BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	
Determination of the cost of basic local telecommunications services, pursuant to Section 364.025, Florida Statutes.	DOCKET NO. 980696-TP

VOLUME 10

Pages 1080 through 1177

PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN JULIA L. JOHNSON COMMISSIONER J. TERRY DEASON COMMISSIONER SUSAN F. CLARK COMMISSIONER E. LEON JACOBS, JR. COMMISSIONER JOE GARCIA
DATE:	Tuesday, October 13, 1998
TIME:	Commenced at 9:30 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	NANCY S. METZKE, RPR, CCR

APPEARANCES:

(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS - VOLUME 10

PROCEEDINGS

(Transcript follows in sequence from Volume 9).

KEVIN DUFFY-DENO

continues his testimony under oath from Volume.

COMMISSIONER DEASON: It seems to me that is a serious flaw in the model if it doesn't create enough cabling to at least meet the minimum requirement. That's a flaw in both models. Why does that flaw exist?

DOCTOR DUFFY-DENO: Why does it exist?

COMMISSIONER DEASON: Yeah.

DOCTOR DUFFY-DENO: Well, I can explain why it exists in the Hatfield Model, and then I can maybe provide some reasons why it might exist in the BCPM model. The best way to explain why it exists in the Hatfield Model is to look at the following. I've got some overheads that would explain this.

I need to get all the points up there so you can -- There we go. What this shows is a placement of customer locations, some address geocoded, some surrogate. And this would be -- these would be spatially placed on a map. The next step in the Hatfield pre-processing is to form these locations into clusters. And the next overhead shows a cluster formed out of those customer locations, okay? And, again, this is all in the pre-processing stage. This is not what you see on the CD you get with the model.

This, the outer perimeter of these points is referred to as a convex hull. Now that is not really important. What's important is that the boundary of the cluster is formed by these connections between those outer points. Now this is what's done by PNR. On behalf of the Hatfield Model development team PNR geocoded the locations, address geocoded locations, developed the surrogate placement, formed these clusters of customers into these irregular shaped polygon clusters; and then the last step was the transformation of that irregular shape into a regular shape. The models modeling -- transformation to a regular shape makes modeling a heck of a lot easier to do.

So what happens is this irregular shape is transformed into a rectangle. Now this rectangle is what's included in the model. When you open the model MDB database, you get essentially these rectangular clusters; and this is the modeling tool used by the Hatfield Model to estimate the amount of cable needed to serve the customers in the PNR underlined clusters.

So what the minimum spanning tree test says is, given the amount of cable estimated by this modeling tool isn't enough to simply connect customers in the underlying PNR cluster. And the reason the Hatfield Model falls short is due to two reasons: Reason Number 1 is the transformation of this irregular shape polygon into this

rectangle. What that tends to do is, it tends to compress dispersion. The dispersion of customers that occurs in the PNR cluster is greater than the amount of dispersion within the modeled area. And the reason for that is not only the transformation in the shape but also the placement of uniform lots within that modeling area. In this case we are assuming nine customers, and the model assumes essentially uniform distribution of lots within that rectangle.

Now the second reason for the failure in terms of the minimum spanning tree test is that when the model estimates the amount of branch and backbone cable, it will extend the cables to only one lot's width and depth from the perimeter. What that means is that the customers, in order to be served with the -- And we are talking about rural areas here. This is where predominantly the problem occurs. In rural areas the default drop value is only 150 feet, so what happens is the model needs -- these customers have to be compressed even further into the interior of this modeled area to be connected to the branch and backbone.

So when you add up the amount of branch, backbone and drop for this modeled area and you compare it with the amount of connecting distance needed to connect the customers in the underlying PNR cluster in rural areas

where this, again, is predominantly the problem, the model comes up short. So the reason for the shortage in the Hatfield Model is transformation of these irregular shaped clusters of customers into the regularly shaped rectangle used by the model and the assumption that backbone and branch cable extends to only within one lot depth and width within the modeled area.

COMMISSIONER JACOBS: Excuse me. Does that include the configuration -- I think it was mentioned in the presentation -- where it was said that there was an assumption that in those outlyer areas they would have the remotes from -- that would not come directly from the CO. So would it need that same kind of connecting technology, or would you have something else in place of that?

DOCTOR DUFFY-DENO: I believe you are referring to the outlyer clusters.

COMMISSIONER JACOBS: Yeah, yeah.

DOCTOR DUFFY-DENO: Yeah, this is the -- the MST problem in the Hatfield Model is predominantly a problem with the main clusters.

COMMISSIONER JACOBS: Oh, okay.

DOCTOR DUFFY-DENO: Okay? The outlyer clusters, because they are so small to begin with and because of the connecting cable between the main cluster and the outlyers takes a right angle routing. The minimum spanning tree is

as straight as the crow flies. When you add up the connecting cable to the outlyers plus the outlyers internal, you are always going to be above the minimum spanning tree for those outlyers and that connecting cable.

COMMISSIONER JACOBS: I see.

DOCTOR DUFFY-DENO: So, really, the focus -- the main area of concern is with the main clusters.

COMMISSIONER JACOBS: Thank you.

COMMISSIONER DEASON: The second half of that question.

DOCTOR DUFFY-DENO: BCPM.

COMMISSIONER DEASON: Yes.

DOCTOR DUFFY-DENO: Unfortunately, the analysis isn't as clear-cut in terms of BCPM, and I can give you some thoughts I have. I would also recommend you talk to Doctor Brian Staihr to see what thoughts he has on this.

One thing that jumps out is that BCPM uses a cap, a road cap on the amount of distribution distance it estimates within a quadrant. And the rationale for this -- what this road cap says is that the amount of branch, backbone, drop and connecting cable cannot exceed the amount of road mileage within that quadrant. And the idea was, well, that cable is going to go along the roads, so how can you have more cable distance than road distance? Well, maybe that assumption contributes to the shortage of

BCPM on this account.

That's the only thing that comes to mind right now. Again, Doctor Brian Staihr might have more thoughts on this. You know, it is a problem. It is an issue in both models, but clearly BCPM -- or Hatfield comes up far worse on this test than does BCPM.

BY MR. LAMOUREUX (Continuing):

Q I just want to clarify something. What the MST is, is if you've got a cluster and the model, Hatfield Model, geocodes some locations in that customer -- in that cluster and the others -- Let me backup. The others have been placed surrogate, using the surrogate location methodology somehow. So some of these customers have been located through geocoding, some have been located through the surrogate location methodology. The MST calculates a distance for that to connect all those points?

A (WITNESS NODDED HEAD AFFIRMATIVELY).

Q That is not a comparison to if you were to take that cluster out, drop it down on top of somewhere in Florida and find where all the houses are in Florida, households, houses, whatever you want to do, and calculate that distance. It's not a comparison of that?

A No, it's not.

Q Okay. So what you've done is if you've got the MST distance out of the Hatfield Model, some number --

we'll call it X for lack of creativity -- what you then do is you add up all the distance, ground footers that you find in the Hatfield Model itself for that cluster -- say it's Y -- and you determine if Y is either equal to -- if Y is equal or less than, if the Hatfield Model distance is equal to or less than the MST distance than that?

A Less than.

Q Okay. Now if it's true that the surrogate location methodology is a conservative approach in how it places the surrogates, it could very well be that although the route distance that comes out of the model for that cluster is less than the MST distance for that cluster. the route distance in that cluster is sufficient for the actual amount of routage if you were to drop that cluster down on top of the houses on Florida?

A Is it possible? Sure. Is it relevant? Absolutely not. What the models are doing is -- and what this test is doing is determining whether the model estimates enough cable to serve customers in the locations identified by the model. That would be the first cluster that Mr. Lamoureux drew. It has no bearing whatsoever, or it has no -- it is not in relation in any way to where customers are actually located. We don't have a comprehensive database on that. This is an internal model consistency test. Does the model estimate enough cable to

serve customers in the locations identified by the model?

Now I don't care where they have identified those locations. I don't care if they put them on the perimeter of census blocks, I don't care if they put them on the roads. I don't care if they put them all on top of each other, the test is still valid, and the test still says: Does the model estimate enough cable to connect, to at least connect those customers? So this whole argument about how the geocoded -- I'm sorry, the surrogate location placement on the census block boundary somehow yields a greater dispersion and hence the Hatfield Model in actuality estimates enough cable to serve actual customers is mind boggling to say the least. They are mixing apples and oranges in essence. The focus of the MST analysis is internal to the model. Does the model build plant to where the model says customers are located, period.

Q The purpose of this proceeding is to determine what's the appropriate cost to provide service to these customers in Florida, right, or to determine how to calculate the cost to provide service to these customers in Florida?

A Correct, it is. And how do we do that? We build models. Do we have some requirements that our models should pass? Yes, they should be internally consistent.

Q But the ultimate check on whether the model does,

what the purpose of this proceeding is, is to determine if the amount of footage for the location that actually exists in Florida is enough cost to serve that actual location in Florida. Would you agree with me on that?

A No, I can't. We don't know where actual customers are located. You can't take that model, that cluster and plop it down on top of Florida, some part of Florida, and compare the distances with respect to what actually it would take to serve those customers because we don't know where those customers are located. That's the whole reason we are going through all this, all this debate about the customer location methodology. It is an estimation methodology. And then to say that, well, we have located customers using this state of the art methodology, and, oh, by the way, our points aren't accurate enough, therefore, you can't use the minimum spanning tree test is ludicrous to say the least.

Q Whether or not it's possible to do it, the ultimate test of whether a model does what the purpose of this proceeding is for is whether it generates enough cable, footage, plant to have sufficient cost to serve actual locations in Florida.

MR. CARVER: Objection. Madam Chairman, he has asked this exact same question three times, and I think Doctor Duffy-Deno has answered it three times, and we are

just going over the same thing now again and again and again.

MR. LAMOUREUX: Actually I don't think he answered the question. I would have to think back. I'm not sure it actually had a yes or no to it. And, again, he answered the question of whether or not it was possible to do the test, not whether that really should be the test regardless of whether it's possible or not.

MR. CARVER: I believe the answer was no, and I think he has stated that unequivocally several times, and he has explained his answer at great length; and, again, I think this is just repetitive.

CHAIRMAN JOHNSON: I thought his answer was no too. Unless you are asking a different question, and when you were just explaining what you were asking, you had about three questions in there.

MR. LAMOUREUX: Let me ask the question, and if I get the objection again, I will.

BY MR. LAMOUREUX (Continuing):

Q But my question is regardless of whether or not there was a test that can be done to do it, the ultimate test of whether a model serves the purpose of what this proceeding is about is whether the model generates enough plant and cost to serve an actual location in the State of Florida?

A No, it --

MR. CARVER: Same objection. That's the same question.

CHAIRMAN JOHNSON: I'm going to let him answer it.

A It's not. The purpose of the model is to estimate an accurate -- to accurately estimate the cost to serve customers; and to determine whether the model is accurate in that regard, we need to look at some internal validity tests, and that's what the MST test does.

Q Following up on your last answer, it's to determine the cost of serving actual customers, right?

A I certainly hope it is, yes.

Q I want to ask a question about how you did the MST analysis for BCPM. The MST calculation you did for the Hatfield Model was the MST distance for the Hatfield cluster, right?

A That was one of the tests. I did a test for the main cluster, and I also did a test for the main clusters plus the outlyers because there has been some argument that our analysis is biased because we don't include the outlyers; so we put in the outlyers also and low and behold came up with the same findings.

Q And on the BCPM side, the unit of analysis that you did was the ultimate grid, the serving area?

A That's correct.

Q Okay. And my question is, when you were looking at or calculating out the distance in the BCPM, did you include in that the distribution from the DLC at the middle of the serving area to each of the road-reduced distribution areas?

A Absolutely.

Q When you calculated the MST for BCPM, did you include this DLC as a point or a node in calculating the minimum spanning tree distance for this ultimate area?

A Mr. Lamoureux, you've been doing your homework. No, we have not, and the reason was that when this all got started the minimum spanning tree program that was written for the Hatfield Model clusters was just the connecting distance between the points in the cluster, and we didn't add a point in the centroid of the cluster -- I can't honestly think of why we didn't do that, but we didn't. And what Mr. Lamoureux is arguing, well, you've got to connect customers not only to each other but to the network, and that's the subfeeder termination point within -- at the centroid of the cluster.

So what he is saying, I think, and he'll correct me if I'm wrong, but what he is saying is that if you compare the connecting cable distance, backbone, drop and branch distance and compare that with an MST that does not

include the centroid of the ultimate grid as an additional node, that your analysis isn't really an apples to apples, and I'd be the first to agree. But guess what, we did it. And would you like to know the results?

Q Sure.

A Sure. Does it increase the minimum spanning tree distance for BCPM? Sure it does. Sure it does. You're adding an additional node, okay? It's going to increase it.

On average it increases the shortage in BCPM by 24%, and I can provide this as a late-filed exhibit. I've got a table that shows this data. So it does increase the amount of shortage in BCPM, and it's a good point, and I'm glad we brought it up, and we need to -- if we are going to go forward we need to include that additional node. However, to be fair, don't we also need to do that HAI model? Yes, we do; and yes, I have done it.

The MST distance also increases in the Hatfield Model, and the shortage increases as well. However, the shortage doesn't increase by as much in the Hatfield Model. It increases by an average 8%. So if I can just use these new MST numbers and reference back to my summary statement where I said BCPM was short on average by 68% -- was short in 68% of its serving areas and Hatfield was -- I'm sorry, Hatfield was short in 68% of its serving areas

and BCPM was short in, I believe it was, 24% of its serving areas.

What would be the new numbers if we used the centroid of the clusters? The Hatfield Model would be short in 88%. And this is just of its main clusters by the way. I couldn't do it for the outlyers. Hatfield is short in 88% of its main clusters in the lowest density zone. BCPM is short in 43% of its clusters in the lowest density zones. And, again, we can file this as a late-filed exhibit.

So, good point. Good point. But the relative results of the test are fairly constant. BCPM performs, still performs much better on this test than does the Hatfield Model.

Q Now when you said it increases the average amount of shortage by 24%, was the amount of distance that is short that it increases by 24%?

A That was the amount of -- the difference between the minimum spanning tree and the estimated distribution distance, yeah, for the entire state actually. That's the --

Q Is that -- I'm sorry, go ahead.

A That is the only number I've got, is for the entire state.

Q That is not in the number of clusters that are

short, that increase as a result of doing this revised MST?

A That 24% increase?

Q Yeah.

A No, that's just the shortage, the total shortage.

Q Right. And when you rattled off the numbers 88% and 40 something percent of Hatfield versus BCPM, you said those were in the lowest density zones?

A That is the lowest density zone, yes.

Q The less than five density zone?

A The less than five, yes.

Q So it increased the number of clusters short in BCPM, it went from 31% to 40 something percent?

A 32% to 43 in the lowest density zone.

Q And in that density zone it increased the number of Hatfield clusters -- I'm sorry, the number of Hatfield clusters by 86 and half roughly to about 88%?

A Yes. Yes. So, again, the effect was smaller in the Hatfield Model than in the BCPM.

Q The last subject I want to cover, I don't need any graphs for this. BCPM locates and builds plant to house units and Hatfield locates and builds plant to households; is that right?

A No, unfortunately, I can't agree with that statement; and it's a clarification I need to make in particular with respect to the Hatfield Model. The models

build plant to clusters of customers. Neither model builds plant to specific households or housing units. So in terms of the Hatfield Model, when we are talking about address geocoded points, the model does not build plant to those points. Those points are used to form clusters, just like I have up here on the screen. Those points are used to form clusters, and the model estimates the amount of cable needed to serve that cluster, that serving area, and the same for BCPM.

Q Okay. Let me ask a more precise question then.

A Okay.

Q The Hatfield Model builds plant and, therefore, cost to clusters containing households. BCPM builds plant and calculates costs based on ultimate grids containing housing units?

A Yes. Let me restate that. As the fundamental unit or the fundamental definition of a residential customer, BCPM default is a housing unit which, as we know, is an occupied or an unoccupied structure. And the Hatfield Model uses as its definition of the residential customer, it uses "households," but I also thought it was households with phone service, which is a smaller number than the population of households.

Q Generally, there are more housing units than households?

A And there are more households than households with phones.

Q So as a general proposition, by locating and building to an area that encompasses housing units rather than households, BCPM would build more plant than if it simply built to areas based on households; would you agree with that?

A As a general proposition, I would agree with that.

Q Okay. And the FCC criteria specifically refers to households, not housing units; is that right?

A The criteria in -- criterion uses the word "households." Obviously that term -- there is a difference of opinion as to whether the FCC truly meant households or did it mean housing units, or did it mean households with current telephone service. Obviously the sponsors of BCPM interpreted that as housing units. The Commission may interpret that differently.

COMMISSIONER CLARK: Doctor, let me ask you a question on that. Households has a specific term in the sense that it's -- and that's evidently what Hatfield is equating the use -- As I understand it, they are using the term -- they are saying the term "household," and the FCC has the same meaning as in the census and, therefore, you would use that measure.

DOCTOR DUFFY-DENO: Well, actually, if -- I think my understanding is correct that they are using households with phone service which would not be of a census definition of a household.

COMMISSIONER CLARK: Well, if they are, I didn't understand that, so let's just keep with the notion of they are equating households. Is it possible that they are equating household to the census use of the term?

DOCTOR DUFFY-DENO: I believe, yeah. If we ignore the penetration issue, I believe that's what they are doing.

COMMISSIONER CLARK: Well, let me ask you from the standpoint of modeling for cost, which do you think is correct to use, the housing units or the ones that actually have people in them?

DOCTOR DUFFY-DENO: I believe that the models should be costing what it would take to build plant to housing units because of the incumbent's obligation to serve. When the census did their census, on that particular day, a house could have been vacant when the very next day somebody moved in. That house would be considered a housing unit but an unoccupied one in the census data.

COMMISSIONER CLARK: Now is it possible to simply adjust the Hatfield Model? Can you just change an input so

that you do use housing units for the Hatfield Model?

DOCTOR DUFFY-DENO: I believe it would be a change in the pre-processing stage. It's something the user could not do

COMMISSIONER CLARK: Well, if we thought that was correct to do, we could have that changed in the Hatfield?

DOCTOR DUFFY-DENO: I'm assuming that you would make a request to AT&T to make that change and they would have that change executed. I might point out that BCPM, although the default is building to housing units, can very easily, by the user -- we don't have to go back to pre-processing -- the user using BCPM can change the module so that it builds to households.

COMMISSIONER DEASON: How much difference does it make in the BCPM results as to whether you use households or housing units?

DOCTOR DUFFY-DENO: I don't know. I don't know. Doctor Brian Staihr might be able to answer that for you. I haven't seen any runs.

MR. LAMOUREUX: I have no further questions.

CHAIRMAN JOHNSON: We are going to take a 30-minute lunch break.

(BRIEF RECESS)

CHAIRMAN JOHNSON: We are going to go back on the record.

MR. LAMOUREUX: With the Commission's indulgence, may I ask one last question? (Inaudible)

CHAIRMAN JOHNSON: Your mike -- I can hear you, but your mike isn't on.

MR. HATCH: The mike is not activated.

CHAIRMAN JOHNSON: Well, maybe that is because I need to turn them on.

You want to ask one last question?

MR. LAMOUREUX: One last question, and I promise it will only be one question.

CHAIRMAN JOHNSON: Okay.

BY MR. LAMOUREUX (Continuing):

Q In I think the next to last line of questions we talked about, I asked you if doing the MST for the BCPM you had added a point in the middle of the ultimate grid for that DLC, and you gave me some numbers, or analysis you did for that. All I wanted to ask you is, in that analysis you did, did that also include the addition of points in the four quadrants where -- which would be connected to that point in the middle of the ultimate grid?

A I don't know. I'll need to find out.

MR. LAMOUREUX: Thank you very much, and I appreciate the indulgence.

CHAIRMAN JOHNSON: Okay.

DOCTOR DUFFY-DENO: I will add that maybe Doctor

Staihr knows the answer to that question.

CHAIRMAN JOHNSON: If you could pull your mike down a bit?

DOCTOR DUFFY-DENO: I would just add that maybe Doctor Staihr knows the answer to that question.

CHAIRMAN JOHNSON: Okay. Mr. Melson.

CROSS EXAMINATION

BY MR. MELSON:

Q Doctor Duffy-Deno, I'm Rick Melson representing MCI. I've just got a few questions for you this afternoon.

I believe part of the point of your MST analysis is you want to be sure that the model does not understate the amount of distribution required to serve an area; is that correct?

A Generally correct, yes.

Q And would you also agree, on the other side, that you don't want to overstate the required amount of distribution?

A Conceptually, yes. The problem is we don't have a benchmark on the other side as to what is the appropriate amount of cable or distribution, cable distance to serve customers. We only have this lower-bound minimum spanning tree benchmark.

Q And I believe -- let's focus on the numbers you

gave us for the BCPM model. I believe you indicated that after your refined analysis there were some 43% of the grids in the lowest density zone in which BCPM fell short; is that correct?

A That would be the minimum spanning tree, that's correct, using the road centroid of the ultimate grid as an additional node.

Q Can you tell me what that percentage is if you focus not just on the lowest density zone but across all density zones?

A Across -- so the average number of grids short across the entire BellSouth territory?

Q Yes.

A 4.6%.

Q So 4.6% of the total grids BCPM does not place enough distribution to meet the MST minimum?

A Correct, over BellSouth's entire service territory.

Q Okay. So then there are roughly 95% of the grids in which that minimum is exceeded?

A That's correct.

Q Have you done any analysis of the amount or percentage by which the minimum was exceeded in that 95% of the grids?

A I have not.

Q Do you know, for example -- Could you tell us whether the average was more or less than twice the MST minimum?

A I have not done that analysis. I can't tell you.

Q And so without that analysis, even recognizing that the amount needed may be somewhere above the minimum, we don't have any information on how far above the minimum the BCPM numbers would be?

A That data is readily available. I don't have it here. However, again, because we don't have a benchmark for what is the appropriate level of cable, we only have a benchmark for the lower bound, it's not really that useful, because we don't know by how much to offset the minimum shortage -- the minimum spanning tree shortage.

MR. MELSON.

That's all. Thank you.

BY MR. COX (Continuing):

Q Good afternoon, Doctor Duffy-Deno.

A Good afternoon.

Q Will Cox on behalf of the Commission staff, and I have just a couple of quick questions.

This exhaustive discussion you had on the minimum spanning tree analysis, the last number that you gave for BCPM was 43% under building, and that was based on when you

looked at shortage including from the customer location to the DLC; is that correct?

A Correct, when we include the road centroid of the ultimate grid as an additional node.

Q Okay.

A And that was for the lowest density zone.

Q Okay.

A The less than five house housing units per square mile.

Q And you also stated that when you do the minimum spanning tree analysis, it didn't factor into play things such as geographic obstacles that might cause different routing; so, in fact, the 43% is probably an understatement of the under building; is that correct, or fair to say? This is just looking at the model, I understand that. It's an internal check that you have.

A To the extent that -- The answer -- I guess the answer is, yes, to the extent that the appropriate amount of plant needed is greater than the minimum spanning tree amount, yeah. But, again, we don't know what that number is.

Q Okay. Given that, staff sees that as a fairly substantial percentage of under building based on that internal check of the minimum spanning tree analysis. What adjustments to BCPM should be made to correct for this

understatement of distribution plant as indicated by the minimum spanning tree analysis?

A One point -- one thing that comes to mind is that one of the reasons that the Hatfield Model also understates is because the cable -- Let me -- If I can put up my overhead again, I can explain it better, I feel. One of the reasons for the under build in the Hatfield Model was the branch and backbone cable in the modeling, modeled area was limited to within one lot depth and width of the boundary of that modeled area. The same thing happens in BCPM. So one adjustment that comes to mind is to, in BCPM's road-reduced area, when the branch and backbone cable is laid out, is to extend it to maybe to the perimeter of that road-reduced modeled area instead of within one lot depth, width and depth of that boundary.

Q Would that be considered a pre-processing adjustment?

A No, it would be a change to the code itself in the Excel spreadsheets.

Q Is that something that the staff could perform?

A Certainly. And I'm sure the sponsor would be happy to guide the staff in determining exactly what cells should be changed and in what manner to achieve that effect.

Q Would you be the one for us to ask how

specifically to do that?

A It certainly can be asked through me. I would probably send it on to our coding experts to make sure we get you the right cell references.

Q Okay. What other adjustments might be made to correct the problem?

A That's the only one that comes to mind, and I would certainly direct that question to Doctor Staihr. He might have some additional thoughts on that.

Q Thank you, Doctor Duffy-Deno.

A You're welcome.

MR. COX: That concludes staff's questions.

CHAIRMAN JOHNSON: Commissioners?

(NO RESPONSE)

CHAIRMAN JOHNSON: Redirect.

MR. CARVER: Yes, thank you, I have just a few redirect questions.

REDIRECT EXAMINATION

BY MR. CARVER (Continuing):

Q Doctor Duffy-Deno, early in the cross examination by Mr. Lamoureux there was a discussion that had to do with the possible use of geocoding in BCPM and I think you said that it might make sense to do that if it would be -- if it would result in a substantial increase in precision. I think -- I believe the figure you said was if the geocoding

rate was 80% or higher. Do you recall that?

A I recall that discussion, yes.

Q Okay. Let me ask you: Where do high-cost areas tend to be?

A My understanding and looking at the data, they tend to occur in the rural, low-density areas.

Q Have you ever seen a rural, low-density area where the geocode success rate was 80% or higher?

A Not to my knowledge.

Q Thank you.

Moving to a different area. If you could just flip back to the national park example. I had one question for you on that. Now I believe in that example when you did the Hatfield portion of the location, I believe the hypothetical was that Hatfield could geocode one customer and the other two were placed at surrogate locations; is that correct?

A Yes, as I recall this example, we have a census block, and we were talking about this occurring within a state park or a national forest, and we had three locations identified by the census, and we were assuming for talking purposes that one of those was accurately address geocoded and the remaining two were going to be placed on the boundary of the census block, according to the Hatfield surrogate methodology, and I placed them, one there

(indicates) and one there (indicates).

Q Now in that example, as to the two customer locations that are placed on the census block boundary, how close are those likely to be to the actual customer locations?

A Well, in this example here, and again, assuming we have a very large census block, they could be fairly far removed from their actual locations. With a sparsely populated census block with few roads in it, people tend to be located along the roads; and by placing customers on the boundary, they could be pretty far indeed from where they actually reside.

Q Just to clarify, in that particular example, there is not a road on the boundary, is there?

A As I've drawn it, no; and there not necessarily is a road on the boundary.

Q Okay. So assuming that's the case, those customers would be placed, it looks like, about half the distance of the census block off of the road running through it?

A As I've drawn it, yeah, a fairly far distance.

Q And the last thing I wanted to ask you about is a slightly different area. Let's assume --

COMMISSIONER GARCIA: I'm sorry, Mr. Carver, what was the point you were trying to make there? Because I

missed it completely.

MR. CARVER: Okay.

COMMISSIONER GARCIA: And I'm sure there was subtlety to it, and --

MR. CARVER: Well, the point I was trying to make is that the two surrogate locations are in positions where it's very unlikely that customers would ever be there because they are at the boundary. There are no roads on the boundary. The road runs down through the middle, so they've located the customers, if it's a big census block, a long way from the road that runs down the middle; so it's an extremely unlikely location. Whereas, with BCPM, if the customers are on the road, at least in a linear sense, you are a little bit closer to where they would be in real life.

COMMISSIONER GARCIA: I thought there was more subtlety involved. Thank you.

MR. CARVER: It was a fairly broad ploy.

BY MR. CARVER (Continuing):

Q The last point I wanted to make --

A If I can, Mr. Carver, following up on Commissioner Garcia's point, Mr. Lamoureux pointed out that we have an ultimate grid where BCPM identifies one location in which the satellite observations indicates there are no locations. I just want to make a follow-up point that that

is also possible in the Hatfield methodology as we have shown here. Due to the surrogate placement, you could place somebody on a census block boundary where indeed there is nobody actually located there; so it is an artifact of the modeling process.

COMMISSIONER GARCIA: So it's a problem with either model?

DOCTOR DUFFY-DENO: Yes.

BY MR. CARVER (Continuing):

Q And the final question I would ask you, or series of questions is this: Let's assume that the Hatfield Model does successfully geocode a customer; that is, it geocodes the address of the customer on the road near the actual house, some distance from the actual house. Once it's done that, does Hatfield actually build plant -- and when I say build, I mean model plant -- to that location?

A No, it doesn't. And the graphic that I just had up shows that. Once again, this irregular shape polygon cluster is the PNR cluster that's formed out of the geocoded, address geocoded and surrogate locations; and just for talking purposes, suppose that point here is address geocoded. The model does not build to that location. What the model does is it builds to a serving area such as this -- well, which is this rectangular cluster which is used to determine the amount of cable

needed to serve the customers in the underlying polygon cluster.

Q So then in effect, at least for modeling purposes, the customers would sort of be moved from where PNR said they actually are to a different location?

A Conceptually, yes. The models don't spatially move customers around. Customers are located in these spatial locations. For modeling purposes though, you can argue, well, the amount of cable estimated by the model implies that the customers are located here rather than here for modeling purposes.

Q Let me see if I can ask the question a little more precisely. Basically, the Hatfield Model would model the customer location as if it were somewhere other than where the customer really is?

A Yes, for purposes of estimating the amount of cable, the customers are, for modeling purposes, assigned -- or located here. That determines the amount of cable.

Q Okay. And for purposes of my last question, I'm going to call this moving customers, although we understand that the customers aren't literally moved. We are talking about a difference in actual location and modeled locations.

A Okay.

Q But in moving the customer from the clustered location to the location in the rectangle, is that distance significant that the customer is moved?

A It can be. It can be. In rural areas, these clusters tend to be large and sparsely populated; and also depending on the shape of the cluster, if you've got an oddly shaped polygon cluster, the transformation to a rectangle can bring about, in your terms, a fairly large movement of customers for modeling purposes.

Q And in rural areas, those clusters sometimes get as big as 10, 15, 20 square miles; is that correct?

A Oh, yes. There are some, I think, upwards of 20 square miles.

Q So then the movement of the customer from their location in the polygon cluster to the location in the rectangle could be a movement of perhaps several miles or more?

A Possibly.

Q Thank you.

MR. CARVER: That's all I have.

MR. COX: Chairman Johnson, there was one item that the witness mentioned that he could provide us an exhibit, and I had forgotten to mention it in my questions. It was the MST analysis using the DLC information, and we would ask if we could make that an

exhibit, if he could provide that as he suggested that he could.

CHAIRMAN JOHNSON: Okay. We'll identify it as 49. It will be a late-filed. And what was a short title?

MR. COX: MST analysis using DLC information.

DOCTOR DUFFY-DENO: Good enough. Would you also like the Hatfield results?

MR. COX: Yes, please.

CHAIRMAN JOHNSON: Okay. Exhibits.

MR. LAMOUREUX: Could I ask if we could include within that just an answer to the question if that DLC information includes the four points in the quadrant that connect to the DLC.

DOCTOR DUFFY-DENO: Certainly. And, again, Doctor Stahr might be able to answer that for you.

MR. LAMOUREUX: I'll ask him.

DOCTOR DUFFY-DENO: Okay.

MR. CARVER: BellSouth moves 46 and 47.

CHAIRMAN JOHNSON: Shows those admitted without objection.

CHAIRMAN JOHNSON: Staff.

MR. COX: Doctor Duffy-Deno, would that require a late-filed for that exhibit, or do you have that information with you?

DOCTOR DUFFY-DENO: I've got the -- I would like

to do a check to make sure we've got accurate numbers.

MR. COX: Okay. So you would like to provide it as a late-filed?

DOCTOR DUFFY-DENO: Late-filed if I could.

MR. COX: Okay. So staff will just move item -- Exhibit 48.

DOCTOR DUFFY-DENO: And I don't have the Hatfield numbers; it's only written down. I would like to get it in a nice typed form for you.

CHAIRMAN JOHNSON: Show 48 admitted without objection. Thank you.

Are we ready for --

You may be excused.

Are we ready for Mr. Martin?

MS. KEYER: Yes. BellSouth calls its next witness, Peter Martin.

* * * *

Whereupon,

PETER F. MARTIN

was called as a witness on behalf of BellSouth and, after being duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. KEYER:

Q Would you please state your name and business address?

A My name is Peter F. Martin, and my business address is 675 West Peachtree Street, Atlanta, Georgia, 30375.

Q Mr. Martin, by whom are you employed and in what capacity?

A I'm employed by BellSouth Telecommunications as a director in regulatory.

Q Have you caused to be filed in this docket 16 pages of direct testimony with an exhibit titled "Revised Exhibit RFM-1," and 14 pages of rebuttal testimony dated September 2nd, 1998?

A Yes, with the note that it should be PFM-1, not RFM-1.

Q Thank you.

Was this testimony prepared by you or at your direction?

A Yes, it was.

Q Do you have any changes to either your direct or rebuttal testimony?

A No, I do not.

Q Mr. Martin, if I were to ask you the same

questions today as were asked in your direct and rebuttal testimony, would your answers be the same?

A They would.

MS. KEYER: Madam Chairman, I move Mr. Martin's direct and rebuttal testimony be inserted into the record as if read and ask that Revised Exhibit PFM-1 be marked for identification.

CHAIRMAN JOHNSON: The testimony will be inserted into the record as though read, and PFM-1 will be marked as Exhibit 50.

MS. KEYER: Thank you.

BELLSOUTH TELECOMMUNICATIONS, INC.

REBUTTAL TESTIMONY OF PETER F. MARTIN

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 980696-TP

SEPTEMBER 2, 1998

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. (HEREINAFTER REFERRED TO AS "BELLSOUTH" OR "THE COMPANY").

A. My name is Peter F. Martin and I am employed by BellSouth as a Director in Regulatory. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. ARE YOU THE SAME PETER F. MARTIN WHO FILED DIRECT TESTIMONY IN THS DOCKET?

A. Yes, I am.

II. PURPOSE AND SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED TODAY?

A. The purpose of my testimony is to rebut certain issues raised in Joseph Gillan's (Florida Competitive Carriers Association - "FCCA") and Richard Guepe's (AT&T) direct testimonies.

Q. PLEASE COMMENT GENERALLY ON THE DIRECT TESTIMONY FILED ON AUGUST 3, 1998.

A. Mr. Gillan and Mr. Guepe have addressed matters outside the scope of this proceeding. BellSouth prepared its direct case in response to the issues as ordered on July 24, 1998 as did most of the other parties. However, AT&T and the FCCA have taken this opportunity to address issues that will necessarily be considered in future proceedings by this Commission or the Legislature. The issues list for this proceeding was very specific. Since the nature of the issues raised by AT&T and FCCA bears directly on the establishment of a sufficient and explicit state universal service fund, BellSouth must respond and I am compelled to address these issues herein. Dr. William Taylor, of National Economic Research Associates, Inc, also rebuts the testimony of Messrs. Guepe and Gillan.

The Commission need not address these parties' comments or BellSouth's replies on these outside matters at this time, but the Commission should hold these matters for the appropriate proceeding that will follow.

Q. MR. GILLAN, AT PAGE 2 OF HIS DIRECT TESTIMONY, STATES THAT THE PRINCIPAL MOTIVATOR OF UNIVERSAL SERVICE IS PROFIT INCENTIVES. DO YOU AGREE?

A. Certainly not. The principal motivator of universal service is the public policy goal of providing local telephone service to all consumers at an "affordable" rate. Over the past few decades, state commissions have adopted local service rates to consumers that are below the costs to provide such service and have further required the local exchange companies to provide service to all consumers in their service areas. This policy has resulted in a 94 percent penetration level nationwide for telephone service. Such a policy was sustainable in a monopoly environment, but it will not work in a competitive environment when new entrants can cherry pick the most profitable customers--those customers that have traditionally provided support for basic local exchange service.

A fair and sustainable way to fund universal service in a competitive environment must be established, one which does not fall only on the incumbent local exchange company. Since universal service reform is revenue neutral to local exchange companies upon implementation, there is no profit incentive to create a universal service fund as Mr. Gillan alleges.

In addition, in a competitive environment, all telecommunications service providers should pay their fair share to support the funding of universal service. If implicit subsidies remain in one provider's rates but are not found in another's rates, it is hardly competitively neutral.

Q. MR. GILLAN ALSO SUGGESTS IN HIS DIRECT TESTIMONY THAT THE COSTS OF THE FAMILY OF RESIDENTIAL SERVICES SHOULD BE

COMPARED TO THE REVENUES PROVIDED BY THESE SERVICES TO DETERMINE THE NEED FOR A SUBSIDY (PAGE 3). DO YOU AGREE?

A. No. This misplaced suggestion would only continue the implicit subsidies currently in vertical services, toll, and other services in direct contravention to the intent of the 1996 Telecommunications Act ("Act") which directs that implicit subsidies be replaced by explicit subsidies. If implicit subsidies remain in an incumbent local exchange company's rates, competitive neutrality cannot be achieved. Support for consumers in high cost areas must be available to all eligible telecommunications companies, both large and small, from a universal service fund. This is only possible with a fund based upon explicit support from all telecommunications carriers. Neither competitive neutrality nor portability can be achieved as long as implicit subsidies remain in an incumbent local exchange carrier's (ILEC) rates.

Also, Mr. Gillan's suggested analysis would not consider the significant number of BellSouth's customers who do not purchase any discretionary services, and therefore do not provide any contribution to universal service. Indeed, in its News Release of August 14, 1998, AT&T indicated that it was instituting a $3 minimum monthly charge. According to AT&T, in any month, 15 percent of its new customers spend less than $3 per month. It is hypocritical to suggest that incumbent local exchange companies should not be able to recover the cost of providing basic service to its below cost customers when carriers like AT&T are now imposing minimum charges on their customers in an effort to either recover their costs or to drive their low revenue customers away.

Q. IS MR. GILLAN'S RECOMMENDATION THAT THE COMMISSION ADOPT A COST STUDY WHICH INCLUDES A "FAMILY OF SERVICES" A REASONABLE INTERPRETATION OF FLORIDA STATUTE 364.025 (PAGE 3)?

A. No. Florida Statutes 364.25 specifically states:

> "Basic local telecommunications service" means voice-grade, flat-rate residential, and flat-rate single-line business local exchange services which provide dial tone, local usage necessary to place unlimited calls within a local exchange area, dual tone multi-frequency dialing, and access to the following: emergency services such as "911," all locally available interexchange companies, directory assistance, operator services, relay services, and an alphabetical directory listing. For a local exchange telecommunications company, such term shall include any extended area service routes, and extended calling service in existence or ordered by the commission on or before July 1, 1995."

The Florida Statute is specific and does not include optional calling, access service and vertical services.

Q. DOES THE HAI MODEL INCLUDE "THE FULL COST OF THE LOOP AND SWITCH TO PROVIDE ALL SERVICES THAT CAN BE FURNISHED TO CONSUMERS" AS SUGGESTED BY MR. GUEPE AT PAGE 7?

A. No. The HAI model only includes the cost for supported services. On page 1 of the HAI Model Release 5.0a Model Description attached to Mr. Don Wood's direct testimony, it states: "The HAI Model uses the definition of basic local telephone service adopted by the Federal-State Joint Board on Universal Service ("Joint Board") for universal service funding purposes." Mr. Guepe would have you think that all the costs for his residential family of services is included in their model when it is not. For example, the HAI model does not include variable costs associated with providing access service.

Q. MR. GILLAN FURTHER SUGGESTS IN HIS DIRECT TESTIMONY (AT PAGE 7) THAT IT IS NOT POSSIBLE TO CONDUCT A COST STUDY LIMITED TO "DIAL TONE" LOCAL SERVICE WITHOUT IMPLICATING OTHER SERVICES. DO YOU AGREE?

A. No. The Benchmark Cost Proxy Model (BCPM), as well other cost proxy models, are designed to estimate the cost of providing basic local service. Indeed, the criteria set out in the Federal Communications Commission's (FCC) Universal Service Order (para. 250) does not require the models to include or calculate the cost of other services in the model. Determination of the cost of other services is not necessary to calculate the cost of basic local telecommunications service. The local loop is not a shared cost as some would contend. Dr. Taylor addresses the concept of shared cost in his testimony.

Q. DO YOU AGREE WITH MR. GILLAN'S TESTIMONY AT PAGE 11 THAT THERE IS NO COMPETITION IN THE STATE OF FLORIDA?

A cellular telephone is useless without the service provider. The cellular service provider will not give you the free phone unless you commit to a contract for some specified period of time. Thus, the cellular provider is assured of getting a certain level of revenues. In contrast, basic local telecommunications service is functional without any other services required and many of our customers do not purchase additional services. BellSouth cannot require that customers purchase basic service in combination with other services nor can it require subscribers to execute contracts which lock in customers for a period of time. Thus, unlike with the cellular packages, there is a significant likelihood that some customers will be unprofitable.

Q. ARE THE REVENUES FROM TOLL, VERTICAL SERVICES AND ACCESS EVENLY DISTRIBUTED AMONG ALL CUSTOMERS, AND IF NOT, WHAT ARE THE IMPLICATIONS ON UNIVERSAL SERVICE?

A. The revenues are not evenly distributed. We have found that 41percent of BellSouth's residential customers in Florida take no vertical services. When you include those residential customers who subscribe to only one vertical service the percentage increases to 65 percent. Toll revenues are even more skewed. Indeed, some 82% of BellSouth's residential customers make no intralata toll calls during a month. Thus, a small subset of BellSouth's residential customers accounts for a large share of discretionary revenues. It is these customers that competitors will seek out. Competitors will not seek to serve those customers with minimal discretionary service revenues. Competitors will leave these customers to the incumbent LEC. Meanwhile, as the competitors win over the more lucrative

customers, the implicit subsidies available to support universal service will "shrink". Universal service in Florida will be jeopardized.

Q. WHAT SHOULD BE THE APPROPRIATE BENCHMARK FOR CALCULATION OF UNIVERSAL SERVICE SUPPORT AS OPPOSED TO THE BENCHMARK PROPOSED BY MR. GUEPE AT PAGE 14 OF HIS TESTIMONY?

A. The appropriate benchmark for universal service is the maximum rate for the services which comprise universal service including the subscriber line charge and mandatory EAS and zone charges. The inclusion of access, toll and vertical service revenue in the benchmark would only embed the implicit subsidies that are to be made explicit.

In a book entitled Letting Go: Deregulating the Process of Deregulation, Dr. Alfred Kahn makes the point that facilities based competition is doomed if the subsidies for below cost services are insufficient. He states as follows:

> As the [FCC] Commission explicitly recognizes, to its credit, the competition that it is our national policy to encourage makes the overpricing of the subsidizing services unsustainable. Moreover, the way in which the Telecommunications Act and the FCC's interpretation of it has proceeded to make those cross-subsidies unsustainable ensures that competitors will not enter into the local markets *on a facilities basis* unless the subsidies are sufficient to make up the difference between the

suppressed rates and the incremental costs (or efficient prices) of providing *basic service* itself. (Author emphasized with Italics.) (Letting Go: Deregulating the Process of Deregulation, Alfred E. Kahn, MSU Public Utilities Papers, 1998, page 128.)

Inflating the benchmark for universal service by including additional revenues other than those for basic local telecommunications service will create an insufficient explicit subsidy. Besides violating the Act, Dr. Kahn notes that an insufficient explicit subsidy will harm facilities-based competition.

Q. MR. GUEPE REPORTS THAT THE COST OF UNIVERSAL SERVICE FOR BELLSOUTH IS $680.6 MILLION WHICH EQUATES TO ONLY $15.11 PER RESIDENCE LINE PER MONTH (PAGE 12). PLEASE COMMENT.

A. These numbers do not pass the common sense test. If it only costs $15.11 per residence line per month in Florida then why isn't AT&T building out a network in Florida and providing residential service? By constructing a facilities-based network, AT&T could avoid paying access charges and provide the supported services. The revenues it would collect would certainly exceed $15.11 per line (especially if vertical services are included, per AT&T's recommendation). Indeed, the HAI Model shows costs of $11.00 or less per month in some of the Miami wire centers. Yet, AT&T is not providing residential basic service in any of these wire centers. Last year, AT&T stopped its efforts to enter the residential market after losing millions of dollars. If AT&T based its initial entry decision on similarly unrealistically low cost figures, it may very well explain these losses.

Q. IN DEFENSE OF HIS POSITION, MR. GILLAN SUGGESTS THAT THE FLORIDA STATUTES ARE INCONSISTENT AND AMBIGUOUS IN REGARD TO THE DEFINITION OF "BASIC LOCAL TELECOMMUNICATIONS SERVICE" (PAGES 16 AND 17). DO YOU CONCUR?

A. No. The statute is clear and succinct. The difficulty is Mr. Gillan's twisted interpretation. The Florida Legislature has (1) specifically defined basic local telecommunications service in Section 364.025 F. S., (2) requested the Commission to report on the cost of basic local telecommunications service by February 15, 1999, and (3) will use this information to establish a permanent universal service mechanism for the state. It is hard to imagine the instructions being any more clear and unambiguous.

Q. IS IT APPROPRATE AS MR. GILLAN (PAGE 20) AND MR. GUEPE (PAGE 10) ASSERT, TO USE THE SAME LEVEL OF AGGREGATION FOR MODELS WHICH DETERMINE UNE RATES AND UNIVERSAL SERVICE COSTS?

A. No. First of all, the calculation of unbundled network elements rates is determined by costing out the equipment and services necessary to provide certain network elements from an ILEC to an ALEC. These company specific calculations are based on costs that have historically been averaged across the ILEC's study area in order to smooth the rates across all areas of the state. Therefore, until rates (especially business rates) are rebalanced at the state level, it

is not appropriate to disaggregate costs for unbundled network elements to an area smaller than the study area. Business rates cannot be rebalanced until a sufficient universal service fund is established.

Second, the cost proxy model for universal service is predicated on the assumptions of an efficient provider constructing a network using "total forward-looking cost, based upon the most recent commercially available technology and equipment and generally accepted placement principles." The proxy models are designed to calculate costs based on small geographic areas. The Legislature correctly instructed the Commission to calculate these costs on a wire center basis. Calculations at this level will better target necessary support and promote efficient competitive entry of ALECs seeking universal service support by limiting the area they must serve.

Q. PLEASE COMMENT FURTHER ON MR GILLAN'S DISCUSSION OF THE GEOGRAPHIC BASIS OF CALCULATIONS FOR UNIVERSAL SERVICE AND UNES.

A. Mr. Gillan's arguments for consistency are self-serving and contradictory. On one hand, he argues that UNEs should be deaveraged for all wire centers (at page 21) yet on the other, he argues that universal service costs should be calculated on a statewide level (at page 22). It would appear that Mr. Gillan is only interested in a wire center basis of calculation if it concerns UNEs. Determining support for universal service on a statewide basis would result in an insufficient fund. An insufficient fund will disincent ALECs from ever competing for rural and high

A. Absolutely not. in this regard, the FCC adopted the principle of competitive neutrality to ensure that it would show no preference to any provider. Universal service support is fully portable to any eligible telecommunications company. It is not a protected revenue source. AT&T is attempting to shield universal service support from carriers in this proceeding since AT&T advocates that no universal service support should be provided. Under AT&T's plan, no competition will ever develop in rural and high cost areas since support will not be available to new entrants.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. This Commission should report to the Legislature the cost of universal service for BellSouth as calculated by the BCPM 3.1 model with BellSouth inputs by wire center. In addition, the testimony of Richard Guepe of AT&T and Joseph Gillan of FCCA should be disallowed as I have outlined in this rebuttal testimony. Similarly, rebuttal testimony contained herein that discusses Mr. Guepe's and Mr. Gillan's direct testimony as well as Dr. Taylor's rebuttal testimony should be set aside for a future proceeding on universal service.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF PETER F. MARTIN

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 980696-TP

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. (HEREINAFTER REFERRED TO AS "BELLSOUTH" OR "THE COMPANY").

A. My name is Peter F. Martin and I am employed by BellSouth as a Director in Regulatory. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. PLEASE GIVE A BRIEF DESCRIPTION OF YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from the Georgia Institute of Technology with a Bachelor of Industrial Engineering Degree in 1981. I was awarded a Master of Business Administration Degree in 1988 from Georgia State University.

I began employment with Southern Bell in 1981 as an Outside Plant Engineer in Southeast Florida. I have held positions in the Revenue Requirements/Pricing and

Pricing and Economics organizations. From June of 1990 to September 1996, I served in BellSouth as a Manager in Regulatory Policy and Planning. I have been in my present position since September 1996.

Q. HAVE YOU TESTIFIED IN OTHER PLACES ON UNIVERSAL SERVICE?

A. Yes, I have testified in all nine BellSouth States. In addition, I was a panelist before the Federal-State Joint Board on Universal Service during a workshop that was held in January, 1997 on cost proxy models.

II. PURPOSE AND SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED TODAY?

A. My purpose is to address several critical issues surrounding the cost of basic local telecommunications service as it relates to universal service. These issues are outlined in the Commission's Order of July 24, 1998. Specifically, I address the following issue numbers: 1, 2, 3, 5a, 5b, 6a and 6c.

I also will review the federal universal service mechanism and provide this Commission with the cost of universal service by wire center in BellSouth's service area in Florida. This estimate is based on the cost model attached to Ms. Daonne Caldwell's direct testimony.

Ms. Caldwell will discuss the BellSouth specific inputs used in the BCPM 3.1.

model to calculate the forward-looking economic costs of providing universal service. Dr. Kevin Duffy-Deno and Dr. Bob Bowman will address various aspects of the BCPM 3.1 model.

It is important that this Commission select a cost proxy model that engineers a forward looking network that would actually transmit telephones calls in a quality manner, and that is based on realistic inputs or universal service itself could be jeopardized. While you sift through detailed arguments regarding the cost of universal service, please remember that the end result should be a sustainable and sufficient universal service fund as required by the Telecommunications Act of 1996. Such an outcome will keep basic local rates in this state affordable for many more years to come.

Q. WHAT SPECIFICALLY WOULD YOU LIKE TO SEE THIS COMMISSION DO?

A. I propose that the Commission adopt BellSouth's universal service cost calculations for submittal to the state legislature.

Q. BEFORE YOU ANSWER THE SPECIFIC QUESTIONS SET OUT FOR COMMENTS, CAN YOU PROVIDE SOME BACKGROUND ON WHAT HAS OCCURRED AT THE FCC?

A. Yes.

III. THE FCC'S ORDER ON UNIVERSAL SERVICE

Q. WHAT HAS THE FCC DONE ON UNIVERSAL SERVICE?

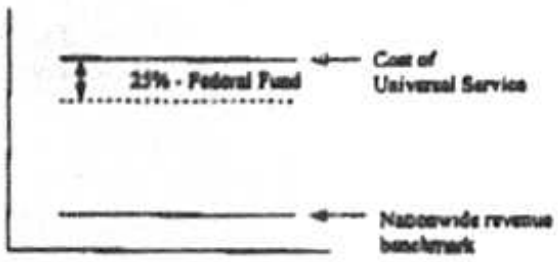
A. On May 8, 1997, the FCC issued its Report and Order in CC Docket No. 96-45. In this Report and Order, the FCC adopted many of the recommendations set forth by the Federal-State Joint Board on universal service. The FCC's Order put forth a framework for how much high cost support will be provided from the Federal High Cost Fund. It also provided details on the FCC's proposals for dealing with schools, libraries, health care, and low income support.

Q. PLEASE DESCRIBE THE FCC'S MECHANISM FOR FUNDING HIGH COST SUPPORT.

A. The FCC's mechanism for funding high cost support provides explicit support for a small part of the difference between the cost of providing universal service and an FCC revenue benchmark. The FCC method is illustrated in Figure 1 below. The FCC directed that the cost of universal service be calculated using a forward looking cost proxy model, and that it be calculated for areas no larger than wire centers. The cost is next compared to an FCC revenue benchmark. The federal fund will then cover twenty-five percent (25%) of the difference between the cost and the FCC revenue benchmark. If the cost for that area is less than the FCC revenue benchmark, then the federal fund support for that area is zero.

The FCC has tentatively chosen a $31 revenue benchmark to calculate universal service support an eligible telecommunications carrier ("ETC") would receive from the federal fund. They could have chosen another benchmark to use in calculating federal support. However, by selecting a $31 revenue benchmark and a 25/75% jurisdictional split between interstate and intrastate, the FCC effectively has limited federal universal support and left the states to deal with supporting the rest.

Figure 1



Q. HOW WILL THE FEDERAL HIGH COST FUND BE SUPPORTED?

A. All interstate service providers will contribute to the fund based on their nationwide share of interstate revenues received from end users. Access revenue and other wholesale revenue are excluded from this calculation.

Q. WHAT DO LOCAL EXCHANGE COMPANIES ("LECS") DO TO REFLECT THE SUPPORT THEY RECEIVE FROM THE FEDERAL FUND?

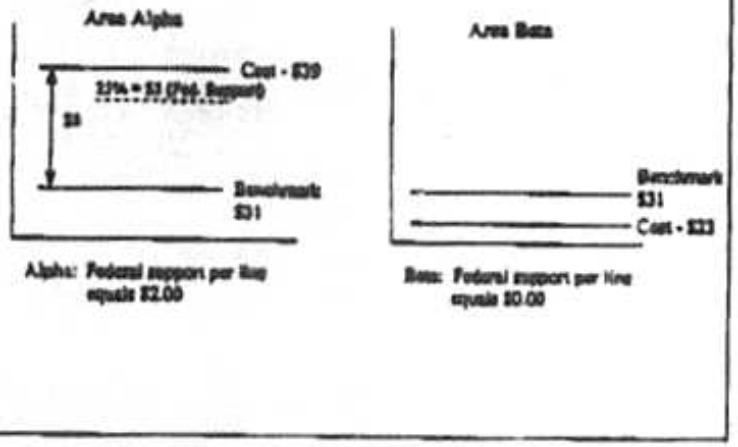
A. The FCC will require that LECs make adjustments to their interstate access prices to reflect the net amount of support they will receive from the federal universal service fund. The net amount of support is equal to the amount that BellSouth's receipts from the fund exceed BellSouth's contribution to the fund. Thus, implementation of the Federal Universal Service Fund will be revenue neutral to the LECs on day one. LECs reduce their prices by the net amount of funding they receive from the universal service fund.

Q. CAN YOU PROVIDE SOME EXAMPLES OF HOW THE FEDERAL MECHANISM WILL WORK?

A. Certainly. Assume that there is a company that serves two census block groups (CBGs) called Alpha and Beta. A cost model, which the FCC has promised to designate by the end of this year, will calculate the monthly per line cost of universal service as $39.00 in Alpha and as $23.00 in Beta. These costs are then compared to the FCC revenue benchmark, which is tentatively set at $31.00 for residential lines. This is illustrated in Figure 2. In area Alpha, the difference between the monthly cost and the benchmark is $8.00. Under the FCC's

mechanism, the FCC will provide twenty-five percent (25%) of this amount, or $2.00, in monthly support to any ETC that provides universal service in this area. In area Beta, the cost is less than the benchmark, so the FCC's mechanism does not provide any support out of the federal fund.

Figure 2



Q. IS THAT ALL THERE IS TO THE FEDERAL HIGH COST FUND?

A. Yes. Conceptually, it is a simple framework, and it should be relatively easy to construct a state high cost fund that will fit well with the federal fund. To do so, the Florida Commission should first adopt a reasonable cost proxy model, such as the BCPM 3.1. The Florida Commission should then have a proceeding to deal with the remaining universal service issues so that it can establish a Florida Universal Service Fund.

Q. HASN'T THE FCC REFERRED MANY OF THE ABOVE ISSUES BACK TO THE JOINT BOARD, AND WHAT WILL BE THE IMPACT OF CHANGES IN THE FCC'S APPROACH?

A. On July 17, 1998, the FCC referred several issues back to the Federal-State Joint Board for consideration. Such issues as the 25% federal factor and the revenue assessment base were sent back to the Joint Board. It is certainly possible that changes to the federal mechanism will result from this referral. However, the focus of this proceeding (the cost of universal service) is unaffected by the FCC's referral of issues back to the Joint Board.

IV. THE NEED FOR A STATE HIGH COST FUND

Q. DOES THE CREATION OF A FEDERAL FUND NEGATE THE NEED FOR A STATE HIGH COST FUND?

A. No, it does not. The federal fund only deals with a small part of the implicit support that is currently built into LEC rates. State universal service support mechanisms will need to deal with the remainder of the implicit universal service support. The FCC recognized this fact in its Access Reform Order, wherein it strongly encouraged states to identify and address the amount of implicit support built into intrastate rates. In a speech given by William Kennard on February 9, 1998 to the National Association of State Utility Consumer Advocates, the FCC

Chairman said that "states have an obligation to take all reasonable steps as promptly as possible to reform existing intrastate universal service support mechanisms to make them compatible with competitive local markets by making the subsidies explicit and portable." The United States Congress also recognized the need for state funding mechanisms. Indeed, one of the principles set forth in the Telecommunications Act of 1996 ("the Act") is that "[t]here should be specific, predictable and sufficient federal and state mechanisms to preserve and advance universal service." (47 U.S.C. Section 254(b)(5)) In fact, Section 254(f) of the Communications Act requires that "Every telecommunications carrier that provides intrastate telecommunications services shall contribute, on an equitable and nondiscriminatory basis, in a manner determined by the State to the preservation and advancement of universal service in that State."

Finally, Chapter 364 .025(4)(b), Florida Statues, requires this Commission to report on the cost of universal service to the Legislature by February 15, 1999 in order for the Legislature to establish a permanent universal service mechanism.

Q. CAN RATES THAT CURRENTLY PROVIDE IMPLICIT SUPPORT FOR UNIVERSAL SERVICE BE SUSTAINED IN A COMPETITIVE ENVIRONMENT?

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A. No. Competitors will target customers who currently provide the most implicit support. They will target high revenue business customers, and those residential customers that purchase considerable amounts of vertical and/or toll services. Competitors will market their services only to these high margin ILEC customers

and leave the remaining high cost customers to the incumbent LEC. Indeed, even AT&T and MCI agree that implicit subsidies are not sustainable in a competitive environment (ATT, Dr. Kaserman Direct Testimony, NC Docket No. P-100, Sub 133B, Page 9, "...the system is unsustainable in a competitive market environment. Where they are allowed to operate, market forces will inexorably eliminate cross-subsidies."; MCI, Dr. Cabe Direct Testimony, KY Admin. Case No. 360, page 13, "... competition in local and intralata toll markets can be expected to drive the prices of vertical and toll services below levels that have been sustainable in the historically monopoly environment.").

Q. DOES BELLSOUTH HAVE A PROPOSAL FOR A STATE UNIVERSAL SERVICE FUND?

A. Yes. However, since this proceeding is narrowly focused on the cost of universal service, I will save discussion of BellSouth's proposal for a future proceeding.

Q: FOR PURPOSES OF DETERMINING THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE APPROPRIATE FOR ESTABLISHING A PERMANENT UNIVERSAL SERVICE MECHANISM, WHAT IS THE APPROPRIATE COST PROXY MODEL TO DETERMINE THE TOTAL FORWARD-LOOKING COST OF PROVIDING BASIC LOCAL TELECOMMUNICATIONS SERVICE PURSUANT TO SECTION 364.025 (4)(b), FLORIDA STATUTES? (ISSUE 2)

A: The BCPM 3.1 model is the appropriate cost proxy model for determining the total forward-looking cost of providing basic local telecommunications service. It was designed for this purpose and meets the ten criteria set out in the FCC's Universal Service Order of May 8, 1997. BellSouth has run the BCPM 3.1 model for Florida and the results for BellSouth's territory by wire center are attached as Exhibit PFM-1. BellSouth recommends that the Commission use the BCPM 3.1 model with the inputs recommended by BellSouth for calculating the total forward looking cost of basic local telecommunications service for BellSouth.

V. ISSUES LIST

Q: WOULD YOU NOW SPECIFICALLY DISCUSS THE OTHER ISSUES PARTICULAR TO THIS DOCKET?

A: Yes.

Q. WHAT IS THE DEFINITION OF THE BASIC LOCAL TELECOMMUNICATIONS SERVICE REFERRED TO IN SECTION 364.025(4)(B)? (ISSUE 1)

A. Basic local telecommunications service is defined in Florida Statute 364.02 (2) which states:

"Basic local telecommunications service" means voice-grade, flat-rate residential, and flat-rate single-line business local exchange services which provide dial tone, local usage necessary to place unlimited calls within a local exchange area, dual tone multifrequency dialing, and access to the following: emergency services such as "911," all locally available interexchange companies, directory assistance, operator services, relay services, and an alphabetical directory listing. For a local exchange telecommunications company, such term shall include any extended area service routes, and extended calling service in existence or ordered by the commission on or before July 1, 1995.

Q. FOR PURPOSES OF DETERMINING THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE APPROPRIATE FOR ESTABLISING A PERMANENT UNIVERSAL SERVICE MECHANISM, SHOULD THE TOTAL FORWARD-LOOKING COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE PURSUANT TO SECTION 364.025(4)(b), FLORIDA STATUTES, BE DETERMINED BY A COST PROXY MODEL ON A BASIS SMALLER THAN A WIRE CENTER? IF SO, ON WHAT BASIS SHOULD IT BE DETERMINED? (ISSUE 3)

A. Initially, the forward-looking cost of basic local telecommunications should be calculated at the wire center level. Current telecommunications providers capture data at this level of aggregation on a standardized basis. Therefore, a wire center

basis for cost calculation would be less burdensome initially than going to a more targeted area of measure like a census block group (CBG).

However, the Commission's goal should be to move the basis of support calculations from a wire center to a CBG basis (a smaller geographic area) for two reasons. First, small areas more accurately target universal service support to areas with high costs. Within a wire center, costs can vary greatly. By choosing a smaller area (a CBG), the accuracy of calculations are greater than when numbers are aggregated to the wire center level. Second, choosing small areas not only as the basis for universal service support but also as the basis for designating service areas for ETCs enables new competitive entrants to compete as an ETC and receive universal service support, without having to serve an extended service area (such as a wire center).

Q. FOR PURPOSES OF DETERMINING THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE APPROPRIATE FOR ESTABLISHING A PERMANENT UNIVERSAL SERVICE MECHANISM, FOR WHICH FLORIDA LOCAL EXCHANGE COMPANIES MUST THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE BE DETERMINED USING THE COST PROXY MODEL IDENTIFIED IN ISSUE 2? (ISSUE 5A)

A. The FCC stated in paragraph 232 of its Universal Service Order that a cost proxy model should be used when calculating the forward-looking economic cost for non-rural LECs. The non-rural LECS operating in Florida are BellSouth, Sprint, and GTE.

The FCC has decided that rural carriers would not use forward looking economic cost models until further review by the FCC and not prior to January 1, 2001. Further, the FCC states that rural carriers would be gradually transitioned from the current mechanism to a forward-looking economic cost model.(para. 203) BellSouth believes that the bifurcated approach set out by the FCC (i.e. - treat non-rural and rural companies separately) is reasonable for use in Florida.

Q. FOR EACH OF THE LECS IDENTIFIED IN (5A), WHAT COST RESULTS FROM USING THE INPUT VALUES IDENTIFIED IN ISSUE 4 IN THE COST PROXY MODEL IDENTIFIED IN ISSUE 2? (ISSUE 5B)

A. The forward-looking costs for BellSouth from the BCPM 3.1 are attached in Exhibit PFM-1. It provides the cost by wire center for BellSouth's designated service area. These costs are based on the forward-looking inputs as provided in Ms. Daonne Caldwell's direct testimony.

Q. FOR PURPOSES OF DETERMINING THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE APPROPRIATE FOR ESTABLISHING A PERMANENT UNIVERSAL SERVICE MECHANISM, SHOULD THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE FOR EACH OF THE LECS THAT SERVE FEWER THAN 100,000 ACCESS LINES BE COMPUTED USING THE COST PROXY MODEL IDENTIFIED IN ISSUE 2 WITH THE INPUT VALUES IDENTIFIED IN ISSUE 4? (ISSUE 6A)

A. No.

Q. IF NOT, FOR EACH OF THE FLORIDA LECS THAT SERVE FEWER THAN 100,000 ACCESS LINES, WHAT APPROACH SHOULD BE EMPLOYED TO DETERMINE THE COST OF BASIC LOCAL TELECOMMUNICATIONS SERVICE AND WHAT IS THE RESULTING COST? (ISSUE 6C)

A. The Commission should refrain at this time from using a cost proxy model for LECs serving fewer than 100,000 access lines. These carriers should generally fall into the definition of "rural LECs", and as such should use embedded costs in determining the cost of basic local telecommunications service. This methodology is consistent with the FCC's determination in their Universal Service Order.

XV. SUMMARY AND CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. It is critically important that this Commission get the cost of universal service right. Consumers will be ill served if the costs are underestimated. The BCPM cost model is an excellent tool for calculating the cost of universal service. The inputs that BellSouth recommends be used in the model are both "real world" in nature and representative of what an efficient provider would incur in building a forward looking network capable of providing high quality basic local exchange service. BellSouth's cost estimations should be approved by this Commission for

submittal to the Florida Legislature, and for subsequent use in the establishment of a state universal service fund.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

BY MS. KEYER (Continuing):

Q Mr. Martin, have you prepared a summary of your testimony?

A Yes.

Q Would you please provide the commissioners with that summary?

A Yes. Good afternoon. I am here today on behalf of BellSouth Telecommunications to propose the adoption of BellSouth's universal service cost calculations for submittal to the state legislature. In the Commission's July 24th, 1998, order, a list of issues was identified to assist the Commission in its obligation to report to the legislature by February 15th of next year the cost of basic local telecommunication service in Florida.

In this docket, the Commission focuses on the cost of universal service in order to meet this obligation. Subsequent dockets will need to be established to consider the remaining issues related to the establishment of a permanent universal service fund.

This docket is a critical first step in the Commission and legislature's work in establishing a permanent universal service mechanism. If the cost of basic local service is not accurately estimated, then the state universal service fund cannot be correctly sized. The end result of this and subsequent proceedings should be

a sustainable and sufficient universal service fund as required by the Telecommunications Act of '96. Such an outcome will keep local rates in this state affordable for many years to come.

Now before I get to the issues that were put out for comment, I need to note that at least one party went well beyond the clearly defined issues list. The Commission was quite clear on the issues to be addressed in this proceeding. Those issues are obviously related to the task set out by the legislature, which was to determine the cost of basic local exchange service. However, AT&T chose to go beyond the issues list and discuss the revenue benchmark they believe to be appropriate. While I believe this issue would be more appropriately addressed in a future proceeding, I will simply note that AT&T's position is at odds with the fully competitive marketplace.

AT&T says that all residential revenues should be included in the calculation of the revenue benchmark; however, this position ignores the reality that many customers don't buy vertical services or intraLATA toll services. These customers will not be sought after by competitors unless universal service support makes up for the difference between the cost of basic local exchange service and the revenues received from it.

AT&T's proposal also violates competitive

neutrality for the incumbent LEC or ILEC. The ILEC will still be expected to serve customers who don't cover their costs. Such a position will not be tenable in a competitive marketplace. It is interesting to note the hypocrisy in AT&T's position since they recently announced a minimum $3 monthly charge to ensure all customers, all new customers at least cover their cost.

Now I'll go back and discuss the specific issues on the Commission's issue list. The first issue in this docket is the definition of basic local telecommunications service referred to in Section 364.025(4)(b). The statutory definition is clear and succinct. The definition of basic local telecommunications service can be summarized as dial tone service. Most parties are using this definition.

The only party who seems to have trouble understanding this definition is Mr. Gillan on behalf of the FCCA. He tries to cloud this simple matter by saying that basic local telecommunications services really refers to a family of services, including vertical and toll services. He does this in support of his position on the size of the fund. The statute is clear on the definition of basic local telecommunications service, and it does not include vertical, toll or access services. I recommend we use the definition spelled out in the statute.

The next issue is what is the appropriate cost proxy model to determine the total forward-looking cost of providing basic local telecommunications service. BellSouth supports the adoption of the BCPM 3.1 model with company-specific inputs as provided in Ms. Daonne Caldwell's testimony. The BCPM model with BellSouth recommended inputs provides a total forward-looking cost of basic telecommunications service provided in BellSouth's service area.

On the other hand, the cost submitted by AT&T and MCI calculated via the HAI model using their recommended inputs should not be adopted. The results do not pass the common-sense test. For example, the HAI sponsors say it cost less than $11 per line in several of the Miami wire centers. That is less than the revenue received via basic rates in the subscriber line charge. According to their own study, AT&T could make money in these wire centers even from customers who only get basic dial tone. Yet, to the best of my knowledge, AT&T is not providing residential service in any of these markets. The action or lack thereof by AT&T makes the point quite clearly that their model and inputs understate the cost of providing basic local service.

The last issue is whether the forward-looking cost of basic local telecommunications service should be

determined on a basis smaller than a wire center. Initially, the cost should be determined at the wire center level due to the availability of such data; however, in the future, the cost in the associated universal service support should be determined on an even smaller basis to better target universal service support since costs can vary greatly even within a wire center.

Also, choosing small areas not only as the basis for universal service support but also as the basis for designating service areas for eligible telecommunications carriers or ETCs enables new competitive entrants to compete as an ETC and receive universal service support without having to serve an extended service area such as a wire center. AT&T proposed the support be calculated at the statewide level. Such an approach is at odds with the local competition envisioned by the Telecommunications Act of '96. New entrants would not receive universal service support under AT&T's approach since calculations would be aggregated to the statewide level. Thus, new entrants would never have an incentive to serve and enter the rural and high cost areas. Targeting universal service calculations in designated service areas for ETCs on a basis at least as small as a wire center minimizes barriers to competitive entry and maximizes competitive opportunities for viable market entry.

In conclusion, BellSouth recommends that this Commission select the BCPM 3.1 cost model and for BellSouth's serving area use the inputs recommended by BellSouth. That combination will provide a good estimate of the cost of basic local exchange service as requested by the Florida legislature. Thank you.

MS. KEYER: Madam Chairman, Mr. Martin is now available for cross.

CHAIRMAN JOHNSON: Okay.

MR. COKER: Thank you, Madam Chairman.

CROSS EXAMINATION

BY MR. COKER:

Q Mr. Martin, my name is Gene Coker, I represent AT&T.

A Good afternoon.

Q Can you tell me what revisions you made to your exhibit?

A Yes. I reflected new costs that were calculated by our cost group. Ms. Caldwell can go into the actual cost changes. I understand the staff found an input that needed to be revised. I simply reflected the new costs that were provided to me by our costing group.

Q Was the impact of that change to increase or decrease the cost?

A I'd have to check. I know that it was an average

impact of nine cents a line. I don't remember if it went up or down, but it wasn't very significant either way. The original was 32.40 per line, and this new one is 32.31, so it went down by nine cents a line on average.

Q At page 9 of your testimony you point out that implicit subsidies cannot continue in a competitive environment. Are the subsidies that you are referring to there the subsidies that are necessary to support basic local service?

A Implicit subsidies, yes, that's the extent to which basic local exchange service, the cost exceeds the revenue.

Q And would you agree that the size of the universal service fund, once it's determined by the Commission, that will determine -- that will define the amount of subsidy that is necessary to support universal service; is that correct?

A Could you say that again?

Q Yes. Once the Commission decides what the size of the universal service fund should be, that defines the amount of subsidy that's necessary to support universal service?

A I think if the Commission looks at the total difference between the rates and the costs for basic local exchange service, I think you're right. They would define

the amount of the, subsidy and that would be the amount in the universal service fund.

Q And once the size is determined, by definition, then there would be no other subsidies in other rates that would be necessary to support universal service; would you agree with that?

A If they dealt with the total amount of subsidies, there would be no subsidies left to be dealt with. You would have taken care of the universal service problem and made it explicit.

Q Do you know what share of the market BellSouth has for basic residential service in its service territory?

A In Florida I believe it's over 99%.

Q On Page 6 of your direct, your direct testimony, you have a discussion there about what's going on at the FCC -- this is at lines 8 through 14 -- with regard to what the LECs will do to reflect what they would receive from a universal service fund. And you mention in that particular part of your testimony that the LECs would reflect a net amount. Can you explain that please?

A Yes. What that means is, and this is already begun by really -- It will continue next year. All that means is that we simply reflect the net amount of support received. So if BellSouth, for example, were to receive a hundred million dollars from the federal fund but we had to

pay in 50 million dollars, we would net 50 million dollars; and then our rates would have to be -- interstate access rates would have to be reduced by 50 million dollars. We'll propose something similar for a state funding mechanism whenever we get to that point.

Q Well, if BellSouth paid in a hundred million and received from the fund a hundred million, the net effect would be zero; is that correct?

A Well, you'd also have to account for the fact that we will be paying into the fund, and we have to have a way to recover that.

Q Well, the net effect would be zero?

A The net effect of this should be zero in total on the revenues.

Q All right. In that case you would not have any offsetting rate adjustments; is that right?

A Only if we --

Q If you net?

A No, that's not correct. The only way that would be correct is if we paid in exactly as much as we received, and the chances of that happening would be astronomically small.

Q Well, perhaps you didn't understand my question or I may not have made it as clear as I could. What my question was, if you paid in a hundred million and received

a hundred million, the net effect -- under those circumstances, the net effect would be zero and there would be no rate adjustment?

A Yeah, I agree. The chances of that happening are pretty small, but you're right.

Q Well, if that were the case and there is no rate adjustments, we would have a hundred-million-dollar universal service fund with no rate adjustments, and my question is does that meet the requirement that universal service report should be made explicit in your view?

A I believe it does. The FCC believes it meets the explicit mandate. I will say the FCC is also looking at possibly moving that out and having customers use a surcharge type approach. The joint board is considering this now, and I think that would be a positive change; but even if that change is not made, yes, I believe it would meet the explicit mandate of the Act.

Q And how would that be explicit?

A All carriers would know what their obligation is to provide -- to support universal service. They would have a defined amount that they would have to pay into the fund, and that's different from the old environment where only the ILEC was having to support universal service, so competitive local exchange carriers will also have to contribute to the federal fund.

Q But in that case, isn't it true that you would be recovering it through revenues you have built into your current rates?

A That's true. That doesn't violate the explicit mandate of the Act in my layman's opinion.

Q You mention in your summary that you were recommending that the cost be determined on a wire center basis initially and then move to a census block group later. When you go to a -- generally speaking, the census block groups are smaller areas; is that correct?

A That's correct.

Q And when you move to the smaller areas, doesn't that result in a larger universal service fund than if you did it on a wire center basis?

A Generally, yes, it does.

Q I'd like to move now to your rebuttal testimony at Page 6. There you mention that the HAI model doesn't include variable cost of access. Is it possible you could be wrong about that as far as this proceeding is concerned?

A From what I heard from Don Wood yesterday, it sounds like he may have made a change. I was relying on MCI testimony from Kentucky where Tom Hyde said that it does not include variable cost of access, so I was relying on an MCI witness's testimony. I heard yesterday Don Wood said he did factor in some of those costs, so maybe they've

updated the model.

Q Were you in the room today when he made that statement again?

A I was. I also reviewed his testimony last night and in no place in his testimony did he say he included those costs. In fact, I think he resubmitted those cost studies, I heard today, because he originally did not include them.

Q And that was on August 18th; is that right?

A I don't remember the exact date.

Q August 19th, I think it was.

On Page 8 of your rebuttal, you mention there and we heard earlier, I think yesterday, that BellSouth has 41% of its residential customers that did not subscribe to vertical services. What do you include in vertical services?

A Vertical services includes such services as three-way calling, speed calling, those type of class type services, basically discretionary type services. It does not include toll services.

Q Does it include caller ID?

A I believe it does.

Q And the 82% figure that you have there, does that include -- how do you classify the calling in the expanded calling area?

A I believe expanded local calling service revenues are classified as local, so we are only looking at revenues classified as toll.

Q And over what period of time does this 82% figure apply? Is that looking at it at one month or a 12-month period or how long?

A I'll have to see if I have that time frame.

(WITNESS REVIEWED DOCUMENTS)

A I think I have that in here. I'll have to check that. I don't know the exact time frame.

Q I guess the important question is, regardless of what numbers you have for various services, can you tell us what percent of your residential customers subscribe only to basic residential service? And by that I mean those that, for which you have listed the rates on your exhibit.

A I don't -- I haven't been able to mesh those two figures I gave you earlier, the 41% and the 80 some odd percent. I don't know exactly what percentage of residential customers only get basic dial tone.

Q Is that something that you could provide as a late-filed exhibit?

A I'll have to check with my billing folks. If we can do it, we can provide it. I can't commit a hundred percent right here. We'll make an effort to do that.

Q At Page 9 of your rebuttal testimony, you talk

about the appropriate revenue benchmark should be the maximum rate charged for basic residential service. Again, those are the rates that are shown on your Exhibit 1; is that correct?

A Yes, with the caveat that you possibly should also include the revenues from extended calling service area plans to the extent they were in effect before, I guess, what was it, July of '95. Whatever is in the definition of basic local exchange service as defined by the Commission, but primarily you would include the basic dial tone charges.

Q And in addition to that, you would include the subscriber line charge, wouldn't you?

A Yes.

Q And why is that appropriate?

A That's appropriate because that's a rate received from the end user, and it's associated with his purchase of basic service.

Q And what about the PIXC charge, do you know what the PIXC charge is?

A Yes, I do.

Q Can you explain that?

A Yes, the PIXC charge is the presubscribed interexchange carrier charge, or PIXC, and what that is, it's a certain amount per line that generally the local

exchange carrier bills to the interexchange carrier, and then they pay that to the local exchange carrier.

Q And is it your understanding it's 53 cents for the first line and a dollar 50 cents for the second line?

A That sounds right.

Q Shouldn't these be included in the revenue benchmark as well?

A No, they shouldn't, and the reason is that they are not being paid by the end user. They are being paid by interexchange carriers, and that's an intermediate party; so, again, it's providing an incentive for the interexchange carrier to find another way to get to the customer. We think that you should look at all the revenues received from the end user, but you shouldn't look at things such access charges or PIXC charges, which is the form of an access charge.

Q Isn't the PIXC charge a flat rate charge that BellSouth is entitled to when a subscriber subscribes to basic local service?

A We collect PIXC charge -- To the extent customer gets service from us, we are able to get this PIXC charge. I should also note, and one thing we are leaving out here, is under BellSouth's proposal -- and we are really not getting into our full proposal here, but we do recommend, of course, that you back out any support

received from the federal universal service mechanism. And I think there is a good chance that when the FCC finally ends up dealing with universal service -- there are a lot of unresolved issues -- but I think when they finally do that, you'll see the PIXC charge possibly being eliminated and being replaced by a federal universal service charge; and when that happens, I think we'll have this effect that you're looking for.

Q I'd like to refer to your Revised Exhibit 1 please. In that exhibit, roughly in the middle of the page, the right side middle, you have two columns for residence flat rate and business flat rate. These are the maximum rates for basic residential service and single line flat rate business; is that correct?

A Yes, that's my understanding.

Q Is this -- and then there is a third column there, the SLC, the subscriber line charge; is that correct?

A Yes, that's correct.

Q And what issues were you trying to address in this proceeding by placing that information in this exhibit?

A No real issue. We were just showing some information here. We had done exhibits in other states where we showed this kind of information and, you know, we

could have left this off. It doesn't really add anything here since we're not testifying at this point on the size of the fund.

Q Okay. This is basically what you propose to be your revenue benchmark; is that right?

A No, that's not correct. I was trying to stick to the issues laid out by the Commission, so we really didn't get into a lot of testimony on the revenue benchmark. In rebuttal I felt we had to because it was teed up by AT&T, but we weren't testifying originally on the appropriate state revenue benchmark.

Q Mr. Martin were you in the room when Doctor Duffy-Deno testified, I think, in his summary and then again on redirect that this Commission should focus on the rural areas because those are where the high-cost areas are going to be?

A I heard that.

Q If we look at your column for basic residential service and add in the subscriber line charge on your Exhibit 1, isn't it a fact that every single wire center in Florida in BellSouth territory is a high-cost area?

A I don't know that I would agree with that. If you're asking does the cost exceed the rate that we are allowed to charge in every wire center, I believe that's a correct statement. Does that mean that it ultimately

deserves universal service support? I don't know that that is the case. I think we need to go to the next proceeding and look at things like, you know, what is the appropriate rate in those wire centers. You know, if customers could pay a little bit more, then you might not need universal service support in a Miami or a Jacksonville.

Q Well, how would you define a high-cost area?

A I would define the high-cost area an area where the costs are high. I mean if you're asking are these all high-cost areas, it depends on what you set the threshold at as high cost. If you say, are these all areas where the cost exceeds the rate that can be charged for basic residential service, then I would agree with you that in all of these wire centers it appears the cost does exceed the rate that we can charge for 1FR service plus the SLC.

Q Using the rates that you have in your Exhibit 1 and the costs, have you done any calculation as to what size of the fund -- of a universal service fund BellSouth would require using the BCPM in Florida?

A We did some calculations a while back. I don't remember the exact number.

Q Do you know about what that number was?

A It would be probably a fairly large number. I would guess for BellSouth it would be in the range of eight hundred million dollars, thereabouts.

Q Thank you.

MR. COKER: That's all I have.

CROSS EXAMINATION

BY MR. HENRY:

Q Good afternoon, Mr. Martin. I'm Mickey Henry, and I represent MCI, and I just have a very few questions.

One thing I was curious about, when you are talking about subscribership to vertical services, my daughter often makes a call, a conference call where you push a star and do something like that, and 75 cents shows up on my bill. Would you consider that I am a subscriber to that service?

A I don't know, and I don't know if those type of revenues would be included, or if that would be included in our percentage. I would have to go back and check with our billing folks.

Q Okay. Your other statement on Page 8 that 82% of BellSouth's residential customers make no intraLATA toll calls during a month, correct?

A Yes.

Q Are you familiar with the expanded calling service or quarter plan routes that BellSouth has in Florida?

A Relatively familiar with it.

Q Okay. Do you -- would you suspect that a lot of

calls that may have previously been classified as toll may now be classified as ECS or quarter calls?

A That's certainly a possibility, and as I mentioned earlier, we could include those revenues. To the extent, again, they are for plans that were in effect prior to, I guess it was July of '95, we could include those revenues since the Commission deemed those were part of basic local telecommunications service.

Q Well, I guess my real question was, does it surprise you that no one is making toll calls because there are no more toll routes left in effect?

A Not really. Some people are making toll calls. I mean 82% don't, that means 18% are.

Q Do you suspect that they are in areas where ECS isn't implemented?

A I don't know where they are located.

Q Now you indicated to Mr. Coker, I believe, that you were going to supply us with the number of customers -- Turning to your Exhibit PFM-1 for a moment, and I don't have the revised one, and when I go to the example I want to use, you'll have to tell me whether the numbers are still the same. But going to PFM-1, that is a listing by end office in Florida of the residential flat rate, the business flat rate, the subscriber line charge and the BCPM calculated cost for that end office, correct?

A Yes.

Q Okay. And you indicated to Mr. Coker that you would supply us with the number of customers by end office that, for example, in Archer, Florida only pay $8.80 per month?

A I don't remember agreeing to that. I said that we would try to provide a percentage statewide for our serving area of what customers only get basic dial tone service. I didn't agree to do that by wire center. I think that would be a tremendous undertaking.

Q Okay. So you are going to be able to supply though for the state how many of your subscribers only pay the flat rate for either residence or business?

A Yes.

Q Okay. Now let me -- On Pages 5, 6, and 7 you generally discuss the FCC process and how that process is going to work, correct, universal service fund?

A Yes.

Q Okay. And you discuss in here the fact that there is going to be a 25/75 jurisdictional split between interstate and intrastate; is that correct?

A That was the tentative way they were going to do it. As I note, that issue has been referred to the joint board, and so by November the 23rd, I believe it is, we should know if this is going to change.

Q Okay. My recollection was that that issue -- the joint board actually asked the FCC to refer to it, the question of the appropriate jurisdictional split; isn't that correct?

A Yes, and it's actually gone beyond that. The FCC has gone ahead and done that.

Q Right. And you also -- At the FCC level, they have selected a revenue benchmark of $31, correct?

A I believe that was tentative, and they're collecting data and going to recalculate that.

Q And your company is supplying that data to the FCC, correct?

A That's correct.

Q And that $31 at the time it was calculated is made up of, on average, the local -- basic local revenues, the subscriber line charge, the average vertical service revenues, the average toll revenues, the average access revenues, correct?

A I believe that's correct.

Q Okay. Now let me take you to just an example of -- So at the federal level, what they are going to do is make a determination as to the cost in a particular wire center, and then they are going to compare that to revenues and make a determination as to how many lines are in need of a subsidy, correct?

A That was the way they were going to do it. Again, they've thrown the whole process open, and United States Telephone Association has made a proposal, a new proposal on how to do the federal support, and I think that is being seriously considered. So, again, I need to note that this is the way they were going to do it. They referred a lot of issues back to the joint board, and I think the FCC could change direction on some of this.

Q But we don't expect the basic math to change. There will be revenues minus cost equals subsidy or not, correct?

A May or may not be that way. I think one thing they are looking at -- I think in total you need to look at the cost versus the revenue. That is how you size the problem in total, and the state will ultimately have to do that, but for what is the federal side of the problem, I think one thing the FCC is looking at is maybe we can look at the amount of support provided via the PIXC charge that you referred to earlier and the carrier common line charge and total that up, and that could be an estimate of the interstate or federal support. And then in addition, they may have additional federal support provided to keep state rates lower, maybe in some of the very rural states; so I think this is an issue that is very much still up in the air.

Q Well, let me take you to an example, and this is the last part of my question. If you would go to your PFM-1, and exchange or the wire center that I picked out was Cocoa Beach, I believe; and it's about, I'll call it 15 lines down, the CLLI code is CCBHFLMA

A Okay.

Q Okay? As I go across that line, I see that the costs are $30.56 according to the BCPM, okay?

A The corrected revised cost is $30.48, but okay.

Q Okay. Well, if I screw up with my math, you'll know it's because I was using the 30.56, but give or take six cents, eight cents. So the basic math would work is that from residential customers in that wire center you're today receiving $9.50 in a flat rate -- flat 1FR rate and $3.50 in a subscriber line charge, correct?

A That's correct.

Q And that would be $12?

A I believe that totals to $13.

Q You're right. Now in order to get to a $31 revenue benchmark, I've just used some illustrative numbers, okay? I want you to assume that on average from those customers you receive $6 in vertical services $5 in ECS revenues, $4 in intraLATA toll and $3 in access charges, okay? That adds up to $31. Now if a revenue benchmark was selected that only reflected the $13, we

would subtract $13 from $30.56, and for a line in that wire center there would be a subsidy payment of $17.56, correct?

A Yeah, using the number you have.

Q Okay. Now if, in fact, the company was receiving $31 from that customer, then for that customer the company would receive $31 from the customer and $17.46 from the USF fund, correct?

A No. I'm glad you asked this question because it gives us a chance to clarify some things. When this fund is set up, there will be rate reductions offsetting whatever support is received. And, again, this is getting into the next phase, but he's brought it up, so I need to respond to it.

There will be rate reductions, so the rates will not stay the same. The rates will come down. I don't know which rates will come down, but the bottom line is there will be rate reductions totaling whatever amount of support is provided via the universal service fund. So there will be no new dollars flowing to the local exchange carrier from day one from the federal fund or from the state fund under BellSouth's proposal.

COMMISSIONER JACOBS: Which rates are those that will come down?

MR. MARTIN: Sorry?

COMMISSIONER JACOBS: Which rate, your $30 rate

will come down?

MR. MARTIN: We'll make the recommendation. The Commission here will be the ones that ultimately decide which rates come down. I would guess that access rates would come down. It's possible vertical service revenues or rates would come down. It's possible that business rates would come down. That's a package we would have to put together. And, again, I think this is out there a ways because we have to go through some other steps; but, yes, rates would come down to offset in total whatever support we get.

COMMISSIONER JACOBS: So that would reduce the 17 then?

MR. MARTIN: I don't know if it would come down to 17, but clearly certain rates would come down when the fund is instituted.

BY MR. HENRY (Continuing):

Q Well, in any event, even if you reduce vertical services in half, let's just say, then we'd cut that to $3 and you'd receive -- you'd still be receiving $14.56 though, correct, over and above what you're receiving from the customer? I'm sorry, $17.56.

A I think in your static example that could work. Again, I think once you start seeing competition come in, you've now made these -- all of these customers attractive

to competitors, and I think competition will start knocking down revenues. But, again, you are focusing on one customer, and I guess you're saying we are going to get more revenue from that customer. In total we are not going to get any more revenue, so it's hard to make the two examples mesh; but bottom line is there won't be new revenues in total flowing to the local exchange carrier.

Q Well, that was the point I wanted to get to. You are going to be getting a government check in effect of $17.56 from that customer. You are going to be getting $13 from that customer by billing him, correct?

A I would say that if we keep the customer we would get the subsidy and we would get the revenue he pays as an end user.

Q So a competitor could come in and you could basically drop your vertical, ECS and toll services to cost, correct, and still maintain the same revenue stream for that customer?

A I don't know that I follow that. I know that the competitor comes in. He'll have a certain cost he needs to cover, and it's possible he'll go down to a certain point. We'll have to compete.

Q Well, I'm not talking about the competitor's cost. I'm talking about BellSouth is receiving $13 from that customer by billing him. They are receiving $17.56

from the government for a total of roughly 30, $31. Okay, today they are billing him roughly $18 in vertical, ECS, intraLATA toll and intraLATA access. You could cut those prices almost to cost, still have the same amount of revenue coming in from that customer, correct?

A I guess if you could show me the math. I mean from a given average customer?

Q Yeah.

A Again, I think it's dangerous to just look at the average customer because part of the problem, and the reason we think you need to look at the basic rate versus the cost associated with it, is that some customers don't get any vertical services; and for that customer it's not going to be viable for a competitor to serve that customer unless they are going to get support for the difference. For the customers who get a lot of vertical service revenues, I think you are going to see a substantial reduction in toll revenues and vertical service revenues as competition takes hold and those above-cost rates start getting competed downwards.

Q Mr. Martin, in my example, you're receiving $31 from that customer today on average. Tomorrow you are going to receive $13 directly from the customer and $17.56 from the government, okay? You are still supplying him with vertical, ECS, intraLATA toll and billing

interexchange carriers access, okay?

A Yes.

Q Now you can basically wipe all those other revenue sources down to zero and you still get the same amount of money tomorrow as you did the day before, correct?

MS. KEYER: Madam Chairman, I'd like to make an objection. I think he has, this is another asked and answered. And in addition to this, it's really irrelevant to this proceeding. He has gone over the same example -- I believe Mr. Martin has given him the best answer he can give him two or three different times, so I would object to any further questioning along these lines and particularly that question.

MR. HENRY: Madam Chairman, I don't believe he has given me an answer. I'm asking him whether he could basically reduce his vertical, ECS, intraLATA toll and enter -- and his access charges to nothing and retain the same amount of money from that customer with a $17.56 USF check.

CHAIRMAN JOHNSON: You can answer the question.

A Yeah, under the very simple example you've given then the dollars would be the same.

(Transcript continues in sequence in Volume 11).