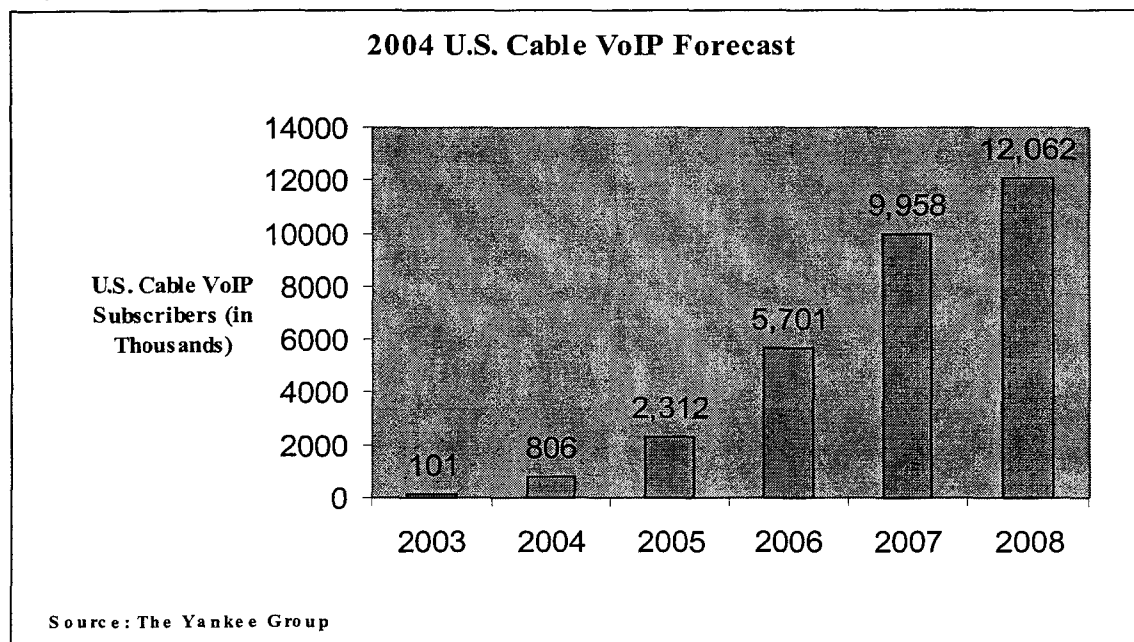
¹⁴¹ Breznick, Alan. "More Major MSOs Unveil VoIP Rollout Plans." Cable Datacom News. March 1, 2004.

¹⁴² Stroud, Michael. "Cable Guy Whipping Phone Guy." Wired News. March 11, 2004.

¹⁴³ Brown, Ken. "Cablevision to Offer Internet Phone-Call Bundle." The Wall Street Journal. June 21, 2004.

¹⁴⁴ Rosenbush, Steve. "Verizon: Take that Cable." BusinessWeek Online. May 14, 2004.

Figure 17



In order to stem losses of subscribers to both cable and wireless competitors, the major telephone companies, Verizon, SBC, BellSouth and Qwest, have alliances with satellite TV providers to provide their own "Triple Play" offerings. Verizon, the nation's largest telecom provider, is also pursuing cable-TV franchises in nine states, its Florida territory included. Verizon intends to supply cable TV service over fiber-optic lines directly connected to homes and offices. Their plans include digital TV, videoconferencing, and movies-on-demand by the end of 2005. SBC says it will spend \$4 to \$6 billion over the next five years replacing the slower copper connections in its networks with high speed fiber. This will allow SBC to market an IP-based television service being co-developed with Microsoft.¹⁴⁵

In a market where most consumers can choose between only one cable company and two satellite providers, the entry of telecom companies into cable television could be a powerful source of competition; however, many are skeptical that there will be widespread fiber-to-the-home deployment except in the distant future, because of its high rollout cost. Qwest is one Bell company that is not deploying fiber to homes in its territory, but is banking instead on other technologies, such as wireless, to deliver high-bandwidth connections at lower cost. Meanwhile, telephone company alliances with satellite TV providers may offer the best interim hope of competing with cable's triple-play offerings. SBC reported signing up 40,000 customers just one month after offering satellite TV service via its alliance with EchoStar.¹⁴⁶

¹⁴⁵ Ewalt, David M. "New Services Stir Up Telecom Market." InformationWeek. June 28, 2004.

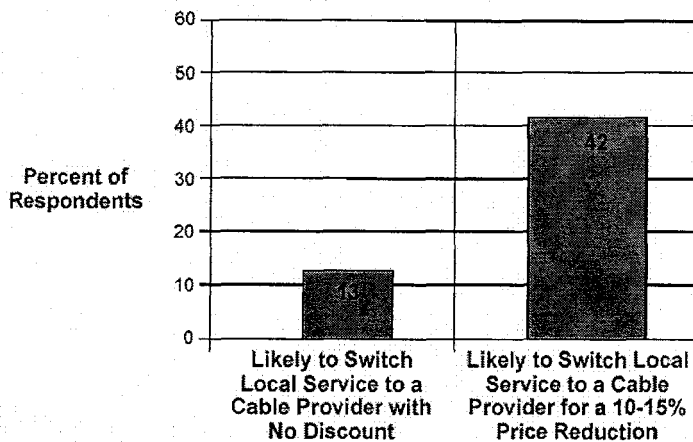
¹⁴⁶ Latour, Almar. "Bells Join Race to Offer TV." The Wall Street Journal. April 29, 2004.

Telephone companies, however, could find it painful trying to match cable's pricing for voice services. Cable company trials are confirming that VoIP-based service is less costly to deploy than circuit-switched. By offering VoIP instead of circuit-switched services, Cox has found that expenditures can be cut by 40% to 75% per customer depending on whether Cox or the customer installs necessary equipment.¹⁴⁷ These economies appear to be impacting the competitive landscape, enabling cable companies to attract customers by undercutting telephone company prices. As an indication of cable telephony's potential, Figure 18 shows that 42% of respondents would switch local service to a cable provider for a 10-15% price reduction.

Figure 18

Sizing the Cable Telephony Threat:

Cable providers gain acceptance as telephony alternative
(continued)



Cable VoIP packages are generally \$10-\$15 below comparable telco offerings, leveraging the consumers' willingness to switch to save money.

Source: The Yankee Group 2003 TAF Survey



One aggressive pricing strategy to date has been by Cablevision when it announced in June that it will offer unlimited local and long-distance service, along with digital cable television and high-speed Internet access for \$90 a month for one year. The company's main telephone competitor in its region, Verizon, was offering a comparable package for \$123.89 a month.¹⁴⁸ However, Verizon has countered not only Cablevision's move, but other cable firms' triple-play offerings by launching a nation-wide VoIP service for \$39.95 per month, \$20 cheaper than its current bundle of unlimited U.S. calling. Verizon gives further discounts if the customer

¹⁴⁷ Hibbard, Justin. Senior Editor. "Cox Declares VOIP Ready for Prime Time." Light Reading. May 17, 2004.

¹⁴⁸ Brown, Ken. "Cablevision to Offer Internet Phone-Call Bundle." The Wall Street Journal. June 21, 2004.

takes other Verizon services. As Verizon will be encroaching into the territories of the other Baby Bells, they are expected to follow suit eventually.¹⁴⁹

More economies for cable may yet be seen as demand for VoIP equipment grows. Brahm Eiley, president of Toronto-based Convergence Consulting Group, a company which studies the North American cable and telecom market said, "Comcast is by far the largest cable company in North America with over 21 million customers in 35 American markets, and when a company such as this makes such a major, accelerated commitment to VoIP, that can only mean good things." Comcast's participation should drive down the cost of the equipment MSOs must obtain to provide phone service via VoIP.¹⁵⁰ In addition to driving down manufacturing costs, it will intensify competition by increasing customer awareness and encouraging vendors to develop superior products containing new features.¹⁵¹

Telephone companies have at least two additional reasons to be concerned about cable telephony. First, while cable's VoIP service may initially be targeted to cable broadband customers, cable giants Time Warner, Charter and Mediacom have indicated they intend to offer voice to the mass market. This means that these companies may not require VoIP subscribers also to subscribe to broadband. Other companies should follow suit, because over time there may be no reason to limit the VoIP offering to just their broadband customers. "It's a whole new reason to talk to non-subscribers or even satellite TV customers. We see the combined bundle as a real good reason to come back and consider cable as a competitor," says John Pascarelli, executive vice president of operations for Mediacom.¹⁵²

The second cause of concern is that with the emergence of VoIP-based cable telephony, many U.S. cable companies have indicated they are considering forming a consortium to jointly offer VoIP service, organizing the way calls are carried over the IP networks, and how they connect with the PSTN. "This is more a consortium to organize the way they are going to talk to each other. It's not the creation of an enterprise that's actually going to own these calls," says Chris Risley, CEO of Nomium Inc., a potential supplier of infrastructure for a cable ENUM (Electronic Number Mapping) system.¹⁵³ Comcast, Cox, and Time Warner are among the Florida-based cable companies that have talked with Neustar, regarding the creation of a telephone-number lookup system based on the ENUM. This system would allow, for example, a call that originated on Comcast's network to connect to a telephone number on Cox's network without ever using the PSTN.¹⁵⁴ Cable companies may believe the creation of this system will help them to avoid the fees local exchange carriers charge to use their networks. Currently,

¹⁴⁹ "Verizon Dangles Cheap VoIP for US Land Grab." The Register. July 27, 2004.

¹⁵⁰ "Comcast commitments will speed N.A. VoIP Deployment." Cablecaster Magazine.
<http://www.cablecastermagazine.com/common_scripts/dailynews/print_version.asp?id=29959>.

¹⁵¹ "Comcast Pushes into Phone Service." Wall Street Journal. May 26, 2004.

¹⁵² Breznick, Alan. Editor. "More Major MSOs Unveil VoIP Rollout Plans." Cable Datacom News. March 1 2004.

¹⁵³ Hibbard, Justin. Senior Editor. "Cable Cadre talks VoIP." Light Reading. April 13, 2004.

¹⁵⁴ Ibid.

under FCC rules, any calls which pass over a CLEC's network and terminate at an Internet service provider are subject to reciprocal compensation, a cost cable companies would like to avoid.¹⁵⁵

Finally, Florida consumers also should benefit soon from cable's rollout of VoIP. Bright House Networks, which assumed managerial control of Time Warner's local cable operations stretching across Central Florida two years ago, is the first large cable operator in Florida to roll out VoIP service. Bright House provides cable television entertainment and high-speed Internet access to more than 750,000 customers in a nine-county area of Central Florida.¹⁵⁶ In July, 2004, the company announced rollout of VoIP service in Pinellas County to a limited number of customers in preparation of an eventual larger-scale rollout of IP-based service. This limited rollout was offered to several hundred customers for a 60-day trial in order for Bright House to evaluate its readiness from an operational and customer service standpoint. On August 30, 2004, Bright House announced the launch of VoIP service throughout Pinellas and Hillsborough counties and the company plans to offer service in Pasco County in September and in Hernando and Citrus counties by the end of December.¹⁵⁷

The area served by Bright House could turn into one of the more hotly contested telephone markets in Florida, if not the nation. Knology, a cable TV competitor with its own network in Pinellas County, launched VoIP service in July 2004. Thus, including Verizon, three facilities-based carriers are now competing for telephone customers in Pinellas County. Verizon, in the meantime, has been researching the legal requirements for a possible launch of its own pay-TV service in Hillsborough, one of the counties served by Bright House.¹⁵⁸

Other MSOs with cable networks in Florida include Cox, Comcast, Time Warner and Mediacom. Cox has indicated it will launch VoIP service in its Pensacola, Gainesville and Ocala markets sometime in 2004 and 2005. Mediacom is currently conducting a marketing and technical trial in Des Moines, Iowa, and is planning on a late 2004 launch in Iowa and possibly other markets later this year. "We're very excited with what we're seeing in the whole VoIP space," said John Pascarelli, executive vice president of operations for Mediacom.¹⁵⁹ While the location of those markets is unknown at this writing, Mediacom is in the process of filing for certification as a telecom provider in their six largest states, including Florida.¹⁶⁰

¹⁵⁵ Ibid.

¹⁵⁶ Bright House Networks website.

¹⁵⁷ Hau, Louis. "Hello, it's Bright House Calling." St. Petersburg Times. August 31, 2004.

¹⁵⁸ Hau, Louis. "Hello, it's Bright House Calling." St. Petersburg Times Online. June 15, 2004.

¹⁵⁹ Breznick, Alan. Editor. "More Major MSOs Unveil VoIP Rollout Plans." Cable Datacom News. March 1 2004. <<http://www.cabledatcomnews.com/mar04/mar04-2.html>>.

¹⁶⁰ Ibid.

B. BROADBAND

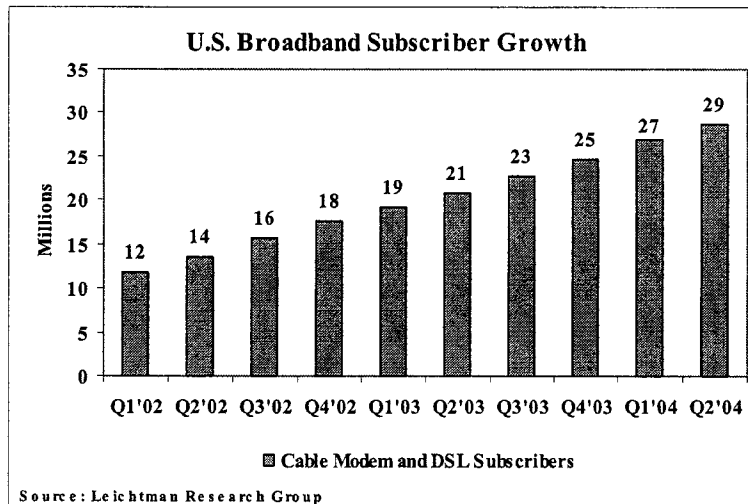
Experts agree that the future of the nation's communications networks is broadband. Whether broadband networks are wireline, wireless, or a combination of the two, they will provide the end user a single connection over which to send and receive voice, data and video communications. The previous sections discussing wireless, cable and VoIP services illustrate the importance of broadband to today's competitive market. The following section looks at today's broadband market nationally and in Florida, and provides an overview of emerging technologies that will make the future telecommunications market more dynamic and competitive.

1. Nationwide Trends in the Broadband Market

As the broadband market has progressed beyond early adopters to mass market customers, growth in Florida and throughout the United States remains strong. With this progression, focus is shifting from early concerns regarding availability and sustainability of growth to a greater interest in competitive choice, pricing, speed of service, and content. In addition, concerns remain for those (mainly rural) areas still without ubiquitous broadband availability.

As seen in Figure 19, the number of broadband subscribers in the United States continues a steady upward trajectory growing from 12 million subscribers in the first quarter of 2002 to 29 million by the end of the second quarter of 2004.

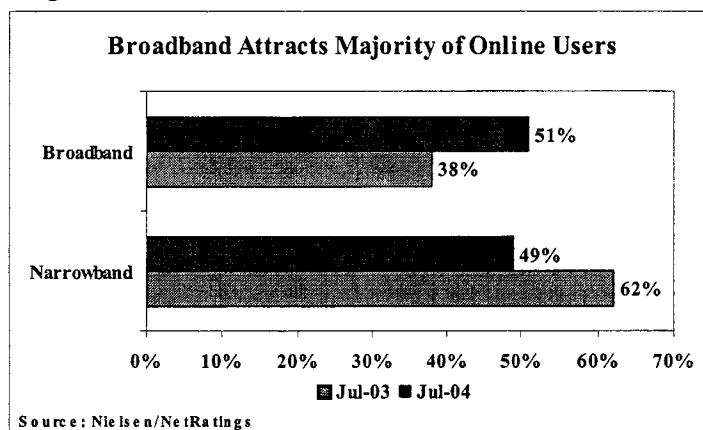
Figure 19



Nearly 25% of U.S. homes subscribe to broadband services, according to a January 2004 survey by Arbitron/Edison Media Research.¹⁶¹ This is a jump from only 7% of homes in the 2001 Arbitron/Edison survey, showing considerable market development in only three years.

The swift growth and rising penetration level leads to a continuing shift in the broadband spotlight. Earlier stages of market development were characterized by concerns regarding availability on the supply side and slow growth on the demand side. Now that cable modem availability exceeds 90% of households passed and DSL coverage is expanding, the concerns regarding availability are now concentrated more specifically on the rural areas which still lack access. However, even rural areas are making headway in broadband deployment. In a survey of its rural members, OPASTCO¹⁶² found that 99% of responding rural telephone companies were providing advanced services of at least 200 kbps. These companies were providing such service to 88% of their coverage area.¹⁶³ As to the demand side of the equation, broadband now represents more than half of U.S. Internet connections (Figure 20). According to Nielsen/NetRatings, 51% of Internet homes had broadband connections in July 2004. In comparison, 38% of Internet households had broadband connections in July 2003.¹⁶⁴

Figure 20



The ongoing consumer shift to broadband is illustrated by several trends stemming from the evolving broadband competition. As cable modem and DSL providers expand, they are increasingly competing for the same customers in overlapping coverage areas. With broadband penetration levels growing, competition for the supply of new customers, generally those

¹⁶¹ "Internet and Multimedia 12: The Value of Internet Broadcast Advertising." Arbitron/Edison Media Research. January 2004. <<http://www.arbitron.com/home/content.stm>>.

¹⁶² Organization for the Promotion and Advancement of Small Telecommunications Companies.

¹⁶³ "New Survey Shows OPASTCO Rural Telcos Make Advanced Services Widely Available." May 10, 2004. <<http://www.opastco.org/docs/051004AdvancedServices.pdf>>.

¹⁶⁴ Vara, Vauhini. "High-Speed Surpasses Dial-Up As Top Home Web Access in U.S." The Wall Street Journal. August 18, 2004.

converting from dial-up service, is becoming more intense. DSL suppliers have typically trailed cable by a 2:1 ratio in market share. For the first time, however, DSL providers matched their cable counterparts in new subscribers added in the first quarter of 2004.¹⁶⁵ Growth rates for the DSL providers during the quarter outpaced cable across the board. In the second quarter of 2004, DSL providers surpassed cable in new broadband subscribers for the first time.¹⁶⁶ Overall, cable still leads in total subscribers with the leading cable MSOs claiming approximately 17.5 million subscribers. The top DSL providers report over 11 million broadband subscribers.¹⁶⁷

The FCC's bi-annual report on high-speed services provides market share data for broadband lines as recently as December 31, 2003.¹⁶⁸ Nationally, 63% of broadband lines were based on cable modem service versus 34% DSL. In Florida, the report showed a closer race between the two technologies as cable made up 52% of all high-speed lines and DSL accounted for 40%. However, according to more recent survey data collected by this Commission, broadband market share in Florida is even closer.¹⁶⁹ Figure 21 shows a consistent trend toward market share parity between cable modem and DSL service.¹⁷⁰

¹⁶⁵ "A Record 2.3 Million Add Broadband in First Quarter of 2004." Leichtman Research Group, Inc. May 11, 2004. <<http://www.leichtmannresearch.com/>>.

¹⁶⁶ "Broadband Internet Grows to 29 Million in the U.S." Leichtman Research Group, Inc. August 17, 2004. <<http://www.leichtmannresearch.com/>>.

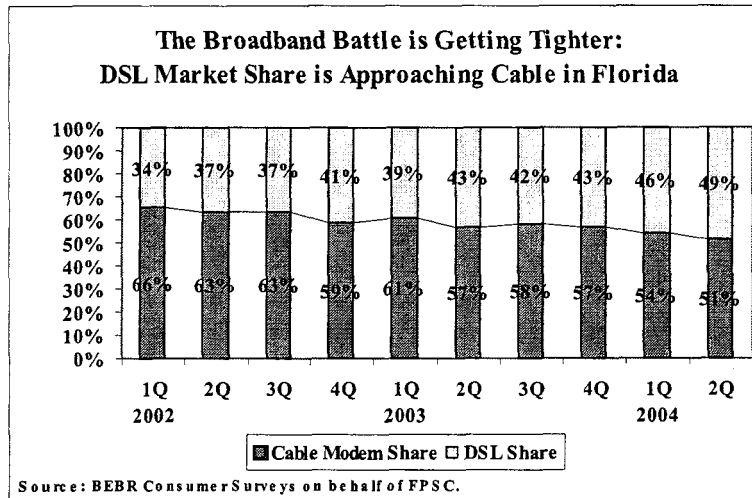
¹⁶⁷ *Ibid.* Top cable and DSL providers reported by Leichtman represent approximately 95% of all subscribers.

¹⁶⁸ "High-Speed Services for Internet Access: Status as of December 31, 2003." Federal Communications Commission. Released June 8, 2004. <<http://www.fcc.gov/wcb/iatd/comp.html>>. The FCC refers to "high-speed lines" as those that provide service at speeds over 200 kilobits per second, in either the upstream or downstream direction. "Advanced services lines" are those that provide services at speeds exceeding 200 kbps in both directions.

¹⁶⁹ Bureau of Economic and Business Research (BEBR) consumer surveys conducted on behalf of the Florida PSC.

¹⁷⁰ This figure examines only cable modem and DSL responses to calculate relative market share. Satellite, fixed wireless and other broadband access methods are not included here.

Figure 21



Pricing may be seen as a major factor in narrowing the market share gap between DSL and cable providers. “Over the past few quarters DSL providers have increased their focus on broadband with an emphasis on lower pricing,” said Bruce Leichtman, president of the Leichtman Research Group.¹⁷¹ Verizon and SBC, the two largest DSL providers have each offered DSL service for less than \$30 per month, while many of the largest cable operators continue to charge \$40 to \$50 per month. Forrester Research points out that early broadband adopters were more acceptable to paying for higher-speed access, while today’s more mainstream consumers are more price sensitive.¹⁷² Forrester found that 43% of today’s new broadband subscribers were motivated by the offer of a discounted package of broadband along with other telecommunications services.

As a competitive strategy, the major cable modem providers appear to have chosen to focus more on providing higher bandwidth rather than lower pricing. Comcast, Time Warner Cable, Cox Communications and RCN Corp. all increased data transmission rates in the summer of 2004. This followed an earlier round of speed boosts in fall 2003 which some saw as a response to DSL price cuts by the regional phone companies.¹⁷³

Another interesting development in broadband is a rising concern by consumers that limited upstream broadband capacity is no longer sufficient. Upstream information transfer rates are becoming increasingly important as broadband users are creating and sharing larger

¹⁷¹ “A Record 2.3 Million Add Broadband in First Quarter of 2004.” Leichtman Research Group, Inc. May 11, 2004. <<http://www.leichtmannresearch.com/>>.

¹⁷² Kolko, Jed. “In Broadband Game, Price Beats Speed.” Forrester Research Special to CNET News.com. March 1, 2004. <<http://www.news.com/>>.

¹⁷³ Breznick, Alan. “MSOs Boost Data Speeds Again, Add Low-Priced Options.” Cable Datacom News. September 1, 2004. <<http://www.cabledatcomnews.com/>>.

quantities of data and multimedia. This is a significant shift from the early dial-up Internet that was characterized by end users mainly downloading web pages or media to their computer.

Today, there is considerably more content creation in the home or small business. Content such as digital photos, digital video, music collections, peer to peer interactions, file transfers and VoIP applications all demand significant upstream capacity. Likewise, the increasing numbers of telecommuters, home offices, and small businesses depending on two-way bandwidth further highlights the importance of upstream bandwidth. As end user demands for increased upstream bandwidth are increasing, there are already signs this may be an important competitive battleground for service providers. In a May 4, 2004 press release, Verizon stated that it would increase the upload speed for its basic DSL plan to 384 kilobits per second (kbps) from the current 128 kbps. Cox Communications raised its "Preferred" cable modem service to 512 kbps upstream while maintaining the same price.¹⁷⁴ In a May 6, 2004 speech to investors, Qwest CEO Dick Notebart stressed the importance of upload speeds in the market today and went on to say he believed DSL had an advantage going forward in the ability to increase upstream bandwidth. Qwest's DSL Deluxe service currently offers upload capacity of 896 kbps, one of the highest available in the marketplace.¹⁷⁵ While cable providers may make similar claims, it is important to note the emerging contest in the area of upstream capacity.

2. The Florida Broadband Market

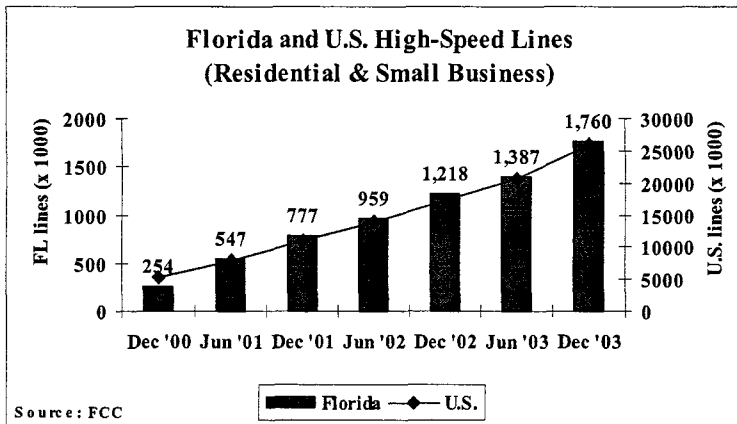
Florida's migration from dial-up to broadband Internet continues at a rapid pace. Figure 22 shows the rise in high-speed lines for Florida and the nation. By December 2003, Florida had over 1.76 million high speed lines in service to residences and small businesses. This was up from only 254,000 such lines three years earlier. This places Florida fourth nationally, behind California, New York and Texas. When looking at total high-speed lines, rather than residential and small business, Florida is third with 2 million such lines, behind only California and New York.¹⁷⁶

¹⁷⁴ Ibid.

¹⁷⁵ <<http://www.qwest.com/internet/>>. Accessed July 21, 2004.

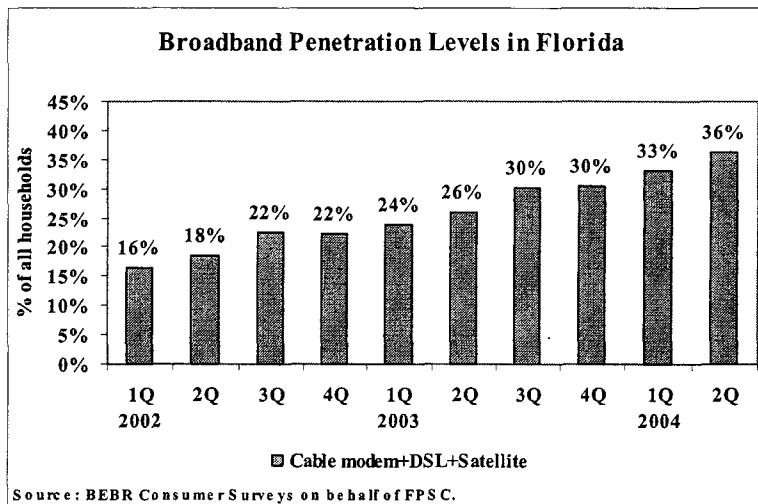
¹⁷⁶ FCC report on "High-Speed Services for Internet Access: Status as of December 31, 2003." Table 7.

Figure 22



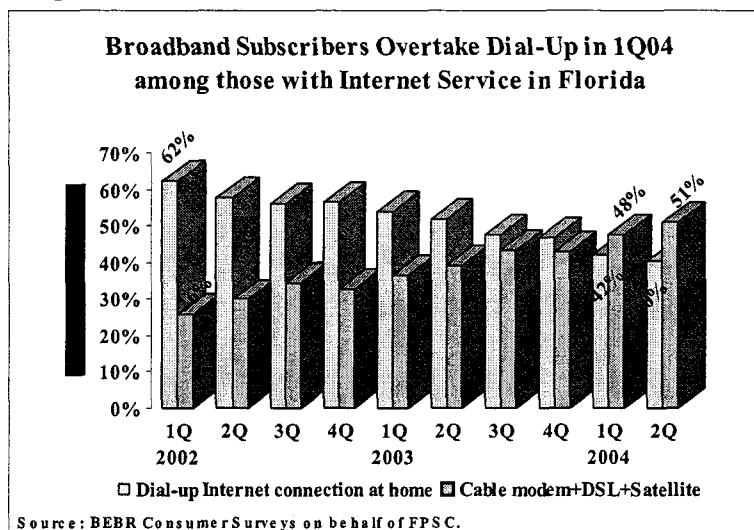
The FCC's biannual report on high-speed lines in service provides the most detailed broadband data in terms of state-specific and technology-specific information. However, the consumer surveys conducted by the University of Florida's Bureau of Business and Economic Research on behalf of this Commission provide additional information on Florida broadband penetration. Figure 23 shows that by the end of the second quarter of 2004, approximately 36% of Florida respondents reported having a high-speed Internet connection in the home.

Figure 23



The rise in broadband is more pronounced when looking exclusively at those with Internet service in the home. For the first time in Florida, the percentage using broadband eclipsed the percentage using dial-up in the first quarter of 2004. This event occurred rather dramatically, as the market share lead for dial-up was quite substantial only two years ago. During this time frame the broadband share of Florida Internet households rose from 26% to 51%, while the share for dial-up dropped from 62% to 40% (Figure 24).

Figure 24



3. Overview of Existing and Emerging Broadband Technologies

Emerging broadband technologies continue to make advances in the drive to capture a segment of the broadband market. While cable modem and DSL still account for the vast majority of broadband subscribers, advancements in the fields of wireless, fiber optics and broadband over powerline continue to offer hope for deployment of these emerging broadband technologies. The following is an overview of recent developments in these technologies.

a. *Wireless Broadband*

In 2004, wireless broadband made important strides toward becoming the third provider of high-speed Internet service to the home. While cable modem and DSL providers continue to rack up large subscriber gains, wireless innovation continues to push down prices and increase coverage areas. An overview of four such wireless technologies follows.

i. *3G Wireless*

In the third generation mobile, or 3G, market, several companies have announced bold plans to provide nationwide mobile data service. Verizon Wireless and Sprint PCS are implementing CDMA networks based on a standard referred to as CDMA-EVDO, or “data-optimized” wireless. Typical downstream bandwidth is in the range of 300 to 500 kbps while upstream bandwidth is limited to approximately 40 to 60 kbps. Verizon Wireless intends to

spend \$1 billion on the network over the next two years.¹⁷⁷ The service will be available on EVDO-based wireless telephones and laptop computers equipped with the Verizon Wireless network card. The service was originally available in San Diego and Washington D.C., but has since expanded to an additional twelve cities nationwide. In Florida, Verizon announced initial availability for the metropolitan area covering from North Palm Beach south through Miami, as well as the Tampa Bay region and Key West.¹⁷⁸ Expansion to further cities in Florida and nationwide is expected in 2004 and 2005. Sprint PCS will also deploy in select markets in the second half of 2004 and in the majority of top metropolitan markets in 2005.¹⁷⁹

Cingular Wireless announced that it was also seeking to push up its timetable for providing high-speed wireless Internet service. Cingular is seeking to catch early market leaders in the race to provide 3G services. The company's mobile network, built on the GSM wireless standard rather than CDMA, faces a different migration path to 3G services. Cingular plans to use the UMTS (Universal Mobile Telecommunications System) technology to provide wireless Internet applications to customer wireless telephones at rates of up to 384 kbps, possibly beginning in 2005.¹⁸⁰ UMTS is compatible with the GSM networks used by Cingular and most European carriers. AT&T Wireless already has 3G service available to customers in six U.S. cities utilizing UMTS technology.¹⁸¹

Nextel Wireless has not yet announced its 3G strategy but the company is conducting an extensive field trial with an exciting mobile data technology from Flarion Technologies. The wireless service, known as Flash OFDM, has shown typical download speeds of 1.5 Mbps and upload speeds of 375 kbps, both significantly faster than competing mobile wireless broadband services. The trial is taking place in the Raleigh-Durham region of North Carolina and has been expanded to cover 1300 square miles.¹⁸²

ii. Wi-Fi

The number of Wi-Fi hotspots in Florida has risen considerably over the past year. Florida had 937 hotspots listed as of September 2004 versus 385 in September 2003.¹⁸³ This

¹⁷⁷ "Verizon Wireless Announces Roll Out of National 3G Network." Verizon Wireless press release. January 8, 2004. <<http://news.vzw.com/>>.

¹⁷⁸ "Verizon Wireless Launches High-Speed Broadband Service." News Release. Verizon Wireless. September 22, 2004.

¹⁷⁹ "Sprint Announces Plans to Extend its Wireless Data Leadership with Launch of High-Speed Wireless Data Technology." Sprint Press Release. June 22, 2004. <<http://www.sprint.com>>.

¹⁸⁰ "Cingular to Deliver 3G Wireless." Cingular news release. June 22, 2004. <<http://www.prnewswire.com/micro/cingul1>>.

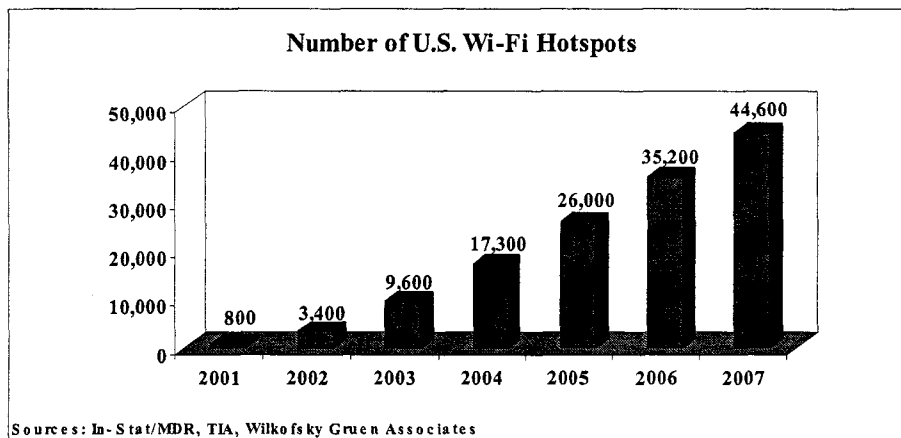
¹⁸¹ "AT&T Wireless Extends 3G UMTS Service to Dallas and San Diego." AT&T Wireless press release. September 1, 2004. <<http://www.attwireless.com/press/>>.

¹⁸² Nextel Communications, Inc. <<http://www.nextelbroadband.com/>>.

¹⁸³ Jiwire Guide to Wi-Fi. <<http://www.jiwire.com>>. Accessed September 2, 2004.

places Florida fourth nationally behind California, Texas and New York. Some research firms expect the number of U.S. hotspots to continue a rapid growth pace well into 2007 (Figure 25).¹⁸⁴

Figure 25



The increasing use of Wi-Fi in homes and businesses has been tempered by difficulties for service providers in establishing a successful business model. The consumer Wi-Fi experience seems to be characterized by high demand from early adopters, but low willingness to pay for a wireless broadband service when many already subscribe to broadband at home. Low equipment costs, unlicensed spectrum, and a well established Wi-Fi standard result in intense competition and small to negative profit margins for equipment manufacturers and operators.

A high-profile example of these challenges is the termination of the Cometa Networks effort not long after its initiation. The company set out to become a nationwide wholesaler of Wi-Fi connectivity, with a goal of 20,000 hotspots. The project was initially backed by IBM, AT&T, Intel and venture capital firms, but never made it past initial deployments in Seattle, New York and Connecticut.¹⁸⁵ Investor support and enthusiasm never developed to support the nationwide model. Cometa's vice president of marketing, Kent Hellebust, noted that potential investors did not believe the return on capital would be sufficient to justify expansion.¹⁸⁶ Another major blow occurred when McDonald's decided to go with competitor Wayport for a rollout of over 8,000 hotspots in the next 12 months.¹⁸⁷

¹⁸⁴ TIA's Tech Trends, Volume I No. 1. May 2004. <http://www.tiaonline.org/media/may04_tech_trends.pdf>.

¹⁸⁵ O'Shea, Dan. "Industry Surprised by Cometa Shut Down." TelephonyOnline. May 19, 2004. <<http://www.telephonyonline.com/>>.

¹⁸⁶ Konrad, Rachel. AP Business Writer. "Cometa Closes as Investors Shy from Wireless Internet Access." The Detroit News. May 20, 2004. <<http://www.detroitnews.com/2004/technology/0405/20/technology-158156.htm>>.

¹⁸⁷ Shim, Richard. "Wayport, McDonald's Cook up Hotspot Deal." CNET News.com. May 24, 2004. <<http://www.news.com/>>.

Just as many are struggling with the Wi-Fi business model, there is considerable interest in further expanding the technology into mainstream usage. The development of hybrid mobile telephones, capable of roaming from wireless telephone networks to Wi-Fi networks, has the potential to significantly expand the presence of both wireless methods. Proponents even suggest such a combination would provide a strong alternative to traditional wired telephone service.¹⁸⁸ The hybrid telephones would combine high-speed data capabilities and lower cost VoIP service while in the Wi-Fi domain, along with the increased range and coverage of today's mobile telephone networks. If early problems with seamless call transfers between networks and hefty battery requirements can be overcome, the convergence promises the best of both worlds for voice and data customers. However, early telephones and service plans are generally dedicated to business users and are expected to be priced at a premium. Wireless broadband would cost between \$40 to \$80 a month and fees for Wi-Fi hotspots another \$20 to \$40 per month.¹⁸⁹

iii. Fixed Wireless

Fixed wireless broadband solutions are typically based on a centralized tower antenna which transmits signals to and from window or roof mounted antennas located at the customer premises. The fixed wireless category includes a variety of technical standards, configurations and bandwidth alternatives.

The fixed wireless broadband market continues to adopt more productive technology solutions. Companies are seeking to develop business models which will allow them to provide service to customers left behind by traditional wireline broadband. Many are even looking to compete for wireline customers by offering wireless service at comparable price points.

WiMAX is a set of emerging fixed wireless broadband standards which have gained much attention recently. Technically related to Wi-Fi, but designed for long range, high bandwidth transmissions, WiMAX has the potential to compete with landline broadband solutions. Initial applications have been directed towards corporate users, but supporters of the technology believe it will eventually be an alternative for residential consumers as well. WiMAX provides up to 31 miles of service area range and allows users to get broadband connectivity without needing direct line of sight with the base station. Each base station can supply a sufficient amount of bandwidth to simultaneously support hundreds of businesses with T1/E1-type connectivity and thousands of homes with DSL-type connectivity.¹⁹⁰

While the technology is praised by many, there are also a great number who doubt that benefits or successful business models will develop for quite some time. For starters, there are worries that WiMAX production will never scale to the level of Wi-Fi, and therefore will remain

¹⁸⁸ Charny, Ben. "Wi-Fi Phones Make a Splash." CNET News.com. August 5, 2004. <<http://www.news.com/>>.

¹⁸⁹ Ibid.

¹⁹⁰ "About the WiMAX Forum." WiMAX Forum. <<http://www.wimaxforum.org/about>>.

an expensive method of broadband deployment. As an end-user product, Wi-Fi has permeated not just home networking for computers but numerous other consumer products as well. WiMAX meanwhile is positioned as a wide area technology and may have more difficulty in achieving economies of scale in the production of base stations and other needed equipment.¹⁹¹ It is also difficult at this early stage of development to determine which business models incorporating WiMAX gear will be most effective. Intel Corporation, a major backer of WiMAX, notes that service providers will need to sustain a mix of high-revenue business customers and high-volume residential subscribers to support a profitable business model.¹⁹² Intel stressed that the inherent flexibility of WiMAX is an advantage in deploying such a model.

Last year, one of the nation's earliest wireless broadband services was provided by Clearwire in Jacksonville, Florida. Since that time the company has been acquired by wireless veteran Craig McCaw and announced a re-launch of new wireless broadband services in August 2004. Clearwire is providing a new fixed wireless broadband service, based on an early version of the WiMAX standard, to customers in Jacksonville, Florida. Clearwire introduced the new service first in Jacksonville with other cities throughout the nation to follow, including Daytona Beach.¹⁹³ The Clearwire tower transmits radio signals from a base site to a small, wireless modem, the size of a paperback book which connects the users' computer to the Internet.¹⁹⁴ The service also focuses on ease of use for the customer. With plug and play capability, the home installation process is meant to be extremely simple. Customers purchase the wireless modem and plug it into their home computer to receive wireless broadband service at rates ranging from 1.5 Mbps for \$34.99 monthly down to 512 kbps for \$24.99 a month.

BellSouth announced in March that it was expanding its fixed wireless broadband trials to Palatka, Florida.¹⁹⁵ The company said earlier trials in Daytona Beach were positive and that the Palatka trials would incorporate tests of features and capabilities, such as the introduction of Wi-Fi components. The new trials will also examine the feasibility of fixed wireless broadband technology in rural areas.

iv. Satellite

Broadband service providers desiring to supply Internet service via satellite continue to have a difficult struggle. The high cost and complexity of such service, combined with

¹⁹¹ Jarich, Peter. "The 'Why' of WiMAX." Current Analysis, Inc. May 10, 2004. <http://www.supercomm2004.com/ind_news/>.

¹⁹² "IEEE 802.16 and WiMAX: Broadband Wireless for Everyone." Intel Corporation white paper. <<http://www.intel.com/netcomms/technologies/wimax/>>.

¹⁹³ Gibbons, Timothy J. "Jacksonville First Market for Clearwire Venture." The Florida Times Union. August 26, 2004. <<http://jacksonville.com/>>.

¹⁹⁴ "Clearwire Launches Wireless Broadband Internet Service." Clearwire press release. August 26, 2004. <<http://www.clearwire.com/>>.

¹⁹⁵ "BellSouth Announces Fixed Wireless Broadband Trial in Palatka, Florida." BellSouth Press Release. March 23, 2004. <<http://www.bellsouth.com/>>.

download and upload speeds slower than those of landline broadband providers, may create a difficult business model for satellite broadband providers. DirecWay is the nation's largest provider of satellite broadband service, with 180,000 residential customers as of year-end 2003.¹⁹⁶ However, News Corp. Ltd, which took over DirecWay and its parent companies in 2004, has deemphasized the satellite broadband business, citing doubts in the projections of market demand and profitability. The Spaceway project, which was promoted as a next generation broadband satellite offering will be scrapped, with the only satellite to be launched dedicated to HDTV instead of Internet service.¹⁹⁷ In fact, News Corp. Ltd. has put the DirecWay division up for sale in order to fund its core DirecTV assets.¹⁹⁸

For many consumers in rural areas, satellite is the only means of obtaining broadband Internet service. According to recent surveys by Northern Sky Research (NSR), as many as 2.5 million rural households and small office/home office users in North America would be receptive to using the latest satellite technology to gain high-speed access to the Internet.¹⁹⁹ The National Rural Telecommunications Cooperative, which lends support to broadband satellite initiatives for its members, states that, "only about 5% of rural towns with populations less than 10,000 have access to broadband."²⁰⁰ However, this does not create an easy market for satellite providers, as noted by NSR senior analyst Patrick French. "The fallacy has been that potential customers in unserved and underserved areas would be willing to pay more for a broadband-satellite connection. But the reality is that many users are simply electing to stick with a standard dial-up connection."²⁰¹

b. Fiber-to-the-Home

Significant announcements in the fiber-to-the-home (FTTH) market this year provide continued optimism for the future of this powerful medium. Smaller operators and municipalities are already leading the charge in fiber deployment. In fact, the Fiber-to-the-Home Council noted that, "FTTH deployments continue to be driven by municipalities, competitive

¹⁹⁶ The DirectTV Group, Inc. Form 10-K, page 12. For the fiscal year ended December 31, 2003. United States Securities and Exchange Commission. <<http://www.sec.gov/edgar/searchedgar/webusers.htm>>.

¹⁹⁷ Pasztor, Andy. "Ambition to use Spaceway to Offer Broadband Service Fades Amid Profit Doubts." The Wall Street Journal, May 28, 2004; page A3.

¹⁹⁸ Hamilton, Dane. "Bidders for DirecTV Satellite Unit Shrink – Sources." Reuters. June 24, 2004.

¹⁹⁹ Long, Mark. "Broadband Via Satellite: Looking Down?" NewsFactor Network. June 28, 2004. <<http://wireless.newsfactor.com>>.

²⁰⁰ National Rural Telecommunications Cooperative. <<http://www.nrtc.coop/sub/wildblue/index.html>>. Accessed July 6, 2004.

²⁰¹ Long, Mark. "Broadband Via Satellite: Looking Down?" NewsFactor Network. June 28, 2004. <<http://wireless.newsfactor.com/>>.

local exchange carriers (CLECs) and new residential developments.”²⁰² The FTTH Council lists 128 communities in 32 states with FTTH deployments, up from 94 communities in 26 states as of September 2003. This year’s list includes six communities in Florida.

While the number of subscribers, or even deployments, remains a small percentage of American households, momentum seems to be building with two of the RBOCs announcing large fiber build-outs. Both Verizon and SBC made recent announcements regarding their fiber plans. Verizon announced that the company was on track to reach one million homes in 2004 with fiber to the premises (FTTP), as the company refers to its chosen technology. In 2005, Verizon plans on deployment to two million more homes. Verizon initiated its first fiber deployment in Texas and has plans to expand through eight other states in its local service territory, including its Tampa, Florida region. The new service will provide broadband download speeds beginning at five Mbps and ranging as high as 30 Mbps, according to Bob Ingalls, president of Verizon’s Retail Marketing Group.²⁰³ SBC also announced the possibility of a \$4 billion to \$6 billion investment in fiber optic deployment for broadband, video and communications services over the next five years. The company noted that investments were still subject to pending regulatory matters and field trials of the technology in the summer of 2004.

In the Triennial Review Order and subsequent clarifications, the FCC ordered that ILECs will not have to unbundle “broadband elements” (specifically fiber-to-the-home loops (FTTH), fiber-to-the-curb loops (FTTC), the packetized functionality of hybrid loops, and packet switching) under Section 251 of the 1996 Act.²⁰⁴ Following that order, uncertainty remained as to whether Section 271 of the 1996 Act²⁰⁵ might still require unbundling of these deployments by Regional Bell Operating Companies (RBOCs). Specifically, some CLECs and state commissions had suggested that although certain unbundling obligations under Section 251 had been lifted by the TRO, Section 271 might still allow an avenue for enforcing unbundling of broadband investment by the RBOCs. Each of the four RBOCs, including BellSouth and Verizon, petitioned the FCC for forbearance from the unbundling obligations in Section 271 to the extent they may have applied to broadband deployment. On October 22, 2004, the FCC granted these petitions for forbearance, ordering that the four RBOCs will not be forced to unbundle broadband elements under Section 271. In the order, released on October 27, 2004, the FCC states, “we forbear from enforcing the requirements of section 271, for all four petitioners (the Bell Operating Companies (BOCs)), with regard to the broadband elements that the Commission, on a national basis, relieved from unbundling in the *Triennial Review Order* and subsequent reconsideration orders (collectively, the “*Triennial Review proceeding*”). These

²⁰² “U.S. Optical Fiber Communities-2004.” Fiber-to-the-Home Council and the Telecommunications Industry Association. May 19, 2004. <<http://www.ftthcouncil.org>>.

²⁰³ “Verizon, in Historic First, Begins Large-Scale Rollout of Advanced Fiber-Optic Technology.” Verizon News Release. May 19, 2004. <<http://newscenter.verizon.com>>.

²⁰⁴ There are some narrow limits to this exemption from unbundling requirements.

²⁰⁵ Section 271 of the 1996 Act, among other things, addresses RBOC obligations for unbundling in order to receive approval to provide long distance service.

elements are fiber-to-the-home loops (FTTH loops), fiber-to-the-curb loops (FTTC loops), the packetized functionality of hybrid loops, and packet switching (collectively, broadband elements).²⁰⁶

The FCC noted that “the relief included in this decision will benefit consumers by making the RBOCs more vigorous competitors to cable modem service, which plays a significant role in the current broadband market.”²⁰⁷ In addition, the FCC reiterated conclusions from the Triennial Review “that relieving incumbent carriers from the unbundling rules for these particular broadband elements could spark a race to build next-generation networks that will benefit consumers by providing new services and more competition.”²⁰⁸

c. Broadband over Power Line (BPL)

Broadband over power line (BPL), which is also referred to as power line communications (PLC), is an emerging technology that delivers broadband Internet connectivity over electric power lines. BPL is a last mile technology that takes advantage of medium and low voltage line capacities. Electricity travels at a lower frequency than an Internet signal, so the two can share a power line.²⁰⁹ Internet data traffic can be transmitted through this medium for approximately one mile, or longer with the use of repeaters. For the backhaul of traffic to Internet backbones, traditional fiber optic or other landlines are required. The technology has promise due to the existence of a network that already completes an electrical connection to virtually every home and business. By enabling power lines with the ability to provide broadband Internet, proponents hope this third network to the home will rival those established by telephone and cable companies.

The FCC issued a Notice of Inquiry (NOI) on April 23, 2003, requesting public comment on the use of electrical power lines to provide Internet and broadband services to residential and business consumers. The NOI was issued as part of the FCC’s “effort to promote spectrum flexibility and access to broadband services for all Americans, and to encourage multiple platforms for broadband, especially new facilities-based platforms.”²¹⁰ The NOI was also issued to request comments to assist the FCC in reviewing their Part 15 rules, which provided specific emission limits for carrier current systems operating below 30 MHz.²¹¹ BPL is one of the

²⁰⁶ FCC Releases Order Granting BOC Petitions for Forbearance From Section 271 Requirements for “Broadband Elements”. October 27, 2004. <http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-254A1.doc>.

²⁰⁷ “Federal Communications Commission Further Spurs Advanced Fiber Network Deployment.” October 22, 2004. <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-253492A1.doc>.

²⁰⁸ Ibid.

²⁰⁹ Glanz, William. “Electric Companies Begin Offering Broadband Service.” The Washington Times. April 5, 2004. <<http://washingtontimes.com/business/20040404-100425-2213r.htm>>. Accessed May 6, 2004.

²¹⁰ FCC News Release. FCC Begins Inquiry Regarding Broadband Over Power Line (BPL). April 23, 2003. <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-233537A1.pdf>.

²¹¹ FCC Notice of Proposed Rulemaking. February 23, 2004. Docket Nos. 03-104 & 04-37. FCC 04-29.

systems to which Part 15 rules apply. Of particular interest to the FCC were comments on the current state of high speed BPL technology, potential interference effects, and test results from BPL experimental sites. The FCC has issued at least eight experimental licenses to offer the service since April 2003. The companies issued licenses include Progress Energy for Raleigh, North Carolina, and Southern Telecom for unspecified areas in Alabama, Florida, Georgia, and Mississippi.²¹²

On February 12, 2004, after receiving over five thousand comments and replies to the NOI, the FCC released a Notice of Proposed Rulemaking (NPRM) proposing rules for BPL that were intended to increase the availability of broadband service to underserved areas and enhance competition while protecting existing services against interference. The NPRM provided interference mitigation requirements, as well as procedures for measuring radio frequency energy emitted from BPL equipment.²¹³ The NPRM also proposed facilitating access to BPL to increase the availability of broadband in rural and underserved areas, where power lines are already in place and there is no access to broadband in many cases.

One group that has voiced opposition to the deployment of BPL is amateur radio operators who are concerned that BPL may affect their shortwave radio communications signals. This group believes BPL may also affect the high-frequency transmissions used for national security, emergency response and an array of other applications.²¹⁴ In May 2004, the Institute of Electrical and Electronics Engineers-USA (IEEE) filed comments regarding the FCC's NPRM. The IEEE said the FCC has not yet resolved interference concerns, including concerns that BPL technologies may cause serious and harmful interference to national security, homeland defense, and emergency and disaster communications. The IEEE also commented that Access BPL systems may be subject to interference from licensed users of the high frequency spectrum that they use, causing the quality of service to decrease.²¹⁵ The FCC believes interference problems can be resolved by technical solutions.²¹⁶

A number of BPL trials have been conducted across the nation, but there have been few commercial rollouts thus far. Current Communications Group and Cinergy Broadband, LLC, announced in March 2004 the first large-scale rollout of BPL technology and services in the U.S. The service is available only in the Cincinnati, Ohio area, but plans include deployment to other Cinergy customers in Kentucky, Ohio, and Indiana, potentially reaching 24 million customers.

²¹² Scholar, Daryl. "Has the Time Come for Broadband Power Line?" In-Stat/MDR Information Alert Newsletter. March 24, 2004. Vol. 49. <<http://www.instat.com/infoalert.asp?Volname=Vol.%20%23%2049#item3>>.

²¹³ FCC Press Release. FCC Proposes Rules For Broadband Over Power Lines To Promote Broadband Service To Underserved Areas And Increase Competition. February 12, 2004. <<http://www.fcc.gov/headlines.html>>.

²¹⁴ American Radio Relay League Web site. Broadband over Power Line: Why Amateur Radio Is Concerned About Its Deployment. <<http://www.arrl.org/tis/info/HTML/plc/BPL-leave-behind.pdf>>.

²¹⁵ Comments of IEEE-USA. FCC Docket Nos. 03-104 & 04-37. May 3, 2004. <<http://www.ieeeusa.org/policy/POLICY/2004/050304a.pdf>>.

²¹⁶ FCC Notice of Proposed Rulemaking. Docket Nos. 03-104 & 04-37. February 23, 2004. FCC 04-29.

The initial deployment followed 14 months of trials. One feature of the service is VoIP telephone service capability.²¹⁷

While BPL seems to hold promise as a third wired broadband network to the home, it is unproven in the marketplace. BPL is entering a market where intense competition already exists between cable modem and DSL providers.

²¹⁷ Current Communications Press Release. Current Communications and Cinergy Launch Broadband Access Over Power Lines. March 2, 2004.
<<http://www.currentgroup.com/OurCompany/PressReleases/PressReleasesDetails/4.htm>>.

CHAPTER V: DISCUSSION OF ITEMS REQUIRED BY CHAPTER 364, F.S.

A. INTRODUCTION

Section 364.386(1), Florida Statutes, requires the Commission to address six points in its evaluation of the status of local wireline telecommunications in Florida. With those issues in mind, staff drafted data requests and sent them to all certificated CLECs and ILECs. The CLEC data request consisted of questions designed to obtain information regarding the types of local telecommunications services being offered, the range of rates and bundles for services offered, the status of agreement negotiations with ILECs, and the geographic areas where customers are able to obtain such services. Along with questions regarding the amounts invested in networks serving Florida and other service offerings such as cable television and cellular service in Florida, CLECs were asked to describe any barriers experienced in entering Florida's local exchange market. Comments as to any major obstacles believed to be impeding the growth of local competition and suggestions as to how to remove such obstacles were also solicited. This chapter addresses the statutory questions and summarizes some of the feedback provided by CLECs in response to the additional questions.

A 1997 amendment to Section 364.161(4), Florida Statutes, mandates that the Commission maintain a file of all CLEC complaints against ILECs regarding timeliness and adequacy of service in the provisioning of unbundled network elements, services for resale, requested repairs, and necessary support services. This information, including how and when each complaint was resolved, is included in Appendix D.

The Commission is required to address the following points in analyzing the status of competition in Florida:

- (1) The overall impact of local exchange telecommunications competition on the continued availability of universal service.
- (2) The ability of competitive providers to make functionally equivalent local exchange services available to both residential and business customers at competitive rates, terms, and conditions.
- (3) The ability of customers to obtain functionally equivalent services at comparable rates, terms, and conditions.
- (4) The overall impact of price regulation on the maintenance of reasonably affordable and reliable high-quality telecommunications services.
- (5) What additional services, if any, should be included in the definition of basic local telecommunications services, taking into account advances in technology and market demand.

- (6) Any other information and recommendations which may be in the public interest.

B. DISCUSSION OF SIX STATUTORY ISSUES

1. The Overall Impact of Local Exchange Telecommunications Competition on the Continued Availability of Universal Service.

Universal Service is the longstanding concept that a specified set of telecommunications services be available to all customers at affordable rates.²¹⁸ Chapter 364.025, Florida Statutes, provides a number of guidelines designed to maintain universal service objectives with the introduction of competition in the local exchange market. Section 364.025(1), F.S., requires ILECs to furnish basic local exchange telecommunications service within a reasonable time period to any person requesting such service within a company's service territory until January 1, 2009. Section 364.025(4), F.S., mandates that prior to January 1, 2009, "the Legislature shall establish a permanent universal service mechanism upon the effective date of which any interim recovery mechanism for universal service objectives or carrier-of-last-resort obligations imposed on competitive local exchange telecommunications companies shall terminate." In compliance with this section, the Commission submitted its report, Universal Service in Florida, to the Governor and Legislature in December 1996. At the direction of the Legislature, universal service issues were revisited in the Universal Service and Lifeline Funding Issues report submitted in February 1999. In its report, the Commission stated that "although the potential for an ILEC to experience competitive erosion of its high-margin customers while retaining its high-cost (and perhaps below cost) customer base is a real concern, the Commission has not discerned any such major impact to date."

In 2003, 94.6% of Florida households subscribed to local telephone service, exceeding the national average of 94.2%.²¹⁹ This represents an increase in Florida households subscribed from 94.3% reported for 2002, and 93.2% reported in 2001.²²⁰ Households with incomes below \$14,000 annually increased telephone subscribership from 94.3% in 2002, to 94.4% in 2003.²²¹ Since 1997, the number of households receiving Lifeline Assistance, an assistance plan that allows for up to a \$13.50 credit on monthly phone charges, has increased 5.4%.²²²

Local exchange wireline competition has had little discernable impact on the continued availability of universal service.

²¹⁸ Exactly what should constitute that "specified set" of services is hotly debated in the national arena.

²¹⁹ Federal Communications Commission. Wireline Competition Bureau. *Telephone Subscribership Report*. Washington D.C., 2004.

²²⁰ Ibid.

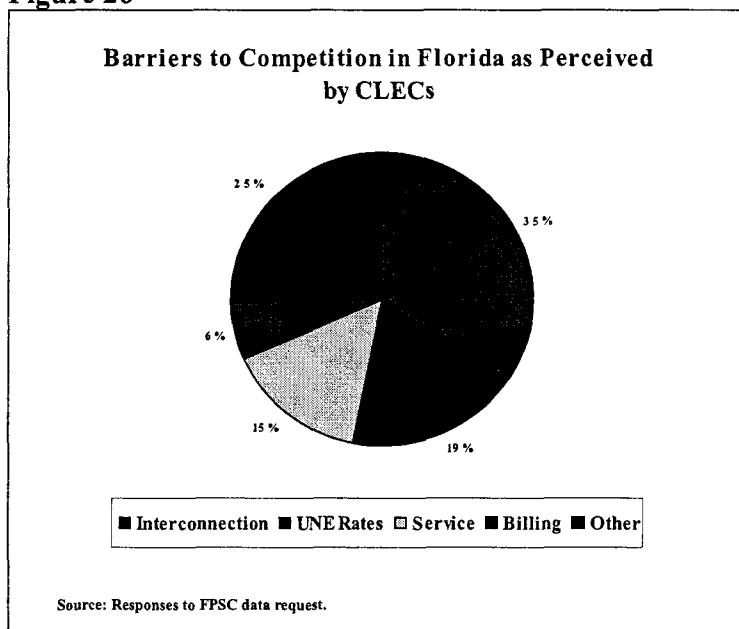
²²¹ Ibid.

²²² Ibid.

2. **The Ability of Competitive Providers to Make Functionally Equivalent Local Exchange Service Available to Both Residential and Business Customers at Competitive Rates, Terms, and Conditions.**

The Commission surveyed the 420 CLECs certified as of May 31, 2004. Of the 357 respondents, 175 indicated that they were currently providing service in Florida. CLECs were asked to discuss any perceived barriers to competition in Florida and to describe any significant obstacles that may be impeding the growth of local competition in the state. The primary issues identified by the respondents are shown in Figure 26.

Figure 26



Interconnection Agreements – The most frequently reported barrier to entry was issues relating to interconnection agreements. CLEC allegations included “take it or leave it” negotiations by ILECs, delays in the negotiation process, excessive costs, and unwillingness of ILECS to negotiate. Recent TRO developments, and the increased focus on negotiations, may have contributed to some CLECs reporting this as a perceived barrier. Last year, interconnection agreements was the second most frequently reported barrier to entry.

UNE Rates – UNE pricing was the second most commonly listed barrier to entry. Some CLECs stated that Commission-set UNE rates were too high and should be reduced. Other CLECs were troubled by the variation of UNE rates between Sprint, BellSouth, and Verizon. Last year, UNE rates was the most commonly identified barrier to entry.²²³

Service – CLECs stated that another barrier to entry was service problems. This category includes allegations about service from the ILEC to the CLEC and from the ILEC to the CLEC’s

²²³ It should be noted that facilities-based CLECs like Florida Digital Network have expressed concern that artificially low UNE-P rates place them at a competitive disadvantage vis-à-vis CLECs offering service via UNE-P.

customers. Some CLECs alleged that new customer installation was delayed by ILECs. Other service issues included problems with number portability, untimely correction of defects, and incorrectly rejected orders.

Billing – Another barrier to entry alleged by CLECs was billing problems. CLECs stated that they have to use their employees to correct billing issues that are the responsibility of the ILECs.

Other Issues – CLECs raised several other issues that did not necessarily fit into one of the major categories previously discussed. Those issues included regulatory uncertainty, winback activities, too much competition, and the belief that the elimination of UNE-P will eliminate competition. Some CLECs stated that another barrier to entry was DSL-related issues.

Pursuant to Section 364.161(4), Florida Statutes, the Commission handles CLEC complaints filed against ILECs. It is noteworthy that over the past three years, the number of complaints has been declining. There were 81 complaints filed from July 1, 2001 through June 30, 2002, 58 complaints filed from July 1, 2002 through June 30, 2003, and 41 complaints filed from July 1, 2003 through May 31, 2004 (note that the number of complaints for the month of June 2004 is not included in the last total).

The Commission received 254 negotiated agreements and 10 requests for arbitration between July 1, 2003 and May 31, 2004. Since June 1996, the Commission has reviewed and approved 2,871 negotiated interconnection agreements.

3. The Ability of Customers to Obtain Functionally Equivalent Services at Comparable Rates, Terms, and Conditions.

In an environment of emerging intermodal competition for voice service, analysis of this statutory factor is not simple. Customers may obtain what they consider functionally equivalent services – via wireline telephony, wireless, VoIP, or cable telephony. This factor, however, is only analyzed herein with respect to the provision of wireline telecommunications by ILECs and CLECs, the companies subject to Commission jurisdiction. As such, our analysis of this factor can be incomplete at best.

As of May 31, 2004, 175 CLECs reported they are currently providing some form of local telecommunications service in Florida. Appendix A lists the responding CLECs, the class of customers each serves, and the methods by which each provides service. Methods of offering service are through *resale* of an ILEC's, or wholesaler's products, *facilities-based* provisioning entirely through the competitor's own facilities, *unbundled network elements* (UNEs) leased from the ILEC, or a *mixed* combination of two or more methods.

Table 6 shows that CLECs appear to continue to target markets with large concentrations of customers. The table lists the state's ten Local Access and Transport Areas (LATAs), the

number of local exchange areas within the LATA served by a local telephone company, and the number of exchanges within the LATA without a competitive entrant.²²⁴

LATA	Exchanges in LATA		Exchanges without competitive entrant		Area Codes Serving LATA	
	2003	2004	2003	2004	2003	2004
Daytona	10	10	0	0	386	386
Ft. Myers	31	31	0	0	863,941,941 to 239	863,941,941 to 239
Gainesville	49	49	1	2	352,850,904	352,850,904
Jacksonville	43	43	0	0	386,904	386,904
Mobile, AL	2	2	1	1	850	850
Orlando	23	23	0	1	321,386,407,407	321,386,407,407
Panama City	35	35	3	5	850	850
Pensacola	23	23	2	3	850	850
Southeast	25	25	1	1	305,561,561 to 772, 754,786,954	305,561,561 to 772, 754,786,954
Tallahassee Area	12	12	0	0	850	850
Tampa Area	24	24	0	0	727,813,863,941	727,813,863,941

Source: Responses to FPSC data requests; FPSC Internal Sources.

Customers must also be able to obtain functionally equivalent services at rates comparable to that of the ILEC in order for meaningful competition to take place.²²⁵ As shown in Table 7, customers appear to have access to a wide variety of rates as competitors have developed a variety of pricing strategies to gain customers, including overall discounts and matching the incumbent's price.

CLEC	CLEC Rate		ILEC	ILEC Rate	
	Residential	Business		Residential	Business
Supra Telecommunications and Information Systems, Inc.	\$10.95	\$27.95	BellSouth	\$7.57-\$11.04	\$20.55-\$30.20
Tallahassee Telephone Exchange	\$9.65	\$19.99	Sprint	\$7.63-\$11.78	\$16.57-\$25.57
American Fiber Networks	\$10.75-\$12.00	\$25.25-\$30.00	Verizon	\$10.12-\$12.10	\$24.47-\$30.35
Orlando Telephone Company	\$11.50	\$25.00	BellSouth Sprint	\$7.57-\$11.04 \$7.63-\$11.78	\$20.55-\$30.20 \$16.57-\$25.57

Source: Company Tariffs and Price Lists.

Another pricing strategy offered by CLECs is prepaid telephone service, an option for, among others, consumers with poor credit histories or those disconnected due to repeated late

²²⁴ The 2003 Report erroneously stated that there were two exchanges in Mobile and in Panama City, and one exchange in Tallahassee without a competitive entrant. The correct numbers were one, three, and zero, respectively.

²²⁵ As noted, customers may obtain what they consider functionally equivalent services via other platforms. Our analysis is limited to wireline telecommunications issues.

payment or nonpayment. Customers of prepaid telephone companies typically agree to pay a monthly fee in advance for local calling and 911 access, but must agree to block long distance, 900-numbers, and directory assistance calls. Prices for such services are approximately \$39.00 per month for residential service, and \$69.00 per month for business service. Telephone companies providing only prepaid telephone services account for 31 of the 175 companies providing local service in Florida.

4. **The Overall Impact of Price Regulation on the Maintenance of Reasonably Affordable and Reliable High-Quality Telecommunications Services.**

In 2003, the Florida Legislature passed a comprehensive rewrite of the Florida statutes governing the regulation of telecommunications companies in Florida. The legislation entitled "The Tele-Competition Innovation and Infrastructure Enhancement Act of 2003" (the 2003 Act) was signed into law on May 23, 2003, by the Governor. The law is designed to provide further impetus for development of a more competitive telecommunications market in Florida. The law most notably impacts the regulation of ILECs and IXC's.

On August 27, 2003, BellSouth, Verizon and Sprint filed petitions with the Commission proposing to implement Section 364.164, Florida Statutes, by rebalancing rates in a revenue neutral manner, on a statewide basis, through decreases in intrastate switched access charges with offsetting rate adjustments for basic local services. The initial petitions were dismissed by the Commission as deficient based on a statutory criterion, but the companies subsequently amended their petitions to correct the deficiencies.²²⁶ A related docket was opened by the Commission on October 2, 2003, to address the required flow-through of ILEC switched access charge reductions by IXCs, pursuant to Section 364.163(2), Florida Statutes.

Fourteen public hearings were held throughout the state to obtain customer input, and citizens filed written comments. The Commission took additional testimony and evidence on the petitions from December 10 through 12, 2003 and reached a decision at its December 16, 2003, Agenda Conference. Based on the evidence before it and having considered a detailed staff recommendation recommending that the rate rebalancing petitions be granted, the Commission found that intrastate access rates currently provide support for basic local telecommunications services and that the support prevents the creation of a more attractive competitive local exchange market by keeping local rates at artificially low levels, thereby raising an artificial barrier to entry into the market by efficient competitors. The Commission determined that the elimination of such support will induce enhanced market entry into the local exchange market by competitors, resulting in the creation of a more competitive local exchange market that will benefit residential consumers. Therefore, it granted the BellSouth, Verizon and Sprint petitions for rate rebalancing.

Although not mandated by Section 364.164 to consider the impact of the proposals on toll rates paid by residential consumers, the Commission concluded that many residential customers will benefit directly from the elimination of in-state connection fees and reductions in

²²⁶ BellSouth filed its amended petition on September 30, 2003; Sprint on October 1, 2003; and Verizon on October 2, 2003.

per-minute intrastate toll rates. Notwithstanding arguments that it lacked the authority to do so, the Commission ordered that reductions in switched access charges paid by IXC's and ILEC's be flowed through to consumers for a minimum period of two years. Further, noting that the amended Lifeline provisions in Section 364.10 will help to protect economically disadvantaged consumers from the effect of local rate increases, the Commission secured the commitment of each of the three large ILEC's to expand its Lifeline eligibility criteria further than the 2003 Act requires by allowing customers with incomes at or below 135% of the federal poverty guidelines to participate in the program. The ILEC's also committed not to increase rates to Lifeline customers before September 1, 2007, even if parity is reached prior to that date. The commitment to increase the eligibility criterion from 125% to 135% of the federal poverty level makes approximately 119,000 additional Floridians eligible for both the monthly Lifeline credit and the protection from the immediate effect of the approved local rate increases.

On January 7, 2004, Charles J. Crist, Attorney General, State of Florida, and Harold McLean, Public Counsel, State of Florida, filed an appeal of the Commission's Order to the Florida Supreme Court. On January 8, 2004, Attorney General Crist also filed a Motion for Reconsideration with the Commission, asking it to reconsider its decision for several reasons. At the May 3, 2004, Special Agenda Conference, the Commission denied the motions for reconsideration. The case is currently on appeal to the Florida Supreme Court. Rate rebalancing has been stayed, pending the outcome of the appeal.

On September 8, 2004, AARP filed with the Commission a motion for an evidentiary hearing because of significantly changed circumstances. AARP concurrently filed a motion with the Florida Supreme Court to relinquish its jurisdiction. In Order No. PSC-04-0893-PCO-TL, the Commission extended the time for filing responses, if the Supreme Court relinquishes jurisdiction, to 12 days from the date of the Supreme Court's decision.

Until the case is decided, the limitations in the previous law regarding local rate increases are in effect. Section 364.051, Florida Statutes, provides that an ILEC may adjust its basic service prices once in a 12-month period by an amount not to exceed the change in inflation less one percent. The following ILEC's proposed changes for basic and non-basic services between July 1, 2003 and May 31, 2004, pursuant to the provisions of Section 364.051, Florida Statutes:

- ALLTEL increased basic residential and business service rates and non-basic business service rates by 0.34%.
- ITS Telecommunications Systems, Inc. increased its basic and non-basic service rates by 0.67%.
- Sprint increased residential basic services rates by 1%. It also increased residential non-basic exchange access rates by 2.06%, and increased business non-basic exchange access rates by 3.28%.
- Verizon increased residential and business basic exchange access rates by 1.04%. It also decreased business non-basic exchange access rates by 0.71%, and increased residential non-basic exchange access rates by 1.04%.

5. **What Additional Services, If Any, Should be Included in the Definition of Basic Local Telecommunications Services, Taking into Account Advances in Technology and Market Demand.**

For ILECs, Section 364.02(1), Florida Statutes, defines basic local service as follows:

“Basic local telecommunications service” means voice-grade, flat-rate residential and flat-rate single line business local exchange services which provide dial tone, local usage necessary to place unlimited calls within a local exchange area, dual tone multi-frequency dialing, and access to the following: emergency services such as “911,” all locally available interexchange companies, directory assistance, operator services, relay services, and an alphabetical directory listing. For a local exchange company, such terms shall include an extended area service routes, and extended calling service in existence or ordered by the commission on or before July 1, 1995.

According to Section 364.337(2), Florida Statutes, the basic local telecommunications service provided by a CLEC must include access to operator services, “911” services at a level equivalent to that of the ILEC serving that area, and relay services for the hearing impaired. CLECs must also provide a flat-rate pricing option for basic local telecommunications; the statute states that, “mandatory measured service for basic local telecommunications services shall not be imposed.”

No evidence suggests a need to recommend additions or deletions to the definition of basic local service.

6. **Any Other Information and Recommendations Which May be in the Public Interest.**

There are no recommendations at this time.

CHAPTER VI: STATE ACTIVITIES

A. TELE-COMPETITION INNOVATION & INFRASTRUCTURE ENHANCEMENT ACT OF 2003

The 2003 Florida Legislature passed a comprehensive rewrite of the Florida Statutes governing the regulation of telecommunications companies in Florida. The legislation entitled "The Tele-Competition Innovation and Infrastructure Enhancement Act of 2003" (the 2003 Act) became law on May 23, 2003 by the signature of the Governor. The law is designed to provide further impetus for development of a more competitive telecommunications market in Florida. The law most notably impacts the regulation of ILECs and IXCs.

1. Long Distance Market

In recognition of the competitive long distance market, the 2003 Act reduces certain Commission authority and oversight over IXCs. A specific example is that the requirement to be certificated is reduced to registration with the Commission prior to beginning operation in Florida. IXCs will continue to be subject to consumer protection statutes related to slamming and cramming. These unscrupulous billing practices will continue to be addressed by the Commission's Division of Regulatory Compliance and Consumer Assistance. IXCs will also continue to file tariffs with the Commission and pay applicable regulatory assessment fees.

2. Expansion of Lifeline

Other aspects of the law include the expansion of Lifeline eligibility and associated benefits. The 2003 Act expanded Lifeline eligibility criteria by including an income-based test and providing for increased promotion of the Lifeline program. The statute provides that those consumers with income less than 125% of the Federal Poverty Guideline are eligible for Lifeline benefits. In addition, the law requires that each LEC subject to the law shall provide Lifeline applications, pamphlets, brochures and other educational materials to state and federal agencies that provide benefits to persons eligible for Lifeline services. Each state agency providing such benefits shall provide these materials to affected persons at the time such persons apply for benefits.

Further, the law requires that each state agency providing benefits to persons eligible for Lifeline service work cooperatively with the Department of Children and Families, the Commission, and telecommunications companies to develop processes for promoting Lifeline participation. That process has involved the Agency for Health Care Administration, Department of Elder Affairs, the Office of Public Counsel, the United Way, AARP, and other community groups working to disseminate information about Lifeline benefits. In an effort to disperse information as widely as possible, the Commission has made available to these agencies CD-Roms containing Lifeline brochures and posters.

Finally, the 2003 Act requires that by December 31 of each year, the Commission shall report to the President of the Senate, the Speaker of the House, and the Governor, on the number of customers subscribing to Lifeline service and the effectiveness of any promotional programs.

3. Promotion of VoIP as a Competitive Alternative

The 2003 Act excludes VoIP telephony from the definition of telecommunications “service” and provides that VoIP telephony should be free from unnecessary regulation. See Section C of Chapter VII below for a discussion of this provision. See Section A.1 of Chapter IV for a discussion of VoIP.

4. Basic Local Exchange Market

Please refer to Chapter V, Section B.4, for a discussion of the provision of the Tele-Competition Act that calls for rate rebalancing and an overview of the Commission’s proceedings and rulings to implement the 2003 Act.

B. COLLOCATION DOCKETS NOS. 981834-TP/990321-TP

In September 1999, the Commission adopted procedures and guidelines for collocation (i.e., one carrier locating equipment at the premises of another carrier), focused largely on those situations in which an ILEC believes there is no space for physical collocation. The following guidelines were addressed: initial response times to requests for collocation space; application fees; central office tours; petitions for waiver from the collocation requirements; post-tour reports; disposition of the petitions for waiver; extensions of time; and collocation provisioning time frames.

An administrative hearing was held on January 12 and 13, 2000, to address collocation issues beyond those previously addressed in the collocation guidelines. The Commission rendered its post-hearing decision on these additional issues on May 11, 2000, by Order No. PSC-00-0941-FOF-TP. Therein, the Commission addressed twenty additional issues, including ILEC obligations regarding “off-premises” collocation; the conversion of virtual to physical collocation; and the division of responsibilities between ILECs and collocators for sharing and subleasing space between collocators and for cross-connects between collocators.

Following a Commission decision in November 2000, addressing various motions for reconsideration and/or clarification of the Order, the docket was left open to address pricing issues for collocation. Subsequently, the proceeding was divided to allow the Commission to address technical issues first, followed by costing and pricing issues.

Prior to the hearing on the technical issues, the parties were able to reach stipulations on several issues. The Commission rendered its decision on the technical issues on November 26, 2003, by Order No. PSC-03-1358-FOF-TP. Numerous Motions for Reconsideration and/or

Clarification of the Order were filed and subsequently addressed by the Commission on March 2, 2004 (Order No. PSC-04-0228-FOF-TP).

The hearing on the remaining issues – to address the costs, appropriate definitions, and associated terms and conditions to provide certain collocation elements – took place on January 28 and 29, 2004. The Commission rendered its decision at the August 17, 2004, Agenda Conference by Final Order PSC-04-0895-FOF-TP.

**C. IMPLEMENTING THE REQUIREMENTS OF THE FCC'S TRO IN COMMISSION DOCKET
Nos. 030850/030851/030852-TP**

On August 21, 2003, the FCC released the TRO. See Chapter III, Section B.2 for a discussion of the TRO.

The Commission opened three dockets on August 22, 2003, to ascertain whether a requesting carrier is impaired by lack of access to certain incumbent local exchange companies' network elements. Docket No. 030850-TP was initiated to address the FCC's presumption of no impairment absent access to unbundled local switching for business customers who obtain access via high-capacity loops (also referred to as enterprise customers). Pursuant to the TRO, the state commission had 90 days from the TRO's effective date, October 2, 2003, to rebut the national finding of no impairment for enterprise local switching. Docket No. 030851-TP was initiated to address impairment issues relating to local circuit switching for mass market customers; and Docket No. 030852-TP was initiated to address the location-specific review for DS1, DS3, and dark fiber loops and route-specific review for DS1, DS3, and dark fiber transport. The TRO required that a state commission complete proceedings regarding mass market switching and high capacity loops and transport within nine months from the TRO's effective date.

By Order No. PSC-03-0988-PAA-TP, issued September 3, 2003, in Docket No. 030850-TP, the Commission concluded that, based on the very limited demand existing in Florida for the combination of DS1 loops with unbundled local switching, CLECs are not impaired absent access to unbundled local switching for business customers served via high-capacity loops, as presumed by the FCC. Accordingly, the Commission did not initiate a proceeding to investigate whether to challenge the FCC's presumption of no impairment.

The hearing in Docket No. 030851-TP addressing the impairment of mass market switching was held February 24-27, 2004. Shortly thereafter, on March 2, 2004, the D.C. Circuit Court of Appeals released its decision which vacated and remanded certain provisions of the TRO. In particular, the D.C. Circuit held that the FCC's delegation of authority to state commissions to make impairment findings was unlawful. The D.C. Circuit further found that the national findings of impairment for mass market switching and high capacity transport were based upon an improper analysis and could not stand on their own. Accordingly, the Court vacated the FCC's delegation to the states for determining the existence of impairment with regards to mass market switching and high-capacity loops. The D.C. Circuit also vacated and remanded back to the FCC the TRO's national impairment finding regarding mass market switching and dedicated transport (below the Optical Carrier Number (OCn) level).

In light of the D.C. Circuit Court decision, on March 18, 2004, the prehearing officer issued an order in Docket No. 030851-TP holding this docket in abeyance indefinitely until further action is deemed appropriate.²²⁷

Upon commencement of the hearing in Docket No. 030852-TP on March 3, 2004, the parties agreed to hold the hearing in abeyance indefinitely pending the outcome of litigation regarding the D.C. Circuit Court of Appeals' decision. All pre-filed testimony and exhibits were moved into the record without objection. However, all parties reserved the right to conduct cross-examination of witnesses if further proceedings were convened in the docket. The parties agreed to participate in informal conference calls to discuss any new developments affecting this docket. These calls were held April 5, May 11, June 8, and July 7, 2004, for Docket Nos. 030851-TP and 030852-TP.

On June 16, 2004, the D.C. Circuit issued its mandate vacating and remanding certain TRO provisions. As a result of the Court's mandate, the FCC released Interim Rules on August 20, 2004, requiring ILECs to continue providing unbundled access to mass market local circuit switching, high capacity loops, and dedicated transport until the earlier of the effective date of final FCC unbundling rules or six months after Federal Register publication of the Interim Rules. Additionally, the rates, terms, and conditions of these UNEs are required to be those that applied under ILEC/CLEC interconnection agreements as of June 15, 2004.²²⁸ In the event that the interim six months expires without final FCC unbundling rules, the Interim Rules contemplate a second six-month period during which CLECs would retain access to these network elements for existing customers, at transitional rates. Beyond establishing interim measures, the FCC seeks comment on, among other things, alternative unbundling rules that will respond to *USTA II*. On August 23, 2004, certain ILECs filed a *Mandamus Petition*²²⁹ with the D.C. Circuit Court of Appeals in response to the FCC's *Order and Notice*.

At the September 21, 2004, Agenda Conference, the Commission decided that, in light of the D.C. Circuit decision, no further action was needed in these dockets and, thus they should be closed. Additionally, the Commission decided that record summaries of Docket Nos. 030851-TP and 030852-TP would not be prepared and sent to the FCC in response to its August 20 Order and Notice of Proposed Rulemaking.

²²⁷ Additionally, the schedule for filing briefs on April 6, 2004, was suspended. The order also informed the parties that informal conference calls would be scheduled to discuss any new developments affecting this docket.

²²⁸ Except to the extent the rates, terms, and conditions have been superseded by 1) voluntarily negotiated agreements, 2) an intervening FCC order affecting specific unbundling obligations (e.g., an order addressing a petition for reconsideration), or 3) a state commission order regarding rates.

²²⁹ *United States Telcom Association v. FCC*, Petition for a Writ of Mandamus to Enforce the Mandate of the Court. August 23, 2004 (*Mandamus Petition*).

D. WHOLESALE PERFORMANCE MEASUREMENT PLANS

Through Docket No. 000121-TP, the Commission developed wholesale performance measurement plans for the ongoing evaluation of operations support systems (OSS) provided for CLECs' use by ILECS. The performance measurement plans provide a standard against which CLECs and the Commission can measure performance over time to detect and correct any degradation of service provided to CLECs. The Commission adopted performance measurements for BellSouth (Sub docket No. 000121A-TP) in August 2001, for Sprint (Sub docket No. 000121B-TP) in January 2003, and for Verizon (Sub docket No. 000121C-TP) in June 2003. Commission staff captures the performance measurement data monthly from each ILEC and applies trending analysis. Staff reviews each ILEC's performance measurement plan at recurring intervals.

For BellSouth, the Commission established 90 wholesale performance measurements as well as a system of remedy payments called the Self-Effectuating Enforcement Mechanism (SEEM) plan. Remedy payments are applied if BellSouth fails to meet performance standards for key measurements as set by the Commission. From July 2003 to May 2004, BellSouth paid over \$28 million in SEEM remedies to CLECs and the state of Florida. BellSouth's May 2004 aggregate performance measurement results indicate that BellSouth met 84% of the Commission mandated performance standards.

For Sprint, the Commission established 38 wholesale performance measurements. In September 2003, staff conducted the initial six-month review of Sprint's performance measures to address proposed revisions to Sprint's performance measurement plan. The revisions were adopted by the Commission in January 2004. Sprint's May 2004 aggregate performance measurement results indicate that Sprint met 86% of the Commission mandated performance standards. Sprint performs a root cause analysis of any measurement not meeting established standards for three consecutive months. These reports are provided monthly to the Commission. Sprint has not been ordered by the Commission to implement a remedy plan for noncompliant service.

For Verizon, the Commission established 44 wholesale performance measurements. Verizon's May 2004 aggregate performance measurement results indicate that Verizon met 89% of the Commission mandated performance standards. Verizon has not been ordered by the Commission to implement a remedy plan for noncompliant service.

E. SERVICE QUALITY DOCKETS AND INCUMBENT LOCAL EXCHANGE COMPANIES

ILECs are required by rule to consistently meet standards established to ensure their customers receive a high quality of service. Commission standards, for example, require a company to restore interrupted service within 24 hours in 95% of the instances reported. Commission standards also require an ILEC to install service 90% of the time in three working days from receipt of an application. The Commission conducts field evaluations of ILECs to verify compliance with the Commission's service standards. Each ILEC is required by rule to

submit quarterly reports to the Commission detailing its compliance with the established service standards. In September 1999, the Commission opened dockets to initiate show cause proceedings against the large ILECs for violation of Commission service standards.

It should be noted that these dockets were not opened based on complaints from consumers, but were predicated on data supplied by the ILECs in the Commission's "self-reporting" process.

1. **Sprint**

Sprint and the Office of Public Counsel (OPC) stipulated to an agreement in July 2000 that results in the company providing credits to its customers when it fails to meet the Commission's standards for out of service repair and primary service installations. The amount credited increases the longer it takes the company to repair or install the service. The agreement was approved by the Commission on November 7, 2000.

On July 15, 2003, the Commission (Docket No. 030430-TL) approved modifications and a two-year extension of the Service Guarantee Program. The modifications made Sprint's program comparable to BellSouth's Service Guarantee Program.

From July 2003, through May 2004, Sprint has paid its customers \$1,454,575 for missing service installations and \$474,444 for the out of service repair. In addition, it has posted, in the Community Service Fund, \$95,000 for missing the business office answer time and the repair answer time. The Community Fund is for promoting Sprint's Lifeline service.

2. **BellSouth**

BellSouth has also signed an agreement with OPC that is similar to the Sprint settlement which the Commission approved on July 24, 2001. The settlement established automatic fixed credits to customers for missed commitments for service installation and an increased credit to customers for missed out of service repairs. On January 22, 2002, BellSouth filed a letter clarifying the starting and ending dates of its Service Guarantee Plan. This was approved by the Commission on February 22, 2002, (Docket No. 010097-TL) making the starting date March 1, 2002 and the end date March 1, 2005.

For the period from July 2003 through May 2004, BellSouth has paid its customers \$571,000 for missed installations and \$1,981,408 for missed out of service repairs.

F. **FLORIDA TELECOMMUNICATIONS COMPETITIVE INTERESTS FORUM**

In an effort to facilitate further development of a competitive local telephone market in Florida, the Commission, in 2001, initiated a collaborative forum for the purpose of addressing operational and logistical issues that arise between CLECs and ILECs. The Florida

Telecommunications Competitive Interest Forum (Forum) is an opportunity for any Florida local telecommunications provider to raise issues or topics related to facilitating a better functioning competitive market in Florida. The Forum provides a venue for parties to engage in dialogue in an effort to resolve issues in an informal setting rather than a formal, more litigious one. Since the inception in August, 2001 the Forum has convened monthly and has considered a host of issues related to billing and ordering functions. The primary focus during the later part of 2003 and thus far in 2004 has been the development of customer migration draft rules. The draft rules address the process and required information exchange necessary to facilitate CLEC-to-CLEC, CLEC-to-ILEC, and ILEC-to-CLEC customer transfers of service. A working subgroup of the Forum presented draft rules to the Forum in mid-2003 and noted that several areas of disagreement remained. The Forum is continuing to explore resolutions to these areas and is also considering the most efficient process to put the draft rules before the Commission.

G. LIFELINE AND LINK-UP PROGRAMS

Since the inception of the Lifeline and Link-Up programs in Florida, the participation rate for eligible subscribers has been low despite consistent efforts to increase consumer awareness about the programs' benefits. Over the past year, the Commission has spearheaded several important initiatives to increase Lifeline and Link-Up visibility and participation by eligible telephone subscribers.

In July 2003, the Commission initiated a joint Lifeline project with other state and federal agencies that resulted in the dissemination of Lifeline educational materials to all of Florida's nursing homes through the Agency for Health Care Administration's Long Term Care Monitoring Program and to more than 200 One-Stop Career Centers through Workforce Florida, Inc.'s 24 regional workforce boards. During 2004, the Commission formed additional partnerships with a number of organizations to provide Lifeline information to the public. These partners include county libraries, city and county consumer affairs offices, churches, senior centers and a university social work program. The Commission continues to evaluate and promote methods to increase Lifeline and Link-Up awareness and participation.

On April 29, 2004, the FCC released its Report and Order (Order), and Further Notice of Proposed Rulemaking regarding the Lifeline and Link-Up Programs. To improve these programs and to increase subscribership, the FCC's Order, in part: 1) added Temporary Assistance to Needy Families program (TANF) and National School Lunch free lunch program (NSL) to the program-based eligibility criteria; and, 2) added an income-based eligibility criterion of 135% of the Federal Poverty Guidelines (FPG).

On August 10, 2004, the Commission issued Order No. PSC-04-0781-PAA-TL, in Docket No. 040604-TL, adopting the NSL and an income-based criterion of 135% of the FPG for purposes of determining eligibility in the Lifeline and Link-Up programs in Florida. The Commission had previously adopted TANF as an eligibility criteria. In addition to the adoption of new eligibility criteria, the Commission ordered that Florida consumers who qualify for Lifeline assistance be allowed the option of electing a self-certification process by which the amount of Lifeline assistance provided would be based on the type of certification chosen by the consumer. Election to use the self-certification process provides a maximum monthly credit of

\$8.25. On August 31, 2004, the Office of Public Counsel, BellSouth, Verizon, Sprint and, jointly, TDS Telecom, GT COM, and ALLTEL Florida filed petitions protesting the Commission's Order and requesting a formal evidentiary hearing.

In a separate but related docket, in May 2004, the Office of Public Counsel petitioned the Commission (Docket No. 040451-TP) to initiate rulemaking requiring local exchange telecommunications companies to provide Lifeline service within 30 days of customer certification. A staff workshop was held on August 19, 2004, to discuss the implications of rulemaking and to gain a better understanding of how Lifeline promotions could more effectively reach Florida's Lifeline eligible population.

CHAPTER VII: FEDERAL ACTIVITIES

A. THE FCC'S TRIENNIAL REVIEW ORDER ON UNE RULES

Under federal law, an ILEC is required to offer UNEs to CLECs at cost-based rates if such UNEs are "necessary" to the CLECs' provision of local service and if the CLECs would be "impaired" without access to such network elements. See Chapter I, Section A.2 above for a discussion of UNEs.

On February 20, 2003, the FCC adopted new rules pertaining to ILEC obligations to unbundle certain elements of their networks and to make these UNEs available to CLECs at cost-based (TELRIC) rates. The FCC released the text of its Order on August 21, 2003; the Order became effective on October 2, 2003. See Chapter III, Section B.2 above.

On March 2, 2004, while the Commission was in the midst of proceedings to implement these FCC rules for Florida, the U.S. Circuit Court of Appeals for the District of Columbia Circuit reversed major portions of the FCC's Triennial Review Order. Among other holdings, the D.C. Circuit held that:

- The FCC cannot delegate its authority to the states, except for fact-finding and other limited circumstances.
- The states cannot be granted the authority to make the impairment findings that the law requires the FCC to make.
- The FCC used an improper analysis in concluding that mass market switching was impaired nationally.
- The FCC used an improper analysis in concluding that certain dedicated transport was impaired.
- The Court's order vacating the offending rules was stayed until the later of 60 days from the date of the opinion (or May 1, 2004),²³⁰ or the Court's denial of any petition for rehearing.

The FCC did not appeal the D.C. Circuit decision to the U.S. Supreme Court. In addition, the Solicitor General of the United States did not appeal the decision. Certain parties to the proceeding did appeal. The United States Supreme Court, however, declined to hear the appeal. As such, the decision of the D.C. Circuit became final on June 15, 2004. As a consequence, certain rules relating to pricing of UNEs ceased to exist. On August 20, 2004, the FCC released its Order and Notice of Proposed Rulemaking (NPRM) on unbundled access to

²³⁰ The FCC and others then petitioned for a 45-day extension of the May 1, 2004 stay date. The request for extension to June 15, 2004 was granted.

network elements. In this Order, the FCC sets forth a 12-month plan with two phases to stabilize the market. First, on an interim basis, the FCC requires ILECs to continue providing unbundled access to switching, enterprise market loops, and dedicated transport under the same rates, term and conditions that applied under their interconnection agreements as of June 15, 2004. Second, the FCC has established measures for the next six months, if final unbundling rules have not been released. In the NPRM, the FCC seeks comment on how to respond to the D.C. Circuit's decisions.

B. REGULATORY FRAMEWORK FOR BROADBAND WIRELINE ACCESS TO THE INTERNET

The Commission filed comments in April 2002, to address the FCC's proposed regulatory framework. Most significant among the FCC's tentative conclusions was that wireline broadband Internet access be considered an Information Service and thus subject only to Title I regulation.²³¹ Depending on one's vantage, this would expressly remove DSL services from the unbundling requirements of the 1996 Act or recognize that DSL (i.e., broadband) is not subject to the 1996 Act in the first instance.

The FCC has not yet ruled in this proceeding. However, in August 2003, the FCC issued its long awaited Triennial Review Order that specifically exempted fiber technology to the home (i.e., technology to deliver broadband into the home) from future unbundling requirements.

In October 2003 the Ninth Circuit Federal Court of Appeals (Ninth Circuit) ruled that cable modem service is a combination of telecommunications service and information service. If upheld, this ruling would bring cable modem service under Title II as well as Title I of the Telecom Act. The decision vacated the FCC's Declaratory Ruling that cable modem service is an information service only and remanded the matter to the FCC for further consideration. The Ninth Circuit denied a request by the FCC to rehear the case but granted a stay of its decision until June 30, 2004. Both the FCC and the U.S. Solicitor General have appealed the case to the U.S. Supreme Court, which stays the Ninth Circuit decision until the case is resolved.

It is not expected that the FCC will issue a decision in the wireline broadband proceeding until the cable modem case has been decided.

C. IP-ENABLED SERVICES (VOICE OVER INTERNET PROTOCOL)

In July 2004, the Commission submitted reply comments to the FCC that endorsed an approach pursuant to which the FCC (from its national perspective) would apply a light regulatory touch to certain IP-enabled services. Florida legislation provides that voice-over-Internet protocol (VoIP) shall be free of "unnecessary regulation" regardless of the provider.

²³¹ Title II regulation applies to telecommunications carriers and includes rate-setting authority. Title I is a more flexible, less prescriptive classification that does not include rate-setting authority.

In recognition of the potential benefits of emerging VoIP technologies for Florida's consumers, the Florida Legislature has taken proactive steps to prevent unnecessary regulation of VoIP at the state level. Specifically, subsection 364.01(3), Florida Statutes, contains the following guidance to the Commission as it relates to the regulatory oversight of VoIP:

The Legislature further finds that the provision of voice-over-Internet protocol (VoIP) free of unnecessary regulation, regardless of the provider, is in the public interest.

Under subsection 364.02(12), Florida Statutes, the 2003 Legislature further specified that:

“Service” is to be construed in its broadest and most inclusive sense. The term “service” does not include voice-over-Internet protocol service for purposes of regulation by the commission. Nothing herein shall affect the rights and obligations of any entity related to the payment of switched network access rates or other intercarrier compensation, if any, related to voice-over-Internet protocol service. (emphasis added)

By exempting VoIP from all regulation, except for the neutral reservation regarding access charges, the Legislature has spoken as to what is “unnecessary.” However, the Commission distinguished between economic and social regulation in its reply comments to the FCC.

The Commission proposed an approach that would not embrace economic regulation and that would focus on addressing any social policy issues that are determined too critical to be left to the market – such as 911, universal service, access for those with disabilities. Such an approach would ensure that consumers are protected while encouraging VoIP providers to invest.

In determining the optimal approach for the regulatory treatment to be afforded VoIP, the Commission suggested that the FCC respect the following principles:

- *Borderless Technology.* Because IP-enabled technologies like VoIP are borderless in nature, such technologies are interstate in nature and, therefore, are more appropriately addressed at the federal level than at the state level.
- *Economic Regulation – To Constrain Monopolies.* The provision of voice telecommunications was historically regulated heavily because it was a service provided by government-created monopolies. VoIP providers have no such monopoly.
- *Emerging Markets.* As reflected in Florida law, new technologies should *not* be subject to old rules designed to forge competition in monopoly markets.
- *Limited “Necessary” Regulation; Otherwise, Let the Market Work.* The full panoply of telecommunications regulation is not necessary to address public safety and

welfare issues (e.g., E911 and USF). Policymakers must distinguish between necessary and unnecessary regulation and allow the market to address issues that do not justify a regulatory solution.

Specifically, the Commission requested that the FCC:

- (a) conclude IP-enabled services to be interstate in nature;
- (b) assert its exclusive jurisdiction over interstate communications;
- (c) establish a national policy, deregulatory in nature, to govern those IP-enabled services within the Commission's jurisdiction;
- (d) not subject IP-enabled services to economic regulation; and
- (e) only subject IP-enabled services within its jurisdiction to public policy regulation deemed important after affording the industry a sufficient period of time in which to develop solutions and standards for meeting public policy objectives.

D. DEVELOPMENT OF A UNIFIED INTERCARRIER COMPENSATION REGIME

Access and intercarrier compensation reform have the potential to affect carrier-to-carrier intrastate rates, universal service, cost allocation issues, infrastructure development, network structures, and various state policies. In August 2001, the Commission filed comments to oppose a federal bill-and-keep system to replace access and reciprocal compensation arrangements. The consequences of adopting a bill-and-keep system may directly impact and change the amounts of payments between carriers for completing each other's calls and hence alter each carrier's ability to compete. In 2001, based on the record before it, the Commission opposed moving to such an approach and recommended these issues be referred to a Joint Board or comparable state/federal negotiation process. The Commission further believes that issues related to universal service and jurisdictional separations should also be referred to the Universal Service and Separations Joint Boards, as appropriate.

The nation's intercarrier compensation regime is in dire need of reform. Virtually all stakeholders agree with this basic proposition. Stakeholders, however, do not agree on how to reform the regime.

The FCC has not yet issued a ruling in this proceeding and it is believed to have been anticipating an industry task force recommendation relating to intercarrier compensation. However, in June 2004 several members of the industry task force, including BellSouth, Verizon and a group of rural ILECs, discontinued their participation, significantly reducing the odds that a consensus could be achieved. On August 13, 2004, the task force made an ex parte filing of its proposal, and then on October 5 made a much more detailed filing in a brief. Other proposals exist as well. The FCC is expected to continue to move forward with reform plans but timing is uncertain.

E. **UNIVERSAL SERVICE**

1. **Review of the Definitions of Universal Service**

On July 14, 2003, the FCC issued an order supporting the recommendation of the Federal-State Joint Board on Universal Service (Joint Board) to maintain the existing list of supported services without modification. These services include:

- single-party service;
- voice grade access to the public switched telephone network;
- Dual Tone Multifrequency signaling or its functional equivalent;
- access to emergency services;
- access to operator services;
- access to interexchange service;
- access to directory assistance; and
- toll limitation services for qualifying low-income consumers.

This order was consistent with comments the Commission filed with the FCC to maintain the current list of supported services. The Commission has long been concerned about the size of this federal program and its impact on customer bills. In addition, the Commission stated that expanding the definition to include advanced services or high-speed Internet access is not warranted, in part because support is conditioned on the ability of a carrier to provide all of the supported services. As such, any proposal to expand the definition to include advanced services would not be technologically neutral. Furthermore, expanding the definition would, in most instances, increase the size of the fund. Given that more support is distributed outside Florida and that Florida is a net contributor to the fund, the Commission also expressed concern about the effects on Florida ratepayers.

2. **Lifeline and Link-up Service for Low-Income Consumers**

The Commission continues to be actively engaged with the Universal Service Joint Board and the FCC regarding Lifeline and Link-up programs. The Commission continues to support the original intent of the Lifeline program, which is to increase subscribership for low-income households that want, but cannot afford, telephone service. The Commission filed comments on August 18, 2003 encouraging the FCC to:

- Adopt an income-based eligibility standard;
- Collect additional data and conduct further analysis before specifying standards beyond that which is set forth in Florida state statute;
- Add the Temporary Assistance to Needy Families (TANF) program to the program based eligibility criteria;

- Add the National School Lunch (NSL) free lunch program to the program based eligibility criteria;
- Take caution in adopting self-certification due to the increased risk of waste, fraud, and abuse and adopt more rigid verification procedures;
- Adopt automatic enrollment as a means of certifying eligibility and increasing enrollment; and
- Advocate more vigorous outreach efforts.

The FCC issued its Order addressing these issues on April 29, 2004. The Order:

- Supports placing greater emphasis on accountability to enhance program integrity;
- Generally supports state flexibility in establishing their own Lifeline and Link-Up programs;
- Adds an income-based eligibility criterion at or below 135% of the of the Federal Poverty Guidelines (FPG);
- Adds the Temporary Assistance to Needy Families program (TANF) and the National School Lunch program (NSL) to the program-based eligibility criteria;
- Continues self-certification, under penalty of perjury, as the federal default rule;
- Encourages states to adopt automatic enrollment; and
- Adopts outreach guidelines to target low-income consumers more effectively.

In addition to the Order, the FCC sought further comment on whether the income-based criterion in the federal default eligibility criteria should be increased to at or below 150% of the FPG. In addition the FCC asked whether adoption of rules governing the advertisement of Lifeline and Link-Up would strengthen the operation of the programs.

3. Schools and Libraries Program

In April 2003, the FCC sought comment on certain rules governing the Schools and Libraries Universal Service support mechanism. The rules of interest will have an impact on the ability to control the size of the fund and the methodology for distribution of the funds. The Commission filed comments July 21, 2003, which urged the FCC to consider suggestions which would improve the safeguards and accountability of the E-rate program. Specifically, the Commission suggested that the Universal Service Administration Corporation (USAC) make available additional data about recipients of support and how the funds are used to increase confidence in the effectiveness and fairness of the program. The program has been heavily criticized for fraud and waste. In addition, the Commission made the following suggestions:

- Establish a comprehensive audit program for the E-rate fund;
- Establish a state-by-state E-rate cap on funds received;
- Establish more comprehensive rules governing how and when E-rate subsidized equipment may be transferred;
- Refine rules for the governing E-rate consultants and the competitive bidding process to minimize waste, fraud, and abuse; and

- Bolster outreach efforts through USAC initiated training opportunities on best practices for applying for funds and achieving program goals to target support more effectively.

The FCC released an order addressing these issues on August 13, 2004. In its order, the FCC adopted several of the Commission's suggestions, such as establishing a more comprehensive audit program, placing new requirements on the transfer of equipment purchased with E-rate funding, and enforcing the requirements for competitive bidding.

4. High-Cost Portability and ETC Designation

On February 27, 2004, the Joint Board released its Recommended Decision addressing universal service high-cost support portability and the process for designating eligible telecommunications carriers (ETC). A carrier must be designated as an ETC in order to receive high-cost or low-income support from the federal universal service program. These issues were referred to the Joint Board on November 8, 2002, by the FCC. In particular, the FCC asked the Joint Board to review the FCC's rules relating to high-cost universal service support in study areas in which a competitive ETC is providing services, as well as the FCC's rules regarding support for second lines.

In general, the Joint Board recommended that the FCC adopt permissive federal guidelines for states (and the FCC) to use when determining whether applicants are qualified to be designated as ETCs. Regarding the scope of support, a majority of the Joint Board members recommended that the FCC limit the scope of high-cost support to a single connection that provides access to the public telephone network (i.e., restate support based on primary lines). The Joint Board's recommendation to restate support based on primary lines is conditioned on the FCC's ability to develop competitively neutral rules and procedures that do not create undue administrative burdens. The Joint Board also offered three proposals designed to avoid or mitigate reductions in the amount of high-cost support flowing to rural carriers as a result of implementing a primary-line restriction.

5. Referral of High-Cost Support Methodology for Rural Telecommunications Carriers

The FCC asked the Joint Board to review its rules relating to the high-cost universal service support mechanisms for rural carriers and to determine the appropriate rural mechanism to succeed the five-year plan adopted in the Rural Task Force Order. The FCC specified that the Joint Board should consider how support can be effectively targeted to rural telephone companies serving the highest cost areas, while protecting against excessive fund growth. The outcome of this proceeding will likely affect future growth in the federal high-cost fund and Florida ratepayer contributions. In 1998, the high-cost support for rural and non-rural carriers in total was \$1.69 billion. By comparison in 2003, the high-cost support for rural carriers was \$2.41 billion and \$856 million for non-rural carriers. The Commission will monitor the proceeding and file comments if appropriate.

F. REPORTING REQUIREMENTS FOR INCUMBENT LOCAL EXCHANGE COMPANIES

Previously, the Commission filed comments expressing concern with eliminating some existing accounting rules and not providing accounting for new technologies that are essential for monitoring and implementing the competitive mandates and safeguards of the 1996 Telecommunications Act.

The FCC's accounting rules provide essential information to Florida in evaluating possible cross-subsidization and promoting competition. The Uniform System of Accounts (USOA) serves as the basis for accounting data that are used to protect ratepayers from improper cross-subsidies, to determine interstate/intrastate cost and revenue splits, to determine the cost of universal service supported services, and to serve as the basis of many of the inputs to the cost proxy models used in determining universal service cost levels and appropriate UNE prices.

On September 5, 2002, the FCC voted to convene a Joint Conference in order to evaluate the accounting requirements that state and federal regulators need to carry out their responsibilities. Commissioner J. Terry Deason was appointed by the FCC to the Joint Conference.

On December 12, 2002, the FCC, on behalf of the Joint Conference, sought public comment with respect to its comprehensive review of regulatory accounting and related reporting requirements. On October 9, 2003, the Joint Conference on Accounting Issues submitted a report to the FCC detailing a series of proposed recommendations to its accounting and reporting rules. Specifically, the Joint Conference sought comment on a number of the issues that were addressed in the FCC's Phase II Accounting Order. In addition, the Joint Conference requested comment on broader questions, including whether there are additional accounting requirements that should be adopted in order to ensure that federal and state regulators have sufficient information to protect consumers, monitor the market place, and promote investment and competition.

The Commission filed comments that recommended that all new accounts identified in the request for comments be adopted so long as the benefits outweigh the costs. The comments also noted the limited availability of financial data in a uniform and standard format outside of the Automated Reporting Management Information System (ARMIS) reports. This information is critical to states for establishing UNE prices, interconnection rates, universal service support, and assessing service quality trends and network functionality, capabilities and reliability.

The FCC released its order on June 24, 2004, responding to the Joint Conference recommendations. The FCC adopted seven of the seventeen Joint Conference recommendations. Among the accepted recommendations was the decision to reinstate certain accounts previously eliminated including accounts for Directory Revenue, Operator Services, Directory Assistance and Customer Services. While recommendations for new separate accounts for several UNE related items were denied as overly burdensome or premature, the FCC did establish subsidiary

categories for the identification of these revenues. Finally, some ARMIS reporting items will no longer be required for carriers deemed to be non-dominant in the markets they serve.

In general, the FCC decision is reflective of a general trend toward reduced reporting requirements for ILECs.

G. REVIEW OF TELRIC PRICING RULES FOR UNBUNDLED NETWORK ELEMENTS

In September of 2003, the FCC issued a Notice of Proposed Rulemaking regarding its rules for the pricing of Unbundled Network Elements and the resale of service by the incumbent local exchange carriers. The methodology embodied in the current rules is referred to as Total Element Long-Run Incremental Cost or TELRIC. The TELRIC methodology has been very controversial since its adoption because it is based largely on hypothetical networks employing the latest available technologies. Incumbent local exchange companies have argued that the methodology leads to UNE rates that are not reflective of real world networks and existing technologies and are substantially below real world costs to provide services. State commissions have pricing authority over UNEs and many have conducted resource intensive, time intensive evidentiary proceedings to implement the TELRIC pricing rules. As set forth below, the Commission remains concerned that pricing rules be grounded in reality, as opposed to purely hypothetical regulatory constructs.

The NPRM tentatively concludes that TELRIC rules should more accurately account for real world attributes of an incumbent local exchange company's network in the deployment of forward-looking costs. The Commission agrees. The scope of the TELRIC review is broad and will address such key factors as cost-of-capital, depreciation expense, rate structure, rate deaveraging, how UNE price setting should relate to Universal Service funding and many other factors. In addition, procedural and implementation matters have been identified that may create the need for state commissions to conduct additional evidentiary proceedings to implement the new pricing rules. The potential impacts of changes to the UNE pricing rules are impossible to predict; however, given the scope of the proceeding, the impacts could be significant.

The Commission filed comments (January 4, 2004) supporting the FCC's tentative conclusion that the "TELRIC rules should more closely account for the real-world attributes of the routing and topography of an incumbent's network in the development of forward-looking costs." The Commission further commented that it believes it is appropriate to determine costs for UNEs that reflect the real-world characteristics of ILECs' networks because UNEs are provided by the ILEC using such a network, not a hypothetical network. Finally, the Commission noted that TELRIC rules should not result in UNE prices that are artificially low such that CLECs would be disincented from using a facilities-based entry strategy.

The FCC has not yet issued an order in this proceeding.

H. LOCAL NUMBER PORTABILITY: WIRELESS TO WIRELESS & WIRELESS TO WIRELINE

In 1996, the FCC adopted the *First Report and Order and Further Notice of Proposed Rulemaking (First Report and Order)* in its Telephone Number Portability docket. This order implemented Section 251(b) of the 1996 Telecommunications Act (the 1996 Act) which requires local exchange carriers (LECs) to provide local number portability, (LNP), to the extent technically feasible, in accordance with requirements prescribed by the FCC. Although the 1996 Act excludes Commercial Mobile Radio Service (CMRS) providers from the definition of local exchange carrier, and therefore from the Section 251(b) obligation to provide number portability, the FCC extended this obligation to CMRS providers. The FCC determined that such an obligation, which would enable wireless subscribers to keep their telephone numbers when changing carriers, would enhance competition between wireless carriers as well as promote competition between wireless and wireline carriers.

After extending the wireless LNP deadline several times, the FCC established November 24, 2003, as the date by which wireless carriers in the top 100 MSAs must be capable of wireless-to-wireless and wireless-to-wireline porting and wireline carriers must be capable of wireline-to-wireless porting. The deadline was extended to May 24, 2004, for all other affected carriers.

As expected, the transition in November 2003 resulted in some complaints. The majority of complaints lodged were related to a particular carrier and most of those were eventually resolved. In May 2004 LNP was implemented for the remainder of carriers and again there was relatively minor disruption to most customers. A mitigating factor in suppressing the volume of customers choosing to switch carriers may have been the fact that typical wireless subscription requires a minimum duration contract with early termination fees. Many customers may have opted to remain with their current carrier until their existing contract expires in order to avoid termination fees.

I. NASUCA TRUTH IN BILLING PETITION TO THE FCC

The National Association of State Utility Consumer Advocates (NASUCA) sought a ruling from the FCC prohibiting the carriers from imposing monthly line-item charges, surcharges, or other fees on customers' bills unless such charges have been expressly mandated by a regulatory agency. In comments to the FCC on August 5, 2004, the Commission expressed that over the past several years, the clear policy choice has been for more specificity, not less, on customer bills. Further, the NASUCA approach could turn out to be burdensome to the companies (in terms of increased administrative burden, another shift in billing practices, increased costs) and, at the same time, not beneficial to consumers (possible increased costs associated with changes in billing practices and less specificity on bills).

As a general principle, companies in a competitive marketplace should have the discretion and the flexibility to recover certain costs from their customers, provided they do not

violate any applicable rules or regulations. Without question, government mandates and regulatory activities impose costs – often substantial costs – on telecommunications carriers. Some wireline and wireless telecommunications carriers impose separate monthly surcharges and fees that are not mandated by government but that may result, directly or indirectly, from government mandates and regulatory activities. These carriers have opted to specifically identify such charges.

Disclosure of such compliance costs to consumers through line items or surcharges would appear to provide consumers more information – not only about what they are being billed for – but also about the actions of their government in promoting certain social policies. As the telecommunications industry continues to become increasingly competitive, consumers should have access to more detailed information in order to make more informed choices about the services for which they are paying – a principle that supports breaking down costs on a consumer’s bill and disclosing the nature of those costs.

Numerous avenues currently exist for consumer complaints regarding carrier billing. Whether enforcement of existing federal and state legal requirements, as opposed to new legal requirements, could adequately address alleged improper billing practices, is an important determination to be made prior to wholesale reform of billing requirements. The extent to which current consumer protection laws do not address such behavior should be assessed prior to the articulation of a new regulatory paradigm, stated the Commission.

The Commission suggested an alternative rational approach to a declaratory ruling, an approach that would examine and document the claims presented in the NASUCA petition in a systematic, collaborative manner. This approach would permit the FCC to examine the nature and extent of billing problems and determine what, if any, remedy is appropriate and whether it would be best handled through a generally applicable rulemaking or on a case-by-case basis at the state or federal level. This approach would determine whether the problems identified by NASUCA are widespread or merely the result of a few “bad apples.”

The Commission urged that an evidentiary record should be developed prior to consideration of any additional mandated billing requirements for carriers. The Petitioner should show that the approach is good for the consumer. Such a proceeding would create a record on which the FCC could base any conclusions and potential remedies. The FCC should explore:

- what specific charges are at issue;
- how many complaints on this topic have been filed at the FCC, individual state commissions, other state and federal agencies that receive and account for telecommunications billing complaints, and with carriers;
- which specific carriers, if any, are engaging in misleading or deceptive practices and surcharges;
- what costs would be incurred by carriers if the petition were granted;
- could there be an industry solution that does not include a mandate by the FCC – something similar to the voluntary Code of Conduct by the wireless industry;
- should options that include customer education on how to understand charges for telephone service be pursued prior to additional rulemaking;

- what additional cost would be imposed on the companies to restructure the bills to consumers and would the marketplace provide a better approach.

The Commission urged the FCC to take time to review the underlying problems that the NASUCA petition proposes to remedy. The review should address the nature and scope of any alleged improper billing, whether existing laws can address the issue, whether alternatives exist to NASUCA's proposal, and the monetary and other costs and benefits of the NASUCA proposal and of alternatives to that proposal.

To the extent the FCC determines that certain carriers violate federal laws, rules, or orders of the FCC pertaining to telecommunications billing and/or consumer protection, the FCC should take the appropriate enforcement action against those individual carriers. Absent such a review, policymakers cannot be sure that the solution proposed in the petition will not create a whole new host of issues, without providing a commensurate benefit to consumers.

APPENDIX A: CLECS PROVIDING SERVICE

CLEC	Resale	UNE-P	Switch-Based
AA Tele Com	Residential / Business	Residential / Business	
Access Communications, LLC.		Residential / Business	
Access Integrated Networks, Inc.	Residential / Business	Residential / Business	
Access Point, Inc.	Residential / Business	Residential / Business	
ACN Communication Services, Inc.		Residential	
Actel Wireless, Inc.	Residential		
Adelphia	Business		
Advantage Group of Florida Communications, L.L.C.	Residential	Residential / Business	
Allegiance Telecom of Florida, Inc.	Business	Business	Business
ALLTEL Communications, Inc.	Business		Residential / Business
Alternative Phone, Inc.	Residential / Business	Residential / Business	
American Dial Tone	Residential / Business	Residential	
American Fiber Network, Inc.	Residential / Business		
America's Wireless Choice, Inc.	Residential		
AmeriMex Communications Corp.	Residential / Business	Residential / Business	
ANEW Broadband, Inc.	Residential / Business	Residential / Business	
Anns Communication	Residential		
AT&T Communications of the Southern States, LLC	Residential / Business	Residential / Business	Business
Atlantic Phone	Residential / Business	Residential / Business	
Atlantic.Net Broadband, Inc.	Residential / Business	Residential	
Auglink Communications, Inc.	Residential / Business	Residential / Business	
Baldwin County Internet/DSSI Service, L.L.C.			Residential
Basic Phone, Inc.	Residential		
BCN Telecom, Inc.	Residential / Business	Residential / Business	
Bellerud Communications, LLC	Residential		
BellSouth Telecommunications, Inc. CLEC	Residential / Business		Business
Birch	Business	Business	
BTI	Residential / Business	Residential / Business	Business
Budget Phone, Inc.	Residential	Residential	
BudgeTel Systems, Inc.	Residential		
BullsEye Telecom, Inc.		Residential / Business	
Buy Tel Communications, Inc.	Residential		
CariLink International, Inc.	Residential	Residential / Business	
CAT Communications International, Inc.	Residential / Business	Residential	
CHOICE ONE Telecom	Residential / Business		
CI2, Inc.	Business		
Cinergy Communications Company		Residential / Business	
City of Daytona Beach			Business
Citywide Tel	Residential / Business	Residential / Business	
Coastal Telephone Connections, Inc. d/b/a Coastal Connections	Residential		

APPENDIX A: CLECS PROVIDING SERVICE

CLEC	Resale	UNE-P	Switch-Based
Comcast Phone of Florida, LLC d/b/a Comcast Digital Phone			Residential / Business
Covad Communications Company	Residential		
Curbside Communications		Residential / Business	
Cypress Communications Operating Company, Inc.		Business	
DayStar Communications	Business		Business
Deland Actel, Inc.	Residential / Business	Residential / Business	
Delta Phones, Inc.	Residential / Business		
Dialtone Telecom, LLC	Residential / Business		
Double Link Communications, Inc.	Residential		
DPI Teleconnect, L.L.C.	Residential	Residential	
DSL Telecom, Inc.	Residential / Business	Residential / Business	
DSLi	Residential / Business	Residential / Business	Residential / Business
Eagle Telecommunications, Inc.	Residential / Business	Residential / Business	
Easy Telephone Services Company	Residential / Business	Residential / Business	
EPICUS, Inc.	Residential / Business	Residential / Business	
Ernest Communications, Inc.	Business	Residential / Business	
EveryCall Communications, Inc.		Residential / Business	
Excel Telecommunications, Inc.		Residential	
Express Phone Service	Residential	Residential / Business	
EZ Talk Communications, L.L.C.	Residential / Business		
FDN Communications	Residential / Business	Residential / Business	Residential / Business
FLATEL, Inc.	Residential / Business	Residential / Business	
Florida Comm South	Residential	Residential / Business	
Florida Multi Media	Business		Residential
Florida Phone Service, Inc.	Residential	Residential / Business	
Florida Telephone Services, LLC	Residential / Business	Residential / Business	
Focal Communications Corporation of Florida	Business		Business
FPL FiberNet, LLC		Business	
Georgia Telephone Services, Inc.	Residential		
Global Crossing	Residential / Business	Business	
Global NAPS, Inc.		Residential / Business	
Globcom, Inc.	Residential		
Granite Telecommunications, LLC	Business	Business	
Gulf Coast Telecom, Inc.	Residential		
Harbor Communications, LLC		Business	Business
High Tech Communications	Residential / Business		
HOLMES COUNTY E-911	Business		
ICG Telecom Group, Inc.	Business		
IDS Telcom LLC	Residential / Business	Residential / Business	Business
IDT		Residential / Business	
Instatone	Residential / Business		
Intermedia Communications, Inc.	Residential / Business		

APPENDIX A: CLECS PROVIDING SERVICE

CLEC	Resale	UNE-P	Switch-Based
ISN Communications	Residential / Business	Residential / Business	
ITC^DeltaCom	Residential / Business	Residential / Business	Business
KMC	Residential / Business	Business	Business
Knology of Florida, Inc.	Residential / Business		Residential / Business
LecStar Telecom, Inc.	Residential / Business	Residential / Business	
Level 3 Communications, LLC			Business
Lightyear Communications, Inc.		Residential / Business	
Local Line America, Inc.	Residential		
Lone Star State Telephone Co.	Residential		
M.T.G.	Residential / Business		
MCI Worldcom	Residential / Business	Residential / Business	Business
MET Communications, Inc.	Residential		
Metro Teleconnect Companies, Inc.	Residential	Residential	
Metropolitan Fiber Systems of Florida, Inc.	Residential / Business	Residential / Business	
MetTel	Business	Business	
Midstate Telecommunications	Residential		
Momentum Business Solutions, Inc.	Business	Residential / Business	
MY TEL INC.	Residential / Business		
Myatel Corporation	Residential / Business		
National Telecom & Broadband Services, LLC	Residential / Business	Residential / Business	
Navigator Telecommunications, LLC	Residential / Business	Residential / Business	
Network Telephone Corporation	Residential / Business	Residential / Business	Business
NewPhone	Residential	Residential	
NewSouth Communications Corp.	Residential / Business	Business	Business
North American Telecommunications Corporation	Residential / Business	Residential / Business	
NOW Communications, Inc.	Residential / Business	Residential / Business	
NuVox Communications, Inc.		Business	Business
OneStar Long Distance, Inc.	Residential	Residential / Business	
Orlando Telephone Company	Residential / Business		Residential / Business
PaeTec Communications, Inc.	Residential / Business	Business	Business
Phone Club Corporation	Residential / Business		
Phone Link, Inc.	Residential	Residential	
Phone Out/Phone On	Residential		
Phones For All	Residential	Residential	
PowerNet Global Communications		Residential	
Quality Telephone Inc.	Residential	Residential	
QuantumShift Communications, Inc.	Business		
Qwest Communications Corporation	Business		
Re Connection Connection	Residential / Business		
ReTel Communications, Inc.	Residential / Business	Residential / Business	
Rightlink USA, Inc.	Residential / Business	Residential / Business	
Ring Connection, Inc.	Residential / Business		
Saluda Networks Incorporated		Residential / Business	

APPENDIX A: CLECS PROVIDING SERVICE

CLEC	Resale	UNE-P	Switch-Based
SanTel Communications	Residential / Business	Residential / Business	
SBC Telecom, Inc.	Residential / Business		Residential / Business
Second Chance Phone	Residential / Business		
ServiSense.com, Inc.	Residential / Business		
Smart City Solutions, LLC			Business
SNC Communications, LLC		Residential / Business	
Source One Communications, Inc. d/b/a Quick Connects	Residential / Business		
Southeastern Services, Inc.	Residential / Business		
Southern ReConnect, Inc.	Residential		
Spectrotel, Inc.		Residential / Business	
Speedy Reconnect, Inc.	Residential		
Sprint Communications Company Limited Partnership	Residential	Residential / Business	Business
STS	Residential / Business	Residential / Business	
Sun Tel USA, Inc.	Residential / Business		
Suntel Metro, Inc.		Residential / Business	
Supra Telecommunications and Information Systems, Inc.	Residential / Business	Residential / Business	Residential
Symtelco, LLC	Business	Business	
T3 Communications, LLC	Residential	Residential / Business	Business
Talk America Inc.	Residential / Business	Residential / Business	
Tallahassee Telephone Exchange, Inc.	Residential / Business	Residential / Business	
Tel West Communications, LLC	Residential		
TelCove Investment			Business
TelCove of Jacksonville			Business
TeleConex	Residential	Residential	
TELECUBA, INC.	Residential / Business	Residential	
Telefyne Incorporated	Residential		
Telepak Networks, Inc.	Business		
Telephone One Inc.	Residential / Business	Residential / Business	
THC Internet Solutions	Residential / Business		
The Gulas Group, L.L.C.		Business	
The Sunshine State Telephone Company, L.L.P.		Residential / Business	
TIBURON TELECOM INC	Business		
Tiburon Telecom, Inc.	Residential / Business		
Time Warner Telecom of Florida, L.P.	Business		Business
Trans National Communications International, Inc.		Residential	
Tristar Communications Corp.	Residential / Business	Residential / Business	
Unicom Communications, LLC	Residential / Business		
Unitel	Residential / Business	Residential / Business	
Universal Telecom, Inc.	Residential		
Unknown	Residential / Business	Residential / Business	

APPENDIX A: CLECS PROVIDING SERVICE

CLEC	Resale	UNE-P	Switch-Based
US LEC of Florida Inc.	Business		Business
USA Telecom, Inc.	Residential / Business	Residential / Business	
USTEL	Residential	Residential / Business	
Utilities Commission, New Smyrna Beach	Residential / Business	Residential / Business	
VarTec Telecom, Inc.		Residential / Business	
Verizon Avenue	Residential		
Winstar Communications, LLC	Business		
XO Florida, Inc.	Business		Business
Xspedius	Residential / Business	Residential / Business	Business
Z Tel Communications, Inc.	Business	Residential / Business	Business

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Alachua	6	6	0	0
Alford	12	15	1	2
Alligator Point	0	0	0	0
Altha	2	2	0	0
Apalachicola	1	1	0	0
Apopka	30	36	17	21
Arcadia	20	24	6	9
Archer	21	25	6	12
Astor	13	13	3	3
Avon Park	23	20	8	9
Baker	16	13	4	4
Baldwin	17	15	14	19
Bartow	18	19	10	13
Belleglade	30	36	15	25
Belleview	25	24	14	19
Beverly Hills	19	26	4	7
Blountstown	2	2	0	0
Boca Grande	2	0	1	1
Boca Raton	51	57	43	53
Bonifay	16	17	3	6
Bonita Springs	22	24	7	13
Bowling Green	11	11	1	1
Boynton Beach	46	52	39	51
Bradenton	28	24	18	19
Branford	7	9	0	0
Bristol	1	1	0	0
Bronson	25	25	9	13
Brooker	4	3	0	0
Brooksville	33	37	22	26
Bunnell	25	26	16	21
Bushnell	24	22	7	8
Callahan	4	6	0	2
Cantonment	0	26	1	19
Cape Coral	22	28	8	16
Cape Haze	16	16	5	5
Carrabelle	1	1	0	0
Cedar Key	6	4	11	13
Celebration	0	0	2	3
Century ²³²	15	17	5	7
Chattahoochee	2	1	0	0

²³² Updated data for Century.

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Cherry Lake	9	23	0	14
Chiefland	25	26	18	24
Chipley	35	22	21	23
Citra	4	4	0	0
Clearwater	34	31	28	27
Clermont	25	25	14	15
Clewiston	20	21	6	9
Cocoa	45	50	34	46
Cocoa Beach	23	36	18	32
Coral Springs	53	77	35	61
Cottdale	8	10	4	5
Crawfordville	12	12	3	5
Crescent City	5	6	0	0
Crestview	23	23	11	10
Cross City	17	16	10	14
Crystal River	19	21	8	11
Dade City	18	20	10	11
Daytona Beach	54	56	41	52
DeBary	36	43	23	28
Deerfield Beach	43	53	37	47
DeFuniak Springs	21	23	8	9
Deland	36	39	22	32
DeLeon Springs	16	23	10	11
Delray Beach	47	56	34	52
Destin	15	18	9	12
Dowling Park	4	1	0	0
Dunnellon	26	30	14	21
East Orange	26	32	16	20
East Point	1	1	0	0
Eau Gallie	44	47	33	44
Englewood	13	12	9	13
Eustis	29	29	10	11
Everglades	3	4	1	2
Fernadina Beach	38	40	23	31
Flagler Beach	15	19	17	22
Florahome	2	4	0	1
Florida Sheriffs' Boys Ranch	2	3	0	0
Forest	15	15	5	5
Freeport	11	11	4	5
Frostproof	11	12	3	6
Ft. Lauderdale	73	82	54	70

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Ft. Meade	13	10	1	2
Ft. Myers	37	34	20	25
Ft. Myers Beach	11	9	6	5
Ft. Pierce	44	50	28	43
Ft. Walton Beach	28	26	12	16
Ft. White	6	6	0	0
Gainesville	54	54	30	37
Geneva	15	0	9	0
Glendale	6	6	0	0
Graceville	19	22	8	15
Grand Ridge	14	15	1	2
Green Cove Springs	33	36	19	23
Greensboro	1	1	1	0
Greenville	10	14	1	2
Greenwood	10	8	0	1
Gretna	1	3	0	0
Groveland	20	18	7	8
Gulf Breeze	29	31	21	30
Haines City	27	23	13	16
Hastings	2	5	0	0
Havana	30	31	10	13
Hawthorne	22	24	9	15
High Springs	6	5	0	0
Hilliard	6	4	0	0
Hobe Sound	24	29	14	25
Holley-Navarre	24	29	14	22
Hollywood	69	77	45	59
Homestead	50	58	36	47
Homosassa	23	22	6	7
Hosford	1	0	0	0
Howey-in-the-Hills	6	9	1	3
Hudson	21	20	15	17
Immokalee	21	20	6	8
Indian Lake	3	3	2	2
Indiantown	0	0	0	0
Interlachen	6	8	0	0
Inverness	18	26	11	14
Jacksonville	67	76	28	64
Jacksonville Beach	67	2	49	12
Jasper	3	6	0	0
Jay	0	18	1	9

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Jennings	3	6	0	0
Jensen Beach	24	30	13	22
Julington	17	1	16	3
Jupiter	33	37	21	37
Keaton Beach	1	1	0	0
Kenansville	4	5	3	3
Keys	44	45	28	42
Keystone Heights	30	27	11	14
Kingsley Lake	1	3	1	0
Kissimmee	34	42	18	27
La Belle	20	19	6	8
Lady Lake	20	23	7	12
Lake Buena Vista	0	1	4	4
Lake Butler	5	6	0	0
Lake City	38	40	24	31
Lake Placid	19	16	4	8
Lake Wales	23	19	9	14
Lakeland	31	27	15	19
Laurel Hill	1	0	0	0
Lawtey	14	15	1	2
Lee	10	8	1	2
Leesburg	27	30	17	19
Lehigh Acres	25	25	9	12
Live Oak	7	8	0	1
Luraville	3	5	0	0
Lynn Haven	25	24	12	20
Macclenny	2	2	3	2
Madison	13	16	9	9
Malone	12	13	0	0
Marco Island	9	7	8	10
Marianna	18	22	10	12
Maxville	12	15	8	12
Mayo	4	4	0	0
McIntosh	6	7	0	0
Melbourne	52	50	35	51
Melrose	4	5	0	0
Miami	78	85	65	81
Micanopy	13	0	4	0
Middleburg	36	37	16	24
Milton	28	32	18	25
Molino	0	0	0	0

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Monticello	18	22	6	7
Montverde	11	14	1	2
Moore Haven	11	11	2	3
Mount Dora	24	26	9	12
Mulberry	16	15	9	7
Munson	8	0	1	0
Myakka	5	6	1	2
Naples	29	29	14	20
New Port Richey	26	20	19	19
New Smyrna Beach	30	35	27	38
Newberry	27	28	9	12
North Cape Coral	25	0	10	3
North Dade	64	71	47	57
North Ft Myers	29	27	10	17
North Naples	22	21	12	17
North Port	14	15	7	9
Oak Hill	15	19	7	14
Ocala	32	35	16	22
Ocklawaha	15	15	3	3
Okeechobee	21	22	9	10
Old Town	19	21	4	10
Orange City	27	24	15	17
Orange Park	41	46	30	38
Orange Springs	4	5	0	0
Orlando	67	76	53	62
Oviedo	34	36	31	38
Pace	27	30	16	19
Pahokee	27	31	10	20
Palatka	42	41	25	27
Palm Coast	26	34	21	30
Palmetto	18	16	11	14
Panacea	4	2	1	2
Panama City	43	45	28	37
Panama City Beach	36	32	23	27
Paxton	0	1	0	0
Pensacola	46	52	34	41
Perrine	55	66	42	52
Perry	1	1	0	0
Pierson	22	23	9	14
Pine Island	11	14	2	3
Plant City	18	16	12	16

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Polk City	12	11	6	7
Pomona Park	21	23	5	10
Pompano Beach	62	3	49	14
Ponce de Leon	12	10	5	6
Ponte Verde Beach	20	28	26	27
Port Charlotte	30	26	11	16
Port St Joe	2	1	0	0
Port St. Lucie	40	50	26	35
Punta Gorda	20	19	8	12
Quincy	1	5	0	0
Raiford	1	3	0	0
Reedy Creek	25	10	20	5
Reynolds Hill	11	0	0	0
Salt Springs	7	7	1	1
San Antonio	11	11	4	4
Sanderson	1	2	1	1
Sanford	53	56	41	41
Sanibel-Captiva Island	2	4	5	6
Santa Rosa Beach	8	10	7	9
Sarasota	32	23	20	23
Seagrove Beach	8	8	4	7
Sebastian	34	35	20	31
Sebring	17	20	8	12
Shalimar	18	18	6	8
Silver Springs Shores	19	21	6	7
Sneads	12	9	2	3
Sopchoppy	5	4	0	1
Spring Lake Hills	12	13	6	5
St. Augustine	42	46	29	39
St. Cloud	26	31	12	16
St. Johns	12	0	11	4
St. Marks	4	3	2	2
St. Petersburg	43	35	24	29
Starke	19	24	9	10
Stuart	37	42	33	46
Sunny Hills	14	16	4	6
Tallahassee	38	39	19	24
Tampa	48	40	27	29
Tarpon Springs	26	25	18	20
Tavares	18	22	11	12
The Beaches	2	0	0	0

APPENDIX B: EXCHANGES WITH A CLEC PROVIDER

Exchange	Total CLEC Residential Providers		Total CLEC Business Providers	
	(2003)	(2004)	(2003)	(2004)
Titusville	34	41	28	37
Trenton	22	25	13	16
Trilacoochee	15	15	3	3
Tyndall AFB	0	0	0	0
Umatilla	26	22	4	5
Valparaiso	23	21	9	14
Venice	20	17	15	19
Vernon	15	15	6	11
Vero Beach	41	50	28	40
Waldo	4	7	0	0
Walnut Hill	0	0	0	0
Wauchula	18	16	4	6
Weekiwachee Springs	0	40	2	27
Weirsdale	0	0	0	0
Welaka	22	19	7	9
Wellborn	3	7	0	0
West Kissimmee	1	1	6	11
West Palm Beach	68	82	53	67
Westville	10	10	0	0
Wewahitchka	31	1	23	0
White Springs	4	5	0	0
Wildwood	26	25	9	12
Williston	18	23	5	6
Windermere	7	13	9	8
Winter Garden	29	31	17	22
Winter Haven	28	25	17	19
Winter Park	39	46	21	27
Yankeetown	21	17	8	12
Youngstown-Fountain	22	27	8	10
Yulee	26	25	15	18
Zephyr Hills	19	20	15	15
Zolfo Springs	9	9	2	3

APPENDIX C: PERCENTAGE OF CLEC ACCESS LINES BY EXCHANGE

Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
Alachua	> 0 to 1%	> 0 to 1%	0	0
Alford	1% to 5%	1% to 5%	1% to 5%	25% to 30%
Alligator Point	0	0	0	0
Altha	> 0 to 1%	> 0 to 1%	0	0
Apalachicola	> 0 to 1%	> 0 to 1%	0	0
Apopka	1% to 5%	1% to 5%	15% to 20%	10% to 15%
Arcadia	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Archer	1% to 5%	1% to 5%	20% to 25%	25% to 30%
Astor	1% to 5%	1% to 5%	5% to 10%	5% to 10%
Avon Park	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Baker	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Baldwin	5% to 10%	5% to 10%	15% to 20%	30% to 35%
Bartow	1% to 5%	1% to 5%	1% to 5%	20% to 25%
Bellevue	25% to 30%	30% to 35%	15% to 20%	25% to 30%
Belleview	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Beverly Hills	> 0 to 1%	> 0 to 1%	1% to 5%	5% to 10%
Blountstown	1% to 5%	1% to 5%	0	0
Boca Grande	> 0 to 1%	0	> 0 to 1%	5% to 10%
Boca Raton	10% to 15%	10% to 15%	35% to 40%	35% to 40%
Bonifay	1% to 5%	1% to 5%	> 0 to 1%	1% to 5%
Bonita Springs	> 0 to 1%	> 0 to 1%	10% to 15%	10% to 15%
Bowling Green	1% to 5%	1% to 5%	> 0 to 1%	1% to 5%
Boynton Beach	10% to 15%	10% to 15%	30% to 35%	35% to 40%
Bradenton	1% to 5%	1% to 5%	15% to 20%	15% to 20%
Branford	1% to 5%	1% to 5%	0	0
Bristol	1% to 5%	> 0 to 1%	0	0
Bronson	1% to 5%	1% to 5%	1% to 5%	5% to 10%
Brooker	> 0 to 1%	> 0 to 1%	0	0
Brooksville	10% to 15%	5% to 10%	15% to 20%	15% to 20%
Bunnell	5% to 10%	1% to 5%	10% to 15%	15% to 20%
Bushnell	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Callahan	> 0 to 1%	> 0 to 1%	0	35% to 40%
Cantonment	0	5% to 10%	5% to 10%	25% to 30%
Cape Coral	> 0 to 1%	1% to 5%	1% to 5%	10% to 15%
Cape Haze	> 0 to 1%	> 0 to 1%	1% to 5%	1% to 5%
Carrabelle	> 0 to 1%	> 0 to 1%	0	0
Cedar Key	1% to 5%	> 0 to 1%	15% to 20%	75% to 80%
Celebration	0	0	25% to 30%	35% to 40%
Century ²³³	5% to 10%	5% to 10%	5% to 10%	15% to 20%

²³³ Updated data for Century.

APPENDIX C: PERCENTAGE OF CLEC ACCESS LINES BY EXCHANGE

Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
Chattahoochee	> 0 to 1%	> 0 to 1%	0	0
Cherry Lake	1% to 5%	10% to 15%	0	75% to 80%
Chiefland	1% to 5%	1% to 5%	25% to 30%	30% to 35%
Chipley	15% to 20%	5% to 10%	35% to 40%	35% to 40%
Citra	> 0 to 1%	1% to 5%	0	0
Clearwater	> 0 to 1%	> 0 to 1%	30% to 35%	35% to 40%
Clermont	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Clewiston	1% to 5%	5% to 10%	1% to 5%	1% to 5%
Cocoa	5% to 10%	5% to 10%	35% to 40%	25% to 30%
Cocoa Beach	1% to 5%	5% to 10%	20% to 25%	50% to 55%
Coral Springs	15% to 20%	35% to 40%	30% to 35%	50% to 55%
Cottondale	5% to 10%	5% to 10%	5% to 10%	5% to 10%
Crawfordville	1% to 5%	1% to 5%	1% to 5%	30% to 35%
Crescent City	> 0 to 1%	1% to 5%	0	0
Crestview	1% to 5%	1% to 5%	1% to 5%	5% to 10%
Cross City	1% to 5%	1% to 5%	10% to 15%	10% to 15%
Crystal River	1% to 5%	1% to 5%	5% to 10%	5% to 10%
Dade City	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Daytona Beach	5% to 10%	10% to 15%	40% to 45%	35% to 40%
DeBary	10% to 15%	10% to 15%	15% to 20%	20% to 25%
Deerfield Beach	15% to 20%	15% to 20%	35% to 40%	35% to 40%
DeFuniak Springs	5% to 10%	5% to 10%	1% to 5%	1% to 5%
Deland	10% to 15%	10% to 15%	20% to 25%	15% to 20%
DeLeon Springs	10% to 15%	5% to 10%	25% to 30%	20% to 25%
Delray Beach	10% to 15%	10% to 15%	30% to 35%	35% to 40%
Destin	1% to 5%	1% to 5%	20% to 25%	30% to 35%
Dowling Park	> 0 to 1%	> 0 to 1%	0	0
Dunnellon	1% to 5%	1% to 5%	10% to 15%	15% to 20%
East Orange	1% to 5%	1% to 5%	10% to 15%	25% to 30%
East Point	> 0 to 1%	> 0 to 1%	0	0
Eau Gallie	1% to 5%	5% to 10%	15% to 20%	15% to 20%
Englewood	> 0 to 1%	> 0 to 1%	5% to 10%	5% to 10%
Eustis	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Everglades	> 0 to 1%	> 0 to 1%	> 0 to 1%	> 0 to 1%
Fernadina Beach	10% to 15%	5% to 10%	35% to 40%	20% to 25%
Flagler Beach	5% to 10%	5% to 10%	30% to 35%	30% to 35%
Florahome	> 0 to 1%	> 0 to 1%	0	1% to 5%
Florida Sheriffs' Boys Ranch	1% to 5%	1% to 5%	0	0
Forest	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Freeport	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Frostproof	1% to 5%	1% to 5%	1% to 5%	1% to 5%

APPENDIX C: PERCENTAGE OF CLEC ACCESS LINES BY EXCHANGE

Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
Ft. Lauderdale	20% to 25%	20% to 25%	35% to 40%	35% to 40%
Ft Meade	1% to 5%	1% to 5%	> 0 to 1%	1% to 5%
Ft Myers	1% to 5%	25% to 30%	25% to 30%	25% to 30%
Ft. Myers Beach	> 0 to 1%	> 0 to 1%	5% to 10%	15% to 20%
Ft Pierce	10% to 15%	5% to 10%	15% to 20%	15% to 20%
Ft. Walton Beach	1% to 5%	1% to 5%	10% to 15%	20% to 25%
Ft. White	1% to 5%	> 0 to 1%	0	0
Gainesville	10% to 15%	5% to 10%	20% to 25%	15% to 20%
Geneva	1% to 5%	0	15% to 20%	0
Glendale	1% to 5%	1% to 5%	0	0
Graceville	1% to 5%	5% to 10%	1% to 5%	10% to 15%
Grand Ridge	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Green Cove Springs	5% to 10%	5% to 10%	20% to 25%	20% to 25%
Greensboro	20% to 25%	1% to 5%	1% to 5%	0
Greenville	5% to 10%	1% to 5%	1% to 5%	1% to 5%
Greenwood	5% to 10%	5% to 10%	0	1% to 5%
Gretna	> 0 to 1%	5% to 10%	0	0
Groveland	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Gulf Breeze	5% to 10%	5% to 10%	25% to 30%	30% to 35%
Haines City	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Hastings	> 0 to 1%	1% to 5%	0	0
Havana	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Hawthorne	1% to 5%	1% to 5%	5% to 10%	10% to 15%
High Springs	> 0 to 1%	> 0 to 1%	0	0
Hilliard	> 0 to 1%	1% to 5%	0	0
Hobe Sound	5% to 10%	5% to 10%	15% to 20%	25% to 30%
Holley-Navarre	5% to 10%	5% to 10%	10% to 15%	20% to 25%
Hollywood	20% to 25%	20% to 25%	35% to 40%	35% to 40%
Homestead	15% to 20%	15% to 20%	10% to 15%	10% to 15%
Homosassa	1% to 5%	1% to 5%	1% to 5%	10% to 15%
Hosford	> 0 to 1%	0	0	0
Howey-in-the-Hills	> 0 to 1%	1% to 5%	1% to 5%	1% to 5%
Hudson	> 0 to 1%	> 0 to 1%	15% to 20%	20% to 25%
Immokalee	5% to 10%	10% to 15%	1% to 5%	1% to 5%
Indian Lake	> 0 to 1%	> 0 to 1%	1% to 5%	1% to 5%
Indiantown	0	0	0	0
Interlachen	> 0 to 1%	1% to 5%	0	0
Inverness	1% to 5%	1% to 5%	1% to 5%	10% to 15%
Jacksonville	15% to 20%	15% to 20%	40% to 45%	35% to 40%
Jacksonville Beach	10% to 15%	5% to 10%	35% to 40%	25% to 30%
Jasper	1% to 5%	1% to 5%	0	0

APPENDIX C: PERCENTAGE OF CLEC ACCESS LINES BY EXCHANGE

Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
Jay	0	1% to 5%	1% to 5%	5% to 10%
Jennings	1% to 5%	1% to 5%	0	0
Jensen Beach	5% to 10%	5% to 10%	20% to 25%	20% to 25%
Julington	10% to 15%	1% to 5%	15% to 20%	25% to 30%
Jupiter	5% to 10%	5% to 10%	30% to 35%	30% to 35%
Keaton Beach	> 0 to 1%	> 0 to 1%	0	0
Kenansville	> 0 to 1%	> 0 to 1%	5% to 10%	5% to 10%
Keys	5% to 10%	5% to 10%	10% to 15%	15% to 20%
Keystone Heights	1% to 5%	1% to 5%	10% to 15%	15% to 20%
Kingsley Lake	> 0 to 1%	1% to 5%	30% to 35%	0
Kissimmee	1% to 5%	5% to 10%	25% to 30%	35% to 40%
La Belle	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Lady Lake	> 0 to 1%	> 0 to 1%	5% to 10%	5% to 10%
Lake Buena Vista	0	10% to 15%	10% to 15%	10% to 15%
Lake Butler	> 0 to 1%	1% to 5%	0	0
Lake City	1% to 5%	1% to 5%	15% to 20%	15% to 20%
Lake Placid	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Lake Wales	1% to 5%	1% to 5%	1% to 5%	5% to 10%
Lakeland	1% to 5%	1% to 5%	10% to 15%	15% to 20%
Laurel Hill	> 0 to 1%	0	0	0
Lawtey	5% to 10%	5% to 10%	1% to 5%	1% to 5%
Lee	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Leesburg	1% to 5%	1% to 5%	5% to 10%	5% to 10%
Lehigh Acres	1% to 5%	1% to 5%	1% to 5%	5% to 10%
Live Oak	1% to 5%	1% to 5%	0	> 0 to 1%
Luraville	> 0 to 1%	1% to 5%	0	0
Lynn Haven	5% to 10%	1% to 5%	5% to 10%	10% to 15%
Maccleddy	10% to 15%	10% to 15%	10% to 15%	15% to 20%
Madison	5% to 10%	5% to 10%	1% to 5%	1% to 5%
Malone	5% to 10%	5% to 10%	0	0
Marco Island	> 0 to 1%	> 0 to 1%	1% to 5%	1% to 5%
Marianna	5% to 10%	5% to 10%	1% to 5%	1% to 5%
Maxville	5% to 10%	5% to 10%	15% to 20%	20% to 25%
Mayo	1% to 5%	1% to 5%	0	0
McIntosh	> 0 to 1%	1% to 5%	0	0
Melbourne	1% to 5%	5% to 10%	50% to 55%	40% to 45%
Melrose	> 0 to 1%	> 0 to 1%	0	0
Miami	15% to 20%	15% to 20%	30% to 35%	30% to 35%
Micanopy	1% to 5%	0	1% to 5%	0
Middleburg	5% to 10%	5% to 10%	10% to 15%	35% to 40%
Milton	1% to 5%	1% to 5%	10% to 15%	10% to 15%

APPENDIX C: PERCENTAGE OF CLEC ACCESS LINES BY EXCHANGE

Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
Molino	0	0	0	0
Monticello	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Montverde	1% to 5%	1% to 5%	5% to 10%	30% to 35%
Moore Haven	1% to 5%	5% to 10%	> 0 to 1%	1% to 5%
Mount Dora	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Mulberry	1% to 5%	1% to 5%	5% to 10%	5% to 10%
Munson	1% to 5%	0	1% to 5%	0
Myakka	> 0 to 1%	> 0 to 1%	> 0 to 1%	5% to 10%
Naples	> 0 to 1%	1% to 5%	5% to 10%	5% to 10%
New Port Richey	> 0 to 1%	> 0 to 1%	10% to 15%	30% to 35%
New Smyrna Beach	15% to 20%	20% to 25%	25% to 30%	25% to 30%
Newberry	1% to 5%	1% to 5%	15% to 20%	30% to 35%
North Cape Coral	> 0 to 1%	0	5% to 10%	5% to 10%
North Dade	20% to 25%	20% to 25%	35% to 40%	45% to 50%
North Ft Myers	1% to 5%	1% to 5%	1% to 5%	5% to 10%
North Naples	> 0 to 1%	> 0 to 1%	5% to 10%	10% to 15%
North Port	> 0 to 1%	> 0 to 1%	1% to 5%	5% to 10%
Oak Hill	5% to 10%	5% to 10%	20% to 25%	20% to 25%
Ocala	1% to 5%	1% to 5%	20% to 25%	15% to 20%
Ocklawaha	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Okeechobee	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Old Town	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Orange City	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Orange Park	15% to 20%	10% to 15%	25% to 30%	30% to 35%
Orange Springs	> 0 to 1%	> 0 to 1%	0	0
Orlando	10% to 15%	15% to 20%	45% to 50%	40% to 45%
Oviedo	5% to 10%	5% to 10%	25% to 30%	30% to 35%
Pace	5% to 10%	5% to 10%	15% to 20%	20% to 25%
Pahokee	25% to 30%	30% to 35%	30% to 35%	40% to 45%
Palatka	5% to 10%	5% to 10%	20% to 25%	15% to 20%
Palm Coast	5% to 10%	5% to 10%	30% to 35%	15% to 20%
Palmetto	> 0 to 1%	> 0 to 1%	10% to 15%	15% to 20%
Panacea	1% to 5%	1% to 5%	> 0 to 1%	1% to 5%
Panama City	35% to 40%	35% to 40%	30% to 35%	30% to 35%
Panama City Beach	5% to 10%	5% to 10%	10% to 15%	15% to 20%
Paxton	0	> 0 to 1%	0	0
Pensacola	10% to 15%	10% to 15%	35% to 40%	35% to 40%
Perrine	15% to 20%	15% to 20%	30% to 35%	30% to 35%
Perry	> 0 to 1%	> 0 to 1%	0	0
Pierson	1% to 5%	1% to 5%	10% to 15%	15% to 20%
Pine Island	> 0 to 1%	> 0 to 1%	> 0 to 1%	1% to 5%

APPENDIX C: PERCENTAGE OF CLEC ACCESS LINES BY EXCHANGE

Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
Plant City	1% to 5%	1% to 5%	5% to 10%	15% to 20%
Polk City	1% to 5%	1% to 5%	1% to 5%	5% to 10%
Pomona Park	1% to 5%	1% to 5%	5% to 10%	15% to 20%
Pompano Beach	15% to 20%	1% to 5%	40% to 45%	35% to 40%
Ponce de Leon	1% to 5%	1% to 5%	10% to 15%	10% to 15%
Ponte Vedra Beach	5% to 10%	5% to 10%	20% to 25%	20% to 25%
Port Charlotte	> 0 to 1%	> 0 to 1%	5% to 10%	15% to 20%
Port St Joe	> 0 to 1%	> 0 to 1%	0	0
Port St. Lucie	5% to 10%	5% to 10%	20% to 25%	15% to 20%
Punta Gorda	> 0 to 1%	> 0 to 1%	5% to 10%	10% to 15%
Quincy	> 0 to 1%	1% to 5%	0	0
Raiford	> 0 to 1%	> 0 to 1%	0	0
Reedy Creek	5% to 10%	> 0 to 1%	30% to 35%	30% to 35%
Reynolds Hill	1% to 5%	0	0	0
Salt Springs	1% to 5%	1% to 5%	> 0 to 1%	> 0 to 1%
San Antonio	> 0 to 1%	> 0 to 1%	1% to 5%	1% to 5%
Sanderson	10% to 15%	10% to 15%	1% to 5%	1% to 5%
Sanford	10% to 15%	15% to 20%	25% to 30%	40% to 45%
Sanibel-Captiva Island	> 0 to 1%	> 0 to 1%	1% to 5%	5% to 10%
Santa Rosa Beach	1% to 5%	1% to 5%	10% to 15%	10% to 15%
Sarasota	> 0 to 1%	1% to 5%	15% to 20%	20% to 25%
Seagrove Beach	5% to 10%	5% to 10%	5% to 10%	5% to 10%
Sebastian	5% to 10%	5% to 10%	10% to 15%	15% to 20%
Sebring	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Shalimar	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Silver Springs Shores	1% to 5%	1% to 5%	5% to 10%	5% to 10%
Sneads	1% to 5%	1% to 5%	> 0 to 1%	> 0 to 1%
Sopchoppy	1% to 5%	1% to 5%	0	> 0 to 1%
Spring Lake	> 0 to 1%	1% to 5%	1% to 5%	5% to 10%
St. Augustine	5% to 10%	5% to 10%	25% to 30%	30% to 35%
St. Cloud	1% to 5%	1% to 5%	1% to 5%	15% to 20%
St. Johns	1% to 5%	0	35% to 40%	25% to 30%
St. Marks	1% to 5%	1% to 5%	1% to 5%	1% to 5%
St. Petersburg	1% to 5%	1% to 5%	15% to 20%	20% to 25%
Starke	1% to 5%	5% to 10%	5% to 10%	10% to 15%
Stuart	5% to 10%	10% to 15%	25% to 30%	25% to 30%
Sunny Hills	1% to 5%	1% to 5%	1% to 5%	5% to 10%
Tallahassee	1% to 5%	1% to 5%	15% to 20%	15% to 20%
Tampa	1% to 5%	1% to 5%	35% to 40%	30% to 35%
Tarpon Springs	> 0 to 1%	> 0 to 1%	10% to 15%	20% to 25%
Tavares	1% to 5%	1% to 5%	1% to 5%	1% to 5%

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Exchange	% of Residential Access Lines		% of Business Access Lines	
	CLEC Providers		CLEC Providers	
	(2003)	(2004)	(2003)	(2004)
The Beaches	> 0 to 1%	0	0	0
Titusville	1% to 5%	5% to 10%	15% to 20%	20% to 25%
Trenton	1% to 5%	1% to 5%	10% to 15%	10% to 15%
Trilacoochee	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Tyndall AFB	0	0	0	0
Umatilla	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Valparaiso	1% to 5%	1% to 5%	10% to 15%	10% to 15%
Venice	> 0 to 1%	> 0 to 1%	10% to 15%	15% to 20%
Vernon	1% to 5%	1% to 5%	15% to 20%	50% to 55%
Vero Beach	5% to 10%	5% to 10%	15% to 20%	20% to 25%
Waldo	> 0 to 1%	> 0 to 1%	0	0
Walnut Hill	0	0	0	0
Wauchula	1% to 5%	1% to 5%	1% to 5%	1% to 5%
Weekiwachee Springs	5% to 10%	5% to 10%	20% to 25%	20% to 25%
Weirsdale	0	0	0	0
Welaka	1% to 5%	1% to 5%	10% to 15%	20% to 25%
Wellborn	> 0 to 1%	1% to 5%	0	0
West Kissimmee	1% to 5%	1% to 5%	40% to 45%	50% to 55%
West Palm Beach	10% to 15%	10% to 15%	30% to 35%	30% to 35%
Westville	1% to 5%	1% to 5%	0	0
Wewahitchka	> 0 to 1%	> 0 to 1%	1% to 5%	0
White Springs	1% to 5%	1% to 5%	0	0
Wildwood	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Williston	1% to 5%	5% to 10%	5% to 10%	5% to 10%
Windermere	1% to 5%	5% to 10%	5% to 10%	5% to 10%
Winter Garden	1% to 5%	1% to 5%	5% to 10%	10% to 15%
Winter Haven	1% to 5%	1% to 5%	15% to 20%	30% to 35%
Winter Park	1% to 5%	1% to 5%	20% to 25%	30% to 35%
Yankeetown	1% to 5%	1% to 5%	15% to 20%	20% to 25%
Youngstown-Fountain	1% to 5%	1% to 5%	5% to 10%	60% to 65%
Yulee	1% to 5%	1% to 5%	10% to 15%	20% to 25%
Zephyr Hills	> 0 to 1%	> 0 to 1%	1% to 5%	5% to 10%
Zolfo Springs	1% to 5%	1% to 5%	1% to 5%	1% to 5%

APPENDIX D: SUMMARY OF COMPLAINTS FILED BY CLECS

CLEC	ILEC	Date Opened	Docket No. or CATS No.	Description of Complaint	Date Closed	Resolution
Access Integrated Networks	BellSouth	05/30/03	535975T	Problems with lines not working properly. BellSouth reportedly trying to get customers to switch back to them.	07/02/03	Problems resolved. Delays caused by both companies.
Access Integrated Networks	BellSouth	06/25/03	540841T	Customer wants to move DSL (BellSouth) to its Fax line.	08/21/03	Line was moved. Miscommunications with the customer and its contractor.
Allegiance Telecom of Florida, Inc. and XO Florida, Inc. (Joint CLECs)	BellSouth & Verizon	05/21/04	040489-TP	Emergency Complaint of Joint CLECs seeking an order to require BellSouth and Verizon to continue to honor existing interconnection obligations	Pending	Pending
AT&T	BellSouth	11/12/03	031046-TP	Petition and Complaint of AT&T against BellSouth for alleged anti-competitive pricing of long distance service	07/23/04	Order No. PSC-04-0718-FOF-TP, issued on July 23, 2004 grants AT&T's request for voluntary withdrawal of Petition.
Auglink Commun.	BellSouth	03/04/04	586790T	Problem with newly installed line	03/30/04	Problem with voice mail service
DIECA Comm.Inc. (Covad)	BellSouth	09/26/03	030945-TP	Complaint of DIECA Communications, Inc. against BellSouth for breach of the parties' interconnection agreement	01/20/04	Covad filed a voluntary notice of dismissal on January 13, 2004.

APPENDIX D: SUMMARY OF COMPLAINTS FILED BY CLECS

CLEC	ILEC	Date Opened	Docket No. or CATS No.	Description of Complaint	Date Closed	Resolution
DSL Telecom	BellSouth	01/26/04	580160T	Incorrect billing by BellSouth	02/11/04	DSL Telecom is hiring an internal audit company to review its billing records.
DSL Telecom	BellSouth	04/06/04	592145T	Condo Association signed a CLEC Assumption, however BellSouth is preventing it from happening.	05/28/04	BellSouth has not received any order and is not preventing any assumption.
EXCEL	BellSouth	03/16/04	587603T	Excel customer was out of service for over 1 week.	04/07/04	Service has been restored.
EZ Talk	BellSouth	10/07/03	561436T	Billing problem with BellSouth-EZ	12/08/03	Customer withdrew the complaint.
FDN	BellSouth	08/18/03	030829-TP	Complaint by FDN for resolution of certain billing disputes, and enforcement of unbundled network element orders and interconnection agreements	Pending	Pending
FDN	BellSouth	07/25/03	546773T	Charged a disconnect fee for changing from BellSouth to FDN.	08/12/03	FDN is crediting the customer for the termination charge.
FDN	BellSouth	11/17/03	568766T	Problem porting numbers back from Florida Digital Network	12/10/03	Three customers have been ported, 1 chose to remain with FDN and two others were cancelled by BellSouth due to no clarification by DSLI.
Florida Multimedia	BellSouth	08/13/03	550500-T	Service Connection Difficulties	08/13/03	BellSouth escalated the service order in question.

APPENDIX D: SUMMARY OF COMPLAINTS FILED BY CLECS

CLEC	ILEC	Date Opened	Docket No. or CATS No.	Description of Complaint	Date Closed	Resolution
Florida Phone Services	BellSouth	01/27/04	580707T	BellSouth requested additional deposit for increased usage.	02/12/04	FPS should pay an additional \$30,000 deposit in order to honor contract.
FTS	BellSouth	10/23/03	564496T	BellSouth failed to provide service to its customer in a timely manner.	01/14/04	Service required new construction.
IDS Long Distance/ AT&T	BellSouth	10/16/03	557284T & 552585T	Customer's 6 lines has been out of service since 8/18/03.	01/12/04	Service has been restored. BellSouth to reimbursement company for vendor expenses as problem was with BellSouth.
IDS Telecom	BellSouth	12/23/03	031125-TP	Complaint of IDS Telecom LLC against BellSouth for alleged overbilling and discontinuance of service, and Petition for an emergency order restoring service	Pending	Pending
IDS Telecom	BellSouth	05/21/04	040488-TP	Complaint of BellSouth against IDS Telecom LLC to enforce deposit requirements of interconnection agreement	Pending	Pending
IDS Telecom	BellSouth	09/02/03	551589T	Repair problems with an IDS customer	09/18/03	Customer's service has been restored using a spare cable pair.
IDS Telecom	BellSouth	10/09/03	561736T	Trying to port to IDS. BellSouth has a freeze on the line.	12/03/03	BellSouth lifted the local freeze as requested by customer. All numbers are now working.

APPENDIX D: SUMMARY OF COMPLAINTS FILED BY CLECS

CLEC	ILEC	Date Opened	Docket No. or CATS No.	Description of Complaint	Date Closed	Resolution
IDS Telecom	BellSouth	11/7/03	567409-T	Threatened termination of service for non-payment.	12/16/03	Close-out letter to complainant that complex billing matters should be evaluated in a formal proceeding.
IDS Telecom	BellSouth	10/13/03	561895T	Problems regarding the provisioning of customer's fax line for DSL.	01/20/04	Non-regulated service and FPSC could not get the repair charge waived. Problem, however, was caused by IDS/United.
IDS Telecom	BellSouth	03/03/04	586528T	Customer trying to obtain DSL service.	03/11/04	BellSouth incorrectly identified the line as not qualifying for DSL. This has been corrected.
KMC Telecom	BellSouth	02/03/04	581789T	9-1-1 service not available on campus	03/29/04	Service is now working. Will investigate to determine the cause.
Sandhill Commun.	BellSouth	11/12/03	567910T	Billing problem with BellSouth	01/09/04	Response received, problems resolved.
STS	BellSouth	04/02/04	591695T	STS unable to use the BellSouth's LCSC automated system to remove call waiting.	04/21/04	STS advised to use the process outlined in agreement with BellSouth for resolving billing problems.
STS Telecom	BellSouth	10/01/03	560189T	Company is incorrectly listed, also dropped from some directories by BellSouth.	10/16/03	Problem has been resolved
STS Telecom	BellSouth	10/01/03	560300T	BellSouth caused delays in changing LD Company.	10/17/03	Customer successfully changed LD Company
STS Telecom	BellSouth	10/14/03	562697T	Out of Service	11/07/03	Service disconnected by BellSouth in error. It has been restored.

APPENDIX D: SUMMARY OF COMPLAINTS FILED BY CLECS

CLEC	ILEC	Date Opened	Docket No. or CATS No.	Description of Complaint	Date Closed	Resolution
STS Telecom	BellSouth	09/11/03	556202T	BellSouth disconnecting STS customers.	01/05/04	Accidental disconnection. Restored by BellSouth.
STS Telecom	BellSouth	09/17/03	557520T	Calls dropping off, BellSouth charging for premise visits if no trouble found.	01/22/04	Primary line moved from fiber to copper, no further problems. Problem caused by BellSouth.
STS Telecom	BellSouth	10/16/03	563066T	BellSouth removed freeze on customer's line without customer's approval.	02/06/04	STS & BellSouth are working out the notification problems.
Supra	BellSouth	06/13/03	538533T	Problem with DSL being disconnected due to switch	07/08/03	DSL is non-regulated service and Commission has no DSL rules.
Supra	BellSouth	05/23/03	534992T	Dangerous pole in yard that needs replacing	07/15/03	Pole has been removed.
USA Telephone	BellSouth	06/26/03	540974T	No dial tone. Unfair practice by BellSouth & billing problems.	08/07/03	BellSouth will issue credits of \$120.
Vartec	BellSouth	07/03/03	542618T	Customer requested line to be moved. Contractor cut the line when move was not made.	08/06/03	Problem caused by Vartec. Credit of \$37.88 will be issued.
CEMEX	Sprint	03/04/04	586724T	Customer of CEMEX out of service	04/05/04	Mr. Johnson has withdrawn the complaint.
FTS	Sprint	08/14/03	542444T	Can receive but cannot make calls.	11/10/03	Customer's service is now working with Sprint. LOA received to verify transfer of service.
Hosting Network	Sprint	07/03/03	542642T	Porting to Sprint-Hosting Network won't release the line.	07/08/03	Service has been ported. Customer had a freeze on the line.

APPENDIX D: SUMMARY OF COMPLAINTS FILED BY CLECS

CLEC	ILEC	Date Opened	Docket No. or CATS No.	Description of Complaint	Date Closed	Resolution
Allegiance	Verizon	09/30/03	559974T	Customer trying to relocate to a new building. Problem with cables.	10/30/03	Customer has service with Verizon
CAT Comm.	Verizon	02/10/04	577918T	LD service is blocked.	04/05/04	Service has been installed.
Ganaco, Inc.	Verizon	08/8/03	549894-T	Billing problems with a specific Verizon product	09/16/03	Verizon issued the appropriate credits, and states that work on a mechanical fix is underway.
ITC^Delta-Com Comm.	Verizon	12/19/03	031116-TP	Complaint of ITC^DeltaCom against Verizon for alleged violations of the Telecommunications Act of 1996	2/10/04	ITC^Delta-Com Communications, Inc. filed a notice of voluntary dismissal on January 22, 2004.
TCG South Florida	Verizon	07/24/03	030677-TP	Petition and complaint by Verizon regarding customer transfer charges imposed by TCG South Florida	09/17/03	Verizon withdrew its Petition via letter dated September 12, 2003.
Xspedius Commun/Espire	Verizon	08/29/03	550851T	Remote Call Forwarding problem as well as billing problems	10/16/03	In civil litigation

APPENDIX E: LIST OF CERTIFICATED CLECS AS OF 05/31/04

1 Com, Inc. d/b/a 1 Com South, Inc.
1-800-RECONEX, Inc. d/b/a USTEL
360networks (USA) inc.
A.R.C. Networks, Inc. d/b/a InfoHighway
AAA Reconnect, Inc.
AboveNet Communications, Inc.
Acceris Communications Corp. of Florida
Access Communications, LLC.
Access Integrated Networks, Inc.
Access Point, Inc.
AccuTel of Texas, Inc.
ACN Communication Services, Inc.
Actel Wireless, Inc.
Adelphia Telecommunications of Florida, Inc.
Advanced Tel, Inc. d/b/a EATEL
Advantage Group of Florida Communications, L.L.C.
Affordable Phone Services, Inc. d/b/a High Tech Communications
Airface Communications Inc.
AirTIME Technologies, Inc.
ALEC, Inc.
Allegiance Telecom of Florida, Inc.
ALLTEL Communications, Inc.
Alpha Fiber Inc.
Alpha Telecom, LLC
Alternative Access Telephone Communications Corp. d/b/a AA Tele-Com
Alternative Phone, Inc.
Alternative Telecommunication Services, Inc. d/b/a Second Chance Phone
Alticomm, Inc.
AMAFLA Telecom, Inc.
American Fiber Network, Inc.
American Fiber Systems, Inc.
American Phone Services Corp.
America's Wireless Choice, Inc.
Americatel Corporation
AmeriMex Communications Corp.
Andre Trajean Fidel d/b/a Andrex Telecom
ANEW Broadband, Inc.
Annox, Inc.
Armour E611 Incorporated
Arrow Communications, Inc. d/b/a ACI
Asset Channels-Telecom, Inc.
AT&T Communications of the Southern States, LLC d/b/a AT&T

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Atlantic Telecommunication Systems, Inc. d/b/a ATS
Atlantic.Net Broadband, Inc. d/b/a Dolfo.Net
Atlas Communications, Ltd.
ATN, Inc. d/b/a AMTEL NETWORK, INC.
Auglink Communications, Inc.
Available Telecom Services, Inc.
Azul Tel, Inc.
Backbone Communications Inc.
BAK Communications, LLC
Baldwin County Internet/DSSI Service, L.L.C.
Basic Phone, Inc.
BCN Telecom, Inc.
Beauty Town, Inc. d/b/a Anns Communication
Bellerud Communications, LLC
BellSouth Long Distance, Inc.
BellSouth Telecommunications, Inc.
Best Value Telecom, Inc.
Birch Telecom of the South, Inc. d/b/a Birch Telecom and d/b/a Birch
Bright House Networks Information Services (Florida), LLC
Broadband Communities of Florida, Inc.
Broadview Networks, Inc.
BT Communications Sales LLC
Budget Phone, Inc.
BudgeTel Systems, Inc.
BullsEye Telecom, Inc.
Burno, Inc. d/b/a Citywide-Tel
Business Communications, Inc.
Business Telecom, Inc. d/b/a BTI
Buy-Tel Communications, Inc.
BW Consulting, L.L.C.
C2C Fiber of Florida, Inc.
Calpoint (Florida), LLC
Camarato Distributing, Inc. d/b/a Nex-Phon
Campus Communications Group, Inc.
CariLink International, Inc.
CAT Communications International, Inc.
Cbeyond Communications, LLC
Centennial Florida Switch Corp.
CI2, Inc.
Ciera Network Systems, Inc.
Cinergy Communications Company
City of Daytona Beach
City of Gainesville, a municipal corporation d/b/a GRUCom

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City of Lakeland
City of Ocala
City of Quincy d/b/a netquincy d/b/a netquincy.com d/b/a www.netquincy.com
City of Tallahassee
Cleartel Telecommunications, Inc. d/b/a Now Communications, also d/b/a VeraNet Solutions
CM Tel (USA) LLC
Coastal Telephone Connections, Inc. d/b/a Coastal Connections
Cogent Communications of Florida LHC, Inc.
Colmena Corp. of Delaware
Columbia Telecommunications, Inc. d/b/a axessa
Comcast Business Communications, Inc.
Comcast Phone of Florida, LLC d/b/a Comcast Digital Phone
Comm South Companies, Inc. d/b/a Florida Comm South
Communications Xchange, LLC
Computer Network Technology Corporation
Comtech21, LLC
Conextel, Inc.
Coral Telecom, Inc. d/b/a TruComm Southeast
Cordia Communications Corp.
Covista, Inc.
Cox Florida Telcom, L.P. d/b/a Cox Communications
Credit Loans, Inc. d/b/a Lone Star State Telephone Co.
CTC Communications Corp.
Cypress Communications Operating Company, Inc.
David A. Chesson and Ted J. Moss d/b/a Phone-Out/Phone-On
Deland Actel, Inc.
Delta Phones, Inc.
DialEZ Inc.
DialTek, LLC d/b/a DTK Telecommunications, LLC
Dialtone Telecom, LLC
DIECA Communications, Inc. d/b/a Covad Communications Company
Direct Telephone Company, Inc.
Direct2Internet Corp.
Dominion Telecom, Inc.
Double Link Communications, Inc.
DPI-Teleconnect, L.L.C.
DSL Internet Corporation d/b/a DSLi
DSL Telecom, Inc.
DSLnet Communications, LLC
D-Tel, Inc.
DukeNet Communications, LLC
DV2, Inc.
E.Com Technologies, LLC d/b/a Firstmile Technologies, LLC

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Eagle Communications, Inc. d/b/a Eagle Telco, Inc.
Eagle Telecommunications, Inc.
Easy Telephone Services Company
ElectroNet Intermedia Consulting, Inc.
Electronic Technical Services (E.T.S.)
eMeritus Communications, Inc.
Enhanced Communications Network, Inc. d/b/a Asian American Association
EO Telecom of Florida, LLC
EPICUS, Inc. d/b/a EPICUS
Ernest Communications, Inc.
Esodus Communications, Inc. d/b/a Excelink Communications d/b/a Instatone
EveryCall Communications, Inc.
Excel Telecommunications, Inc.
Express Phone Service, Inc.
EZ Talk Communications, L.L.C.
Fair Financial LLC d/b/a Midstate Telecommunications
Fast Phones, Inc. of Alabama
Fiber Media, LLC
FLATEL, Inc. d/b/a Florida Telephone Company d/b/a Oscatel d/b/a Telephone USA
Florida City-Link Communications, Inc.
Florida Digital Network, Inc. d/b/a FDN Communications
Florida Multi-Media Services, Inc. d/b/a Florida Multi Media
Florida Municipal Power Agency
Florida Phone Service, Inc.
Florida Phone Systems, Inc.
Florida Public Telecommunications Association, Inc.
Florida Telephone Services, LLC
Focal Communications Corporation of Florida
Fort Pierce Utilities Authority d/b/a GigaBand Communications
Foxtel, Inc.
FPL FiberNet, LLC
France Telecom Corporate Solutions L.L.C.
Frontier Communications of America, Inc.
Ganoco, Inc. d/b/a American Dial Tone
Georgia Public Web, Inc.
Georgia Telephone Services, Inc.
Global Connection, Inc of America
Global Crossing Local Services, Inc.
Global Crossing Telemanagement, Inc.
Global Dialtone, Inc. d/b/a Atlantic Phone
Global Metro Networks Florida, LLC
Global NAPS, Inc.
Global Response Corporation

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Globalcom Inc. d/b/a GCI Globalcom Inc.
Globaltron Communications Corporation
Globcom, Inc.
GoBeam Services, Inc.
Grande Communications Networks, Inc.
Granite Telecommunications, LLC
GTC Telecom, Corp. d/b/a Curbside Communications
Gulf Coast Telecom, Inc.
Harbor Communications, LLC
Hayes E-Government Resources, Inc.
Home Town Telephone, LLC
Hotline, Inc. d/b/a Hotline Telephone Service, Inc.
ICG Telecom Group, Inc.
IDS Telcom LLC
IDT America, Corp. d/b/a IDT
I-Link Communications, Inc.
Image Access Communications, Inc. d/b/a NewPhone
Intellicall Operator Services, Inc. d/b/a ILD
Intelligence Network Online, Inc.
Intelogistics Corp.
Interactive Services Network, Inc. d/b/a ISN Communications
InterCept Communications Technologies, Inc.
Interlink Telephony, Inc.
Intermedia Communications, Inc.
International Exchange Communications, Inc. d/b/a IE Com
International Telcom, Ltd.
International Telnet, Inc.
Intrado Communications Inc.
ITC^DeltaCom Communications, Inc. d/b/a ITC^DeltaCom d/b/a Grapevine
ITS Telecommunications Systems, Inc.
Jax Telecom Inc.
Kenarl Inc. d/b/a Lake Wellington Professional Centre
Kernan Associates, Ltd. d/b/a St. Johns Estates
King Communications & Services, Inc.
KingTel, Inc.
Kissimmee Utility Authority
KMC Data LLC
KMC Telecom III LLC
KMC Telecom V, Inc.
Knology of Florida, Inc.
Laser Telecom, LLC
LecStar Telecom, Inc.
Level 3 Communications, LLC

APPENDIX E: LIST OF CERTIFICATED CLECS AS OF 05/31/04

LightWave Communications, LLC
Lightyear Communications, Inc.
Lionhart of Miami, Inc. d/b/a Astral Communications
Litestream Technologies, LLC
Local Line America, Inc.
Local Telecom Systems, Inc.
Looking Glass Networks, Inc.
LPGA International Communications, LLC
Madison River Communications, LLC
Max-Tel Communications, Inc. d/b/a Florida's Max-Tel Communications, Inc.
McGraw Communications, Inc.
MCI WorldCom Communications, Inc.
MCI WorldCom Network Services, Inc.
MCImetro Access Transmission Services LLC
McLeodUSA Telecommunications Services, Inc.
Melbourne Venture Group, LLC d/b/a SwiftTel
Mercury Long Distance, Inc.
MET Communications, Inc.
Metric Systems Corporation
Metro Teleconnect Companies, Inc.
Metropolitan Fiber Systems of Florida, Inc.
Metropolitan Telecommunications of Florida, Inc. d/b/a MetTel
Microsun Telecommunications, Inc.
Midwestern Telecommunications, Incorporated
Momentum Telecom, Inc.
Movie, Television & Graphics Corp. d/b/a M.T.G.
Mpower Communications Corp.
Myatel Corporation
MY-TEL INC.
National Telecom & Broadband Services, LLC
Navigator Telecommunications, LLC
Net One International, Inc.
Network International Solutions, Inc.
Network Multi-Family Security Corporation d/b/a Priority Link
Network Operator Services, Inc.
Network PTS, Inc.
Network Telephone Corporation
NetworkIP, L.L.C.
New Access Communications LLC and d/b/a INCOMNET
New Edge Network, Inc. d/b/a New Edge Networks
NewSouth Communications Corp.
Nigerian-American Investment Corporation d/b/a NAIC Telecommunications
nii Communications, Ltd.

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North American Telecommunications Corporation
North American Telecommunications Corporation d/b/a Southeast Telephone Company
North County Communications Corporation
NOS Communications, Inc. d/b/a International Plus d/b/a O11 Communications d/b/a The
Internet Business Association d/b/a I Vantage Network Solutions
Novus Communications, Inc.
NOW Communications, Inc.
NTERA, Inc.
NuStar Communications Corp.
NuVox Communications, Inc.
O1 Communications of Florida, Inc.
O1 Communications of Florida, LLC
Ocius Communications, Inc.
OCMC, Inc. d/b/a One Call Communications, Inc., OPTICOM, 1-800-MAX-SAVE, Advanttel,
RegionTel, LiveTel, and SuperTel
Oltronics, Inc.
One Call Communications, Inc. d/b/a Opticom, a Division of One Call Communications, Inc.
OneStar Long Distance, Inc.
OnFiber Carrier Services, Inc.
ONS-Telecom, LLC
Orlando Telephone Company
Oronoco Networks, Inc.
Pacific Centrex Services, Inc.
PaeTec Communications, Inc.
Palm Beach Community College
Phone 1 Smart LLC
Phone Club Corporation
Phone-Link, Inc.
Pilgrim Telephone, Inc.
PNG Telecommunications, Inc. d/b/a PowerNet Global Communications
Preferred Carrier Services, Inc. d/b/a Telefonos Para Todos and d/b/a Phones For All
Premier Telecom, Inc.
Premiere Network Services, Inc.
Primus Telecommunications, Inc.
ProfitLab, Inc.
Progress Telecom, LLC
Protocall Communications, Inc.
Public Telephone Network, Inc.
Quality Telephone Inc.
QuantumShift Communications, Inc.
Quiet River Communications, LLC
Qwest Communications Corporation
Qwest Interprise America, Inc.

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Qwik.net ALEC, Inc.
RCN Telecom Services, Inc.
Rebound Enterprises, Inc. d/b/a REI Communications
Re-Connection Connection
Reliant Communications, Inc.
ReTel Communications, Inc.
RGT Utilities of Florida, Inc.
Rightlink USA, Inc.
Ring Connection, Inc.
Sago Broadband, LLC
Sail Telecom, Inc.
Saluda Networks Incorporated
Sandhills Telecommunications Group, Inc. d/b/a SanTel Communications
Saturn Telecommunication Services Inc. d/b/a STS
SBA Broadband Services, Inc.
SBC Telecom, Inc.
ServiSense.com, Inc.
Seven Bridges Communications, L.L.C.
Shands Teaching Hospital and Clinics, Inc.
Smart City Networks
Smart City Solutions, LLC
Smart Network Solutions Communications Corp
SNC Communications, LLC
Solution Telecom, Inc
Source One Communications, Inc. d/b/a Quick Connects
Southeastern Services, Inc.
Southern Light, LLC
Southern ReConnect, Inc.
Southern Telecom Network, Inc.
Southern Telecom, Inc. d/b/a Southern Telecom of America, Inc.
Southwestern Bell Communications Services Inc. d/b/a SBC Long Distance
Spectrotel, Inc.
Speedy Reconnect, Inc.
Sprint Communications Company Limited Partnership
Strategic Technologies, Inc.
STS Telecom, LLC
Suntel Metro, Inc.
Sun-Tel USA, Inc.
Super-Tel.Com, Inc.
Supra Telecommunications and Information Systems, Inc.
Symtelco, LLC
Synergy Networks, Inc.

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T3 Communications, LLC d/b/a Tier 3 Communications d/b/a Naples Telephone and d/b/a Fort Myers Telephone
Talk America Inc.
Talk and Pay, Inc.
Talk Unlimited Now, Inc.
TalkingNets Holdings, LLC
Tallahassee Community College
Tallahassee Memorial Telephone Company
Tallahassee Telephone Exchange, Inc.
TCG South Florida
Tel West Communications, LLC
TelCove Investment, LLC
TelCove of Florida, Inc.
TelCove of Jacksonville, Inc.
Telecom Connection Corp.
TeleConex, Inc. d/b/a TeleConex
TELECUBA, INC.
Teledata Solutions, Inc. d/b/a TDSI, INC.
Telefyne Incorporated
Telepacket, Inc
Telepak Networks, Inc.
Telephone One Inc.
Telephone Systems of Georgia, Inc.
Teligent Services, Inc.
TelQuest Communications, Corp.
Telstar Communications, Inc. d/b/a Telstar Prepaid Services
Telsys, Inc.
Terra Telecommunications Corp.
THC Merger Corp. d/b/a THC Internet Solutions
The Boeing Company
The Gulas Group, L.L.C.
The Other Phone Company, Inc. d/b/a Access One Communications
The Phone Connection, Inc.
The Sunshine State Telephone Company, L.L.P.
The Ultimate Connection, L.C. d/b/a DayStar Communications
Think 12 Corporation d/b/a Hello Depot
Tiburon Telecom, Inc.
Time Warner Telecom of Florida, L.P.
T-Netix, Inc.
TotalCom America Corporation
Touch 1 Communications, Inc.
Trans National Communications International, Inc.
Transparent Technology Services Corporation d/b/a North Palm Beach Telephone Company

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Tristar Communications Corp.
U.S. TelePacific Corp. d/b/a TelePacific Communications
Unicom Communications, LLC
United Communications HUB, Inc.
Universal Access, Inc. d/b/a UAI of Florida, Inc.
Universal Beepers Express, Inc. d/b/a Universal Wireless d/b/a Universal Telephone d/b/a Ameri
Phone d/b/a Unitel
Universal Telecom, Inc.
University Club Communications, LLC
US LEC of Florida Inc.
US South Communications, Inc.
US Telesis, Inc.
USA Telecom, Inc.
USA Telephone Inc. d/b/a CHOICE ONE Telecom
Utilities Commission, New Smyrna Beach d/b/a Sparks Communications
Utility Board of the City of Key West d/b/a Keys Energy Services
VarTec Telecom, Inc. d/b/a VarTec Telecom, Inc. and Clear Choice Communications
VBNet, Incorporated
Verizon Avenue Corp. d/b/a Verizon Avenue
Verizon Florida Inc.
Verizon Select Services Inc.
VGM International, Inc.
VIVO-FLA, LLC
Volo Communications of Florida, Inc. d/b/a Volo Communications Group of Florida, Inc.
Vortex Broadband Communications, Inc.
Vox2 Voice, L.C.
Vycera Communications, Inc.
Wholesale Carrier Services, Inc.
Wilted Local Network, LLC
Winstar Communications, LLC
Wireless One Network Management, L.P.
WS Telecom, Inc. d/b/a eXpeTel Communications
XO Florida, Inc.
Xspedius Management Co. of Jacksonville, LLC
Xspedius Management Co. Switched Services, LLC d/b/a Xspedius Communications
Yipes Enterprise Services, Inc.
Zone Telecom, Inc.
Z-Tel Communications, Inc.

GLOSSARY

Access Line	A telephone line extending from the telecommunications company's central office to a point of demarcation, usually on the customer's premises. (See also - "Local Loop")
Broadband	A descriptive term for evolving digital technologies offering consumers a single switched facility offering integrated access to voice, high-speed data services, video-demand services, and interactive information delivery services. Broadband is also used to define an analog transmission technique for data or video that provides multiple channels.
Central Office	CO. A telephone company facility housing the switching system and signaling equipment that provides telephone service for customers in the immediate geographical area.
CLEC	Competitive Local Exchange Company. Any company certificated by the Florida Public Service Commission to provide local exchange telecommunications service in the State of Florida on or after July 1, 1995. Pursuant to Law, the term ALEC was changed to CLEC on May 23, 2003.
Circuit	A fully operative two-way communications path.
Collocation	In a collocation arrangement, a competitor leases space at an incumbent local exchange carrier's (ILEC's) premises for its equipment.
Exchange	A central office or group of central offices, together with the subscriber's stations and lines connected thereto, forming a local system which furnishes means of telephonic intercommunication without toll charges between subscribers within a specified area, usually a single city, town, or village.
InterLATA	Telecommunications services that originate and terminate in different local access and transport areas (LATAs).
Intermodal	The use of more than one form of carrier to transport telecommunication services from origination to termination.
Internet Protocol	Refers to all the standards that keep the Internet running. Describes software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages.
IntraLATA	Telecommunications services that originate and terminate in the same Local Access and Transport Area.

LATA	Local Access and Transport Areas. Geographic regions which present the post-divestiture service areas of the 22 Bell operating companies (BOCs). All telephone service within a LATA is defined as exchange service, while all telephone service between LATAs is defined as interexchange service. LATAs are loosely based on standard metropolitan statistical areas (SMSAs).
LEC	Local Exchange Company or Carrier, Local exchange telecommunications company. Means any company certificated by the Commission to provide local exchange telecommunications service in this state on or before June 30, 1995.
Local Loop	A circuit connecting telephone equipment to a switching facility or distribution point. (See also - "Access Line")
MSO	Multiple System Operator. A company that operates more than one cable television system.
OSS	Operations Support System. Methods and procedures (mechanized or not) which directly support the daily operation of the telecommunications infrastructure. The average local exchange company has hundreds of OSSs, including automated systems supporting order negotiation, order processing, line assignment, line testing and billing.
Packet Switching	A data transmission method whereby a channel is occupied only for the duration of transmission of "packets" of data. The packet switch sends the different packets from different data sources along the best route available, in no particular order. At the other end, the packets are reassembled to form the original message which is then sent to the receiving computer. Because packets need not be sent in a particular order, and because they can go by any route as long as they reach their destination, packet switching networks can choose the most efficient route and send the most efficient number of packets down that route, before switching to another route to send more packets.
PBX	Private Branch eXchange. A small version of a telephone company's larger central switching office that is owned by the customer.
POTS	Plain Old Telephone Service. The basic service supplying single line telephones, telephone lines and access to the public switched network.
PSTN	Public Switched Telephone Network. The telephone network that provides switching and transmission facilities to the general public.
RBOC	Regional Bell Operating Company. Originally, one of seven regional holding companies which were created in 1984 as part of the breakup of

AT&T. After mergers and acquisitions, there are now 4 regional holding companies: BellSouth, SBC Communications, Verizon and Qwest.

Resale Buying local and/or long distance phone lines in quantity at wholesale rates then selling them to someone else.

Section 271 Section of the Telecommunications Act of 1996 specifying the standards that must be met by a regional Bell Operating Company prior to in-region, interLATA entry. The standard seeks to measure whether the barriers to competition that Congress sought to eliminate with the 1996 Act have in fact been fully eliminated and whether there are objective criteria to ensure that competitive local exchange carriers will continue to have nondiscriminatory access to the facilities and services they will need from the Bell Operating Company in order to enter and compete in the local exchange market.

Switch A mechanical, electrical or electronic device which opens or closes circuits, completes or breaks an electrical path, or selects paths or circuits.

Switched Access Telephone company provided exchange access services that offer switched interconnections between local telephone subscribers and long distance or other companies. Long distance companies use switched access for origination and termination of ordinary user-dialed calls. Switched access is the single largest cost item for the long distance industry.

Tariff A statement by a communications company that sets forth the services offered by that company, and established customer rates, terms, and conditions under which regulated services are provided, and states general obligations of the company and customer. Tariffs are subject to review by regulatory agencies and must be followed by the common carrier to ensure nondiscrimination between customers.

UWB A wireless technology that operates over a wide range of spectrum by transmitting very short, low-power pulses that can be used to distribute services such as telephone, cable, and computer networking throughout a building or home.

UNE Unbundled Network Element. The Telecommunications Act of 1996 requires that the incumbent local exchange companies unbundle their network elements and make them available to the competitive local exchange companies on the basis of incremental cost. UNEs are defined as physical and functional elements of the network, e.g., Network Interface Devices, local loops and subloops, circuit-switching and switch ports, interoffice transmission facilities, signaling and call-related

databases, OSSs, operator services and directory assistance, and packet or data switching. (Newton)

UNE-L Unbundled Network Element - Loop.

UNE-P Unbundled Network Element - Platform. When combined into a complete set in order to provide an end-to-end circuit, the UNEs constitute a UNE-P.

Universal Service This term describes the financial support mechanisms that constitute a universal fund which helps to compensate telephone companies or other communication entities for providing access to telecommunications services at reasonable and affordable rates throughout the country, including rural, insular, high cost areas, and to public institutions.

VoIP Voice over Internet Protocol. The technology used to transmit voice conversations over a data network using the Internet Protocol.

Wireline A term used to describe the technology used by a company to provide telecommunications services; it is synonymous with "landline" or land based technology, which "refers to standard telephone and data communications systems that use in-ground and telephone pole cables in contrast to wireless cellular and satellite services." (Techweb.com)

Dkt. No _____
D. Blessing Ex. No. ____ (DCB-16)
Unite Communications Systems

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-16

Unite Communications Systems @ <http://www.uniteone.net/index.html>.



Unified Communication Solutions

[go back](#) [printer friendly](#) [tell a friend](#)

Unite Communications Corporation
Unified Communication Solutions

unite, u-nit' , v.t.
to join into one : to make to agree,
feel as one, or act in concert.
v.i. to become one: to grow or act
together.



The Convenience of One. One Bill. One Call. Simply One.

/// NAVIGATION:

Sign Up
Service Availability
Community News
Photo Gallery

Service Packages
Telephone
Digital Cable TV
High Speed Internet

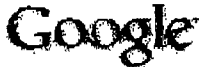
Wide Area Networks
Channel Lineup
Unite FAQ

Comm. Involvement
Customer Center

Welcome to Unite's world of advanced communications, a world in which you'll go faster and farther than you ever dreamed possible!

Our Digital Cable Television, High Speed Internet Access, and cutting-edge Telephone Services deliver more choices, better quality, faster speeds, and impressive value!

Search the web with Google!



Search!



NEW!

Unite Photo Gallery - Check out the latest photos from the Platte City Community Center cookout!
Click here to view the [Unite FAQ \(Frequently Asked Questions\)](#)!
Check out [Unite's great Long Distance prices!](#)

ALSO:

See what some of our younger cookout-goers have to say about Unite!

Questions or comments? Send an e-mail to siteadmin@uniteone.net!

Unite Service Packages

Pick a pack and save!

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Service Availability
Kearney
Platte City
Community News
Photo Gallery

Service Packages
Telephone
Digital Cable TV
High Speed Internet

Wide Area Networks
Channel Lineup
Unite FAQ

Bronze Package Local Telephone Service

\$

- Keep your current phone number
- Includes metro calling plan

Digital Cable TV

- 145+ channels
- Equipment for two (2) televisions
- IN DEMAND Pay-Per-View

Silver Package Local Telephone Service

\$

- Three (3) phone features
- Keep your current phone number
- Includes metro calling plan

Digital Cable TV

- 145+ channels
- Equipment for two (2) televisions
- Six (6) Encore movie channels
- IN DEMAND Pay-Per-View

High Speed Internet

- Unite DSL
- Five (5) e-mail address
- Dedicated connection
- Always-on

Gold Package Local Telephone Service

\$1

- Five (5) phone features
- Keep your current phone number
- Includes metro calling plan
- Caller ID on TV

Digital Cable TV

- 145+ channels
- Equipment for three (3) televisions
- Six (6) Encore movie channels
- IN DEMAND Pay-Per-View

One (1) Premium Movie Channel

- Choose from HBO, Cinemax, Starz!, or Showtime/T

High Speed Internet

- Unite DSL Plus
- Five (5) e-mail address
- Dedicated connection
- Always-on

Platinum Package Local Telephone Service

\$1

- Ten (10) phone features
- Keep your current phone number
- Includes metro calling plan
- Caller ID on TV

Unite Communications Systems Company Overview

Headquartered in the Kansas City metro area, Unite has been providing customer-focused communications solutions since 1997. Unite currently provides "triple play" services of telephone, cable TV and high speed Internet to approximately 3,000 homes and businesses in Kearney and Platte City, Missouri, and private communications networks to school districts and other commercial and governmental organizations over a five-state Midwest region (Missouri, Kansas, Nebraska, Colorado, and Illinois).

Unite's triple play operations currently enjoy a market penetration of 70%+ for residential and business customers. Unite provides significant benefits to customers including better service, greater selection, and lower price.

Unite currently operates private communications networks in Kansas, Missouri, Nebraska, Colorado, and Illinois. These private networks typically involve providing connectivity between multiple facilities locations under long-term lease agreements (5-15 years). Unite has significant experience with federal E-Rate program guidelines. Unite works closely with customer representatives as projects progress to ensure that it meets all customer expectations regarding project cost, quality and timeliness. Unite has a proven history of successful completion of fiber optic construction projects:

Customer	Location	Year Completed
Pueblo County	Pueblo, CO	1999
Raytown School District	Raytown, MO	2001
Dodge City School District	Dodge City, KS	2001
Lincoln Public Schools	Lincoln, NE	2001
Liberty School District	Liberty, MO	2002
Freemont School District	Pueblo, CO	2002
Ameritas Insurance	Lincoln, NE	2002
TAG/TMI	Lincoln, NE	2003
Nebraska Detention Center	Lincoln, NE	2003
Lone Jack School District	Lone Jack, MO	2003
DeSoto School District	DeSoto, KS	2003
Dark Fiber Solutions	Lincoln, NE	2003
Park Hill School District	Parkville, MO	2004
Raymore-Peculiar School District	Raymore, MO	2004
Pueblo School District	Pueblo, CO	2005
Harrisonville School District	Harrisonville, MO	2005
Lexington School District	Lexington, NE	2005
Pfizer	Lincoln, NE	2005
Carrollton School District	Carrollton, MO	2005
Level 3/UNL	Lincoln, NE	2005
Sprint Chicago	Chicago, IL	2005

Unite is a sub-chapter S corporation, 100% owned by four principals who are active in day-to-day management of the company. The four principals collectively have over 75 years of communications and utility industry experience. Unite is cash flow and net income positive.

Dkt. No _____
D. Blessing Ex. No. ____ (DCB-17)
Utopia Net

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-17

Utopia Net website @ <http://www.utopianet.org/>.

Why Was UTOPIA Formed?

Advanced telecommunications are becoming increasingly crucial in business and in improving our quality of life. UTOPIA was formed in response to at least three critical telecommunications needs going unmet by private industry:

1. **Redundant connections.** This is a critical issue for smaller rural communities outside the main service-area corridor in Utah. A few years ago, during a construction project, the primary communications line into Box Elder County was severed, leaving businesses as well as residents, with no telecommunications services. The incumbent provider, when asked repeatedly over the years for a redundant connection, has failed to deliver.
2. **Ubiquitous deployment.** Profitable parts of the state and profitable portions of select cities are currently serviced by some type of broadband connection; however, less profitable communities are ignored by incumbents because they don't provide a sufficient ROI. The resulting digital divide is of concern to the communities, but not to the incumbents.
3. **Competition and service.** Telecommunications infrastructure (copper lines going into homes and businesses) is owned by service provider monopolies. Pricing, programming choice, quality of service, and various business practices dependent on--and benefiting from--the privately owned infrastructure are not being driven by market competition. The absence of competition allows incumbent providers to ignore consumer complaints.

After several years of receiving no positive movement on these issues from private sector incumbents, various Utah municipalities formed a consortium to solve them on their own. The resulting organization, UTOPIA, is governed by an Interlocal Agreement, guided by a unique ideology with specific goals, and is motivated by a one-for-all and all-for-one spirit intent on addressing these problems for their communities.

UTOPIA was organized to address identified critical telecommunications needs. In seeking solutions to those needs, UTOPIA first defined an ideology and adopted specific goals. These ideologies and goals establish the criteria for selecting solutions from among the various technologies, business models, and operational strategies that could potentially address the stated needs:

- **Open Access/Multiple providers.** The solution must be open to, and support, multiple service providers and encourage competition for any and all services offered across the network. A system whose ownership, design, or operation precludes, or gives intrinsic advantage to, any individual provider is unacceptable.
- **Wholesale Services.** To avoid direct competition between the public system and private enterprise, the system must operate at the wholesale level only. All consumer products and services traversing the network are to be offered by private sector service providers in a competitive retail market.
- **Scalable.** Given the rapid evolution of technology and the continual growth of communities, the system must be nearly infinitely scalable. A solution meeting today's needs of speed and capacity is insufficient: it should be capable of meeting projected telecommunications needs for at least twenty years and more.
- **Carrier Class.** Current business requirements for reliable and secure transactions as well as the increasing flow of sensitive personal information across telecommunications lines require the physical components to perform with 99.999% reliability and an equal degree of end-to-end data security.
- **Standards-based.** Proprietary technology forces partnerships with vendors and suppliers. UTOPIA's design and construction must use established, non-proprietary standards that allow for competition in filling hardware needs.
- **Ubiquitous.** Providing services to fewer than all of a community's residents simply perpetuates existing inequities. The selected technology and business model must finally and permanently bridge the digital divide within communities.

These goals and ideals govern all decisions regarding UTOPIA's solutions to the telecommunications needs of its member communities.

Planning for Success

The founding members of UTOPIA devised a staged approach to meet their goals:

1. **Conduct a feasibility study.** UTOPIA hired consultants to determine:
 - which technology best meets the needs of the communities,
 - what business model is appropriate for a public system, and
 - whether the system can be financially self-sustaining

Findings from the completed study were to be subjected to an independent third-party for vetting.

2. **Engage and finance the project.** Upon a favorable outcome to the study, interested member cities commit to proceeding with the project. Committing cities to ongoing participation allows UTOPIA to determine potential market revenues as well as total construction costs and allows UTOPIA to secure financing for the project.
3. **Examine practices.** Before borrowing the full amount of money required for a complete build out, UTOPIA will borrow sufficient to build a small sub-set of the network's first footprint to validate construction costs and to examine construction methodologies, service provisioning, customer support, and other operational issues.
4. **Build out the full network.** Upon successful examination of the policies and procedures established in the the sub-set buildout, the balance of the funding will be secured and committed cities will move ahead towards full deployment. Using a capital efficient approach to deployment, the network will grow as quickly as it is able to support itself.
5. **Operate and maintain the system.** UTOPIA will contract with third-party systems managers to ensure the ongoing viability and success of the system.

UTOPIA has completed phase one of this master plan and is approaching the end of phase two. Of the original 18 cities, 14 have committed to ongoing participation, and 11 of those have committed financial backing to speed the progress of the project in their communities.

Dkt. No _____
D. Blessing Ex. No. ____ (DCB-18)
Grant County

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-18

Grant County (Washington State) Public Utility District Zip fiber network website @
<http://www.gcpud.org/zipp/zippnews.htm>.



Zipp Fiber Network

- [Home](#)
- [News](#)
- [Job Opportunities](#)
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- [Policies](#)
- [Retail Service Providers](#)

Anticipating the future technological needs of the utility, Grant County PUD began developing a fiber optic communication system in the 1980s that now links the hydroelectric projects, most substations, all local offices and the headquarters building. The fiber optic connection of Grant PUD's facilities created a "backbone" throughout the county, which has enough excess capacity to provide broadband access to the residents of the county while meeting the needs of Grant PUD.

After four years of deploying fiber optics to homes, businesses, schools and farms in Grant County, the Commission, our ratepayer-owners and service providers spent much of 2004 discussing the future of this program, called the Zipp Network. Grant PUD Commissioners and Management formed a fiber business plan advisory group for the Zipp Network in 2003 and 2004. This team of business people, farmers, educators and retail service providers worked diligently to review the system's financial needs and results and ultimately provided the Commission with their recommendation to "stand pat" in constructing the Zipp Network for at least one year.

The Zipp Network is discussed and debated publicly - that is one of the advantages of public power. In 2004, Grant PUD acted upon the advice of the business plan advisory group and significantly slowed construction of the Zipp Network, allowing time to take another look at the program and re-evaluate the build-out on an annual basis, if financially appropriate.

In 2005, Grant PUD will only expand service to homes and businesses located within "fiber ready" areas of the county.

Availability Map

Disclaimer:

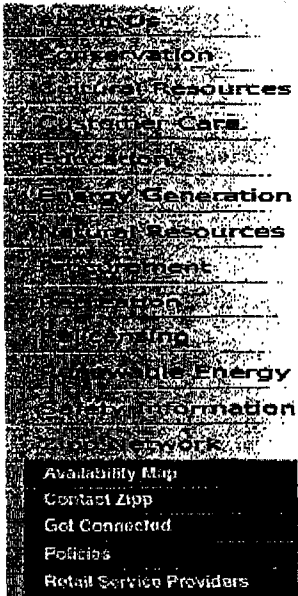
This map is intended for general reference only. **Service within a highlighted area is not guaranteed.** Boundaries shown are approximations. Contact your service provider to determine availability. A complete list of providers can be found by clicking [<here>](#).



Download your free Autodesk DWF viewer [here](#)



Get Connected



➤ Check Fiber Availability

Contact a **Retail Service Provider** to determine if fiber is available in your neighborhood.

➤ Select a Service Provider

Choose a **Retail Service Provider** that meets your needs for one or all of the available services, which include high-speed Internet, television & telephone.

➤ Sign up for service by contacting your Service Provider

Once you have chosen your **Retail Service Provider**, you need to contact them to sign up for service. Your service provider will be able to keep you updated on the status of your fiber installation, which typically takes between 5 & 10 business days. Finally, your provider will follow up with you to ensure all your services are running smoothly.

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[Zipp Network](#)

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Public Utility District No. 2 of Grant County
30 C Street SW, P.O. Box 878, Ephrata WA 98823
(509) 754-0500 - Toll Free in WA State 1-800-422-3199

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Grant County PUD_WEBDE

heard that the people of Grant County want fiber optic service. The survey states that 60 percent of customers in areas where Zipp is not available are very or somewhat likely to sign up for service if it were built in their neighborhood. The survey also concluded that 61 percent want to see continued expansion of the fiber network.
[more](#)

[Zipp Home](#) | [Get Connected](#) | [Retail Service Providers](#) | [Zipp News](#) | [Community Benefits](#)
| [FAQs](#) | [Policies](#) | [Technical Information](#) | [Contact Zipp](#)

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- Fingertip Facts
- News Releases
- Information
- Resources
- Customer Care
- Education
- Procurement
- Stewardship
- Conservation
- Renewable Energy
- Safety Information
- Utility Resources
- Zip Network

Grant County PUD is a consumer-owned utility. It was created in 1938 by a popular vote of the people of the county who had been struggling for 20 years to receive electricity. Grant County is a rural, predominantly agricultural region. The ability to maintain local control of power resources has allowed the county to grow and prosper. Low cost power provided by the Grant County PUD allows the county to be a leading player in the agricultural sector of Washington State and a driving force in regional and state economies.



PUD Manager
Tim Culbertson

A 5-member Board of Commissioners governs the utility. The PUD owns and operates 1 two-dam Priest Rapids Project on the Columbia River in central Washington. Together, Priest Rapids and Wanapum make up one of the nation's largest hydropower developments, with the capacity to produce 2,000 megawatts of electricity – enough to supply a city the size of Seattle.

Grant County PUD shares this affordable electric power with 12 Northwest utilities that serve millions of customers, creating economic benefits throughout the Northwest.

Through enlightened management practices, good stewardship and sensitivity to the multiple needs of others that share the region's resources, the Grant County PUD serves the present as well as future generations.

Learn more about the Grant County PUD Hydro System (video)



Priest Rapids Dam



Wanapum Dam



Potholes PEC



Quincy Chute

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[Procurement](#) | [Recreation](#) | [Relicensing](#) | [Safety Information](#) | [Stewardship](#) | [Zip Network](#)

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Internet Service Providers

 (509) 766-0434 (509) 633-0493 (509) 764-8025 (509) 884-7791 (509) 754-4442 (509) 888-0350 (509) 932-5088	 (877) 518-1005 (509) 927-3397 (509) 754-4010 (509) 764-4636 (509) 771-0070 (509) 765-7700 (509) 765-7773	 (509) 750-0672 1-800-572-5678 (509) 766-1345 (509) 766-9027 (509) 764-0309 (509) 764-5007
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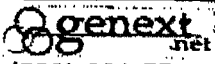
Television Service Providers

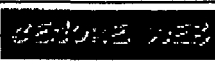
(509) 764-8025

Telephone Service Providers


 (509) 766-9027	 (509) 764-0309
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Security Service Providers



 (509) 884-7791


 (509) 765-7700

Wireless Service Providers


 (509) 766-0434



 (509) 750-0672



 (509) 888-0350



 (877) 518-1005


 (509) 633-0493


 (509) 932-5088


 (509) 667-2413


 (509) 771-0070


 (509) 765-7773

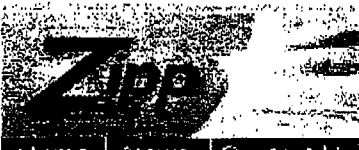
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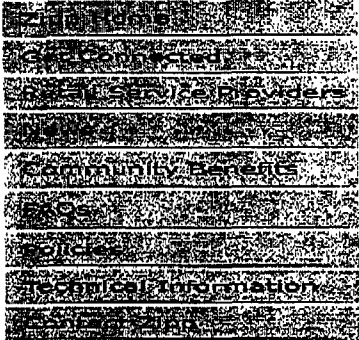
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 Grant County PUD WEBDE



Zipp News



01/24/05 Grant County PUD's Zipp Network wholesale television package to change

EPHRATA, WA - Grant County Public Utility District's Zipp fiber optic network will cease to receive television channels from the Turner Network on Monday, February 7, 2005.

"Grant PUD has received correspondence from Turner Network Sales, Inc. regarding transport of Turner Network television channels across the Zipp Network," said Larry Jones, Grant PUD director of telecommunications. "By law, Grant PUD is not able to agree to several of the stipulations required by Turner Networks in order to retain our ability to transport their television channels to retail service providers." [more](#)

12/29/04 Grant PUD Update on the Zipp Network

EPHRATA, WA - Grant PUD staff continues to develop and review options for the future of the Zipp fiber optic network in preparation for Commissioner examination near the end of January.

After the Commission workshop regarding the fiber program in late November, Commissioners directed staff to develop multiple alternatives for proceeding. These alternatives include options to stand-pat in new construction as done in 2004 and maintain the current customer base, build under a slow construction schedule and build under a fast construction schedule. Each option will be detailed in the business plan document. [more](#)

11/22/04 Zipp Network Survey Results Received - Grant County Wants Fiber EPHRATA, WA - As part of their weekly meeting on Monday, November 22, Grant County PUD Commissioners reviewed the results of the recent Zipp Network market survey and

09/16/04 Grant PUD Commissioners withdraw Rural Utility Service Loan, Alternate Financing Sought for Zipp Network

08/11/04 Zipp Network - Intranet, Internet, Service Provider Page Update Result of Fiber Business Plan Group

07/06/04 Grant PUD Commissioners Approve New Fiber Rate Schedule

6/30/04 Community effort to update Zipp Business Plan

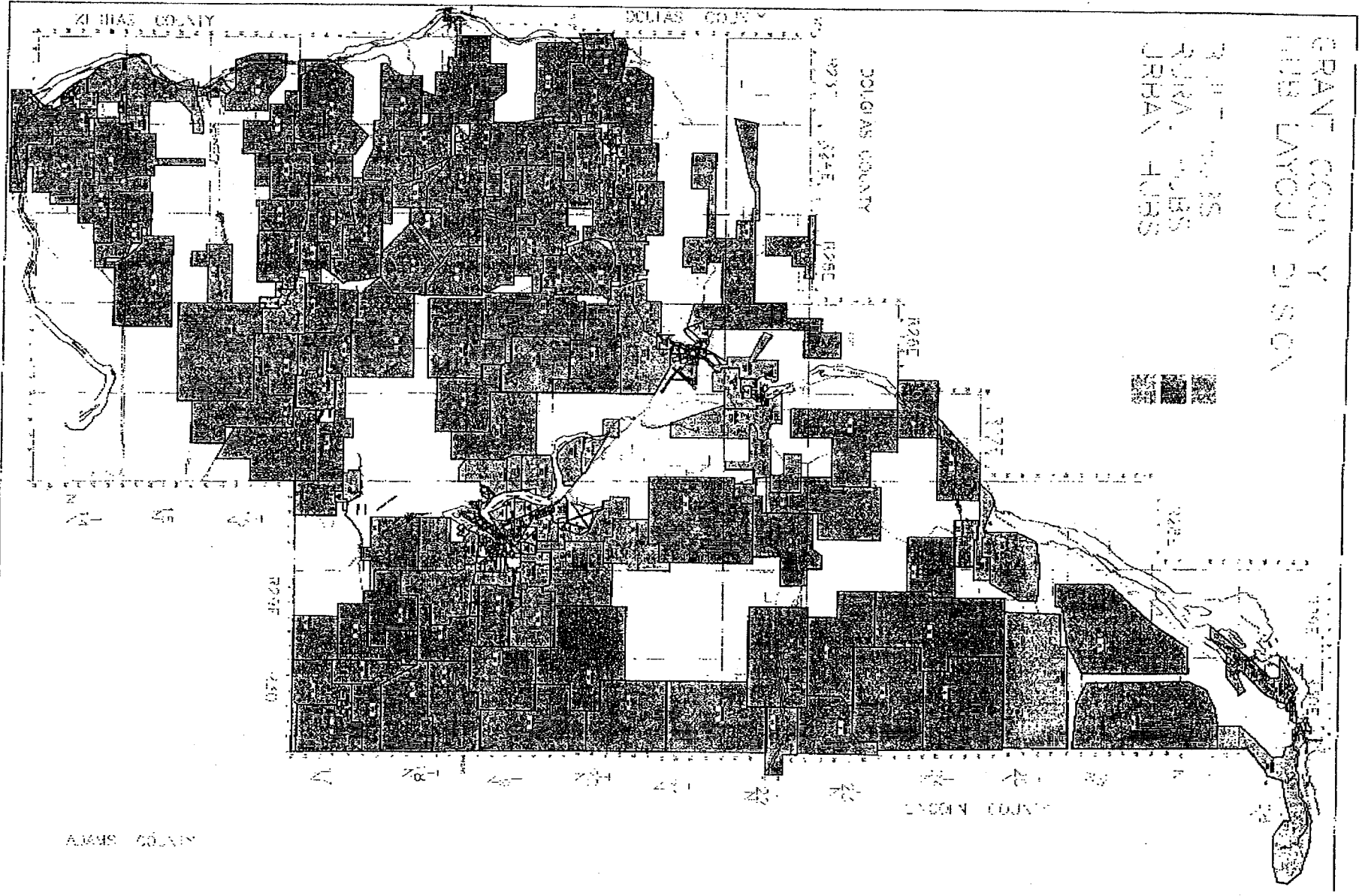
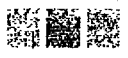
Another Benefit of Fiber: Telemedicine

Reaping Rewards with Cisco Metro Ethernet

Grant County PUD Internet Utopia

GRANT COUNTY
TERRITORY DISSECTION

7 JULY 1855
RUBEN JONES
JERBA JONES



Dkt. No _____
D. Blessing Ex. No. ____ (DCB-19)
Chelan County

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Alltel Florida, Inc.'s Petition)
To Reduce Intrastate Switched Network)
Access Rates In A Revenue Neutral)
Manner Pursuant to Section 364.164,)
Florida Statutes)
_____)

Exhibit DCB-19

Chelan County (Washington State) Public Utility District fiber network website @
https://fiber.chelanpud.org/euedu/about_Us/PUD_Fiber/Presentations/,



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Fiber Advantage

Community +

News

About Us



Home :



There are a thousand reasons to live in North Central Washington, and for most of us, quality of life is at the top of the list. Today you can live outside the urban metropolis and still stay connected with Chelan County PUD's fiber-optics network.

Fiber optics... faster than dial-up, faster than DSL, faster than cable. Contact an authorized service provider today to get connected, and bring the world to your door.

TRIPLE SERVICES OVER FIBER

Chelan County PUD is building a fiber-optic network where you'll have access to the fastest connection anywhere in the world including:



Internet and e-mail access



Telephone service



Digital-quality television and video on demand (available in 2005)

All these services are available through 14 local service providers where you can expect a high level of customer service at competitive prices.

"NEW! Space now available for rent - Chelan County PUD Co-location Center in the Confluence Technology Center"



AVAILABILITY



SERVICE PROVIDERS



CONNECTION REQUEST