ORIGINAL

BEFORE

THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF
MICHAEL J. MAJOROS, JR.

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

AND

MCI WORLDCOM, INC.

DOCKET NO. 990649-TP

June 8, 2000

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Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Michael J. Majoros, Jr. I am Vice President of the economic consulting firm of Snavely King Majoros O'Connor & Lee, Inc. ("Snavely King"). My business address is 1220 L Street, N.W., Suite 410, Washington, D.C. 20005.

Q. PLEASE DESCRIBE SNAVELY KING.

A. Snavely King was originally founded in 1970 to conduct research on a consulting basis into the rates, revenues, costs and economic performance of regulated firms and industries. The firm has a professional staff of 12 economists, accountants, engineers and cost analysts. Most of the firm's work involves the development, preparation and presentation of expert witness testimony before federal and state regulatory agencies. Over the course of the firm's 30-year history, its members have participated in over 500

proceedings before almost all of the state commissions and Federal commissions that regulate the telecommunications, public utility and transportation industries.

Q. PLEASE DESCRIBE THE TYPE OF WORK YOU HAVE PERFORMED WHILE AT SNAVELY KING.

A. I have provided consultation specializing in accounting, financial and management issues. I have testified in over 80 regulatory proceedings. A significant number of these appearances have been related to the subject of telecommunications and public utility depreciation. Exhibit MJM-1 to this testimony summarizes my appearances relating to depreciation. I have also negotiated and/or represented various user groups in fifteen of the Federal Communications Commission's ("FCC's") three-way triennial depreciation represcription conferences. Page 1 of MJM-2 identifies those conferences. I have also participated in several regulatory proceedings in which depreciation was an issue that was ultimately settled. Page 2 of MJM-2 summarizes those proceedings.

Q. WHAT WAS YOUR EMPLOYMENT PRIOR TO JOINING SNAVELY KING?

A. I joined Snavely King in 1981 and have been with the firm since that time. My prior employment and educational background is summarized in Exhibit MJM-3 to this testimony.

Q. FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING

A. I am appearing on behalf of MCI WorldCom, Inc. ("MCI WorldCom") and AT&T Communications of the Southern States, Inc. ("AT&T").

Q. WAS THIS TESTIMONY PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes, it was. I should note, however, that this testimony and its analytical framework draws heavily upon work performed by myself and others at Snavely King on behalf of AT&T, MCI WorldCom, and AT&T Canada LDS for use in other proceedings.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. AT&T and MCI WorldCom have asked me to identify the appropriate plant lives to be used in Total Element Long-Run Incremental Cost ("TELRIC") and Unbundled Network Element ("UNE") cost studies for BellSouth and GTE. Specifically, I am to provide plant lives in conformance with the FCC's requirements.[1]

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. For BellSouth I recommend, with the exception of the fiber cable accounts, the projection lives underlying the current unbundled network element ("UNE") rates. My recommended lives are, with minor exceptions, consistent with the lives set forth in the FCC's 1995 prescription of BellSouth's depreciation rates as well as the Florida Public Service Commission's ("FPSC") decision in Docket Nos. 960757-TP, 960833-TP, and 960846-TP.[2] I have no objections to BellSouth's proposed future net salvage ratios. For GTE, I recommend both the projection lives and future net salvage ratios set forth in the FCC's 1995 prescription of GTE's depreciation rates.[3]

Q. DOES THE FCC SPECIFY THE PLANT LIVES TO BE USED IN THE PRICING OF UNBUNDLED NETWORK ELEMENTS?

A. Yes, indirectly. The FCC rules require that only forward-looking costs be used in the setting of interconnection prices.[4] Forward-looking costs require the use of economic depreciation rates.[5] To comply with this requirement, the plant lives used in the calculation of costs must be based upon the expected economic lives of newly placed plant[6]. In depreciation proceedings, such plant lives are termed "projection lives," to differentiate them from "remaining lives" and "average service lives" which reflect past plant placements.

Q. HAS THE FLORIDA PUBLIC SERVICE COMMISSION IDENTIFIED THE PROJECTION LIVES IT CONSIDERS APPROPRIATE FOR USE IN UNE CALCULATIONS?

A. Yes, the FPSC identified the lives it considers to be appropriate for BellSouth UNE calculations. Those lives are shown on Table III of the FPSC's April 29, 1998 Order No. PSC-98-0604-FOF-TP. With the exception of the FPSC's 20-year projection life for the Aerial, Underground and Buried fiber cable accounts and a few other minor exceptions, the FPSC's projection lives are equivalent to the FCC's prescribed lives. I am therefore recommending the FPSC's projection lives except for the cited fiber accounts where I continue to recommend the FCC's 25 year lives.

Q. ARE YOU FAMILIAR WITH THE DEPRECIATION ASPECTS OF THE FPSC'S DECISION IN DOCKET NOS. 960757-TP/960833-TP/960846-TP?

A. Yes, I testified on the subject of BellSouth's depreciation parameters in that proceeding. The FPSC adopted several of my recommendations and certain of BellSouth's proposals. The primary differences between the FCC's prescribed projection lives for BellSouth are in the four accounts listed below:

ACCOUNT	FCC	FPSC
Buildings	48	45
Aerial-Fiber	25	20
Underground-Fiber	25	20
Buried-Fiber	25	20

I have no objection to the FPSC's 45-year projection-life for Buildings. I am, however, recommending the FCC's 25-year projection lives for the fiber accounts listed above. Review of the Commission's Order indicates that its decision was based on BST's "projection lives of 20 years from its Florida-specific study".[7]

I have reviewed the Florida-specific study in question and also BST's filing in this proceeding. The retirements in these three accounts are negligible and recent life indications are either much longer than the FCC's 25-years or are erratic. The Florida-specific data indicates that if anything, the FCC's 25-year projection lives should be lengthened, not shortened to BST's 20-year request. Consequently, I continue to recommend the FCC's 25-year projection lives.

Q. ARE THE PROJECTION LIVES PRESCRIBED BY THE FCC FORWARD-LOOKING?

A. Yes, they are. As the FCC noted last year, in 1980, it "departed from its previous practice of relying largely on historical experience

to project equipment lives and began to rely on analysis of company plans, technological developments, and other future-oriented studies."[8]

In 1995, the FCC reaffirmed its forward-looking orientation in connection with the simplification of its depreciation represcription practices. The FCC prescribed a range of projection lives which could be selected by carriers for prescription on a streamlined basis. The FCC stated that these ranges were based upon "statistical studies of the most recently prescribed factors. These statistical studies required detailed analysis of each carrier's most recent retirement patterns, the carriers' plans, and current technological developments and trends."[9] Last year, the FCC completed a review of these ranges and updated them as appropriate.[10] The FCC stated:

> These ranges can be relied upon by federal and state regulatory commissions for determining the appropriate depreciation factors for use in establishing high cost support and interconnection and UNE prices.[11]

Indeed, the FCC further stated:

> In adopting a forward-looking mechanism for high-cost support, we found that depreciation expense calculations based on the

Commission's prescribed projection lives and salvage factors represent the best forward-looking estimates of depreciation lives and net salvage percentages.[12]

Q. DO YOU BELIEVE THE FCC STAFF FOLLOWED THE FCC'S DIRECTIVE TO EMPHASIZE FORWARD-LOOKING ANALYSES?

A. Yes. In my experience in fifteen FCC triennial represcription conferences (including BellSouth represcription conferences), the FCC staff always used a forward-looking approach to setting depreciation rates. The FCC staff rarely relied solely on historical data to set depreciation parameters. The FCC bases its parameter prescriptions upon the studies and information supplied by the individual companies, specific company plans, information submitted by state commission staffs, consumer groups and its broad industry-wide experience.

Q. IS THERE EMPIRICAL EVIDENCE THAT THE PROJECTION LIVES PRESCRIBED BY THE FCC HAVE BEEN FORWARD-LOOKING?

A. Yes. I would point to recent trends in the depreciation reserve levels in the industry. As the FCC has recognized, "[t]he depreciation reserve is an extremely important indicator of the

depreciation process because it is the accumulation of all past depreciation accruals net of plant retirements. As such, it represents the amount of a carrier's original investment that has already been returned to the carrier by its customers."[13] The FCC's recognition of the reserve level as an indicator of the depreciation process can best be understood by examining a steady state example.

Assume that we start with a stable environment in which the average age of plant is 9 years and the expected life of plant is 27 years. I have assumed the addition rate, retirement rate and straight-line accrual rate are all 3.7 percent (1/27), and the reserve level is stable at 33 percent of plant in service (9 years/27 years).[14] As we vary these factors, we can see the effect on the reserve level. For example:

- If the addition rate were to increase above 3.7 percent, the reserve level would go down. This should not be a cause for concern, since the average age of plant would similarly represent a lower percent of its expected life and the reduced reserve level is anticipated in a growing environment.

- If the retirement rate were to increase above

3.7 percent, the reserve level would also go down. This would be a cause for concern, since it would indicate that the actual life of plant is shorter than previously expected. If the actual life is shorter the reserve should be higher, not lower than 33 percent.

- If the accrual rate were to increase above 3.7 percent, the reserve level would go up. This would not be appropriate absent a reduction in the actual life of the plant, since it would indicate that the age of plant is higher than 33 percent of its expected life when, in fact, it is not, without a reduction to the actual service life of plant.

In summary, a declining reserve percent would be a reason for concern absent indications that it is merely the result of growth in plant. On the other hand, a rising reserve percent is generally a sign that accrual rates anticipate increasing retirement levels. Indeed, absent indications that the expected life of plant is decreasing, it might be a sign that accrual rates are too high.

Exhibit MJM-4 to this testimony charts reserve levels and other plant rates since 1946 for all local exchange carriers ("LECs") providing full financial reports to the FCC. As shown on Page 1 of Exhibit MJM-4, reserve percents decreased steadily following World War II due to industry growth. These declines continued through the 1970's due in part to accrual rates which were too low. As shown on Page 1 of Exhibit MJM-4, however, the FCC's change to forward-looking depreciation practices in the 1980s resulted in a dramatic rise in reserve levels after 1980. The composite reserve level rose from 18.7 percent in 1980 to an historic high of 50.7 percent in 1998. This track record indicates that the depreciation process is resulting in adequate depreciation accruals, and that the FCC's projection life estimates have been forward-looking and unbiased.

Confirmation of the forward-looking unbiased nature of current FCC prescriptions can be gained by comparing the 1998 accrual rate of 7.0 percent (Exhibit MJM-4, Page 4, Column l) to the 1998 retirement rate of 3.1 percent (Exhibit MJM-4, Page 4, Column k). The prescription of an accrual rate much higher than the current retirement rate indicates an expectation that the retirement rate will be much higher in the future. If the FCC were prescribing depreciation rates based only upon historical indicators, it would be prescribing depreciation rates in the range of 3 to 5

percent.

Exhibit MJM-5 confirms that these national LEC trends apply also to BellSouth-Florida and GTE-Florida. The 1999 depreciation reserve percents for these companies were:

	1999 Reserve %
BellSouth-Florida	54.1%
GTE-Florida	48.9%

Q. WHAT IS THE SOURCE OF THE LIVES PROPOSED BY BELLSOUTH AND GTE?

A. G. David Cunningham sponsors BellSouth's life proposals and Allen E. Sovereign sponsors GTE's life proposals. Mr. Cunningham states at page 5 of his testimony:

> The economic lives BellSouth considers to be appropriate for use in the cost studies are consistent with those used to determine the depreciation rates currently being booked in Florida for intrastate and for external reporting purposes.

Mr. Sovereign states:

> GTE uses the same depreciation inputs for FPSC regulatory reporting that it uses for

financial reporting purposes, and those are the same inputs I recommend here.

Q. DOES THE FACT THAT BELLSOUTH OR GTE MAY USE THEIR PROPOSED LIVES FOR FINANCIAL REPORTING PURPOSES NECESSARILY MAKE THEM APPROPRIATE FOR REGULATORY COST STUDIES?

A. No. In a 1989 Petition, AT&T asked the FCC to base its regulatory depreciation on its financial books.[15] The FCC flatly rejected this request, stating:

> We conclude that AT&T has not made a sufficient showing that this Commission should base AT&T's book rates on the depreciation rates that it uses for financial reporting purpose. Initially, we observe that the present depreciation procedures have worked well for AT&T, in terms of ensuring more rapid capital recovery. Our recent depreciation orders have allowed AT&T to increase substantially its depreciation reserve, from 24.8% of plant as of January 1, 1984 to 39.1% as of January 1, 1989. AT&T does not state in its petition in what specific manner this Commission has been remiss in our depreciation rate prescriptions of recent years. Rather, it relies

upon the fact that in 1988 it took a $6 billion writedown of its asset value for financial reporting purposes. This event may indicate that a new look at AT&T's depreciation situation is warranted, notwithstanding our recent depreciation represcription, and we are accordingly initiating herein an inquiry into AT&T's need for revised depreciation rates. However, that assessment can be accomplished using current procedures rather than depreciation rate methodologies that go well beyond those that we have traditionally employed. We have taken a series of initiatives during the past decade to ensure that carriers are able to adjust their depreciation rates promptly to recover capital investment costs as quickly as possible under the federal regulatory scheme. We do not see a need now to abandon one of those initiatives to address what appears to be a temporary problem that can be resolved with measures less drastic than those suggested by AT&T.[16]

Q. ARE FINANCIAL BOOK LIVES APPROPRIATE FOR USE IN UNE CALCULATIONS?

A. No. The lives used for financial accounting purposes are governed by the Generally Accepted Accounting Principle ("GAAP") of "conservatism." As the FCC has found, GAAP is investor-focused and may not always serve the interest of ratepayers.

Q. HAS ANY MAJOR LEC CONCEDED THE BIAS INHERENT IN THE FINANCIAL BOOKS?

A. Yes. In the FCC's Prescription Simplification proceeding, GTE noted that the GAAP conservatism principle "prefers the understatement (versus overstatement) of net income and net assets where any potential measurement problem exist."[17] Most accountants would agree that the very nature of depreciation makes it a challenge to measure.

In its October 1998 Order, the FCC agreed with GTE, stating:

> One of the primary purpose of GAAP is to ensure that a company does not present a misleading picture of its financial condition and operating results by, for example, overstating its asset values or overstating its earnings, which would mislead current and potential investors. GAAP is

guided by the conservatism principle which holds, for example, that, when alternative expense amounts are acceptable, the alternative having the least favorable effect on net income should be used. Although conservatism is effective in protecting the interest of investors, it may not always serve the interest of ratepayers. Conservatism could be used under GAAP, for example, to justify additional (but, perhaps not "reasonable") depreciation expense by a LEC to avoid its sharing obligation. Thus, GAAP would not effectively limit the opportunity for LECs to merge earnings so as to avoid the sharing zone as the basic factor range option. In this instance, GAAP does not offer adequate protection for ratepayers.[18]

Q. BELLSOUTH COMPARES ITS PROPOSED LIVES TO THE LIVES PRESCRIBED BY THE FCC FOR AT&T IN 1994. DO AT&T's LIVES PROVIDE AN APPOPRIATE BENCHMARK?

A. No. Any comparison to lives prescribed for AT&T in 1994 is irrelevant because in 1994 AT&T was an interexchange carrier ("IXC"). The very same FCC Order that prescribed the lives for AT&T in 1994 also prescribed much longer lives for thirteen LECs.

Clearly, the FCC recognized the difference between the appropriate lives for an IXC and a LEC. The FCC explicitly noted this difference in its Prescription Simplification proceeding when it stated:

> We believe the underlying considerations that go into estimating the basic factors are sufficiently different for the two groups [IXC and LEC] that they should be considered separately.[19]

The plant lives of IXCs are simply not appropriate for use in calculating UNE costs. The expected productive life of plant is largely dependent upon its specific use. To use an extreme, but apt, analogy, the expected productive life of the copper wire installed in a house is many times that of the copper wire installed in an automobile. Despite surface similarity, the use of plant by LECs to provide local exchange and exchange access service is much different than the use of plant by IXCs to provide interexchange services.

IXCs are much less capital intensive than LECs, and thus are able to economically replace their plant much faster than LECs when the occasion demands. To service all homes and businesses in the nation, an IXC needs only about 150 switches and 100,000 sheath kilometers of cable. To gain the same ubiquity for local exchange service, the LECs require over 23,000 switches and

6,000,000 sheath kilometers of cable. No matter how motivated the LECs may be, the sheer magnitude and complexity of the replacement effort ensures that replacement is a long, drawn-out process. This difference also helps explain why facilities-based competition came quickly to the interexchange industry and has been painfully slow in the local exchange industry.

Q. HOW DID BELLSOUTH AND GTE DEVELOP THEIR LIFE ESTIMATES FOR THE ACCOUNTS IMPACTED BY TECHNOLOGICAL CHANGE?

A. They relied largely upon "substitution analysis," which attempts to forecast the pattern by which new technology will replace old technology. GTE relied upon substitution analyses performed by Technologies Futures, Inc. ("TFI"), whose industry studies have been used frequently by local exchange carriers to justify shorter lives in regulatory depreciation proceedings. TFI's studies are sponsored by the Telecommunications Technology Forecasting Group ("TTFG"), an industry association of BellSouth, GTE, Sprint and other major LECs in the United States and Canada. In prior proceedings BellSouth also relied on TFI and at one point convinced the Florida Public Service Commission to rely on TFI as well. However, that reliance has been shown to have been misplaced.

Q. WHAT ASSUMPTIONS UNDERLIE THESE STUDIES?

A. These studies are based upon the premise that LECs will replace their narrowband telecommunications networks with broadband integrated networks capable of providing both telecommunications services and video services, such as cable television. According to these studies, Fiber-In-The-Loop ("FITL") will bring broadband to the home, displacing copper plant. This will result in the upgrading of all transmission systems to Synchronous Optical Network ("SONET"), replacing existing circuit equipment. TFI also predicts that Asynchronous Transfer Mode ("ATM") switching equipment will provide a broadband switching capability replacing today's narrowband switch fabrics.

Q. SHOULD TELRIC COST STUDIES BE BASED UPON ASSUMPTIONS SUCH AS THOSE UNDERLYING THESE ESTIMATES?

A. No. TELRIC is based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent LEC's wire centers. The TELRIC standard requires a determination of the stand-alone cost of unbundled network elements in an efficient telecommunication network. The plant lives appropriate for such a calculation should not be based upon the

assumption that efficient telecommunications facilities will be prematurely retired in order to provide broadband video services.

Q. ARE THE LIVES RESULTING FROM THE USE OF SUBSTITUTION ANALYSIS NECESSARILY ACCURATE?

A. No. Substitution models merely provide a convenient method for plotting by year the growth of new technology assuming the inputs to the formula are correct. The output of a substitution analysis is only as accurate as the inputs selected.

In the first place, substitution analysis is not even relevant unless it is known that a new technology will replace, not supplement, an older technology. It appears, for example, the Asynchronous Transfer Mode ("ATM") switches will be deployed as a supplemental technology to digital switches, not as a replacement for them. As such, substitution analysis is of no relevance. This helps to explain the low retirement rates for digital switching equipment.

Indeed, even when a substitution has started, it does not necessarily follow that it will finish according to pattern. It appeared at one point, for example, that nuclear fuel would replace fossil fuel in electrical generation in this country. The use of substitution formulas in that case would have resulted in dramatically incorrect predictions.

Even if a full substitution is likely, the formula requires the user to predict both the rate of substitution and the point at which the replacement technology will reach 50 percent of the universe. In other words, the analyst must insert as an input the average remaining life of the old technology, since this is essentially the 50 percent level of the new technology. Although substitution methodology allows the preparation and presentation of impressive looking charts and tables, it is merely charting the assumptions made by the analyst. Its outputs at the hands of BellSouth or TFI are no more credible than their inputs.

Q. HAS SUBSTITUTION ANALYSIS PROVEN ACCURATE OVER THE LONG RUN?

A. No. Although TFI forecasts have been provided to the FCC for nearly a decade, they have not been relied upon in the selection of plant projection lives. Fatina K. Franklin, the Chief of the FCC's Competitive Analysis Branch, made a presentation at the Annual Meeting of the Society of Depreciation Professionals on the subject of forecasting. The charts from her presentation are provided as Exhibit MJM-6. Charts 3 and 4 deal specifically with TFI's estimates. Chart 3 demonstrates that TFI's 1989 estimates for the retirement of circuit equipment surviving as of the end of 1996 is nearly three times as great as that predicted by its studies. Chart 4

demonstrates that its 1994 estimates for circuit equipment and analog stored program control ("SPC") switches are already proving inaccurate. Exhibit MJM-7 to this testimony provides a similar analysis of TFI's fiber in the feeder estimates. Page 1 of this analysis shows its predictions for the percent of fiber in the feeder in 1988, 1994 and 1997, and actuals (in bold) through 1995. In 1988 TFI predicted a substitution of 22.55 percent by 1995; in 1994 its prediction dropped to 11.20 percent; and its latest study shows an actual of 9.30 percent. Page 2 graphically portrays this data and demonstrates how TFI's life estimates have lengthened as actuals became available.

Q. HAS BELLSOUTH'S USE OF SUBSTITUTION ANALYSIS PRODUCED ESTIMATES MORE ACCURATE THAN TFI'S ESTIMATES?

A. No. Exhibit MJM-8 to this testimony reproduces the "tracking reports" filed by BellSouth as part of its 1996 Depreciation Study. The FCC requires these reports to shed light on the accuracy of past forecasts by a LEC. Actual retirements from 1993 to 1995 as a percent of retirements forecast in 1993 for the South Central Bell Companies were as follows:

Aerial Cable Metal	32.3%
Underground Cable Metal	11.1%
Buried Cable Metal	23.6%

This abysmal track record may have contributed to BellSouth's failure to request represcription in 1996 and 1999.

Q. DO YOU HAVE ANY FLORIDA-SPECIFIC INFORMATION?

A. Yes. Exhibit MJM-9 is a comparison of the TFI predictions upon which this Commission set BellSouth's copper cable depreciation rates in Docket No. 920385-TL. This table demonstrates that TFI was wrong by over $1.3 million. The remaining lives based on TFI's forecast were equally as wrong.

Q. HAVE YOU COMPARED BELLSOUTH FLORIDA'S AND GTE FLORIDA'S PROPOSED LIVES TO THE FCC LIVES?

A. Yes, I have. Page 1 of Exhibit MJM-10 compares BellSouth's life proposals (Column e) to:

- the range of projection lives prescribed by the FCC pursuant to its Prescription Simplification proceeding (Columns a and b);
- the most recent FCC projection life prescription for BellSouth Florida

(Column c);

- the lives currently prescribed for use in pricing BellSouth Florida UNEs (Column d); and
- my proposal in this proceeding (Column f).

Page 2 displays these same comparisons for future net salvage. Pages 3 and 4 display these same life and future net salvage comparisons for GTE.[20]

Many of BellSouth's and GTE's proposed lives are much shorter than the FCC/FPSC's projection lives for the major technology accounts. Consequently, they are inappropriate for use in UNE calculations.

Q. HAVE YOU COMPARED BELLSOUTH FLORIDA'S AND GTE-FLORIDA'S HISTORICAL LIVES TO THE FCC'S AND FPSC'S LIVES ?

A. Neither of the Companies' filings provide specific information or data to make such a comparison. Nevertheless, I am quite certain based on my experience that the historical lives vastly exceed the FCC's and FPSC's lives for the major technology accounts.

Q. WHAT WOULD BE THE RESULT OF UNE COSTS BASED ON BELLSOUTH'S AND GTE'S PROPOSED LIVES?

A. UNE costs would be overstated and competition would be impeded.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

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[1] *FCC, Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325, released August 8, 1996 ("August 8 Order"), Appendix B ("Rules").*

[2] *FPSC, Docket Nos. 960757-TP, 960833-TP, 960846-TP, Order No. PSC-98-0604-FOF-TP, issued April 29, 1998, ("April 29 Order") Table III.*

[3] *FCC Parameter Report, August 11, 1998.*

[4] *Rules ¶ 51.505 (a)*

[5] *Rules ¶ 51.505 (b) (3).*

[6] *The economic life of an asset is its total revenue producing life. Public Utility Depreciation Practices ("Depreciation Practices"), National Associate of Regulatory Utility Commissioners, August 1996, p. 318.*

[7] *April 29 Order, p.40.*

[8] *1998 Biennial Regulatory Review-Review of Depreciation Requirements for Incumbent Local Exchange Carriers, CC Docket 98-137, Report and Order, FCC 99-397, released December 30, 1999 ("1999 Update"), para. 5.*

[9] *Simplification of the Depreciation Prescription Process, CC Docket No. 92-296 ("Prescription Simplification" proceeding), Third Report and Order, FCC 95-181, released May 4, 1995, p. 6.*

[10] *1999 Update, para. 14.*

[11] *Id., para.34.*

[12] *United States Telephone Association's Petition for Forbearance from Depreciation Regulation of Price Cap Local Exchange Carriers, ASD 98-91, Memorandum Opinion and Order, FCC 99-397, released December 30, 1999, para. 61 (emphasis added).*

[13] *Report on Telephone Industry Depreciation, Tax Capital/Expense Policy, Accounting and Audits Division, Federal Communications Commission, April 15, 1987 ("AAD Report"), p. 3.*

[14] *Reserve will stabilize at 33 percent assuming a triangular (straight-line) mortality curve. See Notes for Engineering Economics Courses, American Telephone and Telegraph Company, Engineering Department, 1996, p. 121.*

[15] *The Modification of the Commission's Depreciation Prescription Practices as Applied to AT&T and The Prescription of Revised AT&T Depreciation Rates, Petition of American Telephone and Telegraph, February 15, 1989.*

[16] *Id., Memorandum Opinion and Order, FCC 89-325, adopted November 22, 1989 (footnote deleted).*

[17] *Prescription Simplification, Comments of GTE Service Corporation and its affiliated domestic telephone companies ("GTE"), March 10, 1993, p. 14.*

[18] *Id., Report and Order, FCC 93-452, released October 20, 1993, para.46.*

[19] *Prescription Simplification, Notice of Proposed Rulemaking, released December 29, 1992*

[20] *Column d is not available for GTE.*

MICHAEL J. MAJOROS, JR.

APPEARANCES BEFORE REGULATORY AGENCIES RELATED TO DEPRECIATION

STATE	DOCKET NO.	UTILITY
New Jersey	815-458	New Jersey Bell Telephone Co.
District of Columbia	785	Potomac Electric Power Co.
Maryland	7689	Washington Gas Light Co.
District of Columbia	813	Potomac Electric Power Co.
Pennsylvania	R-842621	Western Pennsylvania Water Co.
Maryland	7743	Potomac Edison Electric Co.
Maryland	7851	Chesapeake & Potomac Tel. Co.
California	I-85-03-78	Pacific Bell Telephone Co.
Pennsylvania	R-850174	Philadelphia Suburban Water Co.
Pennsylvania	R-850178	Pennsylvania Gas & Water Co.
Pennsylvania	R-850229	General Tel. of Pennsylvania
Maryland	7899	Delmarva Power & Light Co.
Pennsylvania	R-850268	York Water Co.
Pennsylvania	R-860350	Dauphin Water Co.
Idaho	U-1022-59	General Tel. of the Northwest
Maryland	7973	Baltimore Gas & Electric Co.
Pennsylvania	C-860923	Bell Telephone of Pennsylvania
Iowa	DPU-86-2	Northwestern Bell Telephone Co.
District of Columbia	842	Washington Gas Light Co.
Iowa	RPU-87-3	Iowa Public Service Company
Florida	880069-TL	Southern Bell Telephone

STATE	DOCKET NO.	UTILITY
District of Columbia	869	Potomac Electric Power Company
Iowa	RPU-88-6	Northwestern Bell Telephone Co.
New Jersey	1487-88	Morris County Transfer Station
Florida	890256-TL	Southern Bell Telephone
New Jersey	ER89110912	Jersey Central Power & Light Co.
New Jersey	WR900050497J	Elizabethtown Water Company
South Carolina	92-227-C	Southern Bell Telephone Company
Maryland	8485	Baltimore Gas & Electric Company
Pennsylvania	P-900465	United Tel. Co. of Pennsylvania
West Virginia	90-564-T-D	C&P Telephone Co.
New Jersey	90080792J	Hackensack Water Co.
New Jersey	WR90080884J	Middlesex Water Company
Pennsylvania	R-911892	Philadelphia Suburban Water
Kansas	176,716-U	Kansas Power & Light Co.
Indiana	39017	Indiana Bell Telephone Co.
Nevada	91-5054	Central Telephone Co. - Nevada
New Jersey	EE91081428	Public Service Elec. & Gas Co.
Maryland	8462	C&P Telephone Co.
West Virginia	91-1037-E-D	Appalachian Power Company
Maryland	8464	Potomac Electric Power Company
South Carolina	92-227-C	Southern Bell - South Carolina
Maryland	8485	Baltimore Gas & Electric Co.
Georgia	4451-U	Atlanta Gas Light Company
New Jersey	GR93040114	New Jersey Natural Gas Company
Iowa	RPU-93-9	U.S. West - Iowa
Iowa	RPU-94-3	Midwest Gas
Connecticut	94-10-03	Southern New England Telephone
Pennsylvania	R-00953300	Citizens Utilities Company
Arizona	E-1032-95-417 et. al.	Citizens Utilities Company
New Hampshire	DE 96-52	New England Telephone

STATE	DOCKET NO.	UTILITY
Iowa	DPU-96-1	U S West - Iowa
Ohio	96-922-TP-UNC	Ameritech - Ohio
Michigan	U-11280	Ameritech - Michigan
Michigan	U-11281	GTE North
Wyoming	7000-TR-96-323	US West-Wyoming
Iowa	RPU-96-9	US West-Iowa
Illinois	96-0486/0569	Ameritech - Illinois
Indiana	40611	Ameritech - Indiana
Utah	97-049-08	US West-Utah

MICHAEL J. MAJOROS, JR.

PARTICIPATION AS NEGOTIATOR IN FCC DEPRECIATION RATE REPRESCRIPTION CONFERENCES

COMPANY	YEARS	CLIENT
Diamond State Telephone Co.	1985 + 1988	Delaware Public Service Commission
Bell Telephone of Pennsylvania	1986 + 1989	PA Consumer Advocate
Chesapeake & Potomac Telephone Co. - Md.	1986	Maryland People's Counsel
Southwestern Bell Telephone - Kansas	1986	Kansas Corp. Commission
Southern Bell - Florida	1986	Florida Consumer Advocate
Chesapeake & Potomac Telephone Co. - W. Va.	1987 + 1990	West VA Consumer Advocate
New Jersey Bell Telephone Co.	1985 + 1988	New Jersey Rate Counsel
Southern Bell - South Carolina	1986 + 1989 + 1992	S. Carolina Consumer Advocate
GTE-North - Pennsylvania	1989	PA Consumer Advocate

MICHAEL J. MAJOROS, JR.

PARTICIPATION IN PROCEEDINGS IN WHICH DEPRECIATION WAS SETTLED BEFORE TESTIMONY WAS SUBMITTED

STATE	DOCKET NO.	UTILITY
Maryland	7878	Potomac Edison
Nevada	88-728	Southwest Gas
New Jersey	WR90090950J	New Jersey American Water
New Jersey	WR900050497J	Elizabethtown Water
New Jersey	WR91091483	Garden State Water
West Virginia	91-1037-E	Appalachian Power Co.
Nevada	92-7002	Central Telephone - Nevada
Pennsylvania	R-00932873	Blue Mountain Water
West Virginia	93-1165-E-D	Potomac Edison
West Virginia	94-0013-E-D	Monongahela Power
New Jersey	WR94030059	New Jersey American Water
New Jersey	WR95080346	Elizabethtown Water
New Jersey	WR95050219	Toms River Water Co.
New Jersey	WR95070303	Hackensack Water Co. Jersey

Michael J. Majoros

Docket No. 990649-TP
Exhibit MJM- 3

Experience

Snavely King Majoros O'Connor & Lee, Inc.

Vice President and Treasurer (1988 to Present)
Senior Consultant (1981-1987)

Mr. Majoros provides consultation specializing in accounting, financial, and management issues. He has testified as an expert witness or negotiated on behalf of clients in more than eighty regulatory proceedings involving telephone, electric, gas, water and sewerage companies. Mr. Majoros has appeared before Federal and state agencies. His testimony has encompassed a wide variety of complex issues including taxation, divestiture accounting, revenue requirements, rate base, nuclear decommissioning and capital recovery.

Mr. Majoros has been responsible for developing the firm's consulting services on depreciation and other capital recovery procedures into a major area of practice. He has also developed the firm's capabilities in the management audit area and established the firm's office in San Juan, Puerto Rico.

Van Scoyoc & Wiskup, Inc., *Consultant (1978-1981)*

Mr. Majoros performed various management and regulatory consulting projects in the public utility field, including preparation of electric system load projections for a group of municipally and cooperatively owned electric systems; preparation of a system of accounts and reporting of gas and oil pipelines to be used by a state regulatory commission; accounting system analysis and design for rate proceedings involving electric, gas, and telephone utilities. Mr. Majoros also assisted in an antitrust proceeding involving a major electric utility. He submitted expert testimony in FERC Docket No. RP79-12 (El Paso Natural Gas Company). In addition, he co-authored a study entitled Analysis of Staff Study on Comprehensive Tax Normalization that was submitted to FERC in Docket No. RM80-42.

Handling Equipment Sales Company, Inc., *Treasurer (1976-1978)*

Mr. Majoros' responsibilities included financial management, general accounting and reporting, and income taxes.

Ernst & Ernst, *Auditor (1973-1976)*

Mr. Majoros was a member of the audit staff where his responsibilities included auditing, supervision, business systems analysis, report preparation, and corporate income taxes.

University of Baltimore - *(1971-1973)*

Mr. Majoros was a full-time student in the School of Business. During this period Mr. Majoros worked consistently on a part-time basis in the following positions: **Assistant Legislative Auditor – State of Maryland, Staff Accountant – Robert M. Carney & Co., CPA's, Staff Accountant – Noron & Wrgod, CPA's, Credit Clerk – Montgomery Wards.**

Central Savings Bank, *(1969-1971)*

Mr. Majoros was an Assistant Branch Manager at the time he left the bank to attend college as a full-time student. During his tenure at the bank, Mr. Majoros gained experience in each department of the bank. In addition, he attended night school at the University of Baltimore.

Education

University of Baltimore, School of Business, B.S. – Concentration in Accounting

Professional Affiliations

American Institute of Certified Public Accountants
Maryland Association of C.P.A.s
Society of Depreciation Professionals

Publications, Papers, and Panels

"Analysis of Staff Study on Comprehensive Tax Normalization," FERC Docket No. RM 80-42, 1980.

"Telephone Company Deferred Taxes and Investment Tax Credits – A Capital Loss for Ratepayers," Public Utility Fortnightly, September 27, 1984.

"The Use of Customer Discount Rates in Revenue Requirement Comparisons," Proceedings of the 25th Annual Iowa State Regulatory Conference, 1986

"The Regulatory Dilemma Created By Emerging Revenue Streams of Independent Telephone Companies," Proceedings of NARUC 101st Annual Convention and Regulatory Symposium, 1989.

"BOC Depreciation Issues in the States," National Association of State Utility Consumer Advocates, 1990 Med-Year Meeting, 1990.

"Current Issues in Capital Recovery" 30th Annual Iowa State Regulatory Conference, 1991.

"Impaired Assets Under SFAS No. 121," National Association of State Utility consumer Advocates, 1996 Mid-Year Meeting, 1996.

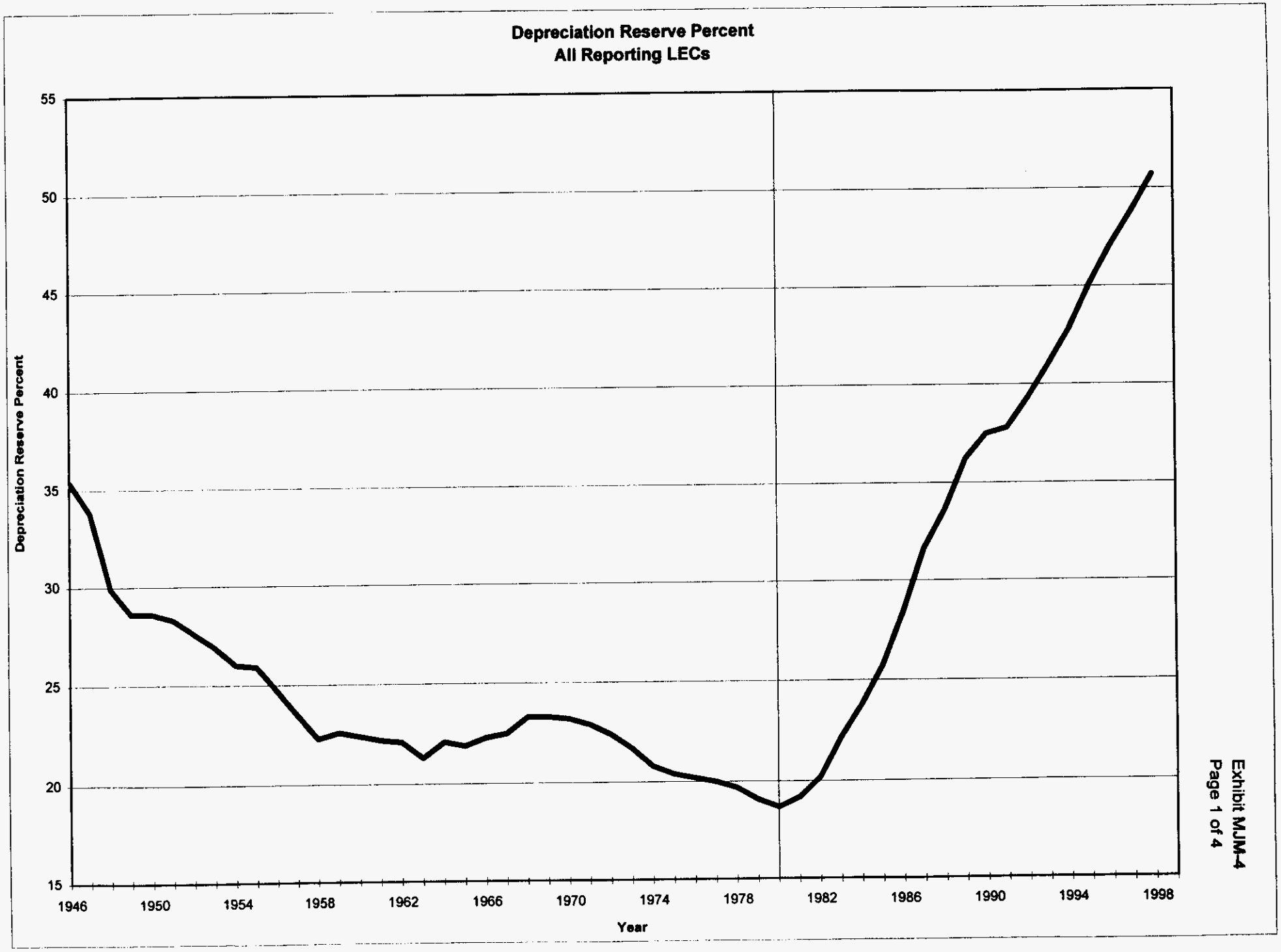


Exhibit MJM-4
Page 1 of 4

All Reporting LECs' Plant Related Rates

(Dollars in Millions)

	Telecommunications Plant in Service													
	BOY (a)	EOY (b)	Average (c)=(a+b)/2	Increase (d) = b-a	Add (e)	Ret (f)	Deprec (g)	EOY Reserve (h)	AVG Reserve (i)	Add Rate (j) = e/a	Retire Rate (k) = f/a	Deprec Rate (l) = g/c	Reserve Percent (m) = h/b
1946		6,500						2,300					35.4
1947	6,500	7,400	6,950	900				2,500	2,400				33.8
1948	7,400	8,700	8,050	1,300				2,600	2,550				29.9
1949	8,700	9,800	9,250	1,100				2,800	2,700				28.6
1950	9,800	10,500	10,150	700				3,000	2,900				28.6
1951	10,500	11,300	10,900	800				3,200	3,100				28.3
1952	11,300	12,300	11,800	1,000				3,400	3,300				27.6
1953	12,300	13,400	12,850	1,100				3,600	3,500				26.9
1954	13,400	14,600	14,000	1,200				3,800	3,700				26.0
1955	14,600	15,800	15,200	1,200				4,100	3,950				25.9
1956	15,800	17,400	16,600	1,600				4,300	4,200				24.7
1957	17,400	19,600	18,500	2,200				4,600	4,450				23.5
1958	19,600	22,000	20,800	2,400				4,900	4,750				22.3
1959	22,000	23,000	22,500	1,000				5,200	5,050				22.6
1960	23,000	25,000	24,000	2,000	2,700	700	1,100	5,600	5,400	11.7	3.0	4.6	22.4
1961	25,000	27,000	26,000	2,000	2,800	800	1,200	6,000	5,800	11.2	3.2	4.6	22.2
1962	27,000	29,000	28,000	2,000	2,900	900	1,300	6,400	6,200	10.7	3.3	4.6	22.1
1963	29,000	32,000	30,500	3,000	4,000	1,000	1,400	6,800	6,600	13.8	3.4	4.6	21.3
1964	32,000	34,000	33,000	2,000	2,900	900	1,600	7,500	7,150	9.1	2.8	4.8	22.1
1965	34,000	37,000	35,500	3,000	4,100	1,100	1,700	8,100	7,800	12.1	3.2	4.8	21.9
1966	37,000	40,000	38,500	3,000	4,100	1,100	1,900	8,900	8,500	11.1	3.0	4.9	22.3
1967	40,000	44,000	42,000	4,000	5,100	1,100	2,100	9,900	9,400	12.8	2.8	5.0	22.5

All Reporting LECs' Plant Related Rates

(Dollars in Millions)

	Telecommunications Plant in Service												
	BOY (a)	EOY (b)	Average (c)=(a+b)/2	Increase (d) = b-a	Add (e)	Ret (f)	Deprec (g)	EOY Reserve (h)	AVG Reserve (i)	Add Rate (j) = e/a	Retire Rate (k) = f/a	Deprec Rate (l) = g/c	Reserve Percent (m) = h/b
1968	43,249	47,123	45,186	3,874	5,104	1,230	2,304	10,979	10,440	11.8	2.8	5.1	23.3
1969	47,175	51,724	49,450	4,549	6,022	1,473	2,507	12,072	11,526	12.8	3.1	5.1	23.3
1970	51,723	56,951	54,337	5,228	6,880	1,651	2,751	13,213	12,643	13.3	3.2	5.1	23.2
1971	56,972	63,090	60,031	6,118	8,052	1,933	3,016	14,447	13,830	14.1	3.4	5.0	22.9
1972	63,068	69,870	66,469	6,802	9,044	2,242	3,330	15,643	15,045	14.3	3.6	5.0	22.4
1973	69,951	77,442	73,697	7,491	10,085	2,595	3,659	16,769	16,206	14.4	3.7	5.0	21.7
1974	77,107	84,888	80,998	7,781	11,024	3,243	4,047	17,685	17,227	14.3	4.2	5.0	20.8
1975	84,799	92,284	88,542	7,485	10,881	3,396	4,486	18,809	18,247	12.8	4.0	5.1	20.4
1976	92,591	99,879	96,235	7,288	11,139	3,856	4,934	20,163	19,486	12.0	4.2	5.1	20.2
1977	101,237	109,496	105,367	8,259	12,438	4,136	5,630	21,903	21,033	12.3	4.1	5.3	20.0
1978	109,502	119,336	114,419	9,834	14,549	4,681	6,199	23,474	22,689	13.3	4.3	5.4	19.7
1979	118,612	129,972	124,292	11,360	16,843	5,452	6,820	24,881	24,178	14.2	4.6	5.5	19.1
1980	129,767	142,096	135,932	12,329	18,694	6,378	7,804	26,512	25,697	14.4	4.9	5.7	18.7
1981	142,121	155,845	148,983	13,724	19,482	5,749	8,664	29,932	28,222	13.7	4.0	5.8	19.2
1982	155,907	168,075	161,991	12,168	18,466	6,409	9,757	33,957	31,945	11.8	4.1	6.0	20.2
1983	169,162	178,482	173,822	9,320	16,076	6,664	11,340	39,571	36,764	9.5	3.9	6.5	22.2
1984	152,315	159,798	156,057	7,483	14,994	4,994	10,048	37,996	38,784	9.8	3.3	6.4	23.8
1985	174,218	186,294	180,256	12,076	18,972	6,687	11,469	43,837	40,917	10.9	3.8	6.9	25.7
1986	186,972	198,758	192,865	11,786	18,907	6,954	13,142	51,543	47,690	10.1	3.7	7.5	28.4
1987	199,063	209,687	204,375	10,624	18,535	7,886	15,263	61,471	56,507	9.3	4.0	8.1	31.6
1988	210,720	220,395	215,558	9,675	17,947	8,949	16,627	74,123	67,797	8.5	4.2	7.7	33.6

All Reporting LECs' Plant Related Rates

(Dollars in Millions)

	Telecommunications Plant in Service												
	BOY (a)	EOY (b)	Average (c)=(a+b)/2	Increase (d) = b-a	Add (e)	Ret (f)	Deprec (g)	EOY Reserve (h)	AVG Reserve (i)	Add Rate (j) = e/a	Retire Rate (k) = f/a	Deprec Rate (l) = g/c	Reserve Percent (m) = h/b
1989	220,126	229,326	224,726	9,200	16,868	8,145	16,839	83,115	78,619	7.7	3.7	7.5	36.2
1990	229,103	235,247	232,175	6,144	18,473	12,380	16,955	88,146	85,631	8.1	5.4	7.3	37.5
1991	236,093	241,620	238,857	5,527	18,322	12,896	16,607	91,427	89,787	7.8	5.5	7.0	37.8
1992	242,599	249,508	246,054	6,909	18,877	12,138	17,036	98,053	94,740	7.8	5.0	6.9	39.3
1993	250,570	258,782	254,676	8,212	18,864	11,217	17,676	106,079	102,066	7.5	4.5	6.9	41.0
1994	259,216	267,443	263,330	8,227	18,781	10,990	18,656	114,598	110,339	7.2	4.2	7.1	42.8
1995	268,555	278,946	273,751	10,391	19,482	9,411	19,393	125,789	120,194	7.3	3.5	7.1	45.1
1996	278,974	291,569	285,272	12,595	22,401	10,271	20,527	137,278	131,534	8.0	3.7	7.2	47.1
1997	291,569	303,809	297,689	12,240	23,171	11,627	21,156	148,163	142,721	7.9	4.0	7.1	48.8
1998	303,689	319,767	311,728	16,078	24,218	9,337	21,947	162,102	155,133	8.0	3.1	7.0	50.7
Avg.	'60-'83									12.6	3.6	5.2	
	'84-'98									8.4	4.1	7.2	

Source: 1946 -1967 Report on Telephone Industry Depreciation, Tax and Capital/Expense Policy, Accounting and Audits Division, FCC, April 15, 1987, pp.6, 9
1968 - 1983 FCC Statistics of Common Carriers, Tables 12 and 16
1984 - 1987 FCC Statistics of Common Carriers, Tables 10 and 14
1988 - 1998 FCC Statistics of Common Carriers, Tables 2.7 and 2.9

Note 1: 1946 - 1983 Includes AT&T

Note 2: Cols l and m for 1985-1987 from Table 14 data as follows:
Col l = 1985 Col g/165,076
1986 Col g/175,926
1987 Col g/187,920
Col m = 1985 Col h/170,355
1986 Col h/181,496
1987 Col h/194,343

BellSouth Telephone Plant Related Rates

(Dollars in Millions)

	Telecommunications Plant in Service												
	BOY (a)	EOY (b)	Average (c)=(a+b)/2	Increase (d) = b-a	Add (e)	Ret (f)	Deprec (g)	EOY Reserve (h)	AVG. Reserve (i)	Add Rate (j) = e/a	Retire Rate (k) = f/a	Deprec Rate (l) = g/c	Reserve Percent (m) = h/b
1990	32,462	34,216	33,339	1,754	3,026	1,272	2,506	12,063	11,378	9.3	3.9	7.5	35.3
1991	34,216	35,829	35,023	1,613	2,994	1,382	2,598	13,384	12,724	8.8	4.0	7.4	37.4
1992	36,034	37,644	36,839	1,610	2,768	1,159	2,615	15,096	14,240	7.7	3.2	7.1	40.1
1993	37,644	39,445	38,545	1,801	3,142	1,341	2,811	16,669	15,883	8.3	3.6	7.3	42.3
1994	39,445	41,095	40,270	1,650	3,143	1,493	2,919	18,203	17,436	8.0	3.8	7.2	44.3
1995	41,095	42,934	42,015	1,839	3,177	1,349	3,044	19,944	19,074	7.7	3.3	7.2	46.5
1996	42,934	45,318	44,126	2,384	3,731	1,347	3,174	22,176	21,060	8.7	3.1	7.2	48.9
1997	45,318	47,203	46,261	1,885	3,413	1,866	3,299	24,155	23,166	7.5	4.1	7.1	51.2
1998	47,203	49,517	48,360	2,314	3,707	1,521	3,594	26,436	25,296	7.9	3.2	7.4	53.4
1999	49,517	51,851	50,684	2,334	4,317	2,729	3,492	28,033	27,235	8.7	5.5	6.9	54.1
Avg.										8.3	3.8	7.2	

Source: Annual Report Form M, Tables B-1 and B-5, 1990-1991
ARMIS 43-02 Reports, Tables B-1 and B-5, 1992-1999

Note: Excludes Customer Premise Wiring

GTE - Florida Telephone Plant Related Rates

(Dollars in Millions)

	Telecommunications Plant in Service												
	BOY (a)	EOY (b)	Average (c)=(a+b)/2	Increase (d) = b-a	Add (e)	Ret (f)	Deprec (g)	EOY Reserve (h)	AVG. Reserve (i)	Add Rate (j) = e/a	Retire Rate (k) = f/a	Deprec Rate (l) = g/c	Reserve Percent (m) = h/b
1995	3676	3853	3,765	177	313	136	312	1407	1,745	8.5	3.7	8.3	36.5
1996	3853	4027	3,940	174	307	118	333	1626	1,745	8.0	3.1	8.5	40.4
1997	4,027	4,286	4,157	259	391	111	343	1,864	1,745	9.7	2.8	8.3	43.5
1998	4,286	4,598	4,442	312	405	117	368	2,131	1,745	9.4	2.7	8.3	46.3
1999	4,598	4,779	4,689	181	361	181	376	2,335	1,745	7.9	3.9	8.0	48.9
Avg.										8.7	3.2	8.3	

Source: ARMIS 43-02 Reports, Tables B-1 and B-5, 1995-1999

Note: Excludes Customer Premise Wiring

SOCIETY OF DEPRECIATION PROFESSIONALS

Annual Meeting

FORECASTING

FATINA K. FRANKLIN
FEDERAL COMMUNICATIONS COMMISSION
SEPTEMBER 22, 1997

Chart 1

LIFE SPAN OR FORECAST METHOD

1. Large Individual Identifiable Units
2. Forecast Of An Individual Retirement Date Or Overall Life Span
3. Life Span - Yrs. From Avg. Date Of Placing To Avg. Date Of Retirement
4. Future Additions Are Integral Part Of Initial Installation

ANALOG ELECTRONIC SWITCHING

(INDIVIDUAL RETIREMENT DATE)

Location Name	Type	Equipped Lines	Year Placed	Book Investment	Est. Date Of Retirement
Springfield	1A	50,000	1979	15,000,000	1999
Paris	2B	10,000	1980	2,500,000	1998
Lexington	RSS	1,000	1984	500,000	1997
Total or Composite		61,000	1979.3	18,000,000	1998.8

DIGITAL ELECTRONIC SWITCHING

(OVERALL LIFE SPAN)

Location Name	Type	Equipped Lines	Year Placed	Book Investment
Jackson	5ESS	56,000	1985	20,000,000
Gainesville	DMS-100	9,000	1987	5,000,000
Lexington	RSS	200	1990	300,000
Total or Composite		65,200	1985.5	25,300,000

Est. Avg. Retirement Year = 1985.5 + 20 Year Span = 2005.5

PRODUCT LIFE CYCLE

Company A
Buried Metallic Cable

Year	1994 Study Forecast	1997 Study Actuals/Forecast	Beg of Year Investment
1994	214.9	229.8 (A)	
1995	140.5	153.5 (A)	
1996	86.5	62.1 (A)	
Total	441.9	445.4 (A)	
1997	43.4	33.2 (F)	221.3
1998	41.0	132.8 (F)	188.1
1999	44.6	55.3 (F)	55.3
Total	129.0	221.3 (F)	464.7

Average Remaining Life (As of 1/1/97) = 464.7 / 221.3 - 0.5 = 1.6 Years

Company B
Aerial Metallic Cable

Year	1991 Study Forecast	1994 Study Forecast	1997 Study Actuals
1994	7,418	5,887	3,532
1995	10,318	7,532	3,818
1996	12,697	9,037	3,490
Total	30,433	22,456	10,840

Substitution Analysis 1

OBSOLESCENCE OF CIRCUIT EQUIPMENT-ALL CATEGORIES
SURVIVORS REMAINING FROM 1987 INVESTMENT

Technology Futures Inc.•		Percent Surviving From FCC Carriers Reviewed In	
End Of Year	Percentage Surviving	1996#	1997@
1987	100		
1988	90		
1989	83		
1990	73		
1991	62		
1992	53		
1993	44		
1994	35		
1995	27	60.6	
1996	21		59.2

ARL (As of 1-1-89) = 5.3 Years

• Technological Substitution in Circuit Equipment For Local Telecommunications Copyright 1989, Technology Futures, Inc.

Includes NET, SNET, US West, GTE- South & GTE-SW

@ Includes Southwestern Bell, Cincinnati Bell & US West

Chart 4

Substitution Analysis 2

Non-SONET Circuit Equipment Survivors

Technology Futures Inc.* End Of Year	% Of 1994 Investment Surviving	Percent Surviving From Carriers Reviewed By FCC Staff In 1996#	1997@
1994	100		
1995	89	97.6	
1996	76		93.7

ARL (As of 1-1-95) = 3.7 Years

Analog SPC Survivors

Technology Futures Inc.* End Of Year	% Of 1994 Investment Surviving	Percent Surviving From Carriers Reviewed By FCC Staff In 1996#	1997@
1994	100.0		
1995	82.1	95.0	
1996	58.9		84.1

ARL (As of 1-1-95) = 2.8 Years

* Depreciation Lives for Telecommunications Equipment: Review & Update

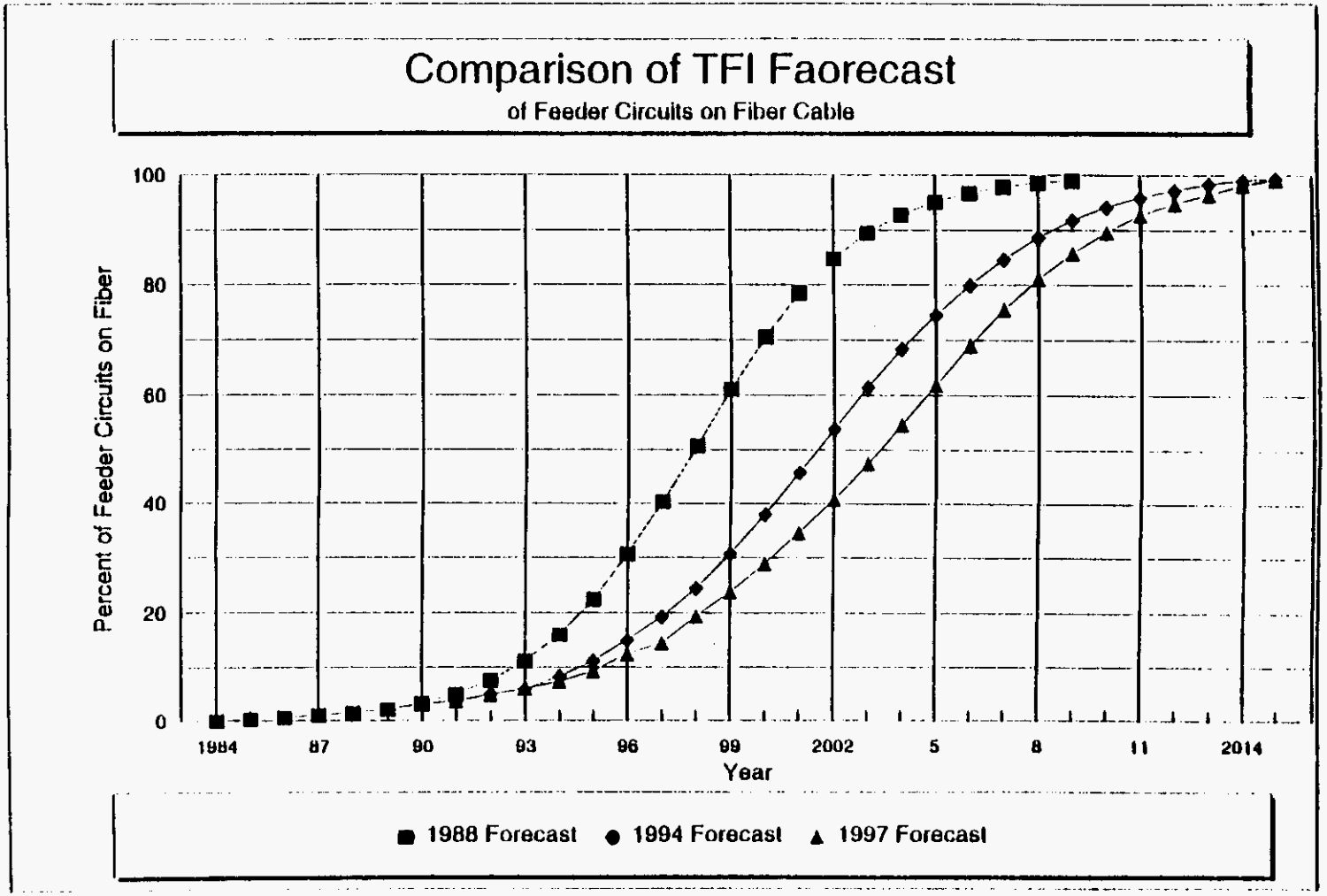
Includes NET, SNET, US West, GTE- South & GTE-SW

@ Includes Southwestern Bell, Cincinnati Bell & US West

COMPARISON OF TFI'S FIBER FEEDER FORECASTS
(PERCENT OF CIRCUITS SERVED BY FIBER CABLE)

End-of-Year	TFI's 1988 Forecast %	TFI's 1994 Forecast %	TFI's 1997 Forecast %
1982	**0.0**	**0.0**	**0.0**
1983	**0.1**	**0.1**	**0.1**
1984	**0.1**	**0.1**	**0.1**
1985	**0.4**	**0.4**	**0.4**
1986	**0.7**	**0.7**	**0.7**
1987	**1.1**	**1.1**	**1.1**
1988	**1.6**	**1.6**	**1.6**
1989	2.2	**2.2**	**2.2**
1990	3.4	**3.1**	**3.1**
1991	5.1	**3.8**	**3.7**
1992	7.6	5.1	**4.9**
1993	11.1	6.1	**6.1**
1994	16.0	8.3	**7.4**
1995	22.6	11.2	**9.3**
1996	30.8	15.0	12.4
1997	40.4	19.4	14.4
1998	50.8	24.6	19.5
1999	61.2	30.8	23.9
2000	70.6	38.0	29.0
2001	78.5	45.9	34.6
2002	84.8	53.9	40.8
2003	89.5	61.6	47.5
2004	92.9	68.5	54.6
2005	95.2	74.6	61.9
2006	96.8	80.0	69.1
2007	97.9	84.7	75.6
2008	98.6	88.7	81.1
2009	99.1	91.9	85.8
2010		94.3	89.7
2011		96.0	92.8
2012		97.3	94.9
2013		98.4	96.5
2014		99.1	98.2
2015		99.5	99.2

Note: Bold indicates actual industry percents at the time TFI projections developed.


Comparison of TFI Faorecast
of Feeder Circuits on Fiber Cable
Percent of Feeder Circuits on Fiber
100
80
60
40
20
0
1984
87
90
93
96
99
2002
5
8
11
2014
Year
1988 Forecast
1994 Forecast
1997 Forecast

BellSouth Telecommunications
General Cable
Attachment 5
Page 1 of 6

TRACK RECORD

COMPARISON OF ACTUAL RETIREMENTS AND ADDITIONS

TO THE 1989 AND 1992 DEPRECIATION STUDY FORECASTS

Retirements-Aerial Cable Metal

($000)

	Activity Year	1989 Study Forecast	1992 Study Forecast	Actuals	Percent Change 1989-1992 Study Forecast	Percent Achievement Actuals vs 1992 Study Forecast
		A	B	C	D = B/A	E = C/B
Florida	1992	13,800	15,306	23,568	110.9%	154.0%
	1993	23,200	19,917	26,934	85.8%	135.2%
	1994	26,700	25,512	9,343	95.6%	36.6%
	Totals	63,700	60,735	59,845	95.3%	98.5%
Georgia	1992	14,700	15,587	9,102	106.0%	58.4%
	1993	24,800	19,769	11,271	79.7%	57.0%
	1994	28,500	24,768	13,302	86.9%	53.7%
	Totals	68,000	60,124	33,675	88.4%	56.0%
N. Carolina	1992	6,100	10,492	5,389	172.0%	51.4%
	1993	10,200	13,707	5,727	134.4%	41.8%
	1994	11,700	17,553	5,847	150.0%	33.3%
	Totals	28,000	41,752	16,963	149.1%	40.6%
S. Carolina	1992	4,100	3,541	2,940	86.4%	83.0%
	1993	6,900	4,392	2,923	63.7%	66.6%
	1994	7,900	5,405	2,526	68.4%	46.7%
	Totals	18,900	13,338	8,389	70.6%	62.9%
Company	1992	38,700	44,926	40,999	116.1%	91.3%
	1993	65,100	57,785	46,855	88.8%	81.1%
	1994	74,800	73,238	31,018	97.9%	42.4%
	Totals	178,600	175,949	118,872	98.5%	67.6%

TRACK RECORD (cont'd)

Retirements-Underground Cable Metal

($000)

	Activity Year	1989 Study Forecast	1992 Study Forecast	Actuals	Percent Change 1989-1992 Study Forecast	Percent Achievement Actuals vs 1992 Study Forecast
		A	B	C	D = B/A	E = C/B
Florida	1992	11,300	43,211	10,404	382.4%	24.1%
	1993	19,000	53,215	19,402	280.1%	36.5%
	1994	21,800	63,915	14,845	293.2%	23.2%
	Totals	52,100	160,341	44,651	307.8%	27.8%
Georgia	1992	5,400	23,058	3,609	427.0%	15.7%
	1993	9,000	28,672	4,901	318.6%	17.1%
	1994	10,400	34,748	13,313	334.1%	38.3%
	Totals	24,800	86,478	21,823	348.7%	25.2%
N. Carolina	1992	1,300	8,807	3,075	677.5%	34.9%
	1993	2,200	11,600	4,610	527.3%	39.7%
	1994	2,500	14,818	3,859	592.7%	26.0%
	Totals	6,000	35,225	11,544	587.1%	32.8%
S. Carolina	1992	1,600	6,915	3,449	432.2%	49.9%
	1993	2,600	8,802	1,375	338.5%	15.6%
	1994	3,000	10,906	1,470	363.5%	13.5%
	Totals	7,200	26,623	6,294	369.8%	23.6%
Company	1992	19,600	81,991	20,537	418.3%	25.0%
	1993	32,800	102,289	30,288	311.9%	29.6%
	1994	37,700	124,387	33,487	329.9%	26.9%
	Totals	90,100	308,667	84,312	342.6%	27.3%

TRACK RECORD (cont'd)

Retirements-Buried Cable Metal

($000)

	Activity Year	1989 Study Forecast	1992 Study Forecast	Actuals	Percent Change 1989-1992 Study Forecast	Percent Achievement Actuals vs 1992 Study Forecast
		A	B	C	D = B/A	E = C/B
Florida	1992	35,100	58,236	23,142	165.9%	39.7%
	1993	59,000	76,137	22,283	129.0%	29.3%
	1994	67,800	97,482	23,506	143.8%	24.1%
	Totals	161,900	231,855	68,931	143.2%	29.7%
Georgia	1992	20,600	34,487	17,170	167.4%	49.8%
	1993	34,700	44,774	17,101	129.0%	38.2%
	1994	39,900	56,878	20,802	142.6%	36.6%
	Totals	95,200	136,139	55,073	143.0%	40.5%
N. Carolina	1992	16,800	22,987	11,061	136.8%	48.1%
	1993	28,300	29,710	10,344	105.0%	34.8%
	1994	32,500	37,674	13,343	115.9%	35.4%
	Totals	77,600	90,371	34,748	116.5%	38.5%
S. Carolina	1992	8,400	16,867	9,247	200.8%	54.8%
	1993	14,100	19,942	7,793	141.4%	39.1%
	1994	16,200	23,458	7,261	144.8%	31.0%
	Totals	38,700	60,267	24,301	155.7%	40.3%
Company	1992	80,900	132,577	60,620	163.9%	45.7%
	1993	136,100	170,563	57,521	125.3%	33.7%
	1994	156,400	215,492	64,912	137.8%	30.1%
	Totals	373,400	518,632	183,053	138.9%	35.3%

COMPARISON OF BELLSOUTH'S METALLIC CABLE FORECAST TO ACTUAL RETIREMENTS

(BellSouth-Florida)

	BellSouth Florida Retirement Forecast ** ($000) (a)	Total Actual Booked Retirements * ($000) (b)	Retirements Associated With Hurricane Andrew ($000) (c)	Normal Retirements Excluding Andrew ($000) (d=b-c)	Forecast Error *** (%) (e=(a-d)/a
Aerial Cable - Metallic					
1992	15,306	23,228	2,577	20,651	-34.9%
1993	19,917	26,934	14,602	12,332	38.1%
1994	25,512	9,343	0	9,343	63.4%
1995	31,214	12,840	0	12,840	58.9%
1996	35,722	8,995	0	8,995	74.8%
1997	37,788	5,541	0	5,541	85.3%
1998	36,881	5,678	0	5,678	84.6%
1999	36,253	6,205	0	6,205	82.9%
Totals for Years 1992-199	238,593	98,764	17,179	81,585	65.8%

Docket No. 920385-TL Authorized Lives Based on Bell South Forecast (Aerial Cable - Metallic)
Authorized Remaining Life 9.7 Years
Associated Projection Life 15.5 Years

Underground Cable- Metallic					
1992	43,211	10,495	39	10,456	75.8%
1993	53,215	19,402	221	19,181	64.0%
1994	63,915	14,845	0	14,845	76.8%
1995	74,534	11,837	0	11,837	84.1%
1996	81,990	6,178	0	6,178	92.5%
1997	82,709	3,128	0	3,128	96.2%
1998	75,297	1,058	0	1,058	98.6%
1999	64,210	2,685	0	2,685	95.8%
Totals for Years 1992-199	539,081	69,628	260	69,368	87.1%

Docket No. 920385-TL Authorized Lives Based on Bell South Forecast (Underground Cable - Metallic)
Authorized Remaining Life 6.0 Years
Associated Projection Life 11.6 Years

Buried Cable - Metallic					
1992	58,236	22,881	783	22,098	62.1%
1993	76,137	22,283	4,438	17,845	76.6%
1994	97,482	23,506	0	23,506	75.9%
1995	119,162	20,135	0	20,135	83.1%
1996	135,835	21,445	0	21,445	84.2%
1997	142,227	12,382	0	12,382	91.3%
1998	136,155	7,803	0	7,803	94.3%
1999	128,314	14,786	0	14,786	88.5%
Totals for Years 1992-199	893,548	145,221	5,221	140,000	84.3%

Docket No. 920385-TL Authorized Lives Based on Bell South Forecast (Buried Cable - Metallic)
Authorized Remaining Life 9.0 Years
Associated Projection Life 15.0 Years

Total Metallic Cable	**$1,671,222**	$313,613	$22,660	**$290,953**	**82.6%**
Combined Forecast Error (1992-1997)				**($1,380,269)**	

* Cunningham Exhibit GDC-2, Table A's .
** FPSC Docket No. 920385-TL. These forecast were the basis for the FPSC's depreciation rate prescriptions for these accounts.
*** Positive value indicates BellSouth's forecast included more retirements in life projections than actually occurred.

Florida Projection Life Comparison

Recommended Inputs - Bell South

	Account Number	Account Name	FCC Range Low (a)	FCC Range High (b)	BS FCC (c)	BS FPSC (d)	BS PROP (e)	SK PROP (f)
1	2112	Motor Vehicles	7.5	9.5	7.5	7.5	8.0	7.5
2	2114	Spec. Purp. Vehicles	12.0	18.0	7.0	7.0	7.0	7.0
3	2115	Garage Work Eqpt	12.0	18.0	12.0	12.0	12.0	12.0
4	2116	Other Work Eqpt	12.0	18.0	15.0	15.0	15.0	15.0
5	2121	Buildings	-	-	48.0	45.0	45.0	45.0
6	2122	Furniture	15.0	20.0	11.0	11.0	15.0	11.0
7	2123.1	Ofc. Support Eqpt	10.0	15.0	10.5	10.5	11.5	10.5
8	2123.2	Co. Comm. Eqpt	7.0	10.0	7.0	7.0	7.0	7.0
9	2124	Gen. Purpose Computers	6.0	8.0	5.5	4.4	4.5	4.4
10	2211	Analog Switching	-	-	1998.8	4.2	2001.6	2001.6
11	2212	Digital Switching	12.0	18.0	16.0	16.0	10.0	16.0
12	2220	Operator Systems	8.0	12.0	10.0	10.0	10.0	10.0
13	2231	Radio Systems	9.0	15.0	7.0	7.0	9.0	7.0
14	2232.11	DDS Circuit	7.0	11.0	6.0	6.0	8.0	6.0
15	2232.12	Digital Circuit	11.0	13.0	10.5	10.5	9.0	10.5
16	2232.20	Analog Circuit	8.0	11.0	7.0	6.8	7.5	6.8
17	2311	Station Apparatus	5.0	8.0	8.0	-	6.0	8.0
18	2341	Large PBX	5.0	8.0	5.0	5.0	6.0	5.0
19	2351	Public Telephones	7.0	10.0	7.0	7.0	-	7.0
20	2362	Other Terminal Equip.	5.0	8.0	6.0	6.0	6.0	6.0
21	2411	Poles	25.0	35.0	35.0	35.0	36.0	35.0
22	2421.1	Aerial Cable - Met	20.0	26.0	18.0	18.0	15.0	18.0
23	2421.2	Aerial Cable - Fiber	25.0	30.0	25.0	20.0	20.0	25.0
24	2422.1	Underground Cable - Met	25.0	30.0	23.0	23.0	14.0	23.0
25	2422.2	Underground Cable - Fiber	25.0	30.0	25.0	20.0	20.0	25.0
26	2423.1	Buried Cable - Met	20.0	26.0	18.0	18.0	15.0	18.0
27	2423.2	Buried Cable - Fiber	25.0	30.0	25.0	20.0	20.0	25.0
28	2424.1	Submarine Cable - Met	25.0	30.0	18.0	18.0	15.0	18.0
29	2424.2	Submarine Cable - Fiber	25.0	30.0	18.0	20.0	15.0	20.0
30	2426.1	Intrabldg Cable - Met	20.0	25.0	20.0	20.0	20.0	20.0
31	2426.2	Intrabldg Cable - Fiber	25.0	30.0	20.0	20.0	20.0	20.0
32	2441	Conduit Systems	50.0	60.0	55.0	55.0	55.0	55.0

Source: Col a, b = FCC Docket No. 92-296 Orders released 6/28/94 and 5/4/95 and Docket No. 98-137 Order released 12/30/99.
Col c = FCC Parameter Report, July 20, 1995
Col d = Florida Dkt. Nos. 960833-TP/960846-TP/971140 TP Order.
Col e = Cunningham Exhibit GDC-2.

Florida Future Net Salvage Comparison

Recommended Inputs - Bell South

	Account Number	Account Name	FCC Range Low (a)	FCC Range High (b)	BS FCC (c)	BS FPSC (d)	BS PROP (e)	SK PROP (f)
1	2112	Motor Vehicles	10.0	20.0	10.0	10.0	16.0	16.0
2	2114	Spec. Purp. Vehicles	0.0	10.0	-	0.0	0.0	0.0
3	2115	Garage Work Eqpt	0.0	10.0	0.0	0.0	0.0	0.0
4	2116	Other Work Eqpt	0.0	10.0	1.0	1.0	0.0	0.0
5	2121	Buildings	-	-	4.0	4.0	0.0	0.0
6	2122	Furniture	0.0	10.0	14.0	14.0	10.0	10.0
7	2123.1	Ofc. Support Eqpt	0.0	10.0	10.0	10.0	5.0	5.0
8	2123.2	Co. Comm. Eqpt	-5.0	10.0	10.0	10.0	10.0	10.0
9	2124	Gen. Purpose Computers	0.0	5.0	0.0	0.0	2.0	2.0
10	2211	Analog Switching	-	-	0.0	0.0	0.0	0.0
11	2212	Digital Switching	0.0	5.0	0.0	0.0	0.0	0.0
12	2220	Operator Systems	0.0	5.0	0.0	0.0	0.0	0.0
13	2231	Radio Systems	-5.0	5.0	-5.0	-5.0	-5.0	-5.0
14	2232.11	DDS Circuit	-5.0	10.0	0.0	0.0	2.0	2.0
15	2232.12	Digital Circuit	0.0	5.0	0.0	0.0	0.0	0.0
16	2232.20	Analog Circuit	-5.0	0.0	-10.0	-10.0	0.0	0.0
17	2311	Station Apparatus	-5.0	5.0	0.0	0.0	0.0	0.0
18	2341	Large PBX	-5.0	5.0	0.0	0.0	5.0	5.0
19	2351	Public Telephones	0.0	10.0	10.0	10.0	-	10.0
20	2362	Other Terminal Equip.	-5.0	5.0	-4.0	-4.0	5.0	5.0
21	2411	Poles	-75.0	-50.0	-75.0	-75.0	-55.0	-55.0
22	2421.1	Aerial Cable - Met	-35.0	-10.0	-11.0	-11.0	-14.0	-14.0
23	2421.2	Aerial Cable - Fiber	-25.0	-10.0	-11.0	-11.0	-14.0	-14.0
24	2422.1	Underground Cable - Met	-30.0	-5.0	-7.0	-7.0	-8.0	-8.0
25	2422.2	Underground Cable - Fiber	-20.0	-5.0	-6.0	-6.0	-8.0	-8.0
26	2423.1	Buried Cable - Met	-10.0	0.0	-8.0	-8.0	-7.0	-7.0
27	2423.2	Buried Cable - Fiber	-10.0	0.0	0.0	0.0	-7.0	-7.0
28	2424.1	Submarine Cable - Met	-5.0	0.0	-5.0	-5.0	-5.0	-5.0
29	2424.2	Submarine Cable - Fiber	-5.0	0.0	-5.0	-5.0	-5.0	-5.0
30	2426.1	Intrabldg Cable - Met	-30.0	-5.0	-12.0	-12.0	-10.0	-10.0
31	2426.2	Intrabldg Cable - Fiber	-15.0	0.0	-12.0	-12.0	-10.0	-10.0
32	2441	Conduit Systems	-10.0	0.0	-7.0	-7.0	-10.0	-10.0

Source: Col a, b = FCC Docket No. 92-296 Orders released 6/28/94 and 5/4/95
Col c = FCC Parameter Report, July 20, 1995
Col d = Florida Dkt. Nos. 960833-TP/960846-TP/971140 TP Order.
Col e = Cunningham Exhibit GDC-2.

Florida Projection Life Comparison

Recommended Inputs - GTE

	Account Number	Account Name	FCC Range Low (a)	FCC Range High (b)	GTE FCC (c)	GTE FPSC (d)	GTE PROP (e)	SK PROP (f)
1	2112	Motor Vehicles	7.5	9.5	7.5		8.0	7.5
2	2113	Aircraft	7.0	10.0	-		5.0	-
3	2114	Spec. Purp. Vehicles	12.0	18.0	-		10.0	-
4	2116	Other Work Eqpt	12.0	18.0	12.0		10.0	12.0
5	2121	Buildings	-	-	40.0		35.0	40.0
6	2122	Furniture	15.0	20.0	15.0		10.0	15.0
7	2123.1	Ofc. Support Eqpt	10.0	15.0	10.0		10.0	10.0
8	2123.2	Co. Comm. Eqpt	7.0	10.0	7.0		10.0	7.0
9	2124	Gen. Purpose Computers	6.0	8.0	6.0		5.0	6.0
10	2211	Analog Switching	-	-	-		-	-
11	2212	Digital Switching	12.0	18.0	16.0		10.0	16.0
12	2220	Operator Systems	8.0	12.0	8.0		10.0	8.0
13	2231	Radio Systems	9.0	15.0	9.0		10.0	9.0
14	2232.11	DDS Circuit	7.0	11.0	9.0		8.0	9.0
15	2232.12	Digital Circuit	11.0	13.0	9.0		8.0	9.0
16	2232.20	Analog Circuit	8.0	11.0	9.0		8.0	9.0
17	2311	Station Apparatus	5.0	8.0	-		-	-
18	2341	Large PBX	5.0	8.0	-		-	-
19	2351	Public Telephones	7.0	13.0	7.0		-	7.0
20	2362	Other Terminal Equip.	5.0	8.0	5.0		5.0	5.0
21	2411	Poles	25.0	35.0	25.0		25.0	25.0
22	2421.1	Aerial Cable - Met	20.0	26.0	20.0		15.0	20.0
23	2421.2	Aerial Cable - Fiber	25.0	30.0	25.0		20.0	25.0
24	2422.1	Underground Cable - Met	25.0	30.0	25.0		15.0	25.0
25	2422.2	Underground Cable - Fiber	25.0	30.0	25.0		20.0	25.0
26	2423.1	Buried Cable - Met	20.0	26.0	20.0		15.0	20.0
27	2423.2	Buried Cable - Fiber	25.0	30.0	25.0		20.0	25.0
28	2424.1	Submarine Cable - Met	25.0	30.0	20.0		15.0	20.0
29	2424.2	Submarine Cable - Fiber	25.0	30.0	25.0		20.0	25.0
30	2425.1	Deep Sea Cable - Met	-	-	-		15.0	-
31	2425.2	Deep Sea Cable - Fiber	-	-	-		20.0	-
32	2426.1	Intrabldg Cable - Met	20.0	25.0	20.0		15.0	20.0
33	2426.2	Intrabldg Cable - Fiber	25.0	30.0	20.0		20.0	20.0
34	2431	Aerial Wire	-	-	8.0		15.0	8.0
32	2441	Conduit Systems	50.0	60.0	50.0		40.0	50.0

Source: Col a, b = FCC Docket No. 92-296 Orders released 6/28/94 and 5/4/95.
and Docket No. 98-137 Order released 12/30/99.
Col c = FCC Parameter Report, August 11, 1995.
Col d = FPSC values not available.
Col e = Sovereign Exhibit AES-2.

Florida Future Net Salvage Comparison

Recommended Inputs - GTE

	Account Number	Account Name	FCC Range Low (a)	FCC Range High (b)	GTE FCC (c)	GTE FPSC (d)	GTE PROP (e)	SK PROP (f)
1	2112	Motor Vehicles	10.0	20.0	18.0		16.0	18.0
2	2113	Aircraft	7.0	10.0	-		50.0	-
3	2114	Spec. Purp. Vehicles	0.0	10.0	-		0.0	-
4	2116	Other Work Eqpt	0.0	10.0	0.0		0.0	0.0
5	2121	Buildings	-	-	0.0		0.0	0.0
6	2122	Furniture	0.0	10.0	9.0		0.0	9.0
7	2123.1	Ofc. Support Eqpt	0.0	10.0	8.0		0.0	8.0
8	2123.2	Co. Comm. Eqpt	-5.0	10.0	-5.0		0.0	-5.0
9	2124	Gen. Purpose Computers	0.0	5.0	0.0		0.0	0.0
10	2211	Analog Switching	-	-	-		-	-
11	2212	Digital Switching	0.0	5.0	0.0		0.0	0.0
12	2220	Operator Systems	0.0	5.0	0.0		0.0	0.0
13	2231	Radio Systems	-5.0	5.0	-5.0		0.0	-5.0
14	2232.11	DDS Circuit	-5.0	10.0	3.0		0.0	3.0
15	2232.12	Digital Circuit	0.0	5.0	3.0		0.0	3.0
16	2232.20	Analog Circuit	-5.0	0.0	3.0		0.0	3.0
17	2311	Station Apparatus	-5.0	5.0	-		-	-
18	2341	Large PBX	-5.0	5.0	-		-	-
19	2351	Public Telephones	0.0	10.0	0.0		-	0.0
20	2362	Other Terminal Equip.	-5.0	5.0	-5.0		0.0	-5.0
21	2411	Poles	-75.0	-50.0	-75.0		-75.0	-75.0
22	2421.1	Aerial Cable - Met	-35.0	-10.0	-35.0		-30.0	-35.0
23	2421.2	Aerial Cable - Fiber	-25.0	-10.0	-25.0		-20.0	-25.0
24	2422.1	Underground Cable - Met	-30.0	-5.0	-17.0		-20.0	-17.0
25	2422.2	Underground Cable - Fiber	-20.0	-5.0	-9.0		-10.0	-9.0
26	2423.1	Buried Cable - Met	-10.0	0.0	-10.0		0.0	-10.0
27	2423.2	Buried Cable - Fiber	-10.0	0.0	-10.0		0.0	-10.0
28	2424.1	Submarine Cable - Met	-5.0	0.0	-5.0		-10.0	-5.0
29	2424.2	Submarine Cable - Fiber	-5.0	0.0	-5.0		-10.0	-5.0
30	2425.1	Deep Sea Cable - Met	-	-	-		-10.0	-
31	2425.2	Deep Sea Cable - Fiber	-	-	-		-10.0	-
32	2426.1	Intrabldg Cable - Met	-30.0	-5.0	-10.0		0.0	-10.0
33	2426.2	Intrabldg Cable - Fiber	-15.0	0.0	-10.0		0.0	-10.0
34	2431	Aerial Wire	-	-	-7.0		-30.0	-7.0
32	2441	Conduit Systems	-10.0	0.0	-10.0		-10.0	-10.0

Source: Col a, b = FCC Docket No. 92-296 Orders released 6/28/94 and 5/4/95.
Col c = FCC Parameter Report, August 11, 1995.
Col d = FPSC values not available.
Col e = Sovereign Exhibit AES-2.