An appropriate application of the FCC's Impair Standard, as set forth in the UNE Remand Order,[2] demonstrates that the competitive telecommunications industry remains critically dependent on the availability of affordable high-capacity UNEs from the incumbent LECs in order to maintain and expand its customer base.

The third section of this analysis discusses the Crandall Declaration and shows why this declaration contributes little in terms of substantive evidence on the issue of whether the ILECs should be relieved from their obligation to offer high capacity loops and transport facilities. The Crandall Declaration is a highly theoretical exercise based on a number of incorrect assumptions. The anecdotal evidence presented in the Crandall declaration, in the form of press releases and newspaper articles, do not rise to the level of hard evidence required for the FCC's Impair Test.

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[2] See, *UNE Remand Order*, Section 51.317(b). Particular attention will be paid to the issue of ubiquity, as specified in Section 51.317(b)(2)(d).

SECTION 1:
NETWORK ANALYSIS

The Three RBOC Petition bases its conclusions on a select set of data that purport to show the availability of alternative sources for high-capacity facilities. This analysis will demonstrate that the Three RBOC Petition's data are too aggregated to adequately address the critical question of ubiquity, which is at the heart of the FCC Impair Standard set forth in the UNE Remand Order.[3] Contrary to the assertions in the Three RBOC Petition, the CLEC industry remains critically dependent on the availability of affordable high-capacity UNEs from the incumbent LECs in order to maintain and expand its customer base.

THE THREE RBOC PETITION'S DATA ARE TOO AGGREGATED TO ADDRESS UBIQUITY

The Three RBOC Petition, and Attachment B ("Kellogg-Huber Report"), report a select set of data in order to demonstrate that CLECs have alternative sources of high-capacity facilities. The data presented, however, fail to adequately address the issue of ubiquity. The Three RBOC Petition also includes a large number of cites from newspapers, magazines and annual reports. This information, however, is often of a speculative nature in that it speaks to the networks that competitors may build, or the potential reach of networks after they have been built. While this type of information is not irrelevant, it is not useful in the rigorous analysis necessary to establish a basis for freeing the ILECs from their unbundling obligations under the Telecommunications Act of 1996.

In essence, therefore, the data on which the conclusions in the Three RBOC Petition are based can be summarized as follows:

- Number of commercial buildings served by CLECs
- Number of Fiber Route Miles owned and operated by CLECs
- Number of CLECs serving MSAs

[3] 47 CFR 51.317(b)(2)(D).

What follows is an analysis of these issues and a demonstration that the Three RBOC Petition has failed to address the critical question of ubiquity, as required by the FCC's rules promulgated in the FCC's UNE Remand Order.[4]

1. Commercial Buildings Served:

The Three RBOC Petition states that "CLEC fiber now reaches at least 175,000 commercial buildings (approximately *one out of every four* commercial buildings in the country.)"[5] This data, and conclusion, are based in large part on the CLEC Report 2001, a *New Paradigm* report, cited in the Kellogg-Huber Report on page 11. Further analysis shows that the majority of commercial buildings are served by a small number of CLECs in a very limited area and that some of those alleged CLECs are in reality cable companies that offer telephone service in only a limited number of their markets.

According to the CLEC Report the distribution of buildings (residential and commercial) served by CLECs is as follows:

TABLE 1.1

RCN Corp	830,989	72%
Knology Holdings, Inc	142,008	12%
XO Communications	45,002	4%
Top 3	**1,017,999**	**89%**
Other CLECs	*128,883*	*11%*
Total	**1,146,882**	**100%**

Thus, 72% of the buildings served by CLECs are served by RCN Corporation. RCN Corporation, however, is predominantly a cable company. As its website (www.rcn.com) indicates, local telephone service is available in only a limited number of its markets: Boston, Chicago, Los Angeles, New York, Philadelphia, San Francisco and Washington D.C.

[4] 47 CFR 51.317(b)(2)(D).

The top three companies in this table serve up to 89% of the buildings, with all the remaining CLECs serving only 11% of the buildings.

The Kellogg-Huber Report makes some calculations based on the CLEC Report to determine the percentage of commercial buildings served by CLECs. First, it assumes that CLECs (other than RCN and Knology) serve only commercial buildings and that none of the buildings served by companies such as WCOM and AT&T are residential.[6] There is no demonstration in the Kellogg-Huber Report, however, that this is in fact true, and it unrealistically implies that WCOM and AT&T serve no residential customers at all. Further limiting the number of commercial buildings in the study, the Kellogg-Huber Report excludes: "stores, offices, schools, churches, gymnasiums, libraries, museums, hospitals, clinics, warehouses and jails." The Kellogg-Huber Report mistakenly claims "CLECs quite clearly do not target most buildings of this type so it is reasonable to exclude them in measuring CLECs' success."[7] It is inappropriate to exclude such buildings, however, since such buildings do represent viable commercial customers. The effect of the Kellogg-Huber calculations here is to limit the scope of the market, so as to increase the potential market share of the competitive industry.

Further, the Kellogg-Huber Report and the Three RBOC Petition fail to show how CLECs serve these buildings. Quite clearly, many of these buildings are served by means of facilities that are leased from the ILECs. That is, the facilities that may be used to serve those commercial buildings could be – and likely are -- the very high-capacity facilities that the Three RBOC Petition now seeks to place out of reach. The data presented in the Three RBOC Petition totally fail to address this issue.

Lastly, companies, such as Mpower, emphasize small to medium-sized commercial customers. The Three RBOC Petition and Kellogg-Huber Report, however, focus mostly on the largest customers, rather than the small to medium-sized customers some CLECs seek to serve, as if

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5 Three RBOC Petition, page 4.

6 See Kellogg-Huber Report, page 11. This page calculates the number of commercial buildings served by CLECs.

7 Id, page 11, footnote 50.

competition for large customers meant that there is automatically competition – and alternative high-capacity facilities – for more geographically dispersed, smaller customers. This, of course, is not true.

In short, the Three RBOC Petition misstates the percentage of commercial buildings served by CLECs and ignores that most of the buildings served by CLECs are served in fairly concentrated markets.

2. Fiber Route Miles:

The Three RBOC Petition states that "by year-end 2000 [the CLECs] had 218,000" route miles of fiber facilities.[8] This figure, although based on data from the CLEC Report, is misleading regarding the availability to CLECs of alternative sources of high-capacity facilities for a number of reasons:

- The figure is highly aggregated and ignores the various types of fiber networks – local, interoffice, and intercity.
- The figure ignores the high degree of duplication of CLEC facilities, reducing the effective geographic scope of the networks.
- Data on the ILECs' local loop, interoffice facilities, and central office facilities show how vast the ILECs' networks are in comparison to CLEC networks.

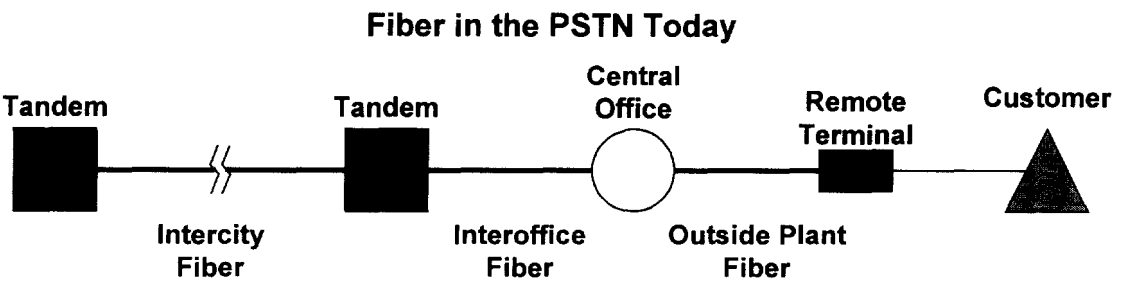
2.(a) The Three RBOC Petition Ignores Differences Between Local, Interoffice and Intercity Networks

The figure of 218,000 route miles of fiber includes three types of fiber networks: local, interoffice, and intercity. As a result, the figure says little about the how these fiber miles can be used to provide an alternative to the ILECs' high-capacity facilities. The diagrams below show the difference between the three types of fiber networks.

[8] Three RBOC Petition, page 3.

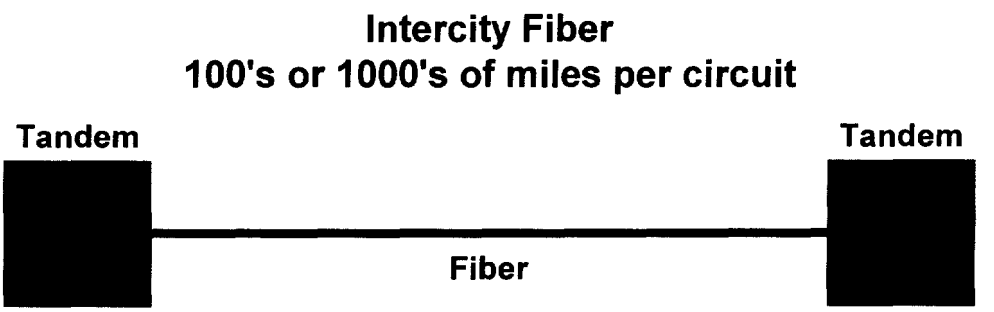
The diagram below shows in simple terms the different segments of the public switched network where fiber may be deployed.

DIAGRAM 1.1



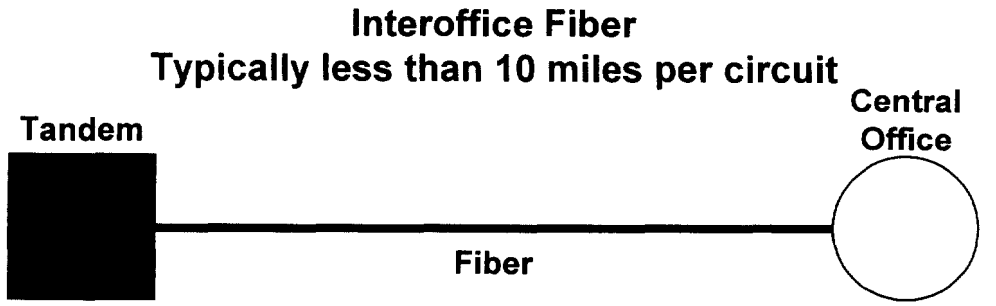
The intercity portion of this network, operated by IXCs and wholesale providers, typically consists of fiber facilities that may stretch over hundreds if not thousands of miles. Because the distances are generally great, aggregating intercity fiber network route miles with route miles on interoffice and local fiber networks causes distortion if the issue to be analyzed concerns the ubiquity and reach of high-capacity interoffice and local facilities.

DIAGRAM 1.2



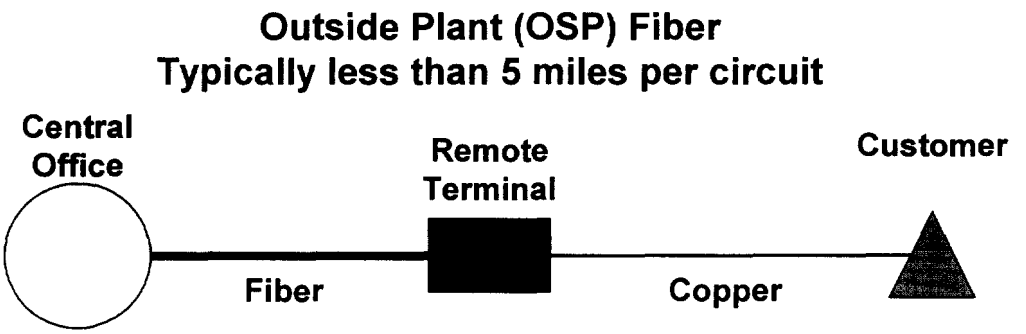
Interoffice networks have much shorter distances. As the diagram below shows, those distances are typically 10 miles or less.

DIAGRAM 1.3



The shortest distances are in the third type of fiber network: outside local plant that connects the central office with the end-user. It is also important to note that the facilities here will be of lower levels of capacity -- mostly OC3 but increasingly OC12 -- than those found in the intercity and interoffice fiber networks.

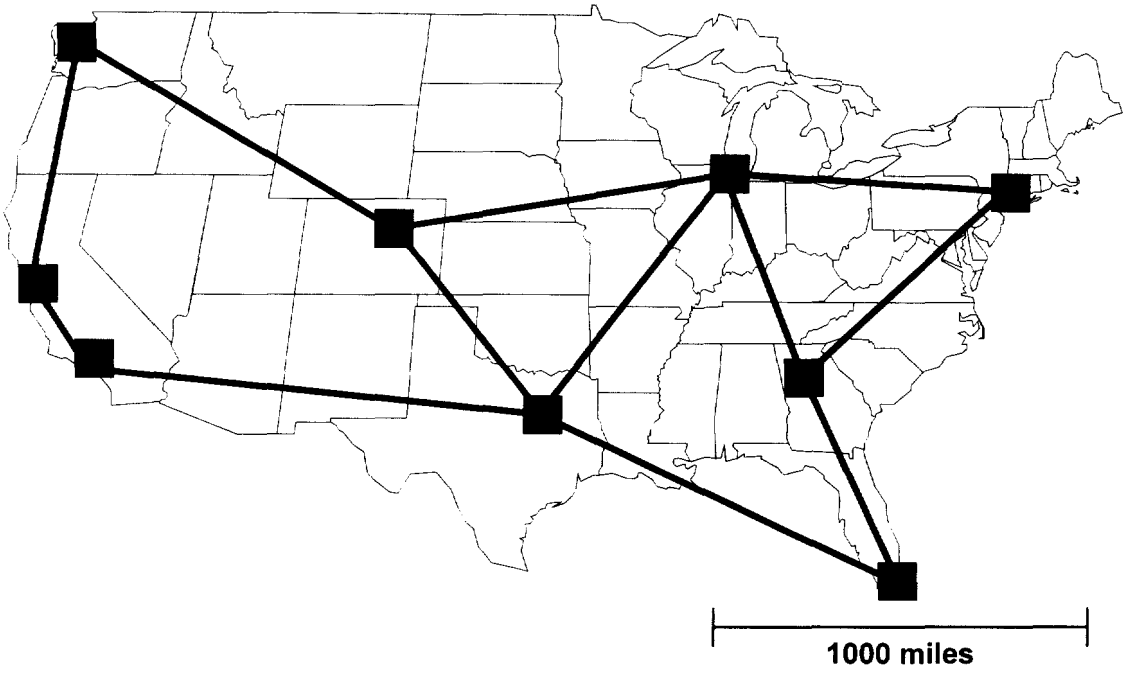
DIAGRAM 1.4



The differences between these three types of fiber networks are best illustrated by means of diagrams that show the environment and geographic scope in which they are deployed. The diagram below shows the vast distances involved in the intercity networks. These networks also involve very high capacity cables.

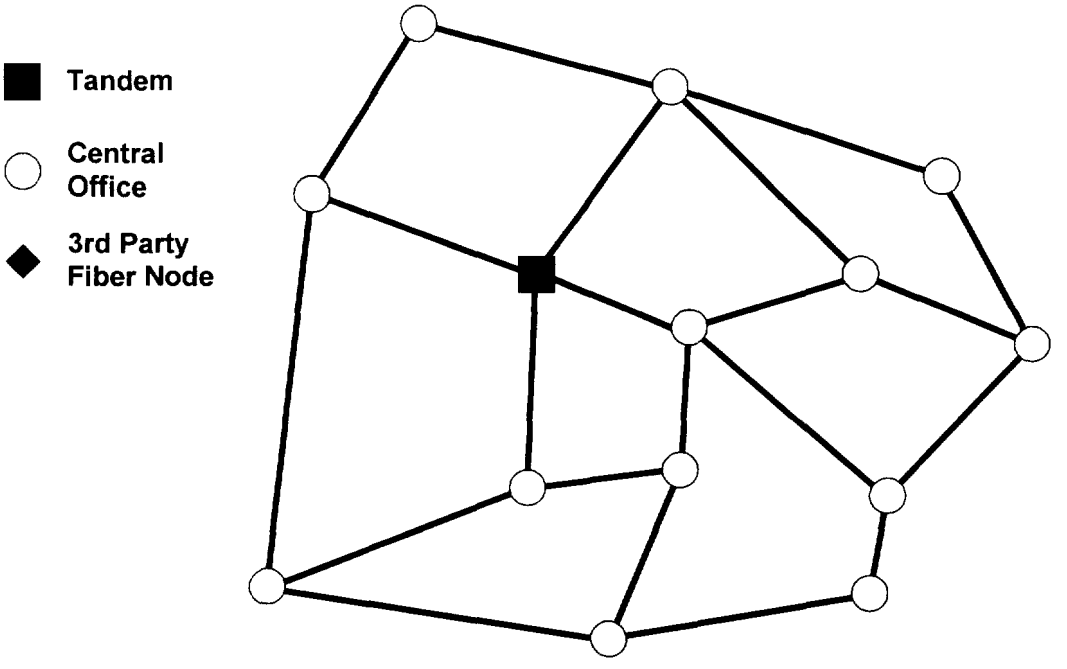
DIAGRAM 1.5

Sample Intercity Fiber Network

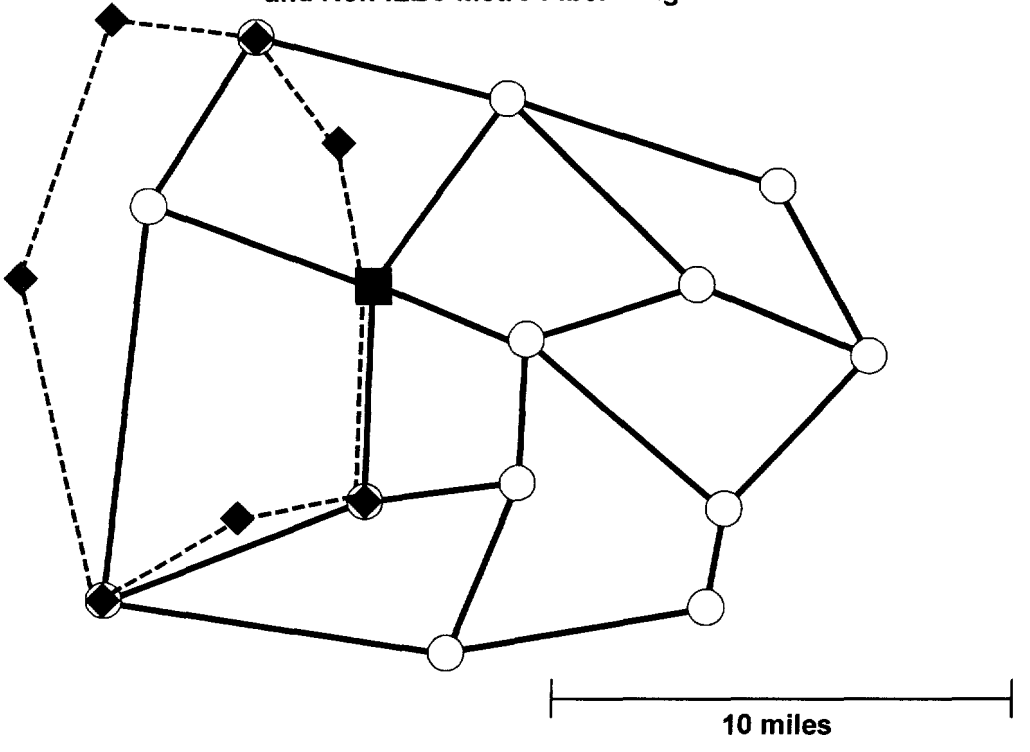


The two diagrams below show an interoffice network and the manner in which CLECs may build their own networks to connect to a subset of the ILECs' central offices. The key here is to note that CLECs never completely duplicate the interoffice network of the ILEC, but always select a specific number of central offices to establish a footprint in a certain area. This is, of course, precisely what the Telecommunications Act of 1996 sought to promote: a selective – but not full -- duplication of ILEC facilities. It is also clear that this type of build-out provides only for a limited footprint and is predicated on a continued use of the ILEC facilities: the same facilities that the Three RBOC petition now seeks to take off the table.

Sample Interoffice Fiber Network



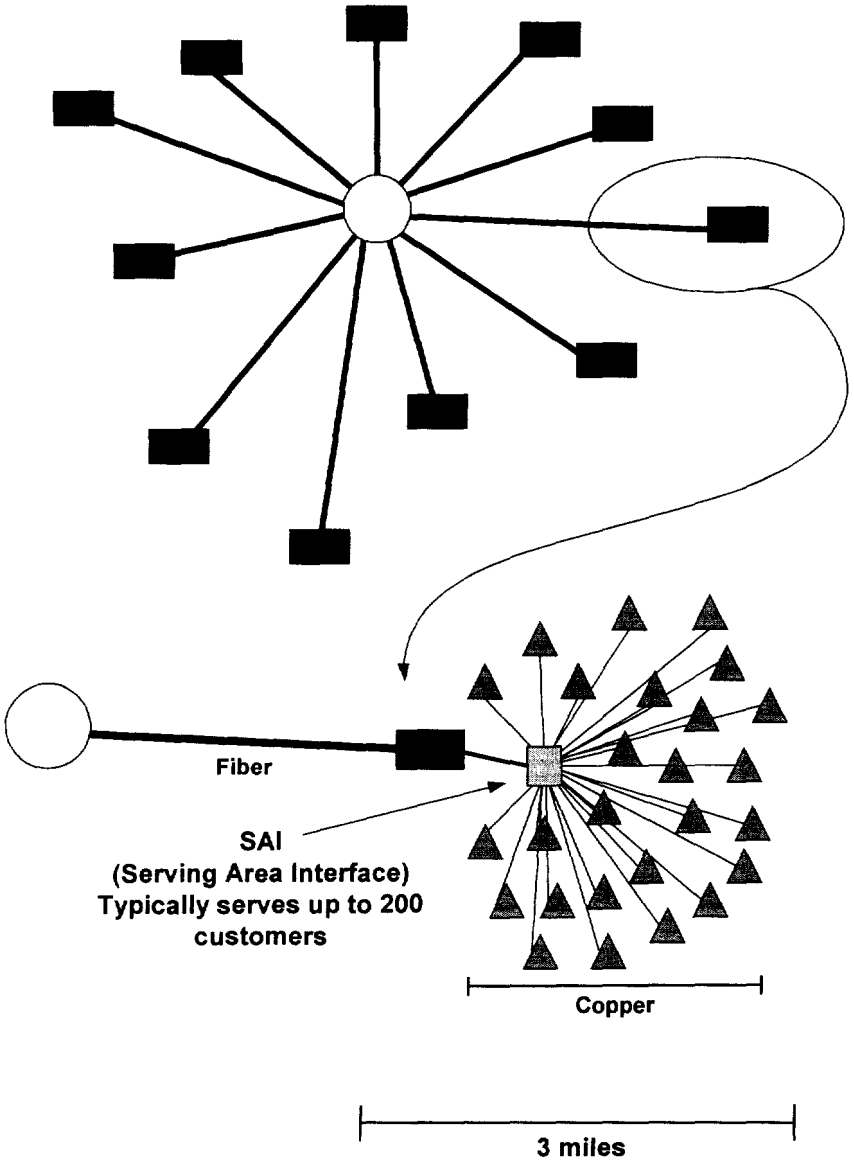
Sample ILEC Interoffice Fiber Network and Non-ILEC Metro Fiber Ring



The next diagram shows how fiber is deployed in outside local plant facilities. This is an example of how ILECs typically connect to their end-users. The system consists of a centralized switching node that feeds remote terminals by means of a local fiber network, which involves relatively short distances and a potentially huge number of locations. This type of local fiber network is possibly the hardest for CLECs to replicate.

DIAGRAM 1.7

Sample Outside Plant Network Featuring Fiber-fed Remote Terminals



As should be clear from these diagrams, the differences between the three types of fiber networks are significant. The intercity fiber network involves large distances on large fiber cables, such as a 1000-mile route over a 192-count fiber cable. The Kellogg-Huber Report treats a 1000-mile route of an intercity network in the same manner as a 1-mile route over a 12-count fiber cable of a local fiber network and would calculate 1001 route miles of fiber. The problem is obvious: a fiber route of 1000 miles on an intercity network may connect only two locations while 1000 fiber routes of 1 mile in a local network may connect 1000 locations. To add the two together is a fairly meaningless exercise for the purposes at hand. Yet, this is what the Kellogg-Huber Report does and what the Three RBOC Petition bases its conclusions on. Thus, the alleged 218,000 route miles of fiber cited in Three RBOC Petition is a largely meaningless statistic in terms of analyzing the issue of ubiquity.

2.(b) The Three RBOC Petition Ignores The Duplication In CLEC Facilities

The diagrams presented above have addressed the problem of aggregating intercity, interoffice, and local network fiber route miles. Another significant problem with the data presented in the Three RBOC Report is that it does not account for the fact that CLECs tend to build their networks to serve larger customers and that these customers are found in a relatively limited set of buildings. As a result, many of the local fiber networks owned and operated by the CLECs may follow the same routes and conduits and serve the same geographic locations. While the presence of multiple networks surely increases the degree of competition for large customers, it does not significantly increase the collective footprint of such networks. That is, the presence of multiple CLECs says little about the *collective reach* of their networks, given that they tend to serve the same geographic locations. Again, the 218,000 route miles of fiber cited in the Three RBOC Petition ignores the fact that many of those route miles follow the same conduits. As such, the statistic inappropriately suggests a far greater reach of fiber networks than has actually been achieved by the competitive industry.

2.(c) The Three RBOC Petition Ignores How Vast The ILECs' Networks Are

To appreciate how vast the ILECs' network is for purposes of comparison to the 218,000 route miles of CLEC fiber (with unspecified locations), the FCC should consider the following statistics on the number of central offices, interoffice facilities and loop facilities.

TABLE 1.2

Host Switches	6,870
Remote Switches	11,990
Total Switches	**18,860**

All these 18,860 switches need to be connected with each other by means of high-capacity interoffice facilities. As the table below shows, this requires almost *3 billion* circuit miles of interoffice facilities. Although these interoffice facilities are expressed on a DS0 basis, when considered in conjunction with the large number of switches that need to be connected, the 3 billion circuit miles of interoffice facilities shows the vast network needed to achieve ubiquitous coverage.

TABLE 1.3

Analog (4kHZ OR Equiv)	9,390,617
Digital (64Kbps or Equiv)	2,878,236,301
Total	**2,887,626,919**

As the table below shows, the Tier 1 ILECs' customer base, measured in access lines, as of December 1999, was 174,712,492, of which 59,248,452 are business customer lines.

TABLE 1.4

Residential	115,464,040
Business	59,248,452
Total	**174,712,492**

9 Statistics of Communications Common Carriers, December 31, 1999. Table 2.3.
10 Id., Table 2.2.
11 Id., Table 2.4.

To serve these customers, the Tier 1 ILECs deploy over 1 billion circuit miles of local facilities, of which 481,666,123 are digital and potentially provided over high-capacity facilities.

TABLE 1.5

Analog (4kHZ OR Equiv)	592,477,876
Digital (64Kbps or Equiv)	481,666,123
Total	**1,074,143,999**

In view of these statistics, the Joint Reports' assertion that the CLECs collectively own and operate 218,000 fiber route miles is largely meaningless and the claim that CLECs can self provide high capacity loop and transport facilities is incorrect.

3. Number of MSAs Served

In order to demonstrate the "ubiquitous" availability of alternative sources of high-capacity facilities, the Three RBOC Petition and Kellogg-Huber Report present the following information on the number of CLEC networks that serve various metropolitan areas.

[12] Id, Table 2.2.

TABLE 1.6

MSAs	# CLEC Networks December, 1999	# CLEC Networks December, 2000	Source
Top 150 MSAs *(70% Population)*	486	635	*Kellogg-Huber Report*
Top 10	9	14	*Kellogg-Huber Report*
11 – 25	4.5	6.7	*Kellogg-Huber Report*
26 – 50	4.5	5.6	*Kellogg-Huber Report*
51 - 100	2.6	3.1	*Kellogg-Huber Report*
100 - 150	1.8	2.0	*Kellogg-Huber Report*

This table fails to meet the ubiquity standard for a number of reasons. First, it is important to note that since seven CLECs have filed for bankruptcy within the last 6 months and others appear about to follow (see discussion in Section 2 of this paper), the data presented in the Three RBOC Petition may no longer be accurate and may overstate the number of CLEC networks.

Further, the data again fail to address the question of ubiquity. For example, Appendix B of the Kellogg-Huber Report notes that New York City is served by 18 CLEC fiber networks. This number, however, tells the Commission very little about the reach of those networks. The main problem is that the data disguise the fact that many of these networks will follow the same conduits and serve the same large office buildings. The fact that there is competition for large customers, however, in no way demonstrates that there is competition in a large geographic area. Again, the data fail to make this distinction, and, as such, fail to address the issue of ubiquity, as required by Section 51.317(b)(2)(D).

INCREASED IMPORTANCE OF HIGH-CAPACITY SERVICES

As the Commission is well aware, there is a major drive under way by the RBOCs to build broad-band networks to reach most of their customers. SBC's Project Pronto has been examined extensively by the FCC in CC Docket 98 – 141. Project Pronto involves the construction of thousands of local fiber networks throughout SBC's thirteen state serving area to bring broad-band services to 77 million of SBC's end-users. SBC plans to upgrade its local loop and backbone infrastructure, lay some 12,000 miles of fiber transmission facilities, and create 25,000

"neighborhood gateways." Verizon's PARTS project is similarly ambitious and relies critically on the construction of broad-band capabilities. Qwest has traditionally been at the forefront of fiber deployment.

While these developments are to be applauded and will generally bring benefits to ratepayers and society at large, it is critically important that CLECs not be cut-off from these developments. It is precisely the access to and interconnection of all these networks that will create the vibrant market place that the Telecommunications Act of 1996 seeks to promote.

The Commission should consider that if local telecommunications markets were truly competitive, then ILECs would automatically make these facilities available to other carriers in order to improve utilization rates. However, it is precisely because markets are not yet competitive that the opposite incentive exists. That is, owning the lion's share of local markets, BellSouth, SBC, and Verizon have an incentive not to make these facilities available in order to handicap their would-be competitors. The Three RBOC Petition must be seen as a regulatory effort to limit access by others to existing and planned high-capacity facilities.

SECTION 2:
MARKET CAPITALIZATION ANALYSIS

The Three RBOC Petition states that CLECs are in a position to self-provide the high-capacity facilities necessary to reach the end-user. Given the general state of the CLEC industry and the tremendous uncertainty over the long-term viability of numerous CLECs, the claim that CLECs have access to sufficient resources to replicate the high-capacity network to self provide is simply wrong.

This analysis calculates the change in market value of the CLEC industry over the period of December 31, 1999 through April 23, 2001, based on the value of the common shares held by investors. For the IXC and CLEC industries the total decline in market capitalization over this period is a staggering *$405 billion, or 64%.*[13] The data for just CLECs, excluding IXCs, is *$122 billion, or 69%.* By contrast, the RBOCs experienced declines in market capitalization over the same period of $79 billion, *or only 16%,* a percentage roughly comparable to the decline in the S&P 500 Index.

DESCRIPTION OF ANALYSIS UNDERTAKEN

QSI Consulting calculated the market capitalization of CLECs and IXCs to assess the change in value that investors have placed on the key players in the domestic telecommunications market. This change in value was determined from December 31, 1999 to April 23, 2001. Market capitalization as of December 31, 1999 was used as the baseline value for two primary reasons: (1) this point in time was still within the bull market period before the first significant market correction took place in the first quarter of 2000; and (2) the components necessary to calculate market capitalization, common shares outstanding and market price, were both readily available from publicly available sources such as websites that provide current and historical price quotes and Securities Exchange Commission ("SEC") filings.

[13] Tables 2.2 through 2.4 list the CLECs, IXCs, and RBOCs for which the change in market capitalization has been calculated.

The companies included in the analysis were classified into three categories:

(1) ***CLECs & Wholesale Suppliers***
This category includes CLECs and wholesale suppliers. Not included are the CLEC divisions of the major IXCs – they are included in the third category described below. (The companies included in this category are identified in Table 1 below.)

(2) ***RBOCs***
This category includes the four RBOCs: Qwest, SBC, BellSouth, Verizon.

(3) ***Major IXCs***
This category includes the major IXCs: Williams Communications, Level 3 Communications, Global Crossing, Sprint, WorldCom, AT&T.

These categories mirror the groups of companies that are compared and contrasted within the Kellogg-Huber Report of April 5, 2001, *Competition for Special Access Service, High Capacity Loops, and Interoffice Transport.* Major IXCs such as AT&T, WorldCom and Sprint that also operate as CLECs were separated from the CLECs & Wholesale Suppliers category because the nature and scope of their operations are quite different from the other CLECs. Additionally, the Kellogg-Huber Report identifies these IXCs as the largest purchasers of special access from ILECs as well as major self-suppliers.

The Debt to Equity ratio was also determined for each company over the same time period to measure changes in relative financial strength based on the amount of debt used to fund operations versus stockholder's equity. Large ratios or ratios that increase over time indicate declining financial strength as debt becomes a larger component of the firm's capital structure. This can be attributed to a greater use of debt as equity markets dry up, declining stockholder's equity due to accumulated operating deficits, or a combination of both.

RESULTS OF THE ANALYSIS

The analysis demonstrates that the class of competitive carriers, cited by the RBOCs in the Kellogg-Huber Report as being a significant source of alternative facilities to the ILEC networks, has suffered serious financial setbacks over the last year. The decline in market capitalization for the three categories, CLECs & Wholesale providers, RBOCs and Major IXCs, is summarized as follows:

TABLE 2.1

CATEGORY	DECLINE IN MARKET CAPITALIZATION	% DECLINE IN MARKET CAPITALIZATION
Category 1: ***CLECs & Wholesale Providers***	($122,332,734,915)	- 69%
Category 2: ***RBOCs***	($78,812,529,670)	- 16%
Category 3: ***Major IXCs***	($283,267,806,743)	- 62%

A more detailed breakdown of the decline in market capitalization for these three categories of carriers is found in tables 1, 2, and 3 below. The summary results are illustrated in the graphs below.

DIAGRAM 2.1

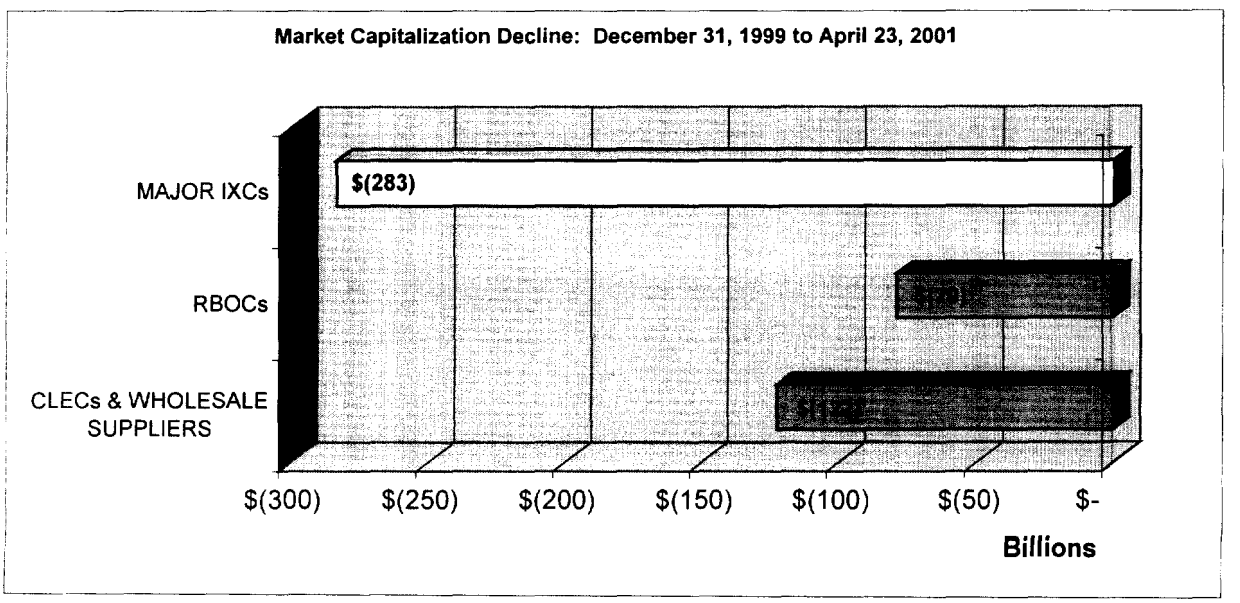
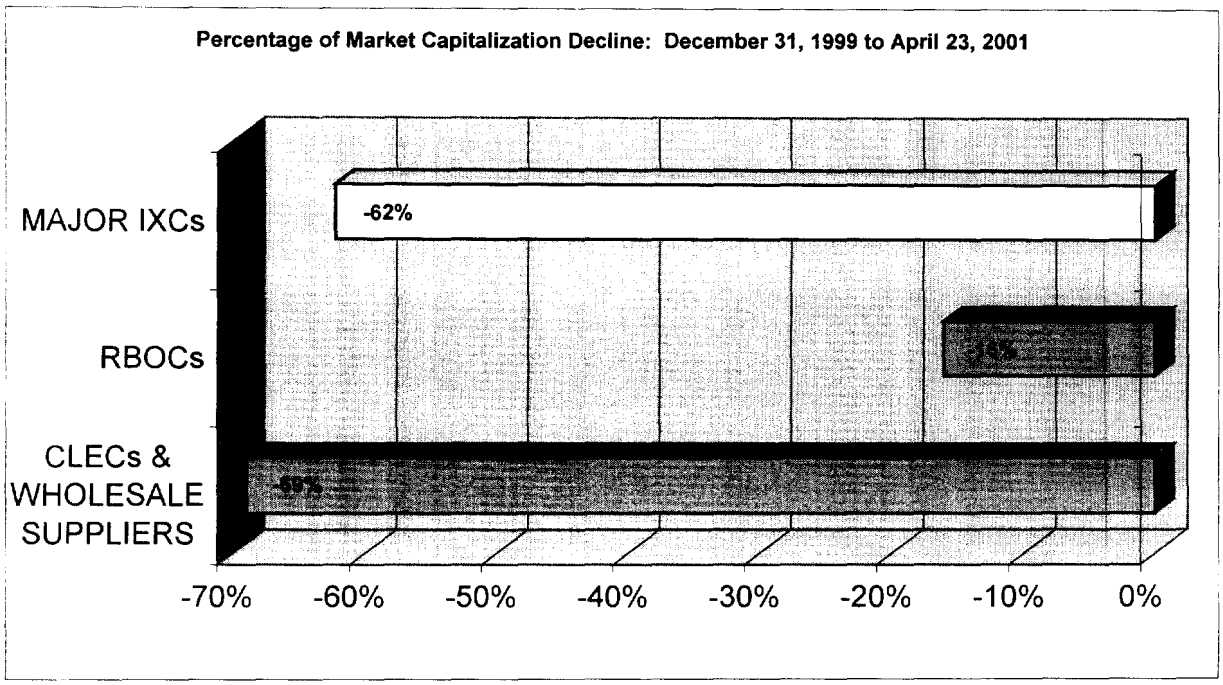


DIAGRAM 2.2



Seven CLECs have filed for bankruptcy protection or liquidation in the last six months[14] with at least one more on the brink within the year:[15] Winstar Communications, Inc. , which has been one of the more prominent fixed wireless providers. The number of remaining CLECs that have reported negative stockholders' equity due to accumulated operating deficits increased to nine as of December 31, 2000 compared to five as of December 31, 1999.

Since the market capitalization decline of the CLECs and IXCs is significantly greater than for the RBOCs, the relative value of each group to the total of the three groups combined has also changed dramatically. The following pie charts illustrate the increasing relative financial strength of the RBOCs over the last 15 months:

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14 Advanced Radio Telecom Corp., Convergent Communications, e.spire Communications, Inc., ICG Communications, Inc., NorthPoint Communications Group, Inc., Winstar Communications, Inc. and Teligent. See attached spreadsheet for filing dates.

15 Rhythms (Rhythms CEO Stepping Down, Rocky Mountain News, April 4, 2001) is expected to file for bankruptcy within the year.

DIAGRAM 2.3

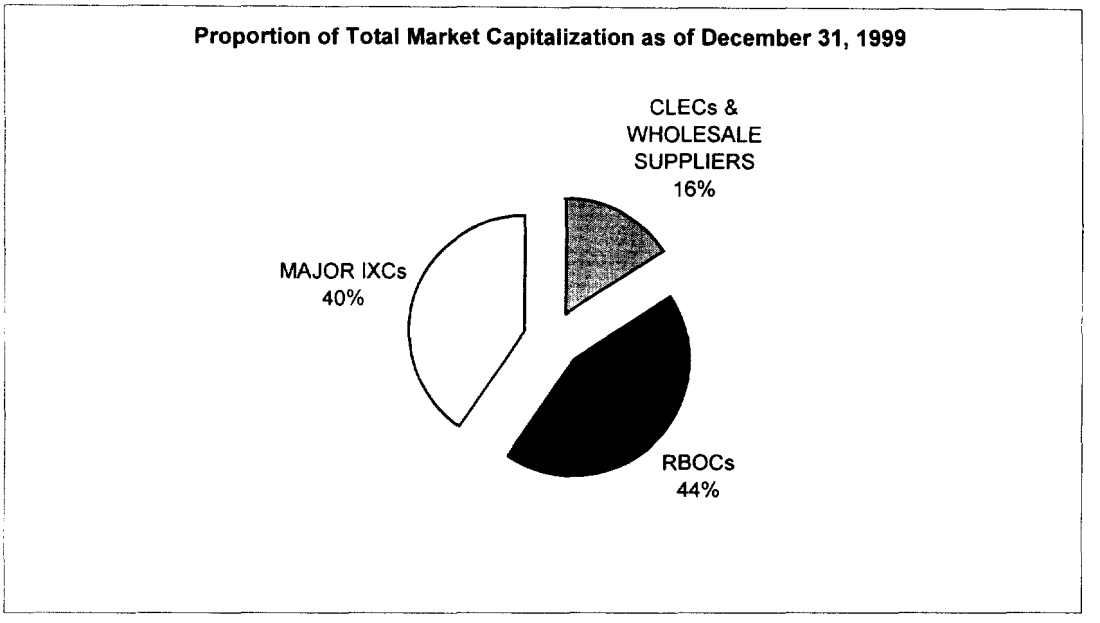
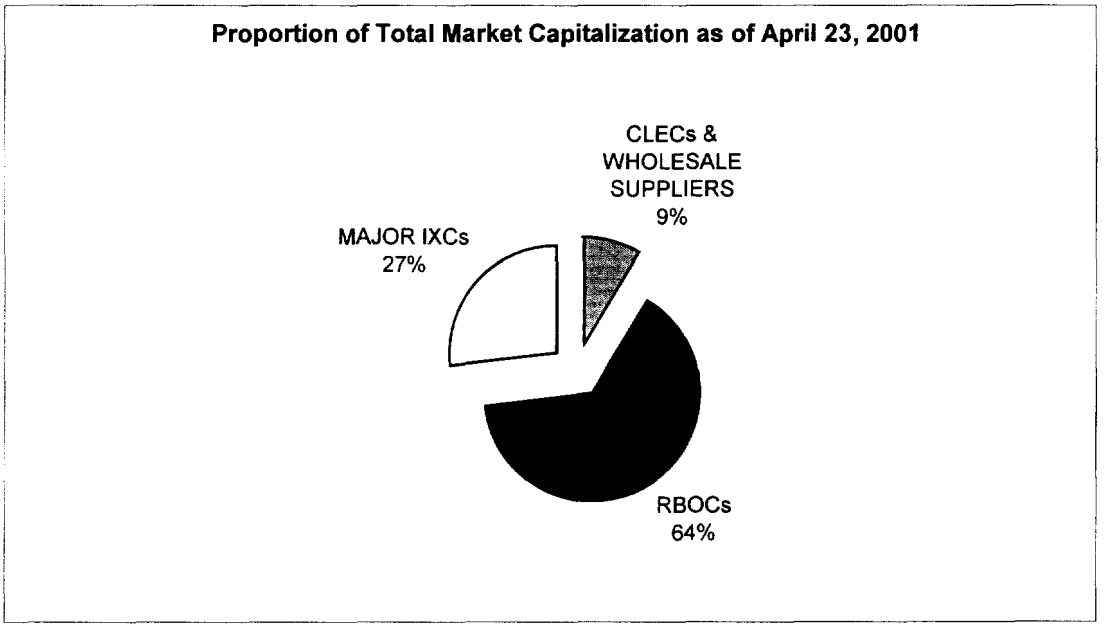


DIAGRAM 2.4



It is clear from the above pie chart that the financial strength of the remaining four RBOCs is increasingly dominating the telecommunications industry.

TABLE 2.2
Decline in market capitalization for CLECs and Wholesale providers (Category 1)

	COMPANY	CHANGE IN MARKET CAP	% CHANGE
1	Advanced Radio Telecom Corp.	$ (671,232,000)	-100.0%
2	Convergent	$ (454,691,750)	-100.0%
3	E.spire	$ (297,308,213)	-100.0%
4	ICG	$ (895,518,750)	-100.0%
5	NorthPoint	$ (590,232,000)	-100.0%
6	WinStar	$ (6,293,910,000)	-100.0%
7	CoreComm	$ (2,272,163,940)	-99.3%
8	Teligent	$ (3,225,250,990)	-99.2%
9	Rhythms	$ (2,358,818,570)	-98.5%
10	Network Access	$ (1,455,879,200)	-97.4%
11	Covad	$ (5,092,290,540)	-96.2%
12	XO	$ (21,035,186,250)	-94.5%
13	Mpower	$ (1,655,831,750)	-93.6%
14	RCN Corp.	$ (3,438,536,190)	-91.9%
15	DSL.net, Inc.	$ (766,029,353)	-90.9%
16	Adelphia	$ (3,018,455,740)	-90.6%
17	Net2000	$ (810,360,150)	-90.6%
18	Z-tel	$ (1,139,292,100)	-89.3%
19	Metromedia Fiber Networks	$ (20,206,149,523)	-88.1%
20	CTC Comm.	$ (995,923,270)	-87.8%
21	Pac-West	$ (822,203,800)	-87.7%
22	Electric Lightwave	$ (816,273,470)	-86.8%
23	NetworkPlus	$ (979,484,070)	-85.1%
24	US LEC	$ (752,198,180)	-84.8%
25	McLeodUSA	$ (23,073,189,055)	-82.9%
26	Allegiance	$ (7,355,564,550)	-81.9%
27	ITC DeltaCom	$ (1,306,396,125)	-79.4%
28	FiberNet	$ (300,686,625)	-76.7%
29	Focal Comm.	$ (1,101,644,765)	-75.2%
30	Choice One	$ (499,530,300)	-63.9%
31	Intermedia	$ (1,249,108,138)	-58.4%
32	Optelecom	$ (4,311,250)	-52.4%
33	Cox	$ (6,794,000,500)	-21.8%
34	Time Warner	$ (606,882,060)	-11.6%
35	Cablevision	$ (893,720,500)	-6.8%
	CLEC & WHOLESALE SUPPLIERS	*$ (122,332,734,915)*	*-68.8%*

TABLE 2.3
Decline in market capitalization for RBOCs (Category 2)

	COMPANY	CHANGE IN MARKET CAP	% CHANGE
36	Qwest	$ (24,171,892,240)	-28.2%
37	SBC	$ (34,504,732,000)	-20.6%
38	BellSouth	$ (11,404,868,430)	-13.0%
39	Verizon	$ (8,731,037,000)	-5.8%
	RBOCS	$ (78,812,529,670)	-16.0%

TABLE 2.4
Decline in market capitalization for Major IXCs (Category 3)

	COMPANY	CHANGE IN MARKET CAP	% CHANGE
1	Williams Communications	$ (11,425,918,600)	-85.2%
2	Level 3 Communications	$ (25,157,193,250)	-82.9%
3	Global Crossing	$ (30,081,852,500)	-75.3%
4	Sprint	$ (40,062,140,460)	-68.1%
5	WorldCom	$ (96,757,337,250)	-64.1%
6	AT&T	$ (79,783,364,683)	-49.1%
	MAJOR IXCs	$ (283,267,806,743)	-62.1%

PRIVATELY HELD CLECS AND WHOLESALE SUPPLIERS

Since all but one of the wholesale local fiber suppliers cited within the Kellogg-Huber Report are privately held,[16] QSI Consulting did not determine the market valuation of these providers. However, it is a given that these privately held firms have to rely upon a combination of debt and private equity provided by founders and venture capital firms to fund their network build-out. As the public equity markets have shied away from supporting initial public offerings of high risk ventures over the past year, many of these privately held telecommunications carriers have had to scramble for additional financing to continue operations. When such financing is available, it usually requires a high interest rate or relinquishing a significant amount of equity and control to venture capitalists. One such example of this struggle is the recent financing obtained by BTI Telecom Corp., which is considered one of the more successful CLECs in the Southeastern United States.

[16] Metromedia Fiber Networks is publicly traded and is included in the QSI market capitalization analysis.

BTI Telecom Corp. was able to secure an additional $110 million of incremental capital in the first quarter of 2001 through a combination of secured debt and preferred equity. To get the funding, BTI had to issue a Senior Secured Note for $50 million and 40,000 additional shares of Series B preferred stock for $40 million to an existing shareholder, the investment firm of Welsh, Carson, Anderson and Stowe VIII, L.P. ("WCAS").[17] The preferred stock not only gives WCAS priority over all other capital stockholders, it also provides for the issuance of 12.6 million warrants to purchase common stock. This preferred equity also carries minimum return-on-investment provisions that ensure that WCAS has protected its investment. Certainly, this illustrates the current collapse in the value of CLECs and other competitive telecommunications companies.

INVESTMENT COMMUNITY'S PERCEPTIONS OF COMPETITIVE TELE-COMMUNICATIONS INDUSTRY

The collapse in market value of the competitive telecommunications industry, including long distance, which is apparent from the financial data, has been duly noted by the financial community and the press. Not a day goes by without some pundit or another commenting on the dismal state of telecommunications competition. As one analyst concludes:

> In telecommunications, we are rolling back the competitive progress made over the last ten years – disabling the enabling industry of economic growth when we need it most.[18]

Other articles go so far as to declare the entire competitive effort to be a failure and note that the RBOCs have slowly but steadily out-maneuvered their would be competitors. A recent article in The New York Times declared that the battle is over:

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[17] BTI Telecom Corp. December 31, 2000 10K, pages 23-24.

[18] Brian Adamik, Yankee Group, *The Death of Competitive Telecom?* CBS MarketWatch, May 3, 2001.

> Of the Baby Bell local phone carriers, once seven in number, three [sic] remain — Qwest Communications, SBC Communications and Verizon Communications — and they are by far the most powerful and important communications companies in the nation. The corporations once known as long-distance carriers, like AT&T, are shells of their former selves. ... The Bells — the race's tortoises — have won.[19]

The potential danger to the nation's economy cannot be overstated. As is well recognized, the telecommunications industry is a critical component in the "high-tech engine" that has propelled our economy forward over a period longer than any other in modern times. That "engine" is now at risk of being usurped – as a natural result of the corporate quest for profit maximization -- by a small group of very powerful companies: the RBOCs. As Wired magazine notes in yet another article on the demise of the competitive telecommunications industry:

> The Bells own 88 percent of the local lines in the US and upgrade on their own terms – conveniently, after most of their competitors have died off.[20]

Whatever may be the merit of these somber prognoses, the fact remains that the competitive telecommunications industry is struggling merely to survive. In the war of attrition, waged by the RBOCs against their competitors, in the market place, in the U.S. Congress, the courts, and before regulators, it does not bode well for the RBOCs' competitors: and, the financial community knows it.

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19 Seth Schiesel, *Sitting Pretty: How Baby Bells May Conquer Their World.* The New York Times, Money&Business, Section 3, page 1. Sunday, April 22, 2001.

20 Frank Rose, Telechasm: *Can we get to the future from here? First we have to get telecom out of the Stone Age.* Wired, May 2001, page 131.

SECTION 3
CRANDALL DECLARATION

The Crandall Declaration introduces a large amount of anecdotal evidence, such as CLEC/IXC press releases and newspaper articles. The Crandall Declaration also performs an analysis based on six sample cities to speculate about the percentage of access customers in large, medium sized, and small cities that are located within 2000 feet of a CLEC fiber line. The Crandall Declaration concludes that "a CLEC would not be impaired in the delivery of special access service without access to an ILEC's unbundled loop-transport combination."[21]

This analysis examines the Crandall Declaration and finds it flawed for the following reasons:

(1) The Crandall Declaration inappropriately draws conclusions about loop-transport combinations (i.e., the enhanced extended link "EEL") based on the "evidence" about large special access customers. The Crandall Declaration – intentionally or not—ignores that the EEL allows for the efficient aggregation of unbundled *DS0 level loops essential for competitive entry into local exchange markets.*

(2) The Crandall Declaration ignores that EELs are an efficient solution because they significantly reduce often prohibitively high collocation costs. Even if alternative high capacity facilities were available, the alternatives would not allow for the same efficient configuration for aggregating unbundled loops as can be achieved with EELs over ILEC facilities.

(3) The conclusions of the Crandall Declaration are flawed because they are based on a number of fundamentally incorrect assumptions.

Lastly, the anecdotal evidence presented in the form of press releases and newspaper articles does not rise to the level of hard and factual evidence necessary for the FCC's Impair Standard. In what follows, each of the issues will be discussed in more detail.

[21] Crandall Declaration, page 8.