Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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

BellSouth Corporation, on behalf of itself and its wholly-owned subsidiaries, ("BellSouth"), submits this reply to comments filed in response to the *Public Notice* released by the Wireline Competition Bureau on January 7, 2003.[1]

BellSouth concurs in and generally supports the comments of the Maine Public Utilities Commission and the Vermont Public Service Board ("Rural State Commissions") and Verizon. Regarding the conversion to the Delphi release of the Synthesis Model, like Verizon, BellSouth is unable to replicate the per-line costs in the *Delphi Language Order* using the data available on the model from the Commission's web site. The model, along with the manipulations of line counts that were made prior to running the model, make it problematic for BellSouth to determine whether it has run the model correctly and whether the model has made all of the calculations correctly. Further, the FCC has neither provided the regulated community with any

[1] Wireline Competition Bureau Seeks Comment on Updating Line Counts and Other Limited Information Used in Calculating High-Cost Universal Service Support for Non-Rural Carriers, CC Docket No. 96-45, *Public Notice*, DA 03-25 (rel. Jan. 7, 2003).

impact analysis of the changes resulting in the conversion to the Delphi release nor demonstrated the impacts of the change from Turbo Pascal to Delphi.

In regard to the use of DS0 equivalents for the counts of special access lines, the Rural State Commissions accurately and convincingly demonstrate that DS3s (and, BellSouth presumes, facilities at higher capacity levels than DS3) should not be included in the count of special access lines unless the model is changed to accurately cost DS3s and above, and that special access lines should not be allocated to wire centers based on the distribution from the 1999 data request. A fundamental problem is that the Commission has yet to recognize that when special access DS0 equivalents provided over high capacity (DS1 and above) loops are treated by the model as either DS0 or DS1 copper facilities, the amount of lines that must be served over copper lines are grossly overstated, resulting in a significantly understated cost per line. The Rural State Commissions do an excellent job demonstrating this with their data.[2]

The Commission made an attempt to reduce this obvious overstatement in copper facility requirements by assuming that 91.75% of special access DS0 equivalents would be served over a 4-wire copper DS1 facility and the remaining 8.25% of special access DS0 equivalents would be served over individual 2-wire copper DS0 circuits.[3] While the High-Cost Proxy Model ("HCPM") portion of the model attempts to recognize this problem, the Hatfield Model ("HAI") portion of the Synthesis Model does not. After the HCPM portion has "built" this unrealistic network of copper-based high capacity lines, the HAI portion of the model then simply divides the cost of the network by the total number of lines (which includes special access lines counted as DS0 equivalents). The result is a significantly understated cost per line. The following

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[2] Comments of the Rural State Commissions at 8.

[3] However, this ignores the basic fact that DS3 loops and above cannot be provided over copper facilities.

simplified example, using only FCC ordered material prices, illustrates the point and underscores the observations of the Rural State Commissions:

Assumptions:

- Assume 10 POTS lines and 1 DS3 special access service
- Assume 100' of buried cable
- 12 pair copper cable = $ 0.78 / ft
- 200 pair copper cable = $ 2.20 / ft

What should happen:

The 10 POTS lines will be served on copper facilities while the DS3 would be served on a separate fiber facility. Since the 10 lines will require a 12 pair cable, that size cable is installed. Therefore, the costs for the POTS lines are:

100' X $ 0.78 / ft / 10 lines = $ 7.80 per line.

What the Synthesis Model does:

The 10 POTS lines will require 10 copper pairs while the model assumes that 91.75% of the 672 DS0 equivalents will be transported on 4-wire copper DS1s and the remaining 8.25% of the DS0s will be provided on separate 2-wire copper DS0 special access circuits. This equates to the following copper pair requirements:

.9175 X 672 = 616.6 / 24 DS0s per DS1 = 25.7 DS1s X 2 pairs = 51 copper pairs; plus .0825 X 672 = 55.4 DS0s X 1 pair = 56 pairs; plus 10 POTS lines X 1 pair each = 10 pairs. TOTAL number of pairs = 51 + 56 + 10 = 117 copper pairs, therefore, the model would place a 200 pair cable: 100' X $2.20 / ft = $220 / 672 DS0s = $ 0.33.per line.

As this simple example shows, the impact of incorrectly assuming that high capacity special access lines can ride on the same copper network that the model builds for basic local service can be tremendous.[4] The issue is compounded by the problem that the "growth" being used as the Commission moves from 2000 line counts to 2001 line counts is not an actual growth in services that use the basic local exchange copper loop, but rather the growth is actually occurring in high capacity special access lines provided over an overlay fiber network.

The Commission has two possible approaches. If the Synthesis Model is left unchanged, DS3 and above special access lines and local private lines should not be included in the line count data. Additionally, some portion of DS1s should be excluded since many DS1s are also provided over the overlay high capacity fiber network.[5] The other approach would require significant model modifications. BellSouth's loop cost model, the BellSouth Telecommunications Loop Model ("BSTLM"), accurately models copper-based services such as POTS and then models an overlay fiber network for high capacity loops. Such an approach accurately depicts the relevant cost for each service type and captures any economies of scope occurring when both the narrow-band network and the high-capacity fiber network follow a common route.

Regarding the resulting mismatch between timing of dependent variables used by the model, BellSouth concurs with Verizon and the Rural State Commissions comments.

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[4] There are economies of scope (primarily some amount of sharing of structure costs) associated with providing both copper-based basic local service and fiber-based high capacity special access lines when all of those services are carried along the same route. However, these economies do not include sharing of copper facilities, nor do they include sharing of digital loop electronics since the high capacity loops at DS3 and above do not use DLC technology.

[5] Unless and until these changes are implemented, the Commission cannot seriously consider AT&T's advocacy of forecasted line counts.

BellSouth appreciates the Florida Public Service Commission's proposal to initiate quarterly recalculations of the model using the same lines as reported for support calculation, but believes that a quarterly recalculation frequency would be unnecessarily burdensome in that line costs should not be changing that rapidly from quarter-to-quarter and would result in further mismatches in timing of customer location data, line counts, road data, etc. In the absence of persuasive record evidence of quarterly line count volatility, less frequent model recalculations should serve the public interest. Similarly, the Florida Public Service Commission's call for updated inputs relating to general support facilities reflects a legitimate need for accurate inputs, but it must not be accorded singular emphasis.

The Commission should continue to reject AT&T's oft-rejected proposal to use forecasted, rather than actual, line counts. The impacts would be significant to universal service support and would not be in the public interest. AT&T has provided no new evidence warranting the Commission's departure from its earlier conclusions in the *2002 Line Counts Update Order*[6] and the *2001 Line Counts Update Order.*[7]

Model line counts should not be updated unless road and customer location data is also updated. Unless this other information is updated simultaneously, the model "places" all "additional" lines at previous year's customer locations. As the Rural State Commissions noted in their Petition for Reconsideration of the *2002 Line Counts Update Order*,[8] that 2002 Order

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[6] *In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Order and Order on Reconsideration*, 16 FCC Rcd 22418, 22421, ¶ 8 (2001) (*"2002 Line Counts Update Order"*).

[7] *In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, *Order*, 15 FCC Rcd 23960, 23964, ¶ 10 (2000) (*"2001 Line Counts Update Order"*).

[8] *In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Petition for Reconsideration of the Maine Public Utilities Commission and the Vermont Public Service Board (filed Feb. 22, 2002).

inappropriately combined the use of (a) 2000 ARMIS data of special access line DS0 equivalents; (b) distribution of those special access lines to wire centers based on 1998 data; and, (c) 1996 customer location data from PNR Associates (now TNS Telecom). Such inconsistencies in timing of data will only be exacerbated by another update in line counts to 2001, and AT&T's attempt to use a "forecasted" or "projected" line count proposal would only worsen an already inappropriate combination of model inputs that must be tied together. Lines serve residence or business customer locations and those locations are placed along roads. Updating of these inputs to a later time frame without updating the others can only produce inaccurate results. If all of this data is not synchronized, the results from the model using this data could only be correct by accident. The result of only updating line counts while holding road data and customer location data constant is false economies of scale and blatant disregard of the reality that many new lines are placed at new customer locations that require new facilities.

CONCLUSION

In its present state the Synthesis Model assumes any increase in "line counts" occurs as a result of a static number of customers buying more and more services at the same location. The model ignores the increases and changes in customer locations, the changes in network and routing requirements, and changes in customer dispersion. This produces a set of numbers that do not provide any value in determining whether loop costs have increased or decreased overtime. The problem is made worse by the Commission's use of DS0 equivalents in the count of special access lines. In BellSouth, switched basic local service lines are declining. The "growth" lines are a result of growth in high capacity fiber-based non-switched lines that the Synthesis Model does not model accurately. As pointed out in the comments filed in response to the *Public Notice*, any update in customer data must not only reflect actual line count change, but

must also take into account the change of the number of customers, the locations of the customers, and the actual growth in the copper network.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I do hereby certify that I have this 12th day of March 2003 served the following parties to this action with a copy of the foregoing **REPLY COMMENTS** by electronic filing and/or by placing a copy of the same in the United States mail, addressed to the parties on the attached service list.

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