Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of	)	
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Forward-Looking Mechanism for High Cost Support for Non-Rural LECs	)	CC Docket No. 97-160

REPLY COMMENTS OF GTE SERVICE CORPORATION AND ITS AFFILIATED DOMESTIC TELEPHONE OPERATING COMPANIES

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SUMMARY

As GTE stated in its Comments and other parties generally echoed in their respective comments, the Commission should not adopt any input values, including those proposed in the FNPRM, until it has finalized a correctly working cost model platform. The bulk of GTE's reply comments respond to the comments of AT&T Corp. and MCI WorldCom, Inc. ("AT&T/MCI WorldCom") that identify problems with some of the input values proposed by the Commission. Not surprisingly, these alleged errors *always* overstate costs. As a result, the only input changes that AT&T/MCI WorldCom offer are those that lower the Model's results. GTE's reply comments reveal that these changes lack factual support, reflect biased, inconsistent and result-oriented analysis by AT&T/MCI WorldCom, and should be rejected.

On customer location issues, the facts show that the use of surrogate road data does not lead to overstated costs. Is superior to unverifiable geocode data. Further, as to outside plant values, the optimization routine should not be applied to more areas as proposed by AT&T/MCI WorldCom. Contrary to allegations that costs will decrease, GTE found that costs in some wire centers actually increase by activating the optimization routine. The Commission should not utilize an optimization routine that cannot be validated and produces anomalous results.

Other proposed inputs arise from faulty, result-oriented analysis. AT&T/MCI WorldCom claim that the Commission should rely on actual price information when it supports the low values acceptable to them, but should reject actual data, such as ILEC contracts, when they contain prices that conflict with AT&T/MCI WorldCom's goal -- Model results that understate the actual cost to provide universal service. As but one example, they would have the Commission rely on the switch prices in actual vendor contracts, but dismiss the prices from contracts for Digital Loop Carrier equipment.

AT&T/MCI WorldCom's reasoning for many inputs is inconsistent with their reasoning on other proposed values. They claim that the network should not be built to serve future demand that will arise after new subdivisions are constructed, but then claim that the Model's sharing inputs should account for the possibility of free trenches (or trenches shared by three other companies) in yet-to-be-built subdivisions. They claim that the vast majority of distribution plant in urban areas will be aerial, but then fail to include any telephone poles on which to hang the cable. They acknowledge that underground plant is used in the distribution network, but claim that the Model should classify it as aerial, thereby excluding the cost of conduit and manholes.

GTE's reply comments also discuss the problems with many other proposals by AT&T/MCI WorldCom. Actual data warrant much higher switch prices, and refute AT&T/MCI WorldCom's claim that switch prices are rapidly declining. The Commission should not devise a "one-time" expense charge based on the SEC reports of telecommunications companies because SEC reports are not useful for measuring costs in a regulated environment.

AT&T/MCI WorldCom propose a cost of capital that no telecommunications company could achieve today. Moreover, GTE agrees with U S WEST, Ameritech, and Sprint that the capital cost input values have no effect on the Model's results because a capital cost carrying factor is hard-coded in the Model.

For these reasons and those set forth in GTE's initial Comments, GTE urges the Commission to reject the input changes offered by AT&T/MCI WorldCom and not adopt the inputs values contained in the FNPRM.

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REPLY COMMENTS OF GTE SERVICE CORPORATION AND ITS AFFILIATED DOMESTIC TELEPHONE OPERATING COMPANIES

GTE Service Corporation and its affiliated domestic telephone operating companies[1] (collectively "GTE") respectfully submit these reply comments to the arguments and claims made by interested parties in response to the Federal Communications Commission's ("FCC" or "Commission") Further Notice of Proposed Rulemaking, FCC 99-120, released on May 28, 1999 ("Notice" or "FNPRM") in the above captioned proceedings.[2] The Notice sought comment on the proposed inputs to the cost model platform (the "Platform" or "Model") adopted by the Commission in the Fifth Report and Order.[3]

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[1] GTE Alaska Incorporated, GTE Arkansas Incorporated, GTE California Incorporated, GTE Florida Incorporated, GTE Hawaiian Telephone Company Incorporated, GTE Midwest Incorporated, GTE North Incorporated, GTE Northwest Incorporated, GTE South Incorporated, GTE Southwest Incorporated, Contel of Minnesota, Inc., GTE West Coast Incorporated and Contel of the South, Inc.

[2] This joint docket -- CC Docket Nos. 96-45 and 97-160 -- is hereafter referred to and cited as the "Universal Service Cost Model Docket."

[3] Universal Service Cost Model Docket, *Fifth Report & Order*, FCC 98-279 (rel. October 28, 1998) ("Fifth Report & Order").

I. INTRODUCTION

GTE's initial Comments addressing the shortcomings of the Commission's proposed inputs have been joined by almost every interested party commenting on the Notice in any meaningful detail. These parties, like GTE, have found that the Platform is flawed, that the Rural Utilities Service ("RUS") data cannot serve as the starting point for estimating the costs of non-rural carriers, and that the Commission's multiple, novel "adjustments" to the RUS data do not and cannot lead to reasonable cost estimates. For these and many other reasons, some of the Commission's inputs may be too high, some may be too low, and the entire body of proposed inputs is hopelessly flawed.

AT&T Corp. and MCI WorldCom, Inc. ("AT&T/MCI WorldCom") -- the primary beneficiaries of understated cost estimates and an inadequate universal service fund -- are mostly pleased with the inputs proposed in the FNPRM because they lead to overall cost estimates that understate what the incumbent local exchange carriers ("ILECs") actually incur to provide universal service in high cost areas. Still, AT&T/MCI WorldCom claim that the Commission erred in many instances. The input "corrections" proposed by AT&T/MCI WorldCom have little credibility, however, because they are *always* ones that would drive the Model's inputs and overall cost estimates even lower. For instance, AT&T/MCI WorldCom urge the Commission to use unverifiable geocode data and related inputs that create serving areas that are more dense and cheaper to serve. They urge greater use of cost minimizing "optimization" routines, greater buying power reductions, more structure sharing, higher fill factors, and a meager cost of capital that no telecommunications company could tolerate in today's competitive environment. AT&T/MCI WorldCom urge the Commission to rely on actual ILEC contract data that support lower costs, but reject other actual contracts that call for

higher costs. AT&T/MCI WorldCom's consistent claims that every input error by the Commission overstated costs simply cannot be believed because they are based on inconsistent logic, biased and result-oriented analysis, and lack factual support. As explained below, their proposed input changes should be rejected.

II. DETERMINING CUSTOMER LOCATIONS

A. AT&T/MCI WorldCom Have Not Shown That PNR's Geocode Data Are Accurate.

AT&T/MCI WorldCom hinge their arguments regarding customer location issues on the conclusory allegation that the geocode data supplied by PNR Associates, Inc. ("PNR") are more accurate than road surrogate data.[4] This assertion, however, has no basis in fact. AT&T/MCI WorldCom have provided no valid evidence to substantiate their claim and, even worse, have actively prevented GTE and other parties from testing its truth by refusing to permit *anyone* to verify the accuracy of the PNR data. Despite AT&T/MCI WorldCom's efforts, evidence suggests quite the opposite -- that road surrogate data are more accurate than PNR's geocode data.

Recent tests of the Model confirm that use of the PNR geocode data leads to customer locations that are too close together, thereby reducing costs artificially. In a July 19, 1999, universal service fund workshop conducted by the Oregon Public Utility Commission ("OPUC"), Model results were presented that show a significant overstatement of line densities in the data set that includes PNR's geocode data. A comparison of residential second line penetration rates in Oregon using a data set with

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[4] Universal Service Cost Model Docket, *Comments of AT&T Corp. and MCI WorldCom, Inc.* (July 23, 1999), at p. 2 ("AT&T/MCI WorldCom Comments").

100% road surrogate data, and a data set that had a combination of geocode and road surrogate data established that the data set with 100% road surrogate data had second line penetration rates that are consistent with actual rates for the companies operating in Oregon.[5] However, second line penetration rates embodied in the data set with PNR's geocode data are dramatically higher than actual rates.[6] This means that the database utilizing PNR's geocode data overstates the average number of lines per residential location. The dramatic overstatement of line density leads to an understatement of the cost per line when the PNR data are run in the Model. Therefore, AT&T/MCI WorldCom's claim that PNR's geocode data are more accurate than road surrogate data is misleading and without foundation.

Based on erroneous customer locations derived from PNR data, AT&T/MCI WorldCom then claim that "the exclusive use of road surrogate data has been proven to introduce upward bias in cost when measuring on a study area basis."[7] Again, AT&T/MCI WorldCom's "evidence" -- their own *ex parte* filings -- proves no such thing. Because PNR data create serving areas that are far too dense, it is not surprising (as AT&T/MCI WorldCom claim) that running the Model with 100% road surrogate data produces cost results that are slightly higher than running the Model with a blend of

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[5] Before the Oregon Public Service Commission, Docket UM731, *OPUC Staff Analysis Binder* (July 19, 1999), at Tab I.

[6] GTE has confirmed that running the Model in the default mode with the geocode data set produces a 76.8% penetration rate for U S WEST's secondary residential lines. This penetration rate is approximately ten times the actual level that companies normally experience. Although less exaggerated but equally problematic, the penetration rate for a GTE Oregon wirecenter (VRNNORXX) cited by AT&T/MCI WorldCom shows 1,425 residential lines terminating in only 359 households -- nearly four lines per household. AT&T/MCI WorldCom Comments at p. 3, fn. 9.

[7] AT&T/MCI WorldCom Comments at p. 3.

PNR geocode and road surrogate data. The more accurate road surrogate data create less dense serving areas, which lead to higher (and more realistic) costs. Paradoxically, AT&T/MCI WorldCom's claimed "upward bias" actually confirms the downward bias caused by PNR's geocode data. AT&T/MCI WorldCom's proposed downward adjustment to loop costs should be rejected because it would re-introduce the flaws in PNR's geocode data into the Model.[8]

AT&T/MCI WorldCom attempt to bolster their "upward bias" argument by claiming that a uniform dispersion of customers along roads does not reflect the uneven customer distributions that occur in reality.[9] Predictably, AT&T/MCI WorldCom provide no evidence or data indicating the prevalence of areas with uneven dispersion. Nevertheless, their claim may be valid in some areas where uneven customer dispersions exist. This fact, however, does not establish that a uniform distribution of customers leads to an overestimation of plant. Uniform distribution of customers can also lead to an understatement of loop costs. For example, in cases where "clumps" of customers are located near the end of cable runs, a larger cable must be carried over a greater distance than where there is uniform distribution. As explained in GTE's Comments, it is impossible to determine whether the exclusive use of road surrogate data understates or overstates plant as long as PNR refuses to make its data completely available for review.[10]

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[8] *Id.* at p. 4, fn. 10.

[9] *Id.* at p. 3.

[10] Universal Service Cost Model Docket, *Comments of GTE Service Corporation and its Affiliated Domestic Telephone Operating Companies in Response to Further Notice of Proposed Rulemaking* (July 23, 1999), at p. 39 ("GTE Comments").

B. Requiring Companies That Need Universal Service Support To Disclose Customer Information Is Not A Feasible Alternative.

AT&T/MCI WorldCom urge the Commission to condition an ILEC's access to federal universal service funds on its provision of comprehensive customer location information.[11] There are a number of problems with this ill-conceived proposal.

First, individual customer billing data (i.e., customer addresses) are treated by ILECs (as well as interexchange carriers) with the highest level of confidentiality, for both privacy and competitive reasons. Disclosure and use of this proprietary, commercially sensitive data would represent an even further departure from compliance with the FCC's Criterion Eight, which requires that all underlying data be available to interested parties for review.[12]

Second, no ILEC could provide a comprehensive list of customer of addresses before the FCC's current implementation deadline of January 1, 2000. Many of the "addresses" on such a list, such as Rural Routes and P.O. Boxes, cannot be geocoded. Because geocode data are not necessary to provide local telephone service and have not been required for any regulatory purpose, ILECs have not had to geocode their customer locations. It would take several years for the ILECs to convert their raw address data into geocode information for use in the Model. The cost of this time consuming process would be exorbitant.

Finally, administration of universal service funding need not include this data gathering exercise because reasonably accurate road surrogate data are currently

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[11] AT&T/MCI WorldCom Comments at p. 4.

[12] In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, *Report and Order* (rel. May 8, 1997), at ¶ 250 ("Universal Service Order").

available. Use of these data will allow for a reasonable estimate of costs incurred in the provision of service to all customers in high-cost areas. ILECs incur costs to provide service to these customers regardless of whether they are geocoded or not. AT&T/MCI WorldCom's proposal is not a practically viable or reasonable alternative in light of the current availability of road surrogate data that allow for reasonable estimation of the cost to serve all lines.

C. Stopwatch Maps Has Customer Location Data For All States.

AT&T/MCI WorldCom claim that there is "no nationwide alternative to the PNR road surrogate data" because "Stopwatch's six-state availability nullifies its utility as a data source to a national cost model." [13] The contention that Stopwatch Maps data are limited to only six states is patently incorrect. Stopwatch Maps provided data for only six states because that is all the data that were requested. Stopwatch Maps' data are not limited to those six states, as AT&T/MCI WorldCom disingenuously suggest. Stopwatch Maps is perfectly capable of providing data for all states if asked. AT&T/MCI WorldCom's mischaracterization of the Stopwatch Maps data does not constitute a valid reason for rejecting them.

D. The Metromail Database Does Not Contain All Customer Locations With Telephone Service.

AT&T/MCI WorldCom agree that "PNR's methodology for estimating the number of customer locations should be used for developing customer location data," and attempt to quell the Commission's concerns about a possible underestimation of customer locations by suggesting that PNR's estimate is, if anything, overstated

because PNR relied on the Metromail database.[14] AT&T/MCI WorldCom base their claim on the assertion that "the number of U.S. locations *receiving mail* generally exceeds the number of locations receiving telephone service."[15] Whether or not this statement is true, it does not justify the use of a data source -- Metromail -- that is admittedly incomplete.

The Metromail database does not include the address of everyone that receives mail, as AT&T/MCI WorldCom imply. As GTE has previously shown, Metromail's National Consumer Database of addresses accounts for only 89.4% of total U.S. households.[16] This, in turn, leads to an *underestimation* of customer locations with telephone service. Metromail's marketing brochure claims that the database consists of 103 million people, or 95% of all U.S. households. PNR's documentation on geocoding, however, concedes that the Metromail database includes duplicate records.[17] Thus, the actual count must be lower than Metromail claims. These discrepancies add ambiguity to the actual number of addresses in Metromail's database and further undermine its reliability. Given these facts and AT&T/MCI WorldCom's faulty reasoning, it is obvious that PNR's methodology for estimating the number of customer locations should not be used.

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[13] AT&T/MCI WorldCom Comments at p. 7.
[14] *Id.* at pp. 7-8.
[15] *Id.* at p. 8 (emphasis added).
[16] Universal Service Cost Model Docket, *Comments of GTE* (June 1, 1998), at pp. 7-8.
[17] *Id.*

III. OUTSIDE PLANT

A. Optimization Does Not Improve The Accuracy Of The Model's Cost Estimates.

AT&T/MCI WorldCom offer no credible evidence to support their contention that the density input that invokes the Prim distribution algorithm should be set at –p850. While they claim that "testing indicates that greater accuracy can be obtained for some areas by setting the optimization factor at –p850 rather than –p500,"[18] AT&T/MCI WorldCom have not identified what inaccuracies are produced when the input value is set at –p500. As with other input values, AT&T/MCI WorldCom propose the –p850 value for one reason only -- to reduce the overall cost results of the Model.

GTE has found that changing the Prim input value from –p500 to –p850 produces the same inconsistent, illogical and confusing results that GTE described in its Comments.[19] GTE changed the Prim input value to –p850 and evaluated the results produced by the Model for its service areas in Florida. When the input value was increased, 18% of the CLLIs "optimized" showed ***increased*** loop investment and monthly costs per line, exactly the opposite of what the optimization routine is supposed to do. GTE doubts that this is what AT&T/MCI WorldCom had in mind when they claimed an improved accuracy from using the –p850 input value. AT&T/MCI WorldCom do not concern themselves with this anomaly because their desired result -- lower overall costs on a statewide basis -- is achieved.

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[18] AT&T/MCI WorldCom Comments at p. 10.

[19] GTE Comments at pp. 33-35.

As support for their claim that optimization at –p850 is more "accurate," AT&T/MCI WorldCom allege that setting the optimization factor at –p850 produces "a deviation as high as 10%" in two GTE wire centers in Idaho -- HRSNIDXA and PTLTIDXX.[20] Once again, GTE's investigation proves this statement to be misleading, if not false. GTE analyzed all of its wire centers in Idaho and, for the two cited by AT&T/MCI WorldCom, found that increasing the input value to –p850 had no impact on the monthly cost per line. Changing the input value has no impact because these wire centers had no clusters containing more than 215 lines per square mile. Furthermore, in GTE's service area in Idaho, only one wire center, HYLKIDXX, showed a reduction in the monthly cost per line (0.16%) as a result of increasing the input value from –p500 to –p850. GTE also discovered that the 10% decline in the two wire centers alleged by AT&T/MCI WorldCom occurs only when the input value is changed from –p0 (no optimization) to –p500.[21] Therefore, AT&T/MCI WorldCom's "proof" lacks foundation and their recommendation of full optimization, or at a minimum the use of –p850 as an input value, should be summarily dismissed.

Even for the areas where changing the optimization input to –p850 reduces cost estimates, there is no proof that the reduced estimates are more "accurate." The significant cost reductions (and reductions in the size of the universal service fund) caused by the optimization routine are not necessarily accurate, and should be thoroughly scrutinized because they appear to occur almost exclusively in service areas that are most likely to receive universal service support.

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[20] AT&T/MCI WorldCom Comments at p. 10, fn. 20. AT&T/MCI WorldCom apparently use the term "deviation" to mean reduction.

Attachment 1 demonstrates that the optimization routine systematically reduces investment and monthly cost per line for CLLIs in rural, high cost areas. This analysis of GTE's service area in Oregon shows that the majority of the cost impact occurs when the Prim algorithm "optimizes" clusters with less than 100 lines per square mile. Under these areas, optimization causes a 2% reduction in loop investment on a statewide basis, but an 8% reduction in universal service support on a statewide basis. However, as demonstrated in Attachment 1, the optimization routine has less than a 1% impact on both loop investment and universal service requirements in clusters with more than 100 lines per square mile -- areas that are less likely to receive support. Because the optimization routine disproportionately affects lower density areas where universal service support is needed most, it reduces universal service support by a greater magnitude than it reduces investment and cost.

The results presented in Attachment 1 also prove that the optimization routine does not work as intended. When the input value is increased from –p100 to –p200, both loop investment and universal service requirements *increase*. This should not happen if the optimization routine worked properly. Since the optimization routine cannot be supported in theory and does not work as intended by the FCC, [22] it should be disabled by setting the optimization factor to –p0.

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[21] The decline in monthly cost per line is 9% for HRSNIDXA and 8.3% for PTLTIDXX.
[22] GTE Comments at pp. 33-35.

B. AT&T/MCI WorldCom's Inconsistent Approach To The FCC's Proposed Input Values Lacks Credibility.

Because AT&T/MCI WorldCom take inconsistent positions on how to develop appropriate input values, their comments and proposed input changes have no credibility. AT&T/MCI WorldCom rely on actual data for input prices only when that data are favorable to them. For example, AT&T/MCI WorldCom recommended a material cost of $215.00 for distribution manholes based on a quote from "Sue Smith, a PenCell Plastics, Inc. sales representative."[23] This is a classic example of AT&T/MCI WorldCom's penchant for using a single, but favorable data source to support an input value.[24] There is, of course, no evidence that this single quote is reasonable as compared to the prices of other suppliers. AT&T/MCI WorldCom compound the problem by recommending an installation cost of $220, which is not substantiated even by Sue Smith.

Similarly, AT&T/MCI WorldCom only rely upon favorable vendor contracts or quotes as the basis for input values. For instance, AT&T/MCI WorldCom appear to accept the switch prices in actual vendor contracts. They argue in unequivocal terms that:

> Because the publicly available data from the most current sources -- most notably forward-looking prices from vendor contracts -- contain much lower figures for switch costs, the Commission should modify its proposed figures to conform with these sources.[25]

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[23] AT&T/MCI WorldCom Comments at p. 24.

[24] Universal Service Cost Model Docket, *GTE Ex Parte*, "Analysis of the Hatfield Model Release 5.0" (February 20, 1998), at pp. 17-20.

[25] AT&T/MCI WorldCom Comments at p. 40.

Then, out of the other side of their mouth, AT&T/MCI WorldCom reject vendor contracts that have prices they do not like. For example, AT&T/MCI WorldCom reject the proposed Digital Loop Carrier ("DLC") input values because "they are derived from incumbent LEC data that supposedly are based on actual costs incurred in purchasing DLCs." [26] The only apparent reason that AT&T/MCI WorldCom reject vendor contract data on DLC costs is that the data reveal costs that are unacceptable to them. AT&T/MCI WorldCom's result-oriented decisionmaking is simply not credible and their recommended inputs should be summarily dismissed.

C. AT&T/MCI WorldCom's Proposed Buying Power Adjustments For Cable And Structure Are Arbitrary And Should Be Rejected.

Although AT&T/MCI WorldCom endorse the concept of a superior buying power adjustment for cable and structure, they oppose the Commission's specific adjustments for buried cable as "arbitrary," and dismiss the lack of an adjustment for structure as an "oversight." AT&T/MCI WorldCom then offer two alternative factors for buried cable, and an arbitrary adjustment for structure costs.[27] AT&T/MCI WorldCom's recommendations are disingenuous and self-serving, and have only one purpose: lower overall cost estimates.

The rationale for AT&T/MCI WorldCom's claim that a larger downward adjustment for buried cable would be more accurate is unclear.[28] It appears that

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[26] *Id.* at p. 32.

[27] *Id.* at pp. 21, 23.

[28] GTE made clear in its Comments that the adjustment of the regression coefficient was improper and its position has been joined forcefully by others. Bell Atlantic's position is equally clear: while Bell Atlantic acknowledges that the natures of rural and non-rural companies are dramatically different, it opposes the quick fix of adjusting the

AT&T/MCI WorldCom believe that an ILEC could get the larger reduction because "buried cable is the predominant type of cable placed in a forward-looking construct."[29] That is, the ILEC would get the largest discount on buried cable because most of its purchases would be for that type of plant, not aerial. This argument cannot be reconciled with AT&T/MCI WorldCom's reasoning with respect to plant mix. In that section of their comments, AT&T/MCI WorldCom claim that distribution plant should be predominantly aerial, and that buried and underground cable are primarily used for feeder and interoffice transport, not for distribution.[30] AT&T/MCI WorldCom cannot have it both ways -- they must either concede that the Commission's aerial factor is correct, or abandon their position regarding the mix of distribution plant.

With respect to structure costs for copper and fiber cable, AT&T/MCI WorldCom fail to explain why any adjustment would be valid.[31] AT&T/MCI WorldCom's bald assertion that a buying power adjustment is needed for structure costs -- which would, in the case of buried plant, consist only of the labor cost to dig a trench -- overlooks the

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regression coefficient for number of pairs downward by 15.2%. Universal Service Cost Model Docket, *Comments of Bell Atlantic* (July 23, 1999), at p. 23 ("Bell Atlantic Comments"). SBC agrees with Bell Atlantic's position regarding the Commission's proposed superior buying-power adjustment for aerial cable. Universal Service Cost Model Docket, *SBC Comments* (July 23, 1999), at p. 8 ("SBC Comments"). They further state that "[p]rocurement costs for material purchases are impacted by quantity. The regression coefficient reflects these normal discounts." SBC Comments at p. 8. Paradoxically, SBC goes on to say that the 15.2% adjustment for buried cable is appropriate. SBC Comments at p. 9. Not only is this latter statement a direct contradiction of their earlier position regarding the aerial cable adjustment, the supporting rational is nonsensical. GTE recommends that the Commission ignore SBC's statement regarding buried cable costs and abandon any proposal to exogenously adjust estimated regression coefficients.

[29] AT&T/MCI WorldCom Comments at p. 21.

[30] *Id.* at p. 25.

[31] *Id.* at p. 23.

local nature of labor markets. While it may be that a rural LEC has little purchasing power in the national market for material such as copper cable, it may play a dominant role in the local market for construction labor. In that case, RUS data on structure costs for buried plant may already reflect the rural LECs' superior buying power for labor, and a further adjustment would double count this factor.

AT&T/MCI WorldCom's buying power recommendations are nothing more than a selfishly motivated attempt to advance their overriding goal of producing lower overall cost estimates. Such a strategy has no place in a legitimate, objective discussion of cost model inputs and should be summarily dismissed by the Commission.

D. Even A Company-Specific Superior Buying Power Adjustment Is Not Appropriate.

GTE disagrees with BellSouth's fallback proposal that the Commission's superior buying power adjustment, if used, should be different for each company and calculated from each company's own costs. The use of a company-specific adjustment factor does not remedy the flaws in the underlying data. Any adjustment designed to measure "superior buying power" is inappropriate because the RUS data used to develop the value being adjusted do not represent the costs of non-rural carriers.[32] Applying a "company-specific" buying power adjustment to these data still will not produce a cost structure reflective of any firm.

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[32] GTE Comments at p. 26.

E. AT&T/MCI WorldCom's Proposed Fill Factors Would Not Provide Sufficient Capacity For Spares And Growth.

AT&T/MCI WorldCom claim that "the Commission's tentative fill factor determinations are too low," and make the unsubstantiated and false assertion that "[d]istribution fill factors sufficient to provide 1.2 lines per household are more than adequate in a forward-looking cost study."[33] Forward-looking distribution design principles -- which are confirmed by AT&T's own design guidelines -- dictate that at least two pairs per housing unit should be provisioned.[34]

As GTE stated in its Comments, a forward-looking network must recognize that demand growth will occur in the future and that the least-cost, most-efficient distribution design is one that builds for ultimate demand at the time of initial placement.[35] Given the substantial growth in demand for second access lines over the last several years, fill factors that result in modeling 1.2 lines per household are woefully inadequate to meet even current demand in many areas of the country.

AT&T/MCI WorldCom nonsensically claim in support of their proposed fill factors that second access lines are not supported by universal service. First, this issue has not been decided.[36] Several states have ordered (or are considering) support for

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[33] AT&T/MCI WorldCom Comments at p. 22.

[34] AT&T's engineering handbook states that "[a]ccepted standards for pair allocations are as follow: Residential – two pairs per living unit...Small business – five pairs per business." *AT&T Outside Plant Engineering Handbook* (August 1994) ("AT&T Handbook"), at pp. 3-11. These guidelines predate the recent explosion in demand for second lines to access the Internet.

[35] GTE Comments at p. 40.

[36] Universal Service Order at ¶ 296.

second access lines. Second, AT&T/MCI WorldCom's position ignores the requirement in the FCC's Sixth Criterion that:

> The cost study or model must estimate the cost of providing service for all businesses and households... Such inclusion of multi-line business services and multiple residential lines will permit the cost study or model to reflect the economies of scale associated with the provision of these services.[37]

AT&T/MCI WorldCom further argue that their high distribution fill factors are appropriate because the Model's cable sizing algorithm -- which selects the appropriate cable size after the fill factor is applied to the number of lines to be served -- produces effective fill factors that are lower than the optimal values."[38] While it is true that selection of the next largest discrete cable size will usually lead to observed utilization levels that are lower than the "input fill" factor, it does not follow that this process would provide sufficient capacity for spares and ultimate demand. When the number of lines is only slightly lower than the number of pairs in the next available cable size, the cable will not have enough margin to provide for spares and demand growth. Furthermore, there is no way to determine the accuracy of AT&T/MCI WorldCom's assertion because the Model does not report "effective" fill factors; it only reports weighted averages of input fills.

Incongruously, AT&T/MCI WorldCom state that the default fill factors from their own cost model -- the HAI Model -- "are too low for use in a model intended solely for universal service."[39] GTE agrees with and welcomes AT&T/MCI WorldCom's

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[37] Universal Service Order at ¶ 250.

[38] AT&T/MCI WorldCom Comments at p. 22.

[39] *Id.*

recognition that the Model is intended solely for universal service. However, there is no legitimate reason why fill factors in a universal service model should be higher than in an unbundled network element model. Furthermore, AT&T/MCI WorldCom's sponsorship and vigorous defense of the HAI Model (and its default fill factors) in many state universal service proceedings impeaches their current claim that the HAI Model inputs are inappropriate.

AT&T/MCI WorldCom claim that the Model's fill factors should not be set to accommodate future demand because "today's ratepayers should not have to bear the additional costs of serving tomorrow's customers."[40] This reasoning reveals either a fundamental misunderstanding of the inter-temporal nature of investment planning or, more likely, a transparent desire to artificially suppress costs. The decision to invest in capital assets is based upon the expected recovery of the firm's investment over the life of the asset. Today's ratepayers are realizing the benefits of forward-looking investment decisions made in previous time periods. Tomorrow's customers (which will include many of today's customers) will realize the benefits of today's forward-looking investment decisions, including building for ultimate demand.

F. AT&T/MCI WorldCom Improperly Base Their Structure Sharing Inputs On A "Scorched Utilities" Assumption.

AT&T/MCI WorldCom claim that structure sharing percentages should "be based on forward-looking principles, not the incumbent LECs' embedded sharing practices,"[41] but assert that the "incumbent LEC should be assigned a maximum of 25% of aerial

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[40] *Id.*

[41] *Id.* at p. 28.

costs."[42] Although they may deny it, AT&T/MCI WorldCom's sharing inputs are necessarily based on a "scorched utilities" assumption, and are therefore fatally flawed.

As discussed by U S WEST, the "scorched node" assumption does not contemplate scorching any facilities other than the existing telephone plant.[43] Consequently, the Model must assume that the existing plant of cable television ("CATV") and electric companies are not disturbed and do not require replacement when modeling a rebuild of the entire telephone network.[44] However, an ILEC would bear only 25% of its aerial structure costs only if the CATV, power and one other company actually shared *every pole* -- as in a "scorched utilities" environment. Such a circumstance will never occur in reality and should not be assumed in theory.

GTE also endorses the comments made by U S WEST, Sprint and Ameritech regarding the "single provider" assumption, i.e., that the economies of scale incorporated in the Model due to the "single provider" assumption result in decreased loop costs, and that any sharing attributed to a competitive local exchange carrier ("CLEC") would increase cost.

GTE acknowledges that new developments and some road expansion projects provide some opportunity to share trenches, through coordination with governmental agencies and other utilities. However, this type of sharing will never be pervasive

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[42] *Id.* at p. 30.

[43] Universal Service Cost Model Docket, *Comments of U S WEST* (July 23, 1999), at pp. 28-29 ("U S WEST Comments").

[44] *See e.g.,* U S WEST Comments at pp. 28-29; Universal Service Cost Model Docket, *Comments of Ameritech on Further Notice of Proposed Rulemaking* (July 23, 1999), at pp. 21-22 ("Ameritech Comments"); *Comments of Sprint Corporation* (July 23, 1999), at pp. 37-38 ("Sprint Comments"); *Comments of BellSouth* (July 23, 1999), at p. 13, Attachment B ("BellSouth Comments") for discussion of "scorched earth" assumption.

enough to have any material influence upon the sharing input. AT&T/MCI WorldCom attempt to justify increased sharing throughout the entire network by arguing that "builders often provide trenching in new subdivisions for use by cable, electric, and telephone companies to facilitate placement of wires and to minimize cable costs."[45] It is ludicrous to base the entire network's sharing input on what may occur in a tiny fraction of it, i.e., in new subdivisions. Moreover, AT&T/MCI WorldCom cannot credibly propose that what may occur in future subdivisions ought to play a role in the sharing analysis because they also claim that the network must not be built to serve future demand or growth. According to AT&T/MCI WorldCom's own comments on the current demand vs. ultimate demand issue, sharing in future subdivisions is totally irrelevant.[46]

AT&T/MCI WorldCom attempt to support their sharing values by claiming that Section 224(e) of the Telecommunications Act of 1996 expresses Congress' belief that "at least three parties would use the incumbent LECs' outside plant structures, and thus provides for compensation on that basis."[47] Section 224(e) does not say or imply this, and, in fact, has nothing to do with structure sharing assumptions in a forward-looking environment. Section 224(e) addresses cost determinations and rental rates for embedded pole costs.

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[45] AT&T/MCI WorldCom Comments at p. 29, fn. 60.
[46] *Id.* at p. 29.
[47] *Id.*

G. The Accounting Rules In FCC Part 32 Do Not Support The HAI Model's Discredited Plant Mix Inputs.

AT&T/MCI WorldCom propose that the Commission adopt the plant mix inputs from the HAI Model even though those values have been thoroughly discredited.[48] GTE and other ILECs have shown here and throughout the country in state proceedings that the HAI Model's distribution plant mix has a fantastically high percentage of aerial plant, with 60% and 85% aerial plant modeled in the two highest density zones.[49] These unrealistic values are based solely on "expert opinion" and have not been validated by any analysis or empirical study.[50] In fact, they violate AT&T's own guidelines, which state that aerial plant should be used only as a last resort when buried and underground plant is not "feasible."[51]

The HAI Model attempts to justify its high aerial plant values by claiming that "riser and block" cables, which run to high rise buildings, are the predominant distribution cable in urban areas and are included as a subset of aerial plant.[52] Even assuming that block and riser cables are used as frequently as 85% in urban areas and are considered "aerial," the HAI Model's corresponding assumptions regarding aerial placement costs in urban areas are seriously defective. Block cable runs from the outside wall of a building, *under the sidewalks and streets*, to the neighboring building. Therefore, the HAI Model's placement costs for aerial/block cable in urban areas should include costs for conduit and for digging up and repaving streets -- costs that should be

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[48] AT&T/MCI WorldCom at p. 25.

[49] HAI Model Documentation, Appendix B at B-16.

[50] HAI Model Inputs Portfolio at p. 36.

[51] AT&T Handbook at p. 10-1.

the same as or higher than underground conduit placement costs. The HAI Model has none of these placement costs for aerial/block cable.[53] Alternatively, the HAI Model should include the costs for poles to carry the block cables between buildings and over streets. The HAI Model does not have these costs either.[54] In fact, the HAI Model assumes that there are no poles for aerial/block cable in the two highest density zones.[55] Even though high density zones are often likely to have areas with single family home neighborhoods and business districts that require poles, the HAI Model has no poles for aerial telephone plant. When confronted with these omitted costs, AT&T/MCI WorldCom's own consultant (a former AT&T employee) confessed that the HAI Model's plant mix inputs are "wrong on the low side."[56] Given the obvious way in which the HAI Model improperly manipulates its plant mix and placement cost inputs to achieve low costs, AT&T/MCI WorldCom's proposal should be rejected.

AT&T/MCI WorldCom argue that FCC Part 32's accounting rules support the HAI Model plant mix values.[57] That is, they admit that underground plant is placed in the distribution network, but claim that these facilities should not be reflected in the Model's plant mix because FCC Part 32 requires the ILEC to classify them as either aerial or buried. Regardless of the Commission's accounting rules as set forth in Part 32, underground distribution plant should be accounted for in the Model's plant mix.

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[52] HAI Model Inputs Portfolio at p. 37.

[53] *Id.* at pp. 19-25, 128-136.

[54] *Id.*

[55] *Id.* at 35, fn. 8.

[56] Before the Florida Public Service Commission, Docket No. 960696-TP, *Cross Examination of James W. Wells,* (October 15, 1998) at p. 2676:9.

[57] AT&T/MCI WorldCom Comments at p. 24, fn. 51.

Accounting rules do not dictate how a network is engineered or what costs should be modeled.

H. The Cost Of 26-Gauge Cable Should Not Be Based On A Relative Weight Methodology.

AT&T/MCI WorldCom argue that the FCC should estimate 26-gauge cable costs by multiplying same size 24-gauge cables by 65%, which correlates to the percentage weight difference between the 26-gauge copper cable and the same size 24-gauge cable.[58] This argument is offered to refute the FCC's 80% factor, which was derived from actual cable costs of Sprint, Aliant and the BCPM defaults. The Commission's proposed methodology is more accurate, but still incorrect. Actual cable costs should be used for both cable gauges, which would obviate the need to use any estimation technique.

AT&T/MCI WorldCom contend that the BCPM sponsors' data fully confirm the logic of the relative weighting approach "for the cable pair sizes for which the relative weighting methodology would be used," i.e., cables above 600 pairs.[59] This suggests that AT&T/MCI WorldCom believe that either the Model will use a different methodology for cable sizes below the applicable range, or that small (i.e., less than 600 pair) 26-gauge cables will not be modeled. Neither of these assumptions is correct.

Herein lies another example of the internally inconsistent analysis underlying AT&T/MCI WorldCom's input recommendations. Since AT&T/MCI WorldCom are

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[58] AT&T/MCI WorldCom Comments at p. 19.
[59] *Id.* at p. 20.

willing to accept Sprint's cable costs when advantageous to their argument,[60] they should likewise be willing to accept Sprint's actual cable costs for the derivation of the 80% factor, or even Sprint's actual cable costs. Predictably, AT&T/MCI WorldCom do not accept the whole of Sprint's actual cable costs, only those they favor.

I. As With Other Default Inputs, The HAI Model's Copper Cable Splicing Input Value Is Not Credible.

AT&T/MCI WorldCom argue that the Commission should adopt the input value for the costs of copper cable splicing "based on the expert opinions submitted in this proceeding," presumably referring to the default input value contained in the HAI Model.[61] The myriad problems with the entire body of HAI Model input values have been discussed in detail and documented in previous comments before the FCC and in numerous state proceedings.[62] Given the biased and unsubstantiated nature of the HAI Model's opinion-based inputs, the FCC should not adopt the copper cable splicing or any of the HAI Model's other values.

The HAI Model inputs, including cable splicing, were developed by consultants hired by AT&T/MCI WorldCom who used inconsistent data sources, searched for input values that produced the desired low results, and ignored empirical data.[63] Often, the HAI Model developers relied upon a selected reference in a particular source

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[60] *Id.* at p. 20, fn. 41. For instance, AT&T/MCI WorldCom use Sprint's actual data to support their proposed cost difference between 2,400 pair and 600 pair cable. Naturally, AT&T/MCI WorldCom reject actual Sprint data for all other purposes.

[61] *Id.* at p. 16.

[62] Universal Service Cost Model Docket, *Comments of GTE* (June 1, 1998), at pp. 7-8; Universal Service Cost Model Docket, *GTE Ex Parte*, "Analysis of the Hatfield Model Release 5.0" (February 20, 1998).

publication to support one aspect of the model, while ignoring other information in the same source that would raise costs.[64] The inputs are also based upon the unverifiable and unreasonable opinions of its sponsors, which are often contradicted by the empirical data the developers themselves solicited.[65] Relying upon data from different companies, different geographic areas and different time periods is a flawed methodology. By mixing inputs from inconsistent sources and picking the lowest cost elements from each source, the HAI Model purposefully drives cost estimates downward. The biased methodologies employed to construct the HAI Model's inputs, including the cable splicing inputs, have no credibility.

By AT&T/MCI WorldCom's own admission, the "development of local competition and the rationalization of universal support will best be served by ensuring that the cost model produces its most *accurate* results."[66] The use of inputs from the HAI Model, given their documented problems and bias, will fall well short of this honorable objective. Only company-specific input values can serve this end.

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[63] Universal Service Cost Model Docket, *GTE Ex Parte*, "Analysis of the Hatfield Model Release 5.0" (February 20, 1998), at pp. 9-20.

[64] *Id.*

[65] *Id.* at pp. 15-24. It is important to note the difference between "input values" and "input database." Input values consist of the user-adjustable input values in the HAI Model. As the name implies, these values can be changed by the user. If no changes are made, then the model uses the "default values" for these inputs. The input database, on the other hand, is not intended to be altered by the user. It contains "vital" information on the characteristics of each carrier, such as the number of lines per cluster and the distance from the wire center to the centroid of the cluster. All data in this database are preprocessed and cannot be validated or changed by the user without a significant amount of effort, the financial wherewithal, and the modelers' disclosure of the structure and contents of the databases.

[66] AT&T/MCI WorldCom Comments at p. 10.

J. AT&T/MCI WorldCom's Splicing Component Method And Underlying Assumptions Are Flawed.

AT&T/MCI WorldCom state that splicing costs in the Model for all cables should be reduced because forward-looking modular splicing methods increase splicing productivity.[67] AT&T/MCI WorldCom ignore the fact that their proposed modular splicing productivity rate could not be obtained outside of a controlled environment, especially in rural, high cost areas, where small cable sizes predominate. The splicing rate of 300 pairs per hour cited by AT&T/MCI WorldCom occurred under optimal conditions. In rural, high cost areas, 300 pair cables are not likely to be encountered. Instead, a technician is more likely to splice twelve 25 pair cables. In these circumstances, drive time, setup time and environmental conditions will greatly diminish a technician's splicing productivity. As with AT&T/MCI WorldCom's other proposals, their splicing component method and underlying productivity assumptions significantly understate splicing costs and should not be adopted.

AT&T/MCI WorldCom acknowledge correctly that "calculating splicing cost as a percent of material investment is not a proper way to determine the splicing cost of a 26-gauge cable."[68] This methodology will systematically bias the splicing costs and engineering costs downward.[69] The cost of splicing and engineering have nothing to do with the gauge of cable, but rather the number of pairs to be spliced. Thus, the cost of

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[67] *Id.* at p. 17.

[68] *Id.* at p. 18, fn. 36.

[69] GTE Comments at pp. 48-49.

splicing and engineering a 300 pair, 24-gauge cable will essentially be the same as the cost of splicing a 300 pair, 26-gauge cable.[70]

K. ILEC Cable Data Were Not Intended To Tie To Contracts.

AT&T/MCI WorldCom argue that ILEC data on copper cable costs should not be used to determine those inputs because the documentation already submitted by the ILECs fails to create a "logic trail" between the contract data and their proposed costs.[71] This argument is a strawman because the ILEC documents, submitted in response to a FCC request for information, were not intended to create such a trail.

The FCC's request for information sought to determine actual in-place cable and structure costs, not to tie unit costs to contracted rates.[72] The FCC's instructions directed ILECs to classify broad categories of investment over a multi-year period as either cable or structure at a wire center level. GTE, as a follow-up to the FCC's original request, is developing detailed work order level activity that will show the link between the contract and actual work order costs.

L. Rectilinear Distance Methodology Is Superior To Airline Distance, But Must Be Calibrated.

AT&T/MCI WorldCom correctly recognize that the rectilinear distance methodology is superior to one based strictly on a route-to-airline ratio. Even so, selecting the appropriate technique is less important than reconciling the Model's results to a study area benchmark, such as actual road feet.

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[70] *Id.*

[71] AT&T/MCI WorldCom Comments at p. 15.

Regardless of the distance technique adopted, there should be a calibration process to ensure that the structure feet generated by the Model and the actual amount of road feet in the study area are consistent. Calibration will improve the accuracy of the Model. The calibration can be carried out using the road factor and a benchmarking run of the Model. The results of the benchmarking run will contain the number of structure feet generated by the Model, which can be compared to the actual number of road feet to produce a road factor. The Model can then be run again using this road factor.

M. The Costs Of Placing Manholes In The Distribution Network Should Be Accounted For In The Model.

AT&T/MCI WorldCom claim that manhole and pullbox costs should be excluded from the underground distribution network because manholes and pullboxes do not exist there.[73] This is not true. High demand areas such as shopping malls and business parks require that manholes and/or pullboxes be placed in the distribution network. Although they are not as prevalent as in the feeder network, manholes and pullboxes do exist in the distribution network and their costs should not be excluded from the Model.

N. AT&T/MCI WorldCom's Proposed Adjustments To The DLC Input Values Are Flawed.

In their DLC cost comparison, AT&T/MCI WorldCom systematically adjusted the DLC cost data submitted by Sprint and declared that making these adjustments show

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[72] Universal Service Cost Model Docket, *FCC Data Collection Request "Outside Plant Structure Cost and Cable Costs"* (December 15, 1998).

[73] AT&T/MCI WorldCom Comments at p. 24.

"that Sprint's actual DLC costs are substantially similar to, and indeed less than, the HAI sponsors' proposed values."[74] Predictably, AT&T/MCI WorldCom's evaluation of Sprint's costs did not uncover a single error by Sprint that understated costs.

To further compound the downward bias, AT&T/MCI WorldCom removed the Cool Cell™ equipment proposed by Sprint claiming that "no other incumbent LEC is known to widely deploy these units."[75] Because Sprint has determined that this equipment is necessary in the network under certain circumstances, these costs cannot simply be removed from the data.

Also, AT&T/MCI WorldCom reduced the supply expense associated with Sprint's DLC costs more than 66% based on the "experience of our engineering team members."[76] While GTE has no basis to comment on Sprint's actual supply costs, GTE's own supply expense for DLC applications is significantly higher than the 4% recommended by the HAI Model engineering team. Again, AT&T/MCI WorldCom's proposed adjustments result in an arbitrary downward bias in cost estimates.

O. T-1 Technology Is Not Forward-Looking.

AT&T/MCI WorldCom argue that using T-1 technology for distribution facilities is the most economically efficient option for provisioning service to customers located beyond 18,000 feet from a main cluster center.[77] GTE has detailed in previous comments why T-1 is not a forward-looking technology.[78]

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[74] *Id.* at Attachment B, p. B-4.
[75] *Id.* at p. B-3.
[76] *Id.* at p. B-4.
[77] AT&T/MCI WorldCom Comments at p. 11.
[78] GTE Comments at p. 62.

From a cost perspective, it is ironic that AT&T/MCI WorldCom argue that the use of "costly repeaters" every 12,000 feet prevents High bit rate Digital Subscriber Line ("HDSL") from being a cost effective solution to the outlier problem.[79] A properly engineered T-1 circuit suffers the same fate because T-1 circuits must also utilize repeaters. While the T-1 repeaters are not as expensive per unit as HDSL repeaters, their maximum spacing is approximately 6,000 feet on screened cable facilities (and even shorter on exchange-type cable), thus requiring at least twice as many repeater locations as a comparable HDSL circuit.

In addition, the Commission has indicated that it believes the industry should discontinue deployment of "well recognized disturbers, such as AMI T1."[80] For these reasons, T-1 technology should not be used in the Model.

IV. SWITCH COSTS

A. The Cost Of An Installed Switch Exceeds The Per Line Value Proposed By AT&T/MCI WorldCom.

AT&T/MCI WorldCom contend that the HAI Model switching input values are "conservative" and should be used in the Model because of the comments of one Bell Atlantic employee.[81] The Commission should not rely on the comment of one person as support for any input value, let alone the input for items as important as switches. Moreover, Bell Atlantic's comment (if accurate) supports a value that may only be

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[79] AT&T/MCI WorldCom Comments at p. 11, fn. 23.

[80] In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, *First Report And Order And Further Notice of Proposed Rulemaking*, FCC 99-48 (rel. March 31, 1999), at ¶ 74 (footnote omitted).

appropriate when purchasing a 60,000 line switch. Once again, AT&T/MCI WorldCom have attempted to bias costs downward by applying the per line cost of a 60,000 line switch to smaller switches typically deployed in less dense areas. Each equipment vendor negotiates a separate contract or price with each individual company. The contract price is usually based on the volume of equipment purchased.

AT&T/MCI WorldCom's proposed cost is also inappropriate because it fails to account for necessary items that are likely not included in the value mentioned by Bell Atlantic's employee. For example, GTE's current contract with Nortel, which was signed in November of 1998, does not include costs for engineering, installation, power or MDF. Even without these costs, the cost per line from the GTE-Nortel contract is much higher than the $55 to $60 range mentioned by Bell Atlantic's employee.

AT&T/MCI WorldCom also claim that publicly available data from current contracts indicate that the proposed switch cost per line in the Model should be decreased.[82] GTE's experience establishes that the opposite is true. GTE's current contract with Nortel for switch material costs is significantly higher per line than the $55 to $60 range cited by AT&T/MCI WorldCom. This material cost must be adjusted upward since, as previously noted, engineering, installation, power and MDF costs are not included in GTE's contract price. Clearly, the $55 to $60 range cited by AT&T/MCI WorldCom is not representative of GTE's per line cost of an installed digital switch.

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[81] AT&T/MCI WorldCom Comments at p. 40.
[82] *Id.*

B. Switch Costs Have Not Declined.

AT&T/MCI WorldCom claim that switching costs have declined over 60% since 1986. It is unclear how AT&T/MCI WorldCom calculated this figure or if it accounts for inflation or the increase in labor cost since 1986. However, the only relevant switch cost for GTE is the amount it pays today and will pay in the future. The last two contracts GTE has negotiated with Nortel covering the years 1994 to 2000 show that switch costs have remained static. GTE pays Nortel the same for a switch today as it did in 1994, and the same cost will apply in 2000.

V. EXPENSES

A. The Costs Of Local Number Portability Should Be Based On The FCC's Approved Rates.

AT&T/MCI WorldCom propose the development of a weighted average for Local Number Portability ("LNP") costs.[83] This is completely unnecessary and should be rejected.

The FCC has recently approved LNP rates for each company. Hence, there is no justification for using the nationwide average suggested by AT&T/MCI WorldCom. These approved LNP rates can be easily retrieved and used in the Model, and will provide the best representation of each company's LNP costs, which is consistent with AT&T/MCI WorldCom's professed desire to have a cost model that "produces its most accurate results."[84]

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[83] *Id.* at p. 47.

[84] *Id.* at p. 10.

B. Cost Estimates Should Not Be Adjusted For One-Time Expenses.

AT&T/MCI WorldCom's suggestion that "one-time expenses" be removed is another example of faulty reasoning designed to produce lower overall cost estimates.[85] It is difficult if not impossible to discuss AT&T/MCI WorldCom's assertion that SEC reports show that "nearly 20 percent or yearly corporate operations expenses and 2.5 percent of yearly network operations expenses consist of non-recurring charges."[86] AT&T/MCI WorldCom provided no supporting documentation for the derivation and development of these statements.

Even if AT&T/MCI WorldCom had cited documentation, the use of SEC reports is likely to reveal nothing useful about appropriate "one-time expenses" for regulatory purposes. Many ILECs have abandoned FAS 71. As a result, significant differences can exist between the regulated financial information obtained from ARMIS reports, advocated for use in this proceeding, and the financial information provided in SEC reports. To suggest that information can be taken from SEC reports and used in a regulatory proceeding without careful analysis and review demonstrates a total lack of understanding of the adjustments that the FCC is attempting to identify.

The FCC seeks to identify expenses related to one-time and non-recurring events that may have been recorded in the financial information used in ARMIS reports. The only source for this information is the respective ILECs. For example, Part 32 accounting does not require specific identification of operating expenses related to non-recurring (service order) activities. These costs are included in the financial reporting of

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[85] *Id.* at pp. 45-46.

[86] *Id.* at p. 46.

the company. Only the ILEC can perform the necessary studies to identify the operating expenses associated with these types of activities.

By contrast, SEC reports identify many types of "special charges" that a corporation may incur in a financial reporting period. It is only these "special charges" type information, which are often related to events such as write-offs of impaired plant, FASB changes, etc., that are available from SEC reports. The type of information that the FCC seeks cannot be gleaned from SEC reports. What AT&T/MCI WorldCom advocate is akin to guessing the cost of apples from the cost of grapefruit.

Since most of the corporations in this proceeding are highly diversified, the "special charges" taken by a company for SEC reporting purposes can be related to any one or all of the subsidiaries of the corporation. GTE, for example, has operations in Wireless, Directory Services, Government Systems, Long Distance and International. Many of the special charges in GTE's SEC reports are related to these businesses, and would never be incurred by the regulated businesses. Many are recorded "below the line" and would not be recorded in regulated financial reports. To suggest that these types of charges can be used to determine one-time and non-recurring expenses of a regulated company is disingenuous, at best.

VI. CAPITAL COSTS

A. AT&T/MCI WorldCom's Proposed Cost Of Capital Is Absurdly Low.

In their discussion of the appropriate cost of capital, AT&T/MCI WorldCom argue that the "true" cost of capital is approximately 8.5 to 9% and later refer to a figure of

8.64% without citation.[87] The proposed figure is unrealistic and reflects a flawed discounted cash flow model premised on numerous unsupported downward adjustments and 1997 data. As with AT&T/MCI WorldCom's other proposed inputs, an 8.64% cost of capital is designed to artificially suppress the Model's cost estimates.

AT&T/MCI WorldCom assert that the ILECs "did not even attempt to provide the Commission with any data, calculation, or methodology to support claims that their cost of capital had *increased* since 1990."[88] This statement is false. GTE reported its forward-looking cost of capital based on 1998 data to be in the range of 12.75 to 13.15%.[89] Thus, the Commission's proposed 11.25% cost of capital would not "result in grossly overstating the cost of providing universal service," as AT&T/MCI WorldCom assert. Rather, it understates the appropriate forward-looking cost of capital, and thereby the costs of providing universal service.

B. The Model Does Not Properly Apply The Capital Cost Input Values.

U S WEST correctly acknowledged that the inputs for "sharing, plant mix placement cost, line counts, operating expenses, depreciation and cost of capital" should drastically affect the Model's results.[90] In the current version of the Model, however, the inputs for cost of capital and depreciation are almost totally irrelevant. Regardless of the values selected, they do not significantly affect the Model's results.

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[87] *Id.* at p. 50.

[88] *Id.*

[89] In the Matter of Prescribing the Authorized Unitary Rate of Return for Interstate Services of Local Exchange Carriers, CC Docket No. 98-165, *Reply Comments of GTE* (March 16, 1999), at p. 35.

[90] U S WEST Comments at p. 28.

It appears that U S WEST, GTE and other parties have been misled into believing that the Model uses the capital cost inputs to calculate a capital carrying cost factor that is used to compute the universal service costs.[91] This is not the case. Past versions of the Model performed these calculations and developed universal service costs based on the capital cost inputs. The current version of the Model only uses the depreciation life input to select a capital carrying cost factor that is hard-coded in the Model.[92] GTE discovered this when it performed a sensitivity test on the Model using a capital cost structure resulting in a 29% cost of money, and the resulting cost of a loop did not change from the default run.

Another major concern is that while the FCC has recommended a default cost of money of 11.25%,[93] the hard-coded capital cost factors are computed from a 10.01% cost of money (which just happens to be the HAI Model default value).[94]

In addition, as GTE previously noted, there is an inconsistency in the cost calculated in the optimization phase in the loop module and the costs finally calculated

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[91] *See e.g.,* GTE Comments at pp. 85-88; U S WEST Comments at p. 28; Ameritech Comments at pp. 30–33; Sprint Comments at pp. 75-79.

[92] The June 2, 1999 version of the Model is insensitive to changes in Cost of Capital Inputs, e.g., Cost of Equity, Cost of Debt, debt ratio. The problem appears to be in the expense modules, i.e., rfcc_expense_density_527.xls and rfcc_expense_wirecenter_527.xls. For example, in the rfcc_expense_density_527.xls module, the calculation of the "Levelized Cost of Capital" for every network element except land is a function of the CCCFact Table (rows 3 to 9 and columns A to CD) located in the CCCFactor Worksheet. This table has fixed inputs that are not affected by changing the Cost of Capital Inputs. The values in this table correspond to the CCCFact in the HAI Model, which is based on a Cost of Capital of 10.01% not the FCC recommended value of 11.25%. In addition, the expense modules used in the FCC Preliminary Results issued June 17, 1999 have the same problem.

[93] FNPRM at ¶ 239.

[94] *Id.* at ¶ 238.

in the expense module.[95] It now appears that this inconsistency is compounded because the annual charge factor inputs proposed by the Commission for use in the loop module are based on a capital cost of 11.25%, while the expense module uses the 10.01% capital cost factors.

VII. OTHER ISSUES

A. Correction To Attachment 3 Of GTE's Comments.

GTE discovered an error in the formula used to calculate the costs for 24-gauge copper buried cable costs, as illustrated in columns G, H and I of Attachment 3 to GTE's Comments. The coefficient applied to the number of pairs was mistakenly entered as .01652 instead of .010652. The corrected table is set forth in Attachment 2.

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[95] GTE Comments at p. 87.

VIII. CONCLUSION

For the foregoing reasons, the Commission should reject AT&T/MCI WorldCom's proposed methodological changes and revised input values. Nor should the Commission adopt any of the hopelessly flawed nationwide input values proposed in the FNPRM. Only after the Commission has finalized a properly working cost model platform is it possible or practical to develop appropriate inputs. At that time, the Commission should adopt company-specific input values based on data that have been (or could be) submitted to the Commission by GTE and other non-rural carriers.

Respectfully submitted,

GTE SERVICE CORPORATION and its affiliated domestic telephone operating companies

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ATTACHMENT 1

Impact of Optimization on Total Loop Investments and Universal Service Support

Prim Input	Total Loop Investment	Incremental $ Impact of Optimization	Incremental % Impact of Optimization	Universal Service Support	Incremental $ Impact of Optimization	Incremental % Impact of Optimization
-p0	$416,474,914			$14,288,872		
-p100	$406,313,957	-$10,160,957	**-2.440%**	$13,131,813	-$1,157,059	**-8.098%**
-p200	$406,923,217	$609,259	0.150%	$13,143,618	$11,805	0.090%
-p300	$406,797,434	-$125,783	-0.031%	$13,115,505	-$28,113	-0.214%
-p400	$406,640,415	-$157,019	-0.039%	$13,111,908	-$3,597	-0.027%
-p500	$406,297,060	-$343,355	-0.084%	$13,111,181	-$727	-0.006%
-p600	$406,132,963	-$164,097	-0.040%	$13,110,875	-$306	-0.002%
-p700	$406,059,790	-$73,174	-0.018%	$13,110,737	-$138	-0.001%
-p800	$406,087,016	$27,226	0.007%	$13,110,794	$56	0.000%

ATTACHMENT 2

Attachment 3 (Revised) to GTE's Comments

	24 Gauge Underground Copper Cable				24 Gauge Buried Copper Cable				24 Gauge Aerial Copper Cable			
Cable Size	Original NRRI Study with Engineering & Splicing Loadings*	FCC Modified NRRI Study w/ Huber Adj. & Engineering & Splicing Loadings**	FCC Modified NRRI Study w/ Huber Adj., Engineering and Splicing Loadings, and Superior Buying Adj.	FCC Proposed Input Values	Original NRRI Study with Engineering & Splicing Loadings*	FCC Modified NRRI Study w/ Huber Adj. & Engineering & Splicing Loadings**	FCC Modified NRRI Study w/ Huber Adj., Engineering and Splicing Loadings, and Superior Buying Adj.	FCC Proposed Input Values	Original NRRI Study with Engineering & Splicing Loadings*	FCC Modified NRRI Study w/ Huber Adj. & Engineering & Splicing Loadings**	FCC Modified NRRI Study w/ Huber Adj., Engineering and Splicing Loadings, and Superior Buying Adj.	FCC Proposed Input Values
(A)	(B)	(C)	(D)	(E)	(G)	(H)	(I)	(J)	(L)	(M)	(N)	(O)
4,200	$57.42	($2.25)	($15.28)	$39.32	$65.16	$54.37	$46.25	$46.25	$52.25	$49.82	$42.43	$42.43
3,600	$49.85	$8.68	($2.49)	$33.70	$56.28	$46.74	$39.78	$39.78	$45.03	$42.88	$36.54	$36.54
3,000	$42.28	$16.17	$6.87	$28.09	$47.41	$39.11	$33.31	$33.31	$37.81	$35.93	$30.66	$30.66
2,400	$34.71	$20.23	$12.79	$22.47	$38.53	$31.48	$26.84	$26.84	$30.59	$28.99	$24.77	$24.77
2,100	$30.93	$20.97	$14.46	$19.66	$34.09	$27.66	$23.60	$23.60	$26.98	$25.52	$21.83	$21.83
1,800	$27.15	$20.85	$15.27	$19.10	$29.65	$23.85	$20.37	$20.37	$23.37	$22.05	$18.88	$18.88
1,200	$19.58	$18.03	$14.30	$16.02	$20.77	$16.22	$13.90	$13.90	$16.15	$15.11	$13.00	$13.00
900	$15.79	$15.33	$12.54	$13.51	$16.34	$12.40	$10.66	$10.66	$12.54	$11.63	$10.05	$10.05
600	$12.01	$11.77	$9.91	$10.35	$11.90	$8.59	$7.43	$7.43	$8.93	$8.16	$7.11	$7.11
400	$9.48	$8.92	$7.68	$7.88	$8.94	$6.04	$5.27	$5.27	$6.53	$5.85	$5.15	$5.15
300	$8.22	$7.35	$6.42	$6.53	$7.46	$4.77	$4.19	$4.19	$5.32	$4.69	$4.16	$4.16
200	$6.96	$5.68	$5.06	$5.11	$5.98	$3.50	$3.11	$3.11	$4.12	$3.54	$3.18	$3.18
100	$5.70	$3.92	$3.61	$3.63	$4.50	$2.23	$2.03	$2.03	$2.92	$2.38	$2.20	$2.20
50	$5.07	$3.01	$2.85	$2.86	$3.76	$1.59	$1.49	$1.49	$2.31	$1.80	$1.71	$1.71
25	$4.75	$2.54	$2.46	$2.46	$3.39	$1.27	$1.22	$1.22	$2.01	$1.51	$1.47	$1.47
18	$4.67	$2.41	$2.35	$2.35	$3.29	$1.18	$1.15	$1.15	$1.93	$1.43	$1.40	$1.40
12	$4.59	$2.30	$2.26	$2.26	$3.20	$1.11	$1.08	$1.08	$1.86	$1.36	$1.34	$1.34
6	$4.51	$2.18	$2.16	$2.16	$3.11	$1.03	$1.02	$1.02	$1.79	$1.29	$1.28	$1.28
1	$4.45	$2.09	$2.08	$2.06	$3.03	$0.97	$0.97	$0.97	$1.73	$1.23	$1.23	$1.23

* NRRI Study recommends a 15% engineering loading and 9.4% splicing loading for copper cable.

** FCC uses a 10% engineering loading and 9.4% splicing loading for copper cable.