



ORIGINAL

Florida Cable Telecommunications Association

Steve Wilkerson, President

VIA HAND DELIVERY

September 2, 1998

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

RE: Docket No. 980696-TP

Dear Ms. Bayo:

Enclosed for filing in the above docket are the original and fifteen (15) copies of the Rebuttal Testimony of William J. Barta on behalf of the Florida Cable Telecommunications Association. Copies have been served on the parties of record pursuant to the attached certificate of service.

Please acknowledge receipt of filing of the above by stamping the duplicate copy of this letter and returning the same to me.

ACK ✓ Thank you for your assistance in process this filing. Please contact me with any
AFA 2 questions.

APP _____
CAF _____ Yours very truly,

CMU *[Signature]*
CTR *[Signature]*
EAG _____
LEG 2 _____
LIN *[Signature]*
OPC _____
RCH _____
SEC 1 _____
WAS _____
OTH _____

Laura L. Gallagher
Vice President, Regulatory Affairs &
Regulatory Counsel

cc: All Parties of Record
Steven E. Wilkerson
William J. Barta

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DOCUMENT NUMBER-DATE
09593 SEP-28

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

In Re: Determination of the cost)
of basic local)
telecommunications service,) Docket No. 980696-TP
pursuant to Section 364.025,)
Florida Statutes)

REBUTTAL TESTIMONY

OF

WILLIAM J. BARTA

ON BEHALF OF THE

FLORIDA CABLE TELECOMMUNICATIONS ASSOCIATION

**HENDERSON RIDGE CONSULTING, INC.
ATLANTA, GEORGIA
SEPTEMBER 2, 1998**

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**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

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I. PURPOSE OF REBUTTAL TESTIMONY

10 **Q. Please state your name and business address.**

11 **A. My name is William Barta, and my business address is 1140 Liberty Grove Road,
12 Alpharetta, Georgia, 30004.**

13 **Q. Have you previously submitted testimony in this proceeding?**

14 **A. Yes. I submitted direct testimony in this proceeding on August 3, 1998.**

15 **Q. What is the purpose of your rebuttal testimony?**

16 **A. My testimony comments upon the cost proxy models that have been submitted by
17 the large incumbent local exchange carriers (i.e. BellSouth, GTE, and Sprint) and
18 jointly by AT&T/MCI to estimate the cost of providing basic local
19 telecommunications service. The testimony discusses the modifications that should
20 be made to the model inputs in order to develop more reliable forward-looking cost
21 estimates. In addition, my testimony rebuts ILEC claims concerning the need to
22 establish an intrastate universal service fund at this time.**

23 **Q. Please summarize your testimony.**

24 **A. The Florida Legislature has directed the Florida Public Service Commission ("the
25 Commission" or "the FPSC") to determine and report the total forward-looking
economic costs ("FLEC") of providing basic local telecommunications service in**

1 Florida. The FLEC models submitted for the Commission's consideration produce
2 sharply divergent results with respect to universal service support requirements.
3 Indeed, the Benchmark Cost Proxy Model, Version 3.1 ("BCPM 3.1") submitted by
4 the non-rural local exchange carriers ("LECs") generate high estimates of required
5 universal service support relative to those calculated under the Hatfield Model,
6 Version 5.0a ("HM 5.0a"). My testimony addresses the model inputs that are most
7 likely to influence the cost estimates of each model. Assuming that the Florida
8 Legislature wishes to obtain this cost information in order to evaluate whether to
9 establish a permanent universal service fund for Florida, it is important to
10 distinguish between the estimated cost of service versus the need for and size of
11 any fund.

12
13 This docket focuses on the determination of the forward-looking costs to provide
14 basic local telecommunications service in Florida. The proceeding has not been
15 initiated to quantify the level of universal service support. Indeed, it has not been
16 established that any funding is necessary at this time. The Commission should note
17 that competition, especially for basic local exchange service, will not be realized for
18 many years. The incumbent local exchange carriers will be the primary
19 beneficiaries of any universal service support established by the Legislature
20 throughout the transition to a fully competitive market. An oversized universal
21 service support system will create an unnecessary windfall for the ILECs that poses
22 a barrier to entry for would-be competitors. Thus, while the FCTA proposes certain
23 adjustments to the cost estimates in this proceeding, the FCTA opposes the
24 establishment of a permanent universal service fund at this time.

25

1 In assessing the need for a universal service support mechanism, a number of other
2 factors deserve equal consideration in addition to carrier-provided cost information.
3 The need for a universal service fund should be first considered in terms of the
4 incumbent carrier's overall profitability in serving the residential subscriber
5 throughout the State of Florida. The degree of competition, both on a current and
6 prospective basis, also influences the urgency for the establishment of a State fund.
7 Other issues that will likely be addressed in a separate proceeding by the
8 Commission include the revenue benchmark, the appropriate affordability threshold,
9 and the opportunities for rate rebalancing. These areas are further measures that
10 can be used to offset the need for an intrastate universal service fund.

11 12 13 II. THE PROCEDURAL BACKGROUND

14
15 Q. What are the events that have led to the initiation of this proceeding?

16 A. On the federal level, a trilogy of regulatory initiatives is underway focusing on
17 achieving the pro-competitive objectives of the Telecommunications Act of 1996.
18 Universal service reform is one of the areas specifically addressed by the 1996 Act.
19 The other two components of the trilogy include local competition (i.e.
20 interconnection and unbundled network element rates) and access charge reform
21 rulemakings.

22
23 On May 8, 1997, the Federal Communications Commission released its Universal
24 Service Order (CC Docket 98-45) implementing the universal service reform
25 requirements outlined in the 1996 Act. Although the FCC's Universal Service Order

1 provides guidance to State regulatory authorities, each jurisdiction can elect to
2 conduct its own study to determine the costs of providing universal service. In that
3 vein, pursuant to Chapter 384.025, Florida Statutes, the Legislature has directed
4 the Commission to conduct a study and report on the forward-looking cost of
5 providing basic local telecommunications services by February 15, 1999.

6
7 On June 19, 1998, the FPSC issued Order No. PSC-98-0813-PCO-TP establishing
8 a procedure to determine the cost of basic local telecommunications service
9 pursuant to Chapter 384.025, Florida Statutes. The Commission will report back
10 its findings to the Legislature by February 15, 1998.

11 12 13 III. AN OVERALL ASSESSMENT OF THE COST MODELS

14
15 Q. What forward-looking economic cost models have been submitted in this proceeding
16 to estimate the costs of providing universal service?

17 A. There are two forward-looking economic cost models that have been submitted to
18 estimate the cost of providing universal service in Florida. The models under
19 consideration include the Benchmark Cost Proxy Model, Version 3.1 and the
20 Hatfield Model, Version 5.0a. Cost studies that are based upon the BCPM 3.1 have
21 been submitted by BellSouth Telecommunications, Inc., Sprint, and, GTE. The joint
22 sponsors of the Hatfield Model 5.0a are AT&T and MCI.

23
24 Q. What analysis of the BCPM 3.1 and the Hatfield Model 5.0a have you performed?
25

1 A. I have reviewed the documentation submitted by the sponsors in support of the
2 forward-looking economic cost models and attended workshops sponsored by
3 regulatory authorities where the design and operation of the BCPM and the Hatfield
4 Model were presented. I have also reviewed ex parte filings submitted by a number
5 of industry participants to the FCC in the matter of developing a forward-looking
6 economic cost model to estimate the cost of providing universal service.
7

8 Q. What general observations do you have regarding the BCPM and the Hatfield
9 Model?

10 A. The respective FLEC models are sponsored by industry members with very
11 divergent views and agendas regarding the cost to provide universal service. The
12 Commission would do well to keep in mind that the majority of universal service
13 support, at least in the foreseeable future, will flow to the incumbent local
14 exchange carriers. Thus, in developing a FLEC model, the sponsors of the BCPM
15 are incented towards a higher cost estimate of providing universal service. On the
16 other hand, a lower cost estimate that minimizes the size of the USF is consistent
17 with the desires of the joint sponsors of the Hatfield Model who are likely to be
18 large contributors to any universal service support system.
19

20 Q. What are the critical components that a cost proxy model must address in the
21 design of a telecommunications network?

22 A. The design of the cost proxy model must be consistent with the policy that every
23 customer who desires service is connected to a local central office switch. The
24 critical components in achieving ubiquitous connectivity include accurately locating
25

1 customers and then designing the least-cost, most efficient feeder and distribution
2 network to serve the customers.

3
4 Q. To what extent have you examined the processes performed within the BCPM 3.1
5 and the HM 5.0a to locate customers and configure the feeder and distribution
6 network?

7 A. In addition to the explanations of the customer location methodology and network
8 configuration presented by the model sponsors at workshops, I have reviewed the
9 documentation provided in support of the carriers' prefiled testimony. Each cost
10 proxy model engages in a series of complex algorithms and iterations based upon
11 Census Block data (i.e. road and household data), wire center information obtained
12 from Business Location Research, and business line data acquired from PNR and
13 Associates. The cost proxy models process this data in an effort to accurately
14 locate customers. Indeed, each model further refines the data through clustering
15 algorithms in an attempt to identify clusters of customers in recognition that
16 subscribers are not uniformly dispersed throughout a carrier's service territory. The
17 end result of these sophisticated mathematical processes is to locate, or assign,
18 customers at a very discrete level (i.e. the microgrid level) and design a network
19 within the engineering constraints of a Carrier Serving Area.

20
21 The customer location methodology and the configuration of serving areas represent
22 model platforms that are not readily subject to revision as user inputs. Although
23 the approaches in which the BCPM 3.1 and HM 5.0a process the customer
24 information data and configure the network to serve the customers differ, it is
25

1 difficult to isolate the impact of these differences in each model's final cost
2 estimate to provide universal service.

4 IV. A DISCUSSION OF THE MODEL INPUTS

5
6 Q. Did you review any other areas or features of the cost proxy models in addition to
7 the customer location and network configuration methodologies?

8 A. Yes. I reviewed each model's inputs documentation provided in support of the
9 BCPM and the Hatfield Model. The flexibility of both models is evident from the
10 volume of inputs the user can change. In my analysis of the differences that exist
11 between specific user inputs, I have focused on those inputs that I believe most
12 materially effect the output of the models, i.e. the final cost estimates.

13
14 My review considered the input parameters effecting the level of investment
15 required to provide universal service, the related capital costs, and the operating
16 expenses necessary to maintain and operate the network. The discussion of these
17 issues is intended to result in revisions that more appropriately reflect the forward-
18 looking conditions that the incumbent local exchange carriers are likely to encounter
19 during the study period. Other parties to the proceeding may raise valid concerns
20 over the values of additional model inputs.

21
22 Q. What overall cost of capital has been assumed by each of the carriers in the cost
23 proxy models?

24 A. In submitting its cost study based upon the BCPM 3.1, BellSouth assumes that the
25 cost of debt will be 6.5% and the cost of equity will be 14.4% on a forward-

1 looking basis. The Company also assumes a debt ratio of 40% which results in an
2 overall cost of capital of 11.24%. The projected overall cost of capital is intended
3 to mirror the current interstate rate of return of 11.25% authorized by the FCC.

4
5 The 12.63% overall cost of capital projected by GTE for use in the BCPM 3.1 is
6 based upon a cost of debt of 6.9% and a cost of equity of 14.3%. The
7 capitalization ratios are assumed to be a debt ratio of 22.5% and an equity ratio of
8 77.5%.

9
10 Sprint forecasts an overall cost of capital of 11.23% for use in BCPM 3.1. The
11 11.23% overall rate of return is comprised of a cost of debt of 7.0% and a cost of
12 equity of 14.1%. A capital structure consisting of 40.4% debt and 59.6% equity
13 is assumed. Sprint, like BellSouth, believes that the FCC authorized rate of return
14 of 11.25% should be used in the cost proxy model.

15
16 The weighted average cost of capital used in the Hatfield Model, Version 5.0a for
17 all incumbent local exchange carriers is 10.01%. The cost of capital is based upon
18 a cost of debt of 7.7% and a cost of equity of 11.90%. The capitalization ratios
19 include 45% debt and 55% equity.

20
21 Q. What cost of capital do you recommend be used in the cost proxy models?

22 A. The authorized intrastate cost of capital for a regulated utility is typically decided
23 by the Commission after hearing testimony from the parties participating in the
24 proceeding. Until the Commission reaches a decision regarding the appropriate
25 forward-looking cost of capital in the instant proceeding, the rate of return

1 estimated by the HM 5.0a sponsors appears to be more representative of the ILECs'
2 forward-looking cost of capital. The HM 5.0a cost of capital more appropriately
3 recognizes the lower business risk attributed to the inherent efficiencies derived
4 from the incumbent local exchange carriers' network economies of scale and scope.
5 In addition, the HM 5.0a cost of capital more closely reflects the fact that there is
6 no meaningful competition for basic local service at this time.

7

8 **Q. What is a fill factor?**

9 A. A fill factor represents the percentage of the network facility that is being used.
10 Neither regulated or nonregulated firms anticipate or desire to be at full, or 100
11 percent, utilization of capacity. Thus, the network facilities of telecommunications
12 common carriers are engineered with an appropriate amount of spare capacity in
13 mind. The spare capacity can take the form of administrative spare, spare capacity
14 attributed to modularity, and demand related spare.

15

16 **Q. How do the fill factors adopted for feeder and distribution facilities effect the cost
17 estimates developed by the models?**

18 A. The fill factors used in the BCPM 3.1 and the Hatfield Model 5.0a effect the level
19 of investment required to provide services to customers. Lower than necessary
20 utilization rates increase total loop investment because the increase in capacity
21 associated with lower fill factors increases the amount of loop plant used to deliver
22 telecommunications services. Optimistically robust fill factors may jeopardize the
23 quality of service. The feeder and distribution fill factors used in the Hatfield Model
24 are higher than those used in the BCPM.

25

1 The appropriate fill factor used in the cost proxy models should balance current and
2 expected demand levels for the supported universal services as well as
3 accommodate the requirements for administrative and modular related spare
4 capacity over the economic life of the feeder and distribution facilities.

5
6 **Q.** What is meant by the sharing of support structures?

7 **A.** Structure sharing refers to the practice of sharing investments in poles, trenches,
8 and conduits with other utilities and/or carriers.

9
10 **Q.** What do each of the models assume with respect to the sharing of support
11 structures?

12 **A.** The level of sharing of support structures projected in the Hatfield Model is
13 significantly greater than in the BCPM. In both models, the amount of structure
14 sharing depends upon the type of structure and the density zone.

15
16 The Hatfield Model sponsors believe that the increased level of sharing of support
17 structures on a forward-looking basis is attributed to the strong economic and
18 financial incentives that will prevail on a forward-looking basis:

19
20 *First, because utilities are now more likely to either face
21 competition or to be regulated on the basis of their prices
22 (e.g. price caps) rather than their costs (e.g. ratebase), a
23 LEC's own economic incentive is to share use of its
24 investment in outside plant structure. Such arrangements
25 permit the LEC to save substantially on its outside plant costs

1 by spreading these costs across other utilities or users.
2 Second, many localities now strongly encourage joint pole
3 usage or trenching operations for conduit and buried facilities
4 as a means of minimizing the unsightliness and/or right-of-
5 way congestion occasioned by multiple poles, or disruptions
6 associated with multiple trenching activities.

7
8 Because of these economic and legal incentives, not only has
9 structure sharing recently become more common, but its
10 incidence is likely to accelerate in the future -- especially
11 given the Federal Telecommunications Act's requirements for
12 nondiscriminatory access to structure at economic prices"
13 (Hatfield Model Version 5.0a, inputs Portfolio, Appendix B,
14 page 151).

15
16 The sponsors of the BCPM rely upon past and current experience with the sharing
17 of structures within the state. The model documentation states that structure
18 sharing is based upon "BellSouth Florida-specific structure sharing percentages to
19 reflect values representative of BellSouth's costs in Florida" (BCPM 3.1
20 documentation, Section 4, Proposed BCPM 3.1 Inputs). Witnesses testifying on
21 behalf of the BCPM in other jurisdictions have concluded that the sharing of
22 trenches and conduit among utilities and other users is negligible. These
23 conclusions were reached based upon inquiries of state contractors regarding the
24 degree of sharing of trenching in distribution and feeder routes and current
25 experience with sharing of underground facilities (Rebuttal Testimony of Jamshed

1 K. Madan, Michael D. Dirmier, and David C. Newton on behalf of BellSouth
2 Telecommunications, Inc., Tennessee Regulatory Authority Docket No. 97-01262).

3
4 **Q. How should the FPSC address the percentage of structure sharing in the cost proxy
5 model used for universal service support?**

6 **A. Clearly, the model sponsors have differing views on the level of structure sharing
7 that is likely to occur on a forward-looking basis. The issues raised by the Hatfield
8 Model sponsors have merit -- the percentages of structure sharing among utilities
9 and other users should increase in the future as more parties require space on a
10 limited number of facilities and right-of-ways. But it is doubtful whether the degree
11 of structure sharing envisioned by the Hatfield Model sponsors will materialize
12 immediately or even in the near future.**

13
14 The model inputs for structure sharing should be revised, by density zone, in order
15 to reflect a more realistic sharing arrangement. The structure sharing percentage
16 should recognize that there will be more carriers seeking the economic benefits of
17 structure sharing but the opportunities for such sharing may be constrained for a
18 number of reasons, including engineering limitations.

19
20 **Q. What depreciation rates are used in the cost proxy models?**

21 **A. The Hatfield Model adopts the average projection lives adjusted for net salvage
22 value as determined in the three-way meetings held between the FCC, the State
23 regulatory authority, and the utility for 76 LEC study areas. As explained in the
24 Hatfield Model Version 5.0a documentation on page 67:**

1 "[T]he model assumes straight-line depreciation and calculates
2 return on investment, tax gross-up and depreciation expenses
3 annually on the mid-year value of the investment. Because
4 capital carrying costs are levelized, substitution of nonlinear
5 or accelerated depreciation schedules for straight-line
6 depreciation would have almost no net effect on calculated
7 annual capital carrying costs (aside from favorable tax
8 effects)."

9
10 The incumbent local exchange carriers adopt a different approach to populate the
11 depreciation-related model inputs than the one used in HM 5.0a. BellSouth presents
12 the rates developed by its Depreciation Organization, GTE asserts that its 1996
13 financial reporting rates are representative of forward-looking conditions, and Sprint
14 relies upon an outside study conducted by Technology Futures, Inc.

15
16 Q. What depreciation rates should be adopted by the Commission for use in the cost
17 proxy model?

18 A. The Commission should adopt the economic lives and net salvage values prescribed
19 for the Florida operations of BellSouth and GTE by the FCC. The forward-looking
20 depreciation lives and future net salvage estimates prescribed by the FCC are
21 grounded in a comprehensive examination and offer an objective assessment of
22 capital recovery rates. The FCC has not prescribed rates in the case of the Sprint
23 operating companies. In lieu of FCC specific rates, the default rates of the HM 5.0a
24 serve as a suitable proxy.

1 Q. What other model inputs should the Commission examine closely?

2 A. The other input values that would appear to have the greatest effect on each
3 model's cost estimates include the copper/fiber crossover point, the purchase price
4 for outside plant and switching facilities, the labor rates and installation times to
5 install facilities, the projected operating expenses, and the level at which universal
6 service support is aggregated.

7
8 Q. How is the copper/fiber crossover point treated in each model?

9 A. The copper/fiber crossover point refers to the threshold where fiber facilities are
10 used in lieu of copper facilities. The BCPM 3.1 is designed to limit copper loop
11 lengths to 12,000 feet:

12
13 "Tends to limit average copper loop lengths from the DLC to
14 the customer by generally limiting the maximum ultimate grid
15 size to 12,000 feet by 14,000 feet, latitude and longitude.
16 If copper loop lengths from the DLC to the customer exceed
17 12,000 feet, the cable gauge is reduced to 24 gauge cable
18 and extended range plug-ins are installed on loops extending
19 beyond 13,600 feet. The ultimate grids are designed such
20 that copper loop lengths from the DLC to the customer are
21 unlikely to exceed 18,000 feet" (BCPM 3.1 Model
22 Methodology documentation, Appendix C, page 125).

23
24 The Hatfield Model, in turn, assumes longer copper loop lengths in the design of the
25 forward-looking network: "[t]he model selects fiber feeder if any of following five

1 criteria are met: b) the total copper loop length, including feeder and distribution
2 cable, for customer locations within a main cluster, exceeds a user-adjustable
3 maximum analog copper distance whose default value is 18,000 feet* (HM 5.0a
4 documentation, Model Description, page 20).

5
6 The Commission should determine, based upon sound engineering practices, the
7 appropriate economic crossover point to be used in the cost proxy models.

8
9 Q. How do each of the models estimate the acquisition costs of switching and outside
10 plant facilities?

11 A. The Hatfield Model sponsors admit that the proprietary claims of switching
12 manufacturers and vendors of outside plant facilities increase the difficulty of
13 estimating the acquisition costs for such network facilities as central office
14 switches, and copper and fiber optic cable:

15
16 "Prices of telecommunications equipment and materials are
17 notoriously difficult to obtain from manufacturers and large
18 sales organizations. Although salespeople will occasionally
19 provide 'ballpark' prices, they will do so only informally and
20 with the caveat that they may not be quoted and the
21 company identity must be concealed. It is very nearly
22 impossible to obtain written, and hence 'citable,' price
23 quotations, even for 'list' prices, from vendors of equipment,
24 cable and wire, and other items that are used in the
25 telecommunications infrastructure. Part of the reason for this

1 is that the vendors have long-standing relationships with the
2 principal users of such equipment, the incumbent local
3 exchange carriers ("ILECs"), and they apparently believe that
4 public disclosure of any prices, list or discounted, might
5 jeopardize these relationships. Further, they may fear
6 retaliation by the ILECs if they were to provide pricing
7 explicitly for use in cost models such as HM 5.0a. The HM
8 5.0a developers thus have often been forced to rely on
9 informal discussions with vendor representatives and personal
10 experience in purchasing or recommending equipment and
11 materials. Nevertheless, a great deal of experience and
12 expertise in the industry underlies the estimates, where they
13 were necessary to augment with explicit, publicly-available
14 information" (Hatfield Model Version 5.0a documentation,
15 Inputs Portfolio, page 10).

16
17 The BCPM sponsors draw upon the opinions of engineers to compliment the use of
18 state specific data regarding the costs to engineer, furnish, and install network
19 facilities. The vendor prices for the facilities are deemed proprietary by the BCPM
20 sponsors.

21
22 Q. How can the Commission be assured that the prices for switching and outside plant
23 network facilities used in the cost proxy models reflect forward-looking conditions?

24 A. Since the BCPM sponsors are critical of the prices for network facilities used in the
25 Hatfield Model, it seems reasonable for the FPSC to require additional support for the

1 BCPM input values. The Commission should seek more reliable data from the BCPM
2 sponsors -- under proprietary protection -- in order to determine whether the values
3 input into the model are supported by actual vendor information. The supporting
4 documentation may include vendor invoices that can be verified with individual
5 construction work order summaries that capture vendor material costs, contractor
6 labor costs, and company labor costs.

7
8 Q. How do the models differ with respect to projected installation times and labor rates
9 to deploy network facilities?

10 A. Not surprisingly, the model sponsors have different opinions with respect to the time
11 required and the labor charges to install facilities. The Hatfield Model installation
12 times and labor rates are based upon "the opinion of a team of outside plant experts"
13 (Hatfield Model Version 5.0a documentation, Inputs Portfolio, page 11). The Hatfield
14 Model also incorporates a Regional Labor Adjustment Factor to recognize that
15 "[D]ifferent areas of the country are known to experience variations in wages paid
16 to technicians, depending on availability of trained labor, union contracts, and cost
17 of living factors. The adjustment applies only to that portion of installed costs
18 pertaining to salaries" (Hatfield Model Version 5.0a documentation, Inputs Portfolio,
19 page 140).

20
21 The BCPM input is based upon the company-specific, regional loaded labor rate and
22 the state-specific time associated with the installation of the facilities. Therefore,
23 the BCPM sponsors do not make an adjustment for regional labor cost variances.

24
25

1 The installation times and the fully-loaded labor rates assumed in the Hatfield Model
2 are lower than those used in the BCPM. The FPSC should determine whether the
3 BCPM inputs reflect historical experience (i.e. embedded costs) or are indicative of
4 the forward-looking operations that an efficient carrier would be likely to incur in a
5 competitive market.

6
7 **Q.** How significantly do the assumptions regarding operating expenses effect the
8 results of the models?

9 **A.** The level of operating expenses greatly effect the cost estimates developed by the
10 models to provide universal service. In past versions of the BCPM, it was estimated
11 that an average of 40% to 50% of the cost of universal service was attributed to
12 the operating expenses of the carrier.

13
14 **Q.** How do each of the models estimate forward-looking operating expenses?

15 **A.** In the BCPM 3.1, operating expenses are input as expenses per access line or as
16 a percentage of investment. BellSouth used the same plant-specific expense
17 factors developed for the Company's TSLRIC cost studies submitted July 31, 1998
18 in FPSC Docket No. 980000A-SP. The operating expenses included in the BCPM
19 3.1-based cost study submitted by Sprint were derived from the actual operating
20 expenses incurred by the Company in Florida during 1997. GTE, like Sprint, uses
21 1997 actual operating expenses as the basis for its BCPM 3.1 input values. GTE,
22 however, makes a series of adjustments (i.e. out-of-period normalizations, going-
23 forward adjustments, and yellow pages revenues adjustments) in order to recast the
24 actual 1997 expenses as forward-looking.

1 The Hatfield Model sponsors acknowledge the difficulty in developing forward-
2 looking cost estimates for the operations of the incumbent local exchange
3 providers:

4
5 "Estimating LEC operating costs is more difficult than
6 estimating capital costs. Few publicly available forward-
7 looking cost studies are available from the ILECs.
8 Consequently, many of the operating cost estimates
9 developed here must rely on relationships to and within
10 historical ILEC cost information as a point of departure for
11 estimating forward-looking operating costs. While certain of
12 these costs are closely linked to the number of lines provided
13 by the ILEC, other categories of operating expenses are
14 related more closely to the levels of their related investments.
15 For this reason, the Expense Module develops factors for
16 numerous expense categories and applies these factors both
17 against investment levels and demand quantities (as
18 appropriate) generated by previous modules" (Hatfield Model
19 Version 5.0a documentation, page 68).

20
21 A more complete discussion of the method and assumptions supporting the level
22 of operating expenses projected by the Hatfield Model can be found in Appendix D
23 of the HM 5.0a Inputs Portfolio documentation.
24
25

1 Q. In what way can the Commission be assured that the operating expenses included
2 in the cost proxy models reflect the costs of a competitive carrier on a forward-
3 looking basis?

4 A. The estimate of operating expenses developed by each of the models lacks
5 adequate support and does not provide the FPSC reasonable assurance that the
6 levels are representative of an efficient carrier operating in a competitive market.
7 For instance, the Forward-Looking Network Operations Factor input of the Hatfield
8 Model assumes that the incumbent local exchange carrier will reduce this type of
9 expense by 50% from the current levels reported in ARMIC. The assumption is
10 supported by the statement that "ARMIS-based network operations expenses are --
11 by definition -- a function of telephone company embedded costs. As reported,
12 these costs are artificially high because they reflect antiquated systems and
13 practices that are more costly than the modern equipment and practices that the
14 HAI Model assumes will be installed on a forward-looking basis" (Hatfield Model
15 Version 5.0a documentation, Inputs Portfolio, page 120). The relevancy and
16 accuracy of the documentation used to support other operating expense inputs to
17 the model is also questionable.

18
19 The documentation supporting the incumbent local exchange carriers' view of
20 forward-looking operating expenses is flawed in a different sense. These parties
21 simply assert that the operating expenses included in the model are forward-looking.
22 GTE adjusts its actual 1997 expenses in an attempt to make them representative
23 of forward-looking conditions. Although the adjustments may appropriately exclude
24 specific expenses on a forward-looking basis, the Commission simply does not have
25 sufficient information to judge the appropriateness of the adjustments without more

1 detailed filings. It is not at all clear whether the operating expenses allegedly
2 required to support universal service include categories of expenses that are
3 incurred to provide competitive and/or discretionary services.
4

5 **Q. How can the Commission obtain greater assurance that the level of operating**
6 **expenses estimated by the models is reasonable?**

7 **A. The Commission should require that the incumbent local exchange carriers (i.e.**
8 **BellSouth, GTE, and Sprint) provide detailed documentation supporting either the**
9 **adjustments they have made to recast embedded cost activity as forward-looking**
10 **expenses or, in the case of BellSouth, provide the detail that is relied upon from**
11 **other cost studies prepared by the Company.**
12

13 **Q. Are there other inputs that can substantially impact the degree of subsidy**
14 **calculated in support of universal service?**

15 **A. Yes. The Commission's decision concerning the aggregation of costs will be an**
16 **important determinant in the ultimate size of the Florida universal service fund.**
17 **Each cost proxy model can disaggregate the costs to provide universal service at**
18 **a very discrete level. In developing cost estimates, data is disaggregated at the**
19 **wire center level, Census Block Groups ("CBGs"), Census Blocks ("CBs"), and even**
20 **at the grid and microgrid level.**
21

22 Although each successive level of disaggregation can be helpful in locating
23 customers and configuring a network to serve those customers, the geographic area
24 that is ultimately defined for universal service support consideration is especially
25 important in determining the magnitude of the support. As the geographic serving

1 areas being modeled become increasingly granular, it should be recognized that the
2 alleged precision of the cost estimates do not fully take into account the economies
3 of scale and scope engineered into the incumbent local exchange carrier's network.
4 Taking the level of granularity to its extreme, the costs necessary to provision
5 universal service for one customer may result in high cost support but the facilities
6 to serve an adjacent subscriber may be below the cost threshold.

7
8 The wire center appears to be the most suitable level at which to aggregate the
9 costs to calculate universal service support requirements. Indeed, BellSouth
10 witness Peter Martin recommends in his prefiled direct testimony that:

11
12 "Initially, the forward-looking cost of basic
13 telecommunications should be calculated at the wire center
14 level. Current telecommunications providers capture data at
15 this level of aggregation on a standardized basis. Therefore,
16 a wire center basis for cost calculation would be less
17 burdensome initially than going to a more targeted area of
18 measure like a census block group (CBG)" (Direct Testimony
19 of Peter Martin, page 12, lines 20 through 24).

20
21
22 **V. THE CURRENT NEED FOR A UNIVERSAL SERVICE FUND**

23
24 **Q.** In what way will the cost estimates to provide universal service determined in this
25 proceeding effect the "appropriate" level of required support?

1 A. The issues in this proceeding are framed in such a way that it is clear the FPSC is
2 looking for the cost information in the context of what is appropriate for
3 establishing a permanent universal service mechanism. The final cost estimates
4 merely represent the starting point on which to determine whether a universal
5 service mechanism is necessary. It is equally important to evaluate the estimated
6 costs to provide universal service within other contexts.

7
8 Q. In what context should the Commission evaluate the estimated costs to provide
9 universal service in order to calculate the carrier-specific levels of support?

10 A. It is important for the Commission to keep in mind that the ILECs' assertion that
11 there is a present need for a universal service fund has not been demonstrated and
12 can be legitimately challenged. For instance, the level of profitability to serve the
13 residential subscriber on a statewide basis, the opportunities for rate rebalancing,
14 and the establishment of the appropriate revenue benchmark and affordability
15 threshold can nullify the need for a massive universal service subsidy.

16
17 Q. Why is it important to consider the overall profitability of serving the residential
18 subscriber as part of the determination of universal service support?

19 A. The explicit universal service subsidy that will flow to the incumbent local exchange
20 carriers stems from the concern over competitive threats. The ILECs claim that
21 their traditional pricing policies have been designed to promote universal service but
22 these policies will be upset as a result of the targeted entry of new competitors.
23 Before accepting the ILECs' position, the overall profitability of serving the
24 residential subscriber on a statewide basis and the degree of competition within the
25 State of Florida should be examined.

1 As a first step in determining the need for a universal service fund, the cost and
2 revenue profile of serving the residential subscriber should be examined. The
3 estimated costs to provide universal service as determined in the instant proceeding
4 should be compared to the revenues received from the residential subscriber,
5 including basic local exchange revenue as well as optional and discretionary
6 services.

7
8 **Q.** Is the concern over the threat of competition eroding the ability of the incumbent
9 local exchange carriers to sustain their traditional pricing policies serious?

10 **A.** No, at least not in the foreseeable future. A case of robust competitive activity
11 disrupting the pricing policies of the incumbent local exchange carriers in the State
12 of Florida -- and thereby, the policy of universal service -- can hardly be made.
13 Indeed, the December 1997 publication of The Florida Public Service Commission's
14 Division of Communications underscores what little inroads competitors have made
15 into the markets of the incumbent carriers.

16
17 *The total number of business access lines served by all entrants combined
18 is 42,303 and the total number of residential access lines is 13,857. By
19 way of comparison, the three large LECs (BellSouth, GTE Florida, and Sprint-
20 Florida) have approximately 2.9 million business access lines and 7.8 million
21 residential access lines, which account for approximately 98.5% of the total
22 access lines in the state (the remaining 1.5% of the total access lines belong
23 to the remaining seven incumbent LECs). Based on information received as
24 of September 1997, the competitors account for 0.5% overall of the total
25 access lines served, 1.4% of the business access lines, and 0.2% of the

1 residential access lines* (Competition In Telecommunications Markets In
2 Florida, page 8).

3
4 Based upon the independent assessment of the FPSC Division of Communications,
5 it does not appear that these incumbent local exchange carriers require any
6 protection from the threat of competition, much less being the primary beneficiaries
7 of a significant, explicit subsidy that their competitors, ironically, are required to
8 fund.

9
10 Q. How do the opportunities for rate rebalancing as well as the establishment of a
11 revenue benchmark and affordability threshold impact the size of the universal
12 service fund?

13 A. Rate rebalancing, the appropriate revenue benchmark, and an affordability threshold
14 are expected to serve as offsets to the total costs to provide universal service and,
15 consequently, reduce the size of the universal service support that flows to the
16 incumbent carriers. The real issue is to what extent these measures reduce the
17 degree of subsidy if appropriately crafted or whether they even need be examined
18 based upon the statewide profitability of serving the residential subscriber. The
19 merits of these issues and others related to universal service support should be
20 thoroughly examined before any intrastate universal service fund is established.

21 Q. Does this conclude your testimony?

22 A. Yes.

23
24
25

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing Rebuttal Testimony of William J. Barta on behalf of the Florida Cable Telecommunications Association has been furnished by U.S. Mail delivery this 2nd day of September, 1998, to the following:

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