BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of: Petition by Metropolitan Fiber Systems of Florida, Inc. for arbitration with BellSouth Telecommunications, Inc. concerning interconnection, rates, terms, and conditions, pursuant to the Federal Telecommunications Act of 1996.	DOCKET NO. 960757-TP
Petition by AT&T Communications of the Southern States, Inc. for arbitration of certain terms and conditions of a proposed agreement with BellSouth Telecommunications Inc. concerning interconnection and resale under the Telecommunications Act of 1996.	DOCKET NO. 960833-TP
Petition by MCI Telecommunications Corporation and MCI Metro Access Transmission Services, Inc. for arbitration of certain terms and conditions of a proposed agreement with BellSouth Telecommunications, Inc. concerning interconnection and resale under the Telecommunications Act of 1996.	DOCKET NO. 960846-TP

FIRST DAY - AFTERNOON SESSION

VOLUME 3

Pages 242 through 448

PROCEEDINGS: **HEARING**

BEFORE:	CHAIRMAN JULIA L. JOHNSON COMMISSIONER J. TERRY DEASON COMMISSIONER SUSAN F. CLARK COMMISSIONER JOE GARCIA COMMISSIONER E. LEON JACOBS, JR.
DATE:	**Monday, January 26, 1998**
TIME:	Commenced at 9:30 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JOY KELLY, CSR, RPR H. RUTHE POTAMI, CSR, RPR Official Commission Reporters

APPEARANCES:

(As heretofore noted.)

WITNESSES - VOLUME 3

EXHIBITS - VOLUME 3

P R O C E E D I N G S

(Transcript follows in sequence from Volume 2.)

ALPHONSO J. VARNER

continues his testimony under oath from Volume 2

CONTINUED CROSS EXAMINATION

MR. SELF: It's on Page 3. It's the next to the last paragraph on that page.

MR. LACKEY: I'm sorry. Which order are we looking at? I've got the arbitration order. Page 87 is what I'm looking at.

CHAIRMAN JOHNSON: Starting at the order on the motion to strike and to determine what was in the bounds of that order; starting there first. And you said that I'm going to the first complete --

MR. SELF: No; the next to the last paragraph. It starts specifically "The motion shall be granted."

CHAIRMAN JOHNSON: Now, it's your position that the testimony that he's -- what do you want to see stricken?

MR. SELF: What I believe that BellSouth should do in order to comply with this order is I guess file a revised AJV-1 that would exclude the LCSC costs, or the pro rata percentage of it based upon

what Mr. Varner has said that relates to the manual interface that the ALECs require.

The basis of the motion to strike was the fact that in the arbitration order that Mr. Lackey is looking at, the Commission specifically ruled that each party shall recover its own costs of OSS.

WorldCom -- in addition to that, WorldCom had attempted early on in this proceeding for example, to include the issue of geographically deaveraged loops, and that issue was stricken, or not allowed to be included, because the focus of this proceeding was to be exclusively those matters for which the Commission had directed BellSouth to file cost studies, because in the arbitration orders interim rates were set for those.

And on the basis of Commissioner Clark's determination, it was found that, for example, geographically deaveraged loops, there was no directive for BellSouth to file such cost studies.

Similarly, with respect to OSS, I believe that the reason that Commissioner Clark granted the motion with respect to that is because there was no directive in the prior arbitration orders for BellSouth to file costs or prices for OSS.

CHAIRMAN JOHNSON: And you're referring back

to that order in which we stated that each company would bear its costs for OSS interface?

MR. SELF: That's correct.

CHAIRMAN JOHNSON: I don't have that one either, but go ahead.

MR. LACKEY: Well, I'm looking at Page 87 out of that order, and that's all I've got is 87, so I need to be a little careful here. But it says, "Based on the foregoing, each party shall bear its own cost of developing and implementing electronic interface systems because those systems will benefit all carriers."

CHAIRMAN JOHNSON: Now, I'm sure that's what Mr. Varner -- because he kept making the distinction between electronic and manual. I need to see that, then.

MR. LACKEY: I don't have the whole order is what I'm worried about, but you can see the page I've got here in front of me.

CHAIRMAN JOHNSON: And maybe Staff can clarify that point, too, because as Mr. Varner testified, he kept making the distinction; and it appeared to me that it was at least his interpretation that what we were referring to was the electronic interface.

MS. KEATING: Would you prefer to hear Staff's opinion first?

MR. LACKEY: Not yet.

CHAIRMAN JOHNSON: I'm sorry.

MS. KEATING: Were you asking for Staff's opinion now?

CHAIRMAN JOHNSON: Go ahead.

MS. KEATING: We would differ with Mr. Varner's interpretation of the LCSC costs related to the manual interface.

CHAIRMAN CLARK: You're going to have to speak a little louder.

MS. KEATING: We do consider that part of manual OSS, and we think -- we would agree that that should be excluded.

MR. LACKEY: Well, if that's the Staff's position, the order that you apparently now have the page out of only goes to electronic systems; it doesn't go to manual systems. I mean, the idea that we ought to pay to have somebody sitting there to answer their phone calls rather than having them -- I mean, that strikes me as a little foreign.

CHAIRMAN JOHNSON: Mr. Lackey, could you point me again to the -- I'm on Page 87.

MR. LACKEY: It's Page 87. It is the one,

two -- the third full paragraph that says "Based on the foregoing, each party shall bear its own cost of developing and implementing."

CHAIRMAN JOHNSON: Got you.

MR. LACKEY: It says "electronic interface systems." But, again, I've got a little bit of a problem, because I've only got Page 87 of this order. Well, now I've got the whole thing, but I still haven't read it.

CHAIRMAN JOHNSON: Staff, help me out. What's the basis for your conclusion that we also intended to include manual OSS -- or that that be excluded?

MS. KEATING: OSS costs were not identified as an issue to be determined in this proceeding. We're not making any determination here as to whether they should or should not be recovered at some point or in some unbundled element.

We're just saying that that was not identified as an issue to be resolved in this proceeding.

CHAIRMAN JOHNSON: So if he testified it -- it's not relevant to anything that we're going to decide today anyway is what you're saying?

MS. KEATING: We just think that that's not

something that should be determined here and something that was identified to be determined here. It's a separate element, in our opinion.

CHAIRMAN CLARK: Okay.

MR. SELF: Chairman Johnson, if I may, if you read the order in its entirety --

CHAIRMAN JOHNSON: This order, the arbitration order?

MR. SELF: The arbitration order, yes. Thank you. If you read the arbitration order in its entirety, nowhere in there does it direct BellSouth to file cost studies to recover the costs, at least in this proceeding, of manual or electronic interfaces.

And, in fact, if you look at the prehearing order in this case, and if you look at the issues that are identified again, nowhere along there does it identify OSS, manual or electronic, as a cost for which a price is to be set in this proceeding.

I do not dispute Commissioner Clark's ruling last week with respect to the Legacy systems that are included in common and shared costs, that those are appropriate for consideration in this proceeding.

However, we now have before us the situation of BellSouth attempting to recover the costs of the LCSC, and that's a new cost. That's something that's

been developed for the ALECs, and that's not something for which this proceeding has been designed to recover the cost of.

CHAIRMAN JOHNSON: Okay. Now refer me back to the exhibit that you're stating. It doesn't go to any textual testimony, it goes to the exhibit, does it not?

MR. SELF: That's correct. It's Exhibit AJV-1, which has been identified as Exhibit 9. It's attached to Mr. Varner's direct testimony, and you should be looking at the version that says "Revised Exhibit AJV-1."

And the problem we face is in the columns under Electronic and Manual Nonrecurring Charges, there's some element of that -- and I don't know because I haven't analyzed that. I can't pull it out for you -- but somewhere buried in there in all of those nonrecurring charges is some element, some amount to recover the LCSC. And I can't pull it out. I don't know if they'd have to rerun the study or what they'd have to do.

CHAIRMAN JOHNSON: Okay. Mr. Lackey, any response to that?

MR. LACKEY: Well, the only response I have is that if we look at Issue 1, it says "What are the

appropriate permanent and recurring and nonrecurring rates for the following unbundled network elements." In order to buy a loop distribution 2-wire analog voice grade loop, you have to order the thing, and there's the nonrecurring charge for ordering the thing.

If you don't have a nonrecurring charge for ordering it, then you can't recover the cost of someone ordering it. It is clearly a proper charge within the scope of this issue. It is a nonrecurring charge associated with that unbundled network element, which is clearly encompassed within Number 1.

Now, I don't think the LCSC is a part of the OSS. But in any event, the thing that we were told to hold our own on, unless I've missed something on Page 87 of that order, were the electronic ones, which we have eliminated on Page 6 of this exhibit.

And if you take any more of it out, all you're going to do is put below cost the manual handling of these things which have to be done. We have to have manual handling of these orders because they don't come across -- or for whatever reason, they can't all be done electronically. So we're just simply going to be below cost on those orders when we get them.

Now, I don't see how anybody can argue that it's outside the scope of that issue. I understand the issue about the Commission telling us to hold our own on the electronic interfaces, but I don't think that goes to this.

COMMISSIONER CLARK: Madam Chair, if I can just be clear, it seemed to me the question I was asked as the prehearing officer was that "look at that order and the order says we're not going to revisit those things; everyone is going to bear their own cost with respect to -- what does OSS stand for again?

MR. LACKEY: Operational support systems.

COMMISSIONER CLARK: And what I'm having difficulty with is the notion that you separate out some manual portion of that and you attribute it to the UNEs. Why isn't that part of the electronic?

I mean, presumably you have to input or -- I guess I'm having difficulty understanding why it should be included in these elements. And is it always included, even when you order electronically?

MR. LACKEY: I'm going to have to -- as much as I like to testify, I'm going to have to let Mr. Varner answer that one, because I don't know the answer to that question.

COMMISSIONER CLARK: Well, I think it seems

to me to be somewhat fundamental, because if we were separating out operator -- what is it?

MS. KEATING: Support systems.

CHAIRMAN CLARK: Support systems. It would seem like whether you have to do it manually or electronically, it would have been separated out. And now it seems there's a debate as to whether it was -- that we had decided that it was part of that and to be separated out. And, quite frankly, you know, that should have been made clear prior to this point.

CHAIRMAN JOHNSON: Staff?

MS. KEATING: Madam Chairman, I just have a little point that I think might clarify things a little bit. I'm reading from the Eighth Circuit's order at Page 808, and the Eighth Circuit indicated there that operational support systems, operator services, directory assistance, et cetera, qualify as network elements that are subject to the unbundling requirements of the Act.

OSS was not identified in this proceeding as an unbundled element for which we would set permanent rates. Based on this statement from the Eighth Circuit, we do view them as a separate unbundled network element.

There for a while costs may be -- we're not

saying whether costs should be recovered or should not be recovered, but we think that determination should be made in a separate proceeding.

CHAIRMAN CLARK: The only thing that I'm not clear on is how will BellSouth go about separating out these costs, and maybe it's just not understanding the technical aspect.

MS. KEATING: Are you asking how they would separate manual versus electronic; is that what you're asking? Or how they would separate out costs for OSS in general?

CHAIRMAN JOHNSON: No. And I don't know how to ask this question. But what's the LCSC?

MR. SELF: LCSC. I can't remember at the moment. Mr. Varner should know.

CHAIRMAN JOHNSON: You may have to help us through this, because we're talking about the LCSC, aren't we, in being able to further unbundle and take out the OSS, and can this be done, and how is this done?

WITNESS VARNER: The LCSC stands for local carrier service center. All it is is a room that has a bunch of people in it who take orders. It's not an operation support system. It's a center with people in it who answer the telephone and take orders.

That's what it stands for. It's not an electronic system. It's just a bunch of people sitting at their desk taking orders.

CHAIRMAN JOHNSON: Well, why does this -- well, how is this issue coming up, Mr. Varner, in the context of is it a manual OSS? Is he saying this room full of people has somehow some manual operation?

WITNESS VARNER: I don't understand how it comes up, because it's not an operations support system.

COMMISSIONER CLARK: Explain to me if MCI wanted to order all these unbundled networks electronically, would you ever use your room full of people?

WITNESS VARNER: We might if the order fell out, if there was an error on the order or something. They do that kind of work as well.

COMMISSIONER CLARK: Okay. Madam Chairman, I think it should not be included as an element. It seems to me that as part of the price of OSS, if you get it wrong, it's part of the ordering system, and whether you do it electronically or manually, it should be part of that system; and the manual part shouldn't be broken out and put into the individual elements.

Now, if we didn't do that, if it was unclear to all the parties in the other proceeding, maybe we have to go back and look at it. But it seems to me that it's really a function of the system, the ordering, and that was what was supposed to -- according to that order, was supposed to be borne by each party.

CHAIRMAN JOHNSON: You see the room full of people and the functions and their duties as a part of OSS, or --

COMMISSIONER CLARK: Well, because Mr. -- you've indicated that you can do it?

WITNESS VARNER: Do what?

COMMISSIONER CLARK: Order. Can you order an unbundled network element electronically? And if you do, do you ever have to use those people in that room?

WITNESS VARNER: Not to place the order, no. You don't use those people if you order it electronically.

COMMISSIONER CLARK: So why should it be included as a cost in the unbundled network element?

WITNESS VARNER: Because that is the cost when you call the on the phone and place that order. That is the same cost that's included in the

nonrecurring cost for every other unbundled network element that the Commission has already approved.

COMMISSIONER CLARK: But it isn't a cost if you order it electronically; it's only a cost if you order it manually.

WITNESS VARNER: That's correct, because --

COMMISSIONER CLARK: And if we're trying to set network elements that apply across the board, why would you include that cost?

WITNESS VARNER: That's why we proposed them the way that we have. We have a proposed a nonrecurring price if you order it manually, and we've proposed a nonrecurring price excluding that amount if you order it electronically; but we did not add in the cost of the systems that you would use if you were to order it electronically.

COMMISSIONER CLARK: I see. Okay.

WITNESS VARNER: That's the way we set the exhibit up. You've got it if you order it manually. You get a lower price if you order it electronically. But the other element that you need if you order it electronically is not in here.

COMMISSIONER CLARK: Well, Madam Chairman, then let me --

WITNESS VARNER: That's what was excluded.

COMMISSIONER CLARK: Let me retreat from what I said. It seems like what they have proposed is fair, then. And, quite frankly, it was not made clear to me, and I think perhaps it was not clear when we did the original order that there would be that kind of separation of charges, or of costs. Perhaps that's correct; the separation of costs.

CHAIRMAN JOHNSON: Mr. Greer, do you have anything to add?

MS. KEATING: I think he does. (Laughter)

CHAIRMAN CLARK: Counsel?

MS. KEATING: The FCC has already identified preordering and ordering as OSS functions as an unbundled element, and that those prices for that have to be determined in a separate proceeding. The LCSC performs an ordering function. Therefore --

CHAIRMAN JOHNSON: So you disagree with the way that Mr. Varner just characterized -- or maybe you didn't hear.

MS. KEATING: We would definitely disagree with the way he characterized the LCSC. It performs a manual ordering function. It's part of what it does.

COMMISSIONER CLARK: So it's your position, and consistent with Mr. Self's position, that those costs have to be included in the OSS? That is a

separate element whether you do it electronically or manually.

MS. KEATING: Yes, Commissioner Clark.

COMMISSIONER CLARK: Then the question becomes, was that the intent of the order. And I think -- I guess it's Staff's position that it was, and that's why you wrote the order the way it was.

COMMISSIONER DEASON: Well, what are legitimate costs that are part of the ordering costs that are part of the nonrecurring? Where do we draw the line?

If LCSC is not part of a legitimate ordering cost that should be considered part of OSS, what are all these other costs? It seems to me this is a very substantive issue, and you're asking the prehearing officer, or the Chairman, to make a decision here, make a ruling that decides a very substantive issue. I don't think that's the way to proceed.

MR. SELF: Well, Commissioner Deason, the basis for the joint motion was the fact that it was not an issue that was ripe for resolution in this proceeding. It was not designated as one, much like WorldCom's request for geographic deaveraging that Commissioner Clark denied inclusion as an issue in this proceeding.

I'm not arguing that they -- at this time at least -- I'm not arguing that they are not entitled to recover OSS costs.

All I'm arguing is in the context of this proceeding and what's been designated as issues for this proceeding on the basis of the arbitration orders that, in fact, any OSS recovery is not appropriate in this proceeding other than as Commissioner Clark correctly ruled, the LEGACY systems that are included in common and shared.

CHAIRMAN JOHNSON: And then you define the entire -- the room with people, LCSC, as part of operation support systems?

MR. SELF: Sure. It's a manual system that's set up as an alternative to the electronic system. Quite frankly, I was expecting to get a call from BellSouth on Friday saying, we have a stack of paper for you to come pick up that would include revisions to AJV-1 that would revise the numbers that appear in the nonrecurring charges.

COMMISSIONER DEASON: You're saying there should be no ordering charges, period, in any of the nonrecurring charges on AJV-1, regardless of whether those ordering charges are manual or electronic?

MR. SELF: That's correct.

COMMISSIONER DEASON: And the basis for that is the prehearing officer's ruling on --

MR. SELF: The basis for that is the arbitration decision orders which specify that -- well, they did not direct BellSouth to file cost studies and, therefore, prices to recover those costs in this particular proceeding.

BellSouth would be entitled, I guess, tomorrow to file a petition and say, we want to establish a rate for OSS cost recovery, just like WorldCom would be entitled tomorrow to file a petition to say, we want geographically deaveraged rates. We may have to negotiate that first, but aside from that issue.

COMMISSIONER CLARK: Commissioner Deason, the basis for both motions that came before me were, it's not within the scope of the proceeding that the Commission had previously set out; and that was setting permanent rates for certain unbundled network elements which were enumerated in the order.

And then the question became -- there was a challenge to WorldCom, and I don't know who else suggested bringing up the issue of deaveraged rates, and then there was a challenge to BellSouth's bringing up the issue of OSS.

Those were not within those items that the Commission requested them, BellSouth, to file cost studies for which we would set permanent rates. That was the reason for excluding them.

Now, this distinction did not get highlighted, shall we say.

COMMISSIONER JACOBS: It sounds like it has not been determined that the LCSC costs for purposes of our deliberations are a distinctive UNE. You cited the Eighth Circuit order. Is that our official position? Or has that been determined?

MS. KEATING: The Commission hasn't made any official statement as to whether it considers OSS an unbundled element; has not specifically said that. However, the Eighth Circuit has upheld the FCC's determination that OSS is an unbundled element.

COMMISSIONER JACOBS: And so we're here now on the argument whether or not the LCSC should be considered by this Commission if -- and it sounds like there will be another proceeding with that. If that's the case, the relevant costs could be determined.

If it is a separate UNE -- and pardon me for a moment. Part of it is my ignorance -- that then there are other UNEs, that we're going to ultimately have to resolve those issues as well. So this will

come in in the scope of that proceeding for whatever UNEs that are out there that we need to finalize the costs for.

In other words, we will not resolve the whole universe of unbundled network elements for this arbitration, and so in the course of some other proceeding we could do that and others.

MS. KEATING: Right.

COMMISSIONER JACOBS: Okay.

COMMISSIONER DEASON: What happens in the meantime if somebody places an order? Do the costs go unrecovered, or does BellSouth say, we don't have a rate to process the order; until we get a rate, we're not going to process your order? I mean, how does it affect the real world?

MS. KEATING: They try to negotiate a rate, and if there's a problem with that, then they come to us.

MR. LACKEY: Well, that's okay as long as we don't have to process any orders while we're negotiating, I guess. But I suspect there are going to be a lot of people unhappy about that if we don't have a rate.

MR. MELSON: Commissioner Deason, to answer your question, I believe from a contractual point of

view, in the contract the Commission has approved it set out what BellSouth has to do in terms of processing orders, and it sets out that there's no separate or additional charge for that.

So while theoretically manual ordering might be a UNE that might need to be arbitrated some day, I think our agreement handles it somewhat differently, and it's probably taken care of.

COMMISSIONER JACOBS: One other question. I can't recall to state it specifically, but I think I understood someone to say that most ALECs are going to use electronic ordering. So to what extent would the cost of manual ordering be a real factor in the short term?

MR. LACKEY: I think Mr. Varner was the one that was addressing that, and I think the conclusion was, is that if you have electronic ordering, most of it will flow through, but occasionally there will be a fallout and LCSC will handle it. But the LCSC also sits there, if I understand correctly, and takes orders. It's not an operating system. It's a place -- it's like a service rep sitting in an office building somewhere taking orders, if I understood what Mr. Varner said correctly.

COMMISSIONER JACOBS: My point is, though,

those orders are not likely to be ALEC or CLEC orders.

MR. LACKEY: Yes, they are. The LCSC was set up specifically to handle CLEC/ALEC orders.

COMMISSIONER JACOBS: It was my understanding that most of those were going to be electronic.

WITNESS VARNER: Not if they come through --

MR. LACKEY: I don't think most of them are going to be electronic, at least not now. Mr. Varner will have to help. I'm sorry. I don't know the answer to that.

WITNESS VARNER: If they come through the LCSC, they're not electronic. They only come through LCSC if they're manual.

COMMISSIONER JACOBS: I understand. Now, my question, and what I'm seeking clarification on, is that for the moment, most of those ALECs -- well, let me narrow it even further. The parties to this proceeding who is going to seek a loop are going to most likely be proceeding under the electronic format --

WITNESS VARNER: Yes. That's what I would expect.

COMMISSIONER JACOBS: So would it not be the case that they would not be using a manual service?

WITNESS VARNER: That's what I would expect.

COMMISSIONER JACOBS: And so then the cost of that manual service would not be relevant in processing those orders?

WITNESS VARNER: Unless they chose to use it; that's right. But I would expect they would use the electronic interfaces.

COMMISSIONER DEASON: Let me ask Staff a question. Do you all agree with Mr. Self's characterization that there should be no ordering costs included in the nonrecurring, the costs shown on AJV-1?

MS. KEATING: Yes.

COMMISSIONER DEASON: There should be no ordering costs regardless of whether it's OSS or LS -- whatever that is? Whatever, there should be no ordering costs included in these rates?

MS. KEATING: We would include LCSC costs, yes. They should be excluded.

COMMISSIONER DEASON: They should be excluded. No ordering costs, period.

MS. KEATING: Correct.

COMMISSIONER DEASON: And the reason for that is that's consistent with the interpretation that that was not part of this docket.

MS. KEATING: Correct.

MR. LACKEY: If I may, Madam Chairman. I'm sorry, Mr. Deason, but I don't understand how that can be reconciled with the issue that says "What are the appropriate nonrecurring rates for the following unbundled network elements?"

Clearly a nonrecurring rate associated with that network interface device or that 2-wire is the ordering charge for it. I mean, I don't see how we can say that the nonrecurring charges associated with these elements, which clearly include ordering the elements, which is a one-time nonrecurring charge, are excluded. I mean, the issue clearly contemplates that those nonrecurring charges will be included in this proceeding.

CHAIRMAN JOHNSON: Staff, any response to that?

MS. KEATING: As I noted earlier, the Eighth Circuit has already said that --

CHAIRMAN JOHNSON: How do we reconcile with what he just stated how the statement does refer to recovery of some nonrecurring costs? What were we contemplating?

COMMISSIONER DEASON: While they're thinking about that, Mr. Varner, what are the nonrecurring

costs other than ordering that are part of your rates in your exhibit?

WITNESS VARNER: Depending on the item, there is provisioning costs. You know, you take the order in, then you actually go through -- let's take if it's a loop, for example. You determine what facility it is that you have to provide. You go and you actually go out in the field and you hook that facility up and make sure that it works all the way from the wire center into wherever they want it to be, terminate the other end of the facility wherever it needs to be terminated. Those kind of costs are all in addition to the ordering.

The functions that's included in these are the exact same functions that's included in all the other nonrecurring charges that's applicable for all the other network elements. It's the exact same functions.

MR. MELSON: Chairman Johnson, if I might, I don't know if I can offer a way out of this morass or not, but I'm going to try.

I think it was very clear in the prior order, and very clear in the order on the motion to strike, that the separate charge that Bell had proposed for recovery of costs of electronic

interfaces was an issue that had been dealt with by the Commission and was not on the table.

After having heard this give and take between Mr. Self and the Staff and BellSouth, I guess I think the point about manual costs is probably debatable.

I wonder would it make sense to allow the exhibit to stand to the extent we can, through subsequent witnesses, try to identify what portion of those costs are manual ordering costs, and then to leave the parties to brief the issue of the extent to which this issue has already been decided or the extent to which it needs to be decided in this docket; because we're really getting now into some legal arguments that may do better through a briefing process than continuing to argue about them.

MCI would suggest that approach, although if you choose to rule yea or nay on the other issue, we'll accept that as well.

CHAIRMAN JOHNSON: I appreciate that, because I was having some of the same -- I wasn't going to rule right now anyway given some of the uncertainties and needing to meet with both legal counsel and technical Staff. But that may be a better way to proceed, because that will allow you all the

opportunity, if necessary, in briefs to provide the legal argument.

Now, the one suggestion that you made would be that other witnesses could address the exhibit and determine which portions are manual ordering costs versus those that are not.

MR. MELSON: I believe Ms. Caldwell did the cost studies that underlie all of these rates, and to the extent, through cross-examination of her, the parties could explore what portion of that is a manual OSS interface, for lack of better terminology, then there presumably would be a record on which the Commission could either include or exclude those costs at the end of the day, depending on how you resolve the legal issues.

COMMISSIONER CLARK: You said this is not an issue for you because of your agreement, what you arbitrated in your agreement.

MR. MELSON: It is an issue for us with regard to the eight elements that are on the table today. To the extent that there was a suggestion that -- the question of whether there could be a surcharge or a separate charge for manual ordering for elements for which prices have already been set, that that might be thrust into limbo. I don't think we're

put into limbo our existing prices, because we've got existing contractual provision. It is a live issue for us as it relates to these eight elements.

MR. LACKEY: And that's all I mean, by the way, was as it applied to these elements.

CHAIRMAN JOHNSON: I'm sorry. I didn't hear you.

MR. LACKEY: I agree with Mr. Melson. I was only discussing it as it applied to these nine elements, not as it goes to the elements that already have prices and nonrecurring prices established.

CHAIRMAN JOHNSON: Okay. Well, Mr. Self, you raised this issue. I'm amenable to the suggestion provided by Mr. Melson that we go ahead and allow the document to stand and allow through cross-examination to find out some determinations as to what is manual ordering -- which costs are manual ordering costs and which are not, and perhaps through briefing determine what should be included and what should not.

MR. SELF: I can accept that.

CHAIRMAN JOHNSON: Okay.

COMMISSIONER DEASON: Let me ask, Mr. Lackey, is there going to be a witness who can specifically identify the manual ordering costs included within Mr. Varner's exhibit?

MR. LACKEY: Ms. White just went and talked to Ms. Caldwell, and apparently Ms. Caldwell believes that she can explain what you need to know. We haven't talked about it, but based on what she's heard, she apparently thinks she can address the issues.

CHAIRMAN JOHNSON: Okay. Very good. That's how we will proceed then. Thank you Mr. Melson.

MR. SELF: Thank you, Commissioners.

Q **(By Mr. Self)** Mr. Varner, I have just a few other questions on a different subject. I'd like to talk about -- I just have one or two questions about collocation next.

WorldCom's witness Mr. Porter has proposed that for physical collocation the interim rates negotiated by BellSouth and MFS be adopted. Do you recall that testimony?

A No. I haven't read his testimony.

Q Would you know if the interim rates that were in fact, negotiated between BellSouth and MFS for physical collocation and approved by this Commission, whether those rates were based on cost?

A I really don't remember. From what I recall, those rates were the rates that were in the collocation handbook at the time, and they originally

were based on cost, and there have been some modifications to them to try to reflect some things, some events that had occurred since, you know, since they were originally put in. But there was no cost study that was done such as what we have here to underlie those rates.

Q Would BellSouth execute an interconnection agreement under Sections 251 and 252 of the Act that includes a rate that's not in compliance with the Act?

MR. LACKEY: I want to object to that question. I think that assumes something that's not necessarily accurate. If I recall correctly, the pricing provisions of 252(d) only apply to arbitrated agreements, and the parties are free to negotiate rates that are suitable to both parties.

I may be wrong about that, but I believe that Mr. Self is asking Mr. Varner for a legal conclusion on those issues.

CHAIRMAN JOHNSON: Mr. Self?

MR. SELF: Since Mr. Varner is not an attorney, I, of course, would never ask him a legal question. Let me see if I can rephrase the question.

Q **(By Mr. Self)** Was the interconnection agreement an amendment that includes the physical collocation rates between BellSouth and WorldCom

negotiated with the intent of implementing sections 251 and 252 of the Act?

A Yes.

Q I'd now like to ask you a few questions about Page 30 of your prefiled direct testimony, and specifically I'd like to look at the answer on Lines 6 through 16, which in general is a discussion about ADSL and HDSL lines.

A Yes.

Q First, on Line 12 you reference ISDN. ISDN is not an issue in this proceeding, is it not?

A No, not the price for an ISDN loop.

Q Okay. I would now like to turn to the fact that the testimony here on Page 30 attempts to draw a distinction between longer and shorter loops, and I'd like to ask you a few questions about that.

First, if I understand your testimony, what is relevant about the distinction that you're trying to make here is that there are distance limitations for ADSL and HDSL which are not present for POT service; is that correct?

A Well, that's a part of what I'm saying here. It's really -- go back to the question of what are some of the characteristics that cause different loop types to have different costs; and what I was

addressing was what some of those characteristics are.

One of them is that you have loop length limitations on ADSL and HDSL. Also, you have more manual work activity on those than you do on regular -- on analog loops, and also that they would take heavier gauge copper.

All of those are characteristics of those loops that make them different from a 2-wire analog loop.

Q Okay. I'll get to the other ones in just a moment.

So, for example, beyond 18,000 feet for ADSL, ADSL service cannot be provided, correct?

A As I said, you have to ask Mr. Baeza. I don't remember the exact numbers, the exact limitations. Subject to check, I think it's 9,000 for HDSL and 18,000 for ADSL.

Q And that's certainly what the cost studies utilize, do they not?

A The cost studies utilize whatever the limitations actually were.

Q Let me ask you this: As between a 15,000-foot loop for POTS, for a POTS line, and a 15,000-foot ADSL line, distance is not an issue with respect to those two lines, is it not?

A If they're the same length, it can't be.

Q Okay. I'd now like to talk about the distinction that you raised with respect to smaller gauge copper wire versus heavier gauge copper wire.

When building loops today, does BellSouth use different gauges of wire for copper loops, or do they all -- or are they all the same gauge?

A It would be different depending on what the technical requirements are for that kind of loop and for that particular distance.

Q Do you know, with respect to POTS loops, do they use different gauge wire?

A You'd have different than -- it has to be different than something else.

Q Would one POTS line have a different gauge wire than a different POTS line?

A It may if the two were different lengths.

Q Do you know for certain?

A I mean, if the two are -- it depends on how much longer one is than the other. You can use a certain gauge of wire out to, you know, a certain distance. You get beyond that distance, you have to increase the gauge; you get beyond it further, you have to increase it more. I don't remember what the limitations are, but you use heavier gauge wire the

longer the distance is.

On some of these, though, like ADSL and HDSL, you have an absolute limitation beyond which the equipment just won't work. The loop can't be any longer than a certain distance or it just won't work. The equipment won't work with it.

On POTS loops you don't have that. You can pretty much get the POTS loop to work. You may have to load it, put, you know, carry on it or something in order to get it out as far as you need to get it out, but you can get it out there far enough to make it work.

Q All right. Let's talk about ADSL for a moment, and just for argument's sake, let's assume that there is, in fact, an 18,000-foot limitation on ADSL such that we're only going to talk about ADSL loops that are 18,000 feet or less; okay?

Isn't it true that with respect to ADSL, that the copper wire loop required for this service is the same as that as is required for POT service?

A You have to ask Mr. Baeza. I believe, however, that the ADSL loop has a -- requires a heavier gauge than you would use with POTS. And the other thing is since it's digital, it wouldn't be a loaded pair either.

Q Have you by chance followed any of the press coverage regarding the new high speed Internet access that's been touted by Intel, Microsoft, BellSouth, and other carriers?

A A little bit. I've seen maybe three or four stories on it.

Q Isn't it true that the biggest advantage of ADSL -- and they're talking about utilizing ADSL, are they not?

A One article did say that, that they were talking about ADSL, but another article I read seemed like they might have been talking about HDSL. So I'm not real sure what it is they're talking about.

Q All right. I want to talk about the manual work item that you've identified on Page 30.

With respect to a 100% copper loop, with respect to that loop if we were going to convert it from POTS service to ADSL, and assuming it was 18,000 feet or less, is there anything else that BellSouth has to do to the copper loop itself in order to make it ADSL compatible?

A If it was a -- previously a POTS loop?

Q Yes.

A You'd need to ask Mr. Baeza. I'm not sure if it was Baeza or Landry. I think it's Baeza. But

it would depend on what the characteristics were of the POTS loop, what all you had to do. But he can give you the details of the work that would need to be done.

MR. SELF: Okay. Thank you. That's all I have.

CHAIRMAN JOHNSON: Staff, how much do you have?

MS. KEATING: Five to 10 minutes, depending upon the responses.

CHAIRMAN JOHNSON: Go ahead.

CROSS EXAMINATION

BY MS. KEATING:

Q Good afternoon, Mr. Varner.

A Good afternoon.

Q I'd like to refer you first to your Late-filed Deposition Exhibit No. 2. I've got just a few clarification questions on that. And for reference purposes, that's in Staff's Exhibit AJV-3. Have you got that, Mr. Varner?

A Yes, I have it.

Q I'm looking now on what's Staff's exhibit, Page Number 167, and at the top of the page it says "Percent Rejected Service Requests and Percent Flow-through Service Requests."

A Is it Page 1 or 2?

Q It's Page 1 of two, yes.

A Oh, all right. I have it.

Q The last column in that chart is identified as Adjusted Flow-through.

A Yes.

Q On the next page the last explanation of how charges -- or how these numbers are calculated says "Adjusted Flow-through," and it defines adjusted flow-through as LESOG flow-through plus CLEC SOER errors times LESOG eligibility.

A Divided by.

Q Divided by. Excuse me. Thank you for the correction.

However, when we made that calculation, that is not the number that we got in the adjusted flow-through column. Could you explain why the numbers, or the percentages that are identified in the adjusted flow-through column are incorrect, or whether the explanation of how the calculation is made is incorrect?

A It appears to me from reading this that it's the calculation that's incorrect, because the adjusted flow-through is supposed to be the projected flow-through if the CLEC errors are removed.

Oh, wait a minute. If -- no. (Pause) I haven't done the calculation, but it seems to me that that's what it ought to be. Looking at the numbers, it should be 15443 plus 6253 over 22689.

Q Could I ask which line you're looking in?

A I'm at the bottom of Page 1.

Q Actually, let's start from the first line, Line A.

A Okay. That's a designation for a company. I was looking at the total line.

Q Okay. The percentage in the adjusted flow-through column does not equal the calculation that's described for it. For instance, if you add the LESOG flow-through plus the SOER errors, and then divide it by LESOG eligibility --

A It's only the CLEC SOER errors is what you add, not total.

Q So that calculation does not apply anywhere except to the total column?

A I'm sorry. Let me --

Q Let's go through this again. When you're looking in Line A --

A A; all right.

Q On Page 1 of one.

A Yes.

Q If you add LESOG flow-through --

A 2019.

Q No -- yes, 2019.

A Yes.

Q And then you add it to CLEC SOER errors --

A 953.

Q Right. And then divide it by 3171, by our calculations we get 93.7%.

A Okay. Like I say, I haven't done it, but it appears to me that that should give you the 90.7 you've got in the last column.

Q So you would say that the calculation described is correct?

A Yes. It doesn't make sense, based on what it is it's trying to do.

Q I just have a few follow-up questions, then, not referring to this exhibit.

In response to a line of questions that counsel for AT&T asked you, you stated that application fees are common with special assemblies, correct?

A Not the application fee we have here for physical collocation. We do charge a fee for a firm quote for a special assembly.

Q Okay. Is that --

A Not the same number as you have here.

Q Okay. But that is similar to an application fee?

A Yeah.

Q Is that what you're saying?

A Yes. It's not the same number that you have here. It's usually a percentage, or something of that nature, of the special assembly price.

Q Well, you're familiar, aren't you, with contract service arrangements?

A Yes.

Q Does BellSouth charge application fees in conjunction with developing the prices for CSAs?

A No. CSAs -- and I'm talking about CSAs separate from special assemblies -- those are already tariffed services. There's nothing really new to be developed. All you're doing is you're pricing them differently than they are in the tariff. It's a special contract price.

Q Well, can you explain for us, then, why special assembly would merit an application type fee while a CSA would or would not?

A A special assembly is something that you're developing specifically for that customer. It's not a service that you're offering -- that we're offering

generally, so we have to determine what it takes to do that, to put that service out and make it available specifically for that customer. It's not a general tariffed offering.

Contract -- service arrangements contrast with the special assemblies. The services in there are already tariffed services. The only thing you're doing is putting them together in a separate -- in a separate contract price as opposed to the tariff price.

Q Well, do you ever conduct cost studies to determine CSA prices?

A Well, you have -- you do them, but you really do them at the time you put the tariff in, because a cost study for the CSA, it's the same services that are tariffed, so it's the same cost study that applies for the tariffed item.

Q Let me ask that question one more time. Do you ever conduct cost studies to determine customer-specific CSA prices?

A If it's a -- to make sure that we're talking about the same thing -- okay, special assemblies, which many people call CSAs as well, those are the individual customized arrangements. Yes, you have to do, you know, a cost study for each specific one,

because it's not generally offered. Each one is going to be different, so you do a cost study for those.

CSAs, which are just contract arrangements, a contract price off the tariffed service, the only cost study that you need is the one that you did for the tariff in the first place. So you don't need to do another cost study for those.

Q Just to follow up on that, don't you conduct customer -- and I believe you already stated this -- you do conduct, to an extent, customer-specific cost studies for CSA; is that correct?

A Yes, to the extent that they're not just, you know, the price discounts off the tariff offerings. If it's something other than that, we have to do a cost study.

Q Then let me ask you this again: Then why would you charge an application type fee with a special assembly, whereas you would not charge such a fee with a CSA?

A Because there's really -- the amount of work that it takes to develop whether you're going to offer the customer a 10% or a 20% or a 15% discount is minuscule.

What we're trying to capture for the other one is the amount of work it takes for an engineer to

go out and determine how much work it takes and what needs to be done to put that service in. That's a significant cost.

On the other one, all you're trying to decide is what discount do I want to give the customer. That's a lot less work involved in that than designing a service.

MS. KEATING: Thank you, Mr. Varner. Those are all the questions that Staff has.

CHAIRMAN JOHNSON: Commissioners? (No response.)

How much redirect are you going to have?

MR. LACKEY: Just a couple.

CHAIRMAN JOHNSON: We'll try to wrap that up before we take a break, then.

REDIRECT EXAMINATION

BY MR. LACKEY:

Q I just want to follow up, Mr. Varner, on the question Staff just asked you about the physical collocation questions.

A Yes.

Q And it also relates to something Mr. Lamoureux asked you about space collocation costs.

Do you recall that Mr. Lamoureux suggested that the nonrecurring cost for a central office would

be approximately $10,000?

A Yes.

Q Are you familiar with Mr. Ellison's testimony in this proceeding?

A Yes.

Q Does he have nonrecurring costs associated with cage preparation and entry fiber?

A Yes, he does.

Q How much does that run for central office?

A About $4,400.

Q So to suggest that there's no nonrecurring costs associated with this preparation would not reflect what Mr. Ellison is testifying about, would it?

A No, it would not.

Q We may have a disagreement about the amount, but not the existence of the necessity for the planning, do we?

A No, we do not.

Q Mr. Melson asked you about virtual collocation and the tariffed rates. Do you recall that?

A Yes.

Q And he was asking you about the item on Page 6 of your Exhibit H.2.8, DS-1 cross-connects. Do

you recall that?

A Yes.

Q And do you recall that he asked you how many -- he asked you what the recurring rate was under the tariff?

A Yes.

Q And that was $7.50?

A Yes.

Q And the TSLRIC cost was $1.16? Do you recall discussing that with him?

A Yes, I do.

Q Are there other rates associated with that virtual collocation that are, in fact, priced below -- I'm sorry -- where the tariffed rate is priced below the actual cost of providing the service?

A Yes.

Q And if this Commission wanted to adjust those rates, would they have to increase those rates?

A Yes.

Q Would they necessarily have to decrease the tariffed rates that are above cost?

A No, they would not.

MR. LACKEY: That's all I have. Thank you, Madam Chairman.

I'm confused about the exhibits. I thought

that Mr. Varner's AJV-1 was Number 10, but I'm told it's Exhibit 9.

CHAIRMAN JOHNSON: I have it listed as 9.

MR. LACKEY: I'd like to move Exhibit 9. And then Exhibit 11 was the list of the redactions from his testimony. I'd like to move Exhibit 11.

CHAIRMAN JOHNSON: Show 9 and 11 admitted without objection.

(Exhibit 9 received in evidence.)

(Exhibit 11 received in evidence.)

MS. KEATING: Staff moves Exhibit 10.

CHAIRMAN JOHNSON: Show exhibit 10 admitted without objection.

(Exhibit 10 received in evidence.)

MR. MELSON: Chairman Johnson, were Exhibits 1 through 8 admitted?

CHAIRMAN JOHNSON: No. Those are Staff Exhibits 1 through 8. Mr. Pellegrini?

MR. PELLEGRINI: Yes, we would move those exhibits.

CHAIRMAN JOHNSON: Show 1 through 8 admitted without objection.

(Exhibits 1-8 received in evidence.)

CHAIRMAN JOHNSON: I think, Mr. Varner, you may be excused, and we're going to take a 15-minute

break.

(Brief recess.)

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

MS. WHITE: BellSouth calls Daonne Caldwell and William Zarakas to the stand. Ms. Caldwell and Mr. Zarakas are appearing as a panel, so the preliminary matters will be a little different than usual.

- - - - -

DAONNE CALDWELL AND WILLIAM ZARAKAS

were called as a panel of witnesses on behalf of BellSouth Telecommunications, Inc. and, having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. WHITE:

Q Ms. Caldwell, would you please state your name and address for the record?

A (**Witness Caldwell**) My full name is Doris Daonne Caldwell. Business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q And by whom are you employed?

A BellSouth Telecommunications, Inc.

Q Mr. Zarakas, would you please state your

name and address for the record?

A (**Witness Zarakas**) My name is William Zarakas. My business address is 50 Rockefeller Plaza, New York, New York 10020.

Q And by whom are you employed?

A I am employed by Theodore Barry & Associates.

Q Have you both previously caused to be prepared and prefiled in this case direct testimony consisting of 51 pages?

A (**Witness Caldwell**) Yes.

Q Do you have any substantive additions or corrections to make that to testimony at this time?

A No.

MS. WHITE: On January the 23rd we did file in a letter the parts of the testimony, Ms. Caldwell and Mr. Zarakas' direct testimony and Ms. Caldwell's rebuttal testimony, and exhibits that would be stricken because of the operations support systems; and Ms. Sims is going to hand out just a recap of what we've already filed. If you'd like to make that an exhibit, we can do that.

CHAIRMAN JOHNSON: I'll mark it as Exhibit 12.

(Exhibit 12 marked for identification.)

Q **(By Ms. White)** If I were to ask you the same questions today that are contained in your prefiled direct testimony as revised, would your answers to those questions be the same?

A Yes.

MS. WHITE: I'd like to have the direct testimony of Ms. Caldwell and Mr. Zarakas inserted into the record as if read.

CHAIRMAN JOHNSON: It will be so inserted and as, I guess, modified.

MS. WHITE: As modified?

CHAIRMAN CLARK: As modified by Exhibit 12.

Q **(By Ms. White)** Were there any exhibits associated with the direct testimony?

A **(Witness Caldwell)** Yes.

Q Were these exhibits prepared by you or under your direction and supervision?

A Yes.

Q Are there any corrections or changes to the exhibits?

A There were originally five exhibits, but as noted on the handout, two of those exhibits are no longer appropriate; what would have been listed as P-3 and P-5.

MS. WHITE: Madam Chairman, I'd like to have Exhibits P-1, P-2, and P-4 marked for identification.

CHAIRMAN JOHNSON: It will be marked as Exhibit 13. And that was P-1, P-3, and P-4?

MS. WHITE: P-1, P-2, and P-4.

CHAIRMAN JOHNSON: I'm sorry. P1, P-2, and P-4.

(Exhibit 13 marked for identification.)

Q **(By Ms. White)** Ms. Caldwell, did you cause to be prefiled in this docket rebuttal testimony consisting of 12 pages?

A Yes.

Q Do you have any additions or changes to make to that rebuttal testimony at this time?

A I have two changes. On Page 9, Line 18, I need to replace the number "19" with "30". And on Page 10, Line 18, at the end of that sentence remove the words "makes this".

Q Are those the only changes?

A To the rebuttal; that is correct.

Q If I were to ask you the questions that are contained in your rebuttal testimony today as modified, would your answers be the same?

A Yes, they would.

MS. WHITE: I'd like to have the rebuttal

testimony of Ms. Caldwell inserted into the record.

CHAIRMAN JOHNSON: It will be so inserted.

Q **(By Ms. White)** Were there any exhibits attached to your rebuttal testimony?

A There were no exhibits to the rebuttal.

Q Ms. Zarakas and Ms. Caldwell, have you prepared a summary of your testimony?

A **(Witness Zarakas)** We have.

MS. WHITE: The summary of both of these witnesses combined will be 10 minutes or under.

Q **(By Ms. White)** Would you please proceed with that summary?

MR. PELLEGRINI: Excuse me, Chairman Johnson. I believe, Ms. White, that Ms. Caldwell needs to correct the titles to -- the state indication on Pages 1274 and 1275.

WITNESS CALDWELL: Yes, sir, that is correct. In P-1 of the cost studies, Page 1274 and 1275, they were incorrectly titled as "North Carolina." They are Florida data. I just need to correct the title.

CHAIRMAN JOHNSON: Where is that? What are you referring to?

WITNESS CALDWELL: In P-1, which is the cost study, P-1 of the direct testimony, Pages 1274 and

1275.

CHAIRMAN JOHNSON: Anything else?

MS. WHITE: Is that your only correction to P-1?

WITNESS CALDWELL: Yes.

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT PANEL TESTIMONY OF

WILLIAM P. ZARAKAS AND D. DAONNE CALDWELL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKETS NOS. 960757-TP/960833-TP/960846-TP/960916-TP/971140-TP

NOVEMBER 13, 1997

Q. (TO THE PANEL) PLEASE STATE YOUR NAME, OCCUPATION AND ADDRESS.

A. **(By Mr. Zarakas)** My name is William P. Zarakas. I am a Managing Director with the management consulting firm of Theodore Barry & Associates (TB&A). My business address is 50 Rockefeller Plaza, Suite 1035, New York, New York, 10020.

(By Ms. Caldwell) My name is D. Daonne Caldwell. I am an Acting Director in the Finance Department of BellSouth Telecommunications, Inc. (hereinafter referred to as "BellSouth" or "the Company"). My area of responsibility relates to economic service costs. My business address is 675 W. Peachtree St., N.E., Atlanta, Georgia, 30375.

Q. (TO THE PANEL) PLEASE STATE YOUR PROFESSIONAL EXPERIENCE AND EDUCATION RELATED TO THE ISSUES IN THIS PROCEEDING.

A. **(By Mr. Zarakas)** As a Managing Director with Theodore Barry & Associates, I am responsible for overseeing TB&A's work dealing with strategy, policy and regulation, and I am also responsible for TB&A's work in

telecommunications. As such, I have overseen many of TB&A's engagements (for regulatory commissions as well as regulated companies) which involve management audits, analysis of markets, and emerging regulatory issues. I have also been involved in several TB&A engagements for the electric utility industry. Prior to joining Theodore Barry & Associates in 1988, I was employed as an Economist for the New York Power Authority and as a Consultant for Ebasco Business Consulting Company, where I was involved in financial and economic consulting to a variety of utility clients. I hold a Master of Arts Degree in economics (with honors) from New York University.

(By Ms. Caldwell) I joined South Central Bell in 1976 in the Tupelo, Mississippi, Engineering Department where I was responsible for Outside Plant Planning. In 1983, I transferred to BellSouth Services, Inc. in Birmingham, Alabama, and was responsible for the Centralized Results System Data Base. I moved to the Pricing and Economics Department in 1984 where I developed methodology for service cost studies until 1986 when I accepted a rotational assignment with Bell Communications Research, Inc. (Bellcore). While at Bellcore, I was responsible for development and instruction of the Service Cost Studies Curriculum including courses such as "Concepts of Service Cost Studies", "Network Service Costs", "Nonrecurring Costs", and "Cost Studies for New Technologies". In 1990, I returned to BellSouth and was appointed to a position in the cost organization, which is now a part of the Finance Department, with the responsibility of managing the development of cost studies for transport facilities, both loop and interoffice.

I attended the University of Mississippi, graduating with a Master of Science Degree in mathematics. I have attended numerous Bellcore courses and outside seminars relating to service cost studies and economic principles.

Q. (TO THE PANEL) PLEASE STATE YOUR RELEVANT EXPERIENCE IN TESTIFYING.

A. **(By Ms. Caldwell)** I have testified in each of the nine BellSouth states in the local competition dockets, including arbitration dockets and/or generic cost dockets.

(By Mr. Zarakas) I have testified on several evolving regulatory issues, including regulatory frameworks and cost structures. I have testified before the New York, Virginia, Alabama, Georgia, Louisiana and Florida Commissions.

PURPOSE

Q. (TO THE PANEL) WHAT IS THE PURPOSE OF THE PANEL'S TESTIMONY?

A. **(By Mr. Zarakas)** Together, we propose to assist the Florida Public Service Commission (the "Commission") in understanding the cost study methodology employed by BellSouth in this proceeding and the results generated by the use of that methodology. We will explain in detail how the process works both conceptually and in actual practice.

I will describe TB&A's involvement in the development of the cost studies and provide the Commission with TB&A's opinion regarding BellSouth's methodology and/or guidelines, the use of models in its cost study process, as well as an assessment of the reliability of cost study results. In this regard, I

will introduce the cost study process and explain the steps taken in the development of costs, including the sources of input data and the models used to derive the outputs.

(By Ms. Caldwell) The Commission's Order No. 96-1579-FOF-TP dated December 31, 1996, required BellSouth to file cost studies in support of prices for unbundled network elements (UNEs) for which the Commission had established interim rates. BellSouth initially filed Total Service Long Run Incremental Cost (TSLRIC) studies on February 14, 1997 and filed additional elements on March 3, 1997 in response to the Commission's order. Since the March filing, BellSouth has revised both the cost study process (with the assistance of TB&A) and the inputs for these UNEs. Thus, updated TSLRIC studies were conducted for the following UNEs:

- Unbundled Local Loops
  - Sub-loop 2-Wire/ 4-Wire Analog Distribution
  - Network Interface Device (NID)
  - 2-Wire Asymmetrical Digital Subscriber Line (ADSL)
  - 2-Wire High Bit Rate Digital Subscriber Line (HDSL)
  - 4-Wire High Bit Rate Digital Subscriber Line (HDSL)

- Unbundled Ports
  - 4-Wire Analog Voice Grade
    - Features

- Unbundled Transport Facilities
  - Dedicated DS1 (Nonrecurring, only)

- Directory Assistance
  - Directory Transport

- Physical and Virtual Collocation

The studies, including complete documentation, are filed with this testimony as Exhibit P-1. Also included in Exhibit P-1 are two summaries; one summarizes the Total Service Long Run Incremental Cost (TSLRIC) results and the other summarizes the Total Element Long Run Incremental Cost (TELRIC) economic costs. Basically, both methodologies follow the same underlying principles. In fact, this Commission recognized the similarities between the two methodologies. On page 24 of the Final Order on Arbitration this Commission stated, "... we do not believe there is a substantial difference between the TSLRIC cost of a network element and the TELRIC cost of a network element." Both TSLRIC and TELRIC studies are:

- Long -run
- Forward-looking
- Reflect least-cost, efficient technologies
- Include directly attributable costs which are determined based on cost causation

The main difference between the two methods is the inclusion of shared and common costs. The TSLRIC results do not include either, while, the TELRIC economic costs recognize the existence of both. Thus, the TELRIC economic costs equal the TSLRIC results plus shared and common costs. The TELRIC economic costs appropriately serve as the basis for the rates presented in Mr. Varner's testimony since these costs identify not only the direct (TSLRIC) costs but also the legitimate level of shared and common costs attributable to the unbundled element. This Commission clearly recognizes that shared and common costs are true costs to BellSouth. In fact, the Commission's Final

Arbitration Order attempted to set rates which would "provide some contribution toward joint and common costs." BellSouth's studies present a methodology which systematically attributes shared and common costs which will be discussed later in this testimony.

Exhibit P-2 contains a description of each UNE for which a cost study is provided. I will elaborate on aspects of BellSouth's cost studies using the development of the cost of providing a 2-wire unbundled analog loop to illustrate various steps in BellSouth's cost study.

Q. (TO MS. CALDWELL) ARE THERE ANY OTHER COST ISSUES WHICH MUST BE ADDRESSED?

A. **(By Ms. Caldwell)** Yes. As Mr. Varner explains in his testimony, during arbitration the question arose as to the cost of ordering an unbundled loop and an unbundled port on the same service request. In response to this inquiry, studies were conducted which determined the nonrecurring costs incurred when the following elements were ordered together:

- 2-Wire Analog Loop and Port
- 2-Wire ISDN Loop and Port
- 4-Wire Analog Loop and Port
- 4-Wire DS1 and Port

In order to develop these costs, the cost analysts consulted with network subject matter experts to verify work activities involved in provisioning these elements when they are ordered together as opposed to being ordered separately. The

nonrecurring cost results, both for loops and ports ordered on an individual basis and when they are ordered together, are included as Exhibit P-3. Mr. Landry, in his testimony, discusses the work activities associated with provisioning these elements when they are ordered together. Also, Mr. Varner will utilize the relationship between the two sets of costs to determine an appropriate discount level to be applied against the existing unbundled loop and unbundled port nonrecurring rates to establish rates for an order which requests both.

Q. (TO MS. CALDWELL) ARE THERE ADDITIONAL STUDIES BELLSOUTH IS PROVIDING WITH THIS TESTIMONY?

A. (By Ms. Caldwell) Yes. The nonrecurring costs presented on the summaries contained in Exhibit P-1 were determined based on an entirely manual process, i.e. one without an electronic interface, to be consistent with the previously filed unbundled elements. However, BellSouth realizes the most likely manner an Alternative Local Exchange Company (ALEC) will choose to enter an order is through an electronic interface. Thus, the incremental portion of the nonrecurring costs attributable to manual ordering have been identified and are outlined in Exhibit P-4.

Since the orders will be entered electronically, additional costs will be incurred by BellSouth to handle these orders. Exhibit P-5 presents the costs associated with Operational Support systems (OSS). OSSs fall into two categories, Electronic Interfaces and Legacy Systems. Electronic Interfaces are new systems developed by BellSouth for the sole purposes of providing ALEC electronic pre-ordering, ordering, maintenance, and billing capability. The Electronic

Interfaces provide the ALECs access to BellSouth's Legacy Systems. Legacy Systems are the systems that existed prior to local competition and are used by BellSouth to perform numerous functions in the provisioning of telecommunications service.

The BellSouth cost study calculates costs for both categories, Electronic Interfaces and Legacy Systems. The costs associated with the Legacy Systems, reflecting central processing units, software, programming labor, maintenance, etc., are included in the shared and common factors discussed by Mr. Reid.

The costs for the Electronic Interfaces are not included in the shared and common factors. The costs for these systems are calculated in a separate study, since they are new and were developed solely for the ALECs. This study includes the development expenses and three years of maintenance expense associated with the new systems and program enhancements to four Legacy Systems. These expenses are predominately programming labor, however some investment for computer equipment and labor associated with Product Commercialization and training are included.

The OSS costs are calculated for three years and then divided by the total orders (demand) during that three year period to produce a cost per order.

COST STUDY DEVELOPMENT

Q. (TO MR. ZARAKAS) PLEASE DESCRIBE TB&A'S QUALIFICATIONS IN GENERAL, AND SPECIFICALLY IN THE AREA OF REGULATORY ANALYSIS.

A. **(By Mr. Zarakas)** TB&A is an independent general management consulting firm founded in 1954, focused primarily on strategic developments in the telecommunications and energy industries. TB&A's clients include telecommunications and energy companies, suppliers to those industries, and state and federal regulatory commissions. TB&A has performed a wide range of consulting assignments relating to the regulation of the telecommunications industry, conducted on behalf of telecommunications companies, as well as regulatory commissions such as the New York, Alabama and Kentucky Public Service Commissions.

Q. (TO MR. ZARAKAS) PLEASE DESCRIBE TB&A'S INVOLVEMENT WITH BELLSOUTH REGARDING THE DEVELOPMENT OF COST STUDIES.

A. **(By Mr. Zarakas)** TB&A was retained by BellSouth in 1996 to perform an independent review of BellSouth's cost studies, to work with BellSouth to improve its cost study methodology and process, if warranted, and to assist BellSouth in making its cost study simpler and more easily understood.

Historically, BellSouth's cost studies primarily had been prepared to support tariff filings or, in some cases, to establish cost parameters for various purposes. These cost studies were relatively complex, and were difficult for laypersons to understand. The advent of competition in the telephone industry, however,

brought heightened interest in determining the costs associated with the components (or elements) of the telephone network. This widespread interest in cost studies has also emphasized the need to simplify cost studies.

The challenge, however, has become one of balancing accuracy with simplicity. In some cases proxy models have been proposed to simplify the analysis, but these models may have not addressed the complexity of a wholesale telephone network, and thus resulted in a less than accurate reflection of costs.

BellSouth's concerns regarding the need for simpler and more understandable cost studies prompted its retention of TB&A. As a result, TB&A did the following:

- First, TB&A reviewed and worked with BellSouth to refine, as necessary, the methodology and the processes used by BellSouth to develop its cost studies.

- Second, TB&A worked with BellSouth to ensure that the cost models it employed were consistent with and supportive of its overall methodology.

- Third, TB&A worked with BellSouth to make its various models more open and user-friendly to BellSouth cost analysts, to the Commission and to others.

- Fourth, TB&A actively participated in a comprehensive review process of each UNE cost study. This included a review of data inputs (including materials, equipment, loadings, and factors) and models.

The scope of TB&A's work included the review of numerous documents (including preliminary and final aspects of the cost study; accounting and cost allocation procedures; cost model documentation and reviews; cost methodology manuals; and regulatory filings, related testimony, and orders) and interviews (including BellSouth cost analysts, product managers, engineers, and planners).

Q. (TO MS. CALDWELL) PLEASE DESCRIBE YOUR INVOLVEMENT IN THE DEVELOPMENT OF THE BELLSOUTH COST STUDIES FILED WITH THIS COMMISSION.

A. **(By Ms. Caldwell)** I was responsible for overseeing and reviewing each study to ensure that the cost study methodology was correctly applied. Throughout the cost study process, I worked with the cost analysts to ensure that the components of each UNE were appropriately identified and included. Additionally, I was consulted on cost study methodology changes proposed for this filing.

OUTLINE OF TESTIMONY

Q. (TO THE PANEL) HOW IS THE PANEL'S TESTIMONY ORGANIZED?

A. **(By Mr. Zarakas)** Our testimony is presented in four sections.

- Section I discusses the cost study methodology used by BellSouth to develop UNE-specific and Florida-specific economic costs.
- Section II provides a more detailed review of the development of economic costs, involving UNE modeling and the use of BellSouth's

TELRIC Calculator©. This section constitutes the largest part of our testimony.

- Section III discusses the open nature of the cost models that BellSouth has developed (with TB&A's involvement) to ensure that the development of economic costs are understandable and auditable.

- Section IV summarizes the panel's conclusions regarding BellSouth's cost studies.

SECTION I - COST STUDY METHODOLOGY

Q. (TO MS. CALDWELL) WHAT WAS THE ULTIMATE OBJECTIVE OF BELLSOUTH'S COST STUDIES?

A. **(By Ms. Caldwell)** The ultimate objective of BellSouth's cost studies was to develop complete, accurate and understandable costs for each of the unbundled network elements that will be presented to the Commission. Specifically, BellSouth's cost studies calculated the Total Service Long Run Incremental Cost (TSLRIC) of each network element. Additionally, BellSouth's cost studies developed "economic costs," reflecting TSLRIC plus consideration of shared and common costs.

Q. (TO MR. ZARAKAS) PLEASE DESCRIBE BELLSOUTH'S COST STUDY METHODOLOGY.

A. **(By Mr. Zarakas)** Cost study methodology refers to the overall guidelines for conducting the study, as well as the major supporting processes through which

the study is carried out. BellSouth used the following overall guidelines in its cost studies:

- Costs should reflect forward-looking network architecture, engineering and materials and equipment.
- Costs should be developed individually for each unbundled network element.
- Costs should be based on the particular materials, equipment, and installation requirements associated with provisioning a specific unbundled network element, to the greatest extent possible.
- Costs should be developed based on state-specific characteristics and data.
- Cost development should be auditable and understandable.

(By Ms. Caldwell) BellSouth also used the following assumptions regarding cost of capital, depreciation and utilization in developing TSLRIC for the various UNEs.

- BellSouth used an 11.25% cost of capital. BellSouth consulted with financial experts who advised BellSouth that the 11.25% cost of capital authorized by the FCC appropriately reflects a forward-looking risk adjusted cost of capital.
- BellSouth used projected depreciation lives generally consistent with the depreciation lives we use for public reporting purposes in Florida.

- BellSouth used an average utilization level for various materials and equipment required in provisioning the UNEs.

Q. (TO MS. CALDWELL) PLEASE CHARACTERIZE THE TYPES OF COSTS THAT ARE DERIVED FROM BELLSOUTH'S COST STUDIES.

A. **(By Ms. Caldwell)** Two types of costs are derived from BellSouth's cost studies: recurring and nonrecurring. Recurring costs reflect the capital costs and operating expenses associated with the investments required to provide an item of plant. Capital costs consist of depreciation, cost of money and income tax. Operating expenses consist of plant specific expenses (such as maintenance), ad valorem taxes and gross receipts taxes.

Nonrecurring costs are one-time expenses associated with provisioning, installing and disconnecting the unbundled network element. These costs include four major categories of activity: service order processing, engineering, connect and test, and technician travel time.

Q. (TO MS. CALDWELL) CAN YOU GIVE AN EXAMPLE OF EACH TYPE OF COST YOU HAVE DESCRIBED?

A. **(By Ms. Caldwell)** Yes. The best example of a recurring cost is the ongoing cost of the local telephone loop that runs to our homes. That loop consists of materials (i.e., fiber, copper, channel banks and such things) which have to be bought and installed. These items are capitalized. Therefore, each month there is a carrying cost (an interest charge of sorts) for the use of that material, as well as costs associated with its ongoing recovery (depreciation) and maintenance. This return on the investment in the materials used to build the loop are examples of recurring costs which should be captured in a monthly rate.

On the other hand, when a service technician has to go to a central office and move a cable pair from a BellSouth main distributing frame to the facilities of another local exchange company, the cost is nonrecurring and therefore should be recovered in a one-time nonrecurring charge.

Q. (TO MR. ZARAKAS) PLEASE DESCRIBE HOW BELLSOUTH APPLIED THE COST STUDY GUIDELINES TO THE DEVELOPMENT OF ITS COST STUDY.

A. **(By Mr. Zarakas)** BellSouth's cost study process is composed of five steps, summarized below. These steps, while generally applicable to the overall cost study process, are directly applicable to the recurring costs associated with the provision of UNEs. The nonrecurring costs, which Ms. Caldwell referred to earlier, will be discussed later in our testimony.

- First, BellSouth identified the unbundled network elements based on requests by Alternative Local Exchange Companies (ALECs) and also based on requirements imposed by regulators.

- Second, BellSouth determined the forward-looking architecture, engineering, and provisioning procedures required to provide the functionality for each of the identified unbundled network elements through the use of models, special studies and the integrated involvement of necessary BellSouth personnel, such as cost analysts, product managers and network engineers.

- Third, BellSouth developed the costs associated with the material and equipment required to provision each UNE. This step is referred to as "UNE modeling."

- Fourth, BellSouth modeled the installation of the materials and equipment by ensuring that the costs associated with installation and supporting structures were appropriately included.

- Fifth, BellSouth determined the economic cost of each unbundled network element by converting the installed investment into its carrying charges and operating expenses. Also included in this step is the inclusion of shared and common costs, to calculate TELRIC economic costs, and the impact of taxes.

An analogy may help put these steps in perspective. Specifically, the cost study process is quite like building a house.

- Step One involves deciding on the type of house that you want to build. That is, you must decide whether to build a colonial or a ranch-style house, whether to include a basement and how many cars the garage should accommodate.

- Step Two involves architects and engineers designing the house and developing preliminary specifications.

- Step Three involves determining the cost of all the major items necessary to construct the house, such as lumber, windows, kitchen and bathroom fixtures, and a heating and air conditioning system.

- Step Four involves incorporating and accounting for the costs of labor, together with what we call minor materials (such as nuts and bolts) needed to actually put the house together. As any house builder can attest, the cost of building the house is certainly more than the sum of

the major materials and equipment referred to above. In fact, minor materials and the labor associated with installation in the end proves to be a very significant cost.

- Step Five represents the application of the costs associated with owning and maintaining the house; for example, interest on loan payments, insurance, property taxes, utility bills and repairs over time.

Q. (TO MR. ZARAKAS) PLEASE EXPAND ON YOUR DESCRIPTION OF BELLSOUTH'S COST STUDY PROCESS.

A. **(By Mr. Zarakas)** Exhibit P-6 provides a more detailed view of the "costing" process (i.e., steps 3, 4 and 5) referred to above. This exhibit reflects BellSouth's cost study process flow, and can be considered in two parts:

- UNE modeling, which develops the costs of materials and equipment, software and labor that are required for BellSouth to provision unbundled network elements. The UNE modeling effort uses models and pricing calculators, which are the detailed analyses primarily relating to developing the costs of the major materials and equipment. For example, this includes the detailed analyses of loops and switches.

- The TELRIC Calculator©, which completes the installation of the required investment (via "loadings") and then develops the recurring and nonrecurring economic cost associated with a particular unbundled network element (via "factors").

Q. (TO THE PANEL) HOW DID BELLSOUTH DEVELOP THIS COST STUDY PROCESS?

A. **(By Ms. Caldwell)** In conducting cost studies over the years, BellSouth has developed a cost study methodology and process. Because of the importance of accurately assessing the costs of UNEs, and our desire to simplify the process if possible, we retained Theodore Barry & Associates to review BellSouth's approach to cost studies and work with us to develop a cost study methodology and process that would produce accurate and understandable economic costs for the various UNEs.

(By Mr. Zarakas) TB&A reviewed BellSouth's cost study methodology and the way that BellSouth implemented that methodology. Several improvements were added over the course of this project. Notably, BellSouth (with TB&A's assistance) redesigned its cost study process, aligning the process along lines of staff expertise, whereas previously a single cost analyst was responsible for all aspects of a cost study.

Also, BellSouth (with TB&A) developed a more automated approach to the cost studies, developing the TELRIC Calculator©. This assures a higher level of consistency across cost models and modelers (the cost analysts). Implementing the TELRIC Calculator© accomplished several goals:

- Streamlining and, when possible, automating the cost study process; that is, enabling faster turn-around of cost studies.
- Ensuring greater control of the cost study process.
- Allowing all parties involved in the cost study process the opportunity to audit the process and develop their own scenarios by changing inputs.

Even though the model has been named the TELRIC Calculator©, this doesn't imply TELRIC results are the only ones which can be generated. The model is flexible and based on the user's inputs, can develop TSLRIC outputs. As I mentioned previously, all parties have the opportunity to develop their own scenarios. As Ms. Caldwell has explained, by eliminating the shared and common costs from the calculation, TSLRICs are determined using the TELRIC Calculator© which is further described in Exhibit P-1, Section 2.

SECTION II - UNE MODELING, LOADINGS, AND FACTORS

A. UNE MODELING

Q. (TO MS. CALDWELL) BRIEFLY DESCRIBE UNE MODELING.

A. **(By Ms. Caldwell)** As we have already stated, the first step in the process of determining the cost of a UNE is defining the UNE. The person or entity requesting the UNE, either before approaching BellSouth or in conjunction with BellSouth's engineers, must provide the specifications for the UNE. From that point, the next step in the development of costs for the UNE is the identification of the costs associated with: 1) materials and equipment; 2) expenses; and 3) labor associated with the requirements for the UNE. To build the house referred to earlier, we have to decide how much wood, how many bricks, and what appliances will be required. In BellSouth's UNE modeling, the cost analyst lists all of the components identified in the engineering requirements and applies prices for those components based on the latest vendor prices available to BellSouth (which include BellSouth vendor discounts) as appropriate. Additionally, the cost analyst adjusts the material price to account

for the appropriate average utilization of the various components that comprise the UNE.

Q. (TO MR. ZARAKAS) WHAT IS MEANT BY "MODELS" IN THE CONTEXT OF BELLSOUTH'S COST STUDY?

A. **(By Mr. Zarakas)** Many of the unbundled network elements involve detailed or complex aspects of BellSouth's network. For example, the costs associated with the port UNEs involve primarily switches, which are multi-faceted and serve several purposes. To accurately capture these costs, the analysts used specially-developed tools (or models) to develop UNE-specific and Florida-specific costs.

In some cases, BellSouth used a simple spreadsheet approach, while more sophisticated models were used for the development of other UNE costs. For example, the costs for Physical and Virtual Collocation were developed using spreadsheets, while the costs associated with loop, switching and transport related UNEs required more advanced computer programs.

Q. (TO MS. CALDWELL) PLEASE IDENTIFY THE KEY MODELS USED BY BELLSOUTH IN ITS COST STUDY.

A. **(By Ms. Caldwell)** BellSouth has been involved in cost analysis for many years analyzing costs for its own internal purposes as well as for regulators. To do so BellSouth has utilized a number of models, some of which are proprietary to third parties, such as Bellcore. Because of some of the concerns expressed during the recently completed arbitrations, and also earlier in this proceeding, BellSouth has attempted (with the advice and assistance of TB&A) to review all of its models for the purpose of streamlining them and making them more user

friendly. We have been partially successful in this endeavor. We are currently using two models for this cost analysis; the Loop Model and the SCIS Model. These models are more fully described as follows:

- Loop Model: This is a BellSouth-developed model which stores the specific characteristics of an average loop in Florida, as well as a weighted vendor price table for components used in the loop. This model is used to develop the material costs for narrowband loop and loop-related UNEs.

- The Switching Cost Information System (SCIS) Model. This is a sophisticated model developed by Bellcore to produce switch-related costs associated with ports and features.

The Loop Model is open and may be reviewed by anyone, subject only to the requirement that vendor specific data be protected.

The SCIS model is proprietary. Bellcore owns the SCIS model and it has commercial value to Bellcore. In fact, Bellcore has provided a witness for BellSouth who will address questions concerning this model. Bellcore has agreed, provided that the appropriate proprietary protections are available, to make the model available for inspection. I do want to say that BellSouth did attempt to avoid using the proprietary SCIS model. Unfortunately, the model, which has evidently been used for more than 18 years and thus must have been owned by AT&T at one point, is the best model available to perform the tasks that we required.

Q. (TO MS. CALDWELL) DID BELLSOUTH RELY ON ANY OTHER MODELS OR STUDIES IN DEVELOPING ITS COSTS?

A. **(By Ms. Caldwell)** Yes. BellSouth has three "price calculators," or study processors which it uses in conjunction with the basic models listed above: (1) the Synchronous Optical Network (SONET) Price Calculator; (2) the Loop Multiplexer Price Calculator; and (3) the Digital Loop Carrier (DLC) Price Calculator. These price calculators develop the cost of specialized components that are used in the provision of various UNEs. These calculators take vendor prices for various items of equipment and converts the prices to a per circuit level.

The Commission may recall references to these studies in earlier proceedings as "fundamental studies." On reflection, I am not certain that the purpose or nature of these studies was made clear enough in prior proceedings. Indeed, in reading over some of the transcripts, it seems that there was some suggestion that these "fundamental studies" were complex, time consuming black holes which might be beyond understanding.

Nothing could be further from the truth; however, it is true that these studies contain vendor specific information and that they, therefore, contain proprietary data (which the vendors do not want publicly disclosed). In concept, however, these studies are very simple. They are price lists furnished by the vendor, which include the discounted price (that is, the information that vendors do not want publicly disclosed) and, sometimes, a "configuration" file, which the vendor furnishes so that the purchaser will know how to assemble the equipment.

(By Mr. Zarakas) An analogy may be helpful. Any number of us has probably experienced a situation where a car we owned leaks oil. A common place for such leaks, particularly in older cars, is the "valve covers." If you like

to repair your own cars, you can go into a auto parts store, where an attendant can review a parts list and can tell you what valve cover you need, what it will cost, and what other parts (such as sealing gaskets) you will need in order to install the replacement valve covers.

In the case of telephone equipment, BellSouth's engineers take vendor price lists and configuration files and identify the particular "parts" and configurations that BellSouth expects to use in its network in the future. This is then put into a data base or a spreadsheet for future use, when that part (or a group of parts) is needed to construct the network, or a part of the network (i.e., a UNE). When an engineer later designs a UNE - say a loop - he tells the cost analyst what parts are needed, and the cost analyst can then go to the appropriate "study" and pick out the cost of the various components contained in the engineer's design. As I mentioned, these studies are compiled for the more complex items, such as the SONET equipment, and multiplexers, but prices for cables and other items necessary to build a loop are also obtained from price lists maintained by the company as well.

(By Ms. Caldwell) This process may be easier to understand if a more defined example is used. Suppose we want to determine the material costs associated with a two-wire analog loop that will extend beyond 12,000 feet and which another local exchange company wants to buy from BellSouth on an unbundled basis. Based on our assumptions regarding the make-up of such a loop, we know that it will be built using fiber and copper, since it extends beyond 12,000 feet. Using a very simple layout, we would expect that there would be a copper run from the subscriber's premises to a remote terminal. At the remote terminal the analog signal carried on the copper line would be multiplexed or combined

with other copper lines and converted into a digital signal, carried at the DS1 level. This electrical digital signal would then be converted into an optical signal and would be transported on fiber to the central office. At the central office the signal would first be converted from an optical signal to an electrical digital signal, at the DS1 level, and then broken back down into an analog signal in a central office terminal and terminated on the frame where it could be handed off to a competing local exchange company who had purchased that unbundled loop.

In determining the material prices for this loop, the cost analyst would have to price out the copper, the fiber, the channel banks, the multiplexers, and the equipment that converts the signal from an electrical to optical format and then back, as well as any other equipment or materials used in constructing the loop. The analyst does this by looking at the appropriate price lists to obtain the prices for the elements he needs. For instance, he might utilize the Loop Multiplexer Price Calculator to find the price of the multiplexer needed in this loop, just as he might look at another price list to see what 26 or possibly 24 gauge copper cable costs per foot.

In short, there is no mystery about these studies. The chief problem with the public disclosure of these studies revolves around the fact that vendors give BellSouth discounts on equipment which may or may not be available to other purchasers. Understandably, vendors do not want these discounts disclosed. In fact, BellSouth's contracts with the vendors prohibit the Company from disclosing their discounted prices. We have asked the vendors for permission to disclose this information, subject to appropriate protective agreements, and

have asked this Commission to maintain the information provided to it in this area as proprietary, which such pricing information clearly constitutes.

Once the analyst assembles all of these prices, they are used as inputs into the Loop Model (remember that we are using the loop as the example here), and the Loop Model provides us with the total materials and equipment, or investment, stated in dollar terms, necessary to build a loop.

Q. (TO MS. CALDWELL) HOW IS THE LOOP MODEL ITSELF CONSTRUCTED?

A. (By Ms. Caldwell) The Loop Model is fairly simple as well. In its most basic terms, the Loop Model consists of a data base that contains the component parts of what we have identified as a hypothetical representative loop in Florida, and application software that allows the user to change the prices of the various components of that representative loop. By changing the inputs to the Loop Model, the user can determine the material prices that will result when this loop is constructed using the user-changeable input prices.

Q. (TO MS. CALDWELL) HOW DID BELLSOUTH DETERMINE WHAT CONSTITUTED A REPRESENTATIVE LOOP?

A. (By Ms. Caldwell) The representative loop that is included in the Loop Model was developed based on a sample of residence and business loops in Florida. We have provided a significant amount of detail about the development of the loop sample in Mr. Ellis Smith's testimony and in the supporting papers accompanying the studies, but I will provide an overview here.

Basically, our statistician developed a sampling process for us which we used to identify two samples of loops: one consisting of residential loops and one consisting of business loops. Once the sample was developed, we examined each loop in the sample, and, if the loop as it then existed did not represent the most forward-looking, most efficient technology, we recast the loop so that it did. For instance, if a loop was 15,000 feet long, but was on copper, we recast the feeder part of the loop to put it on fiber, which is the medium of choice for a loop over 12,000 feet.

Once the samples were recast, each loop was broken into its constituent parts (i.e., so much aerial cable, so much buried copper, etc.). Each kind of investment was then summed for all of the loops in the sample and then divided by the number of loops to get an average level of that investment. For instance, the total amount of all aerial copper cable in the distribution plant would be summed and then divided by the total number of loops to get the average amount of aerial cable in our loops. This average of all the different parts was used to "construct" our hypothetical representative loop.

To illustrate this further, assume that we have three loops:

- The first loop has 200 feet of buried fiber feeder and 100 feet of aerial copper distribution plant.
- The second loop has 600 feet of copper feeder plant and 300 feet of aerial copper distribution plant.
- The third loop has 700 feet of buried fiber feeder and 200 feet of aerial copper distribution plant.

BellSouth's Loop Model would total each component and then develop the average loop characteristics from the data. In this simple example we would have 900 feet of buried fiber feeder (for an average of 300 feet of buried fiber in the representative loop), 600 feet of copper feeder plant (or 200 feet of copper feeder plant in the representative loop), and 600 feet of aerial copper distribution plant (or 200 aerial feet of copper distribution in the representative loop). My example is not intended to be precise but to illustrate what the data base in the Loop Model does in order to configure the representative loop. Moreover, this same data base can be used to determine the average distribution portion, the average feeder portion, or the amount of materials that would be required to form other kinds of loops that depend on the same basic make-up as the loops sampled.

Q. (TO MR. ZARAKAS) DID BELLSOUTH'S LOOP MODEL FACILITATE THE DEVELOPMENT OF ACCURATE FORWARD-LOOKING AND FLORIDA-SPECIFIC LOOP COSTS?

A. **(By Mr. Zarakas)** Yes. BellSouth's approach to developing loop-related costs included three pivotal factors that make the results forward-looking and specific to Florida. First, the loop cost was based on representative residence and business loops in Florida. Second, the loops were reconfigured to reflect a forward-looking architecture. Third, actual vendor prices, which reflect BellSouth discounts, were used.

Q. (TO MS. CALDWELL) WHAT MODEL DID BELLSOUTH USE TO DEVELOP SWITCH-RELATED COSTS?

A. **(By Ms. Caldwell)** BellSouth used a model mentioned earlier, the SCIS model, to develop switch-related costs. SCIS uses detailed and specific data regarding switches in Florida, including: office characteristics and traffic patterns, parameters of the switch being studied, and vendor information, including technical descriptions and prices. With this data, SCIS develops the least common denominators of cost, or the investment drivers of the switch (referred to as the "cost primitives," or "building blocks") which are used to produce the port costs.

BellSouth chose to use the SCIS model because it produces accurate, state-specific results at the granular level required for individual UNEs. A less detailed model might calculate a reasonable cost for a single "average" switch-based UNE, but it would lack the data to differentiate among UNEs beyond that single "average" element.

Q. (TO MR. ZARAKAS) DOES BELLSOUTH'S USE OF SCIS RESULT IN AN ACCURATE REPRESENTATION OF FORWARD-LOOKING AND FLORIDA-SPECIFIC SWITCHING COSTS?

A. **(By Mr. Zarakas)** Yes. First, SCIS produces Florida-specific costs based on the deployment of efficient and forward-looking switching technology:

- SCIS inputs include location-specific, switch-related detail to ensure that switches are configured to meet the specific demands of particular locations across the network.

- For the purposes of these cost studies, the switch characteristics input into SCIS by BellSouth reflect a forward-looking digital technology. Specifically, BellSouth assumed that all switches would be either Lucent

(5ESS) or Nortel (DMS 100/200). The melded digital results are used as a surrogate for existing analog offices.

- SCIS uses actual Florida switch locations.

Further, BellSouth used actual discounted switch prices as an input into SCIS. Switch prices are a very important input into SCIS, and they represent the single major cost component of switch-related UNEs.

Q. (TO MR. ZARAKAS) HAVE ANY SPECIAL STUDIES BEEN CONDUCTED REGARDING THE ACCURACY AND APPROPRIATENESS OF SCIS?

A. **(By Mr. Zarakas)** Yes, Arthur Andersen & Company conducted a review of SCIS in 1992. This independent review was required by the FCC as part of its Open Network Architecture tariff proceeding. The review involved over 4,000 hours of auditing and concluded that SCIS "is fundamentally sound and provides reasonable estimates of switching system investment attributable to service and feature usage of the switch." The Anderson report stated:

- "The costing principles inherent in SCIS are appropriate for estimating long run incremental investments attributable to switching system usage, and the specific methods for implementing these principles are reasonable."

- "SCIS accurately estimates the cost of actual switching systems engineered according to manufacturer engineering rules as evidenced by Bellcore's validation procedures and results."

- "Extensive software development controls and testing are used to assure SCIS models are properly implemented and installed by model users."

- "...although SCIS is a complex model requiring considerable understanding of switching systems and service costing, the model documentation, training and technical support are adequate to provide reasonable support for the model in use."

Q. (TO MS. CALDWELL) ARE THERE ANY SWITCH-RELATED COSTS NOT CALCULATED BY SCIS?

A. **(By Ms. Caldwell)** Yes. Right-to-Use (RTU) costs are not calculated in SCIS. A RTU expense is a licensing fee that is paid to a vendor for using software, either for a switch or data base. An RTU cost is calculated by first determining the RTU expense from vendor contracts. Since RTU fees are vendor and equipment type specific, the fees are melded by percent deployment. For example the local exchange switch RTU fees are melded on the percent deployment of network access lines per switch type. The RTU nonrecurring cost is expressed as a recurring equivalent cost by amortizing the expense over the life of the switch. This RTU calculation is performed by the cost analyst.

Q. (TO MS. CALDWELL) DID BELLSOUTH USE ANY OTHER MODELS?

A. **(By Ms. Caldwell)** Not at the level of formality associated with the Loop and SCIS models. In developing the material prices associated with the other unbundled network elements, BellSouth's cost analysts used customized Microsoft Excel spreadsheets. In all cases, the cost analysts assumed a forward-looking network architecture.

B. THE TELRIC CALCULATOR©

Q. (TO MR. ZARAKAS) TO THIS POINT, YOU AND MS. CALDWELL HAVE BEEN DESCRIBING THE PROCESS THAT IDENTIFIES THE COST OF THE MATERIALS NECESSARY TO PROVIDE UNES. WHAT ELSE IS THERE TO THE PROCESS?

A. **(By Mr. Zarakas)** As you correctly note, to this point we have discussed the vendor price lists (for the component parts of the network) and the various models that produce the dollars of investment in materials that are necessary to provision a UNE (based on the inputs received from vendors and from our BellSouth's Network Department). What remains is to take these material costs, as well as other costs and apply them to what we refer to as our TELRIC Calculator©.

It is important, at this point, to refer to Ms. Caldwell's discussion of recurring and nonrecurring costs, because these costs are treated differently from this point forward in the cost study process. The recurring types of costs are primarily associated with investments. These investments must be installed and maintained and capital costs for these investments must be paid. This is all completed by the TELRIC Calculator©. The other type of recurring cost (i.e., software and labor expenses) and nonrecurring cost (i.e., labor) do not involve installation, capital costs, maintenance, or taxes and are treated accordingly by BellSouth's TELRIC Calculator©.

The TELRIC Calculator© also applies gross receipts taxes to all types of cost. In determining the TELRIC economic costs, the TELRIC Calculator© adds shared and common costs to the TSLRIC results.

Q. (TO MS. CALDWELL) DOES THE TELRIC CALCULATOR© PERFORM ANY OTHER CALCULATIONS?

A. **(Ms. Caldwell)** Yes, to ensure consistency and exercise control, the labor rates reside in the TELRIC Calculator©, instead of having the cost analysts get the current labor rates from various BellSouth sources and multiply out labor hours by labor rates.

Q. (TO THE PANEL) HOW DID THE TELRIC CALCULATOR© APPLY THE VARIOUS LOADINGS AND FACTORS?

A. **(By Mr. Zarakas)** Loadings and factors (other than the shared cost, common cost and gross receipts factors) are applied only to investments. In the cost study process these investments were recorded using the FCC's Uniform System of Account and Field Reporting Code (USOA-FRC, or simply FRC) accounting structure. The FRC designation is used by BellSouth and other large telephone companies. For the construction associated with the various unbundled network elements included in the cost study that BellSouth submitted to the Florida Commission, 22 field reporting codes were available for use. The FRCs may also be broken down to a "sub-FRC" level for greater specificity, if needed.

By capturing different types of assets by FRC and also developing loadings and factors on FRC-specific basis, we were able to ensure that only the relevant loadings and factors were added to investments.

1. LOADINGS

Q. (TO MR. ZARAKAS) BRIEFLY DESCRIBE THE STEPS INVOLVED IN CONVERTING THE UNE MODELING INTO AN INSTALLED INVESTMENT.

A. **(By Mr. Zarakas)** The UNE modeling effort identifies and prices the major materials and equipment necessary for BellSouth to provide a particular unbundled network element, but does not represent the total cost of installation. To accomplish this, further steps are required. First, BellSouth adjusted the material and equipment costs to be forward-looking by applying account-specific inflation factors. Then, BellSouth adjusted for the additional labor and/or material that is needed to complete installation through "loadings." Loadings reflect the costs associated with installation, preparation, and/or supporting structures. Referring to the earlier example of constructing a house, loadings would be analogous to allowing for labor and miscellaneous materials. In terms of telephone plant, these loadings add the buildings and land the materials will reside on, or in the case of loops, adds the poles or conduit needed to support the cable.

Q. (TO MR. ZARAKAS) HOW DID BELLSOUTH DEVELOP THE LOADINGS THAT IT APPLIED TO THE UNE MODELING?

A. **(By Mr. Zarakas)** BellSouth developed the loadings based on accounting data, reflecting the actual mathematical relationships between the components of the UNE modeling and other types of costs. In its most simple terms (and just for the purpose of illustrating this point), BellSouth looked at its books and found that for every dollar it spent for aerial cable, it spent Y dollars for telephone poles. Using numbers for illustrative purposes, BellSouth might find that for every $1.00 of aerial cable, it spent $2.00 for poles. Therefore, if the UNE

model says that $500 in aerial cable is needed, the "loading" would provide $1,000 for poles.

In doing this, BellSouth has taken a very detailed approach to loadings, developing many specific types of loadings to ensure that only the appropriate types of loadings are included in the cost study. In all, BellSouth developed eight loadings that can be divided into two primary groupings: "In-Plant Loadings" and "Supporting Structure Loadings."

Q. (TO MS. CALDWELL) PLEASE DISCUSS IN-PLANT LOADINGS.

A. **(By Ms. Caldwell)** In-Plant Loadings are developed by FRC and fall into four categories:

1) The Material Loading adjusts the outside plant material price for outside plant engineering labor, installation labor, sales tax, and miscellaneous items of plant such as small amounts of wire, nuts, bolts, etc. If any vendor labor is involved, the material loading also adjusts for that investment.

Let me use a buried cable for an example. The material price of the cable is a small part of the total investment. The material loading adjusts that material price for the following: the labor of the outside plant engineer who designs the buried cable section which is to be placed (cable size location, length, etc.), the contract construction placing crew which buries the cable, and the splicing crew which splices the cable. The material loading also adjusts for the investment for additional items of plant which are required such as splice casings, buried cable markers, and terminals.

Let me relate this to the house example. The material loading for the lumber in the house would adjust the lumber material price for the labor of the architect, the labor of the construction crew, and small items such as nails.

2) The TELCO Loading is developed specifically for central office switch accounts. This loading adjusts the switch material price to account for BellSouth engineering labor, BellSouth installation labor, sales tax, and miscellaneous items of plant, such as nuts and bolts. The cost process uses SCIS to model the switch-related UNEs and the output of SCIS includes not only the material price but also the vendor engineering and installation labor.

3) The Plug-in Loading is developed specifically for the plug-in circuit equipment. This loading adjusts the plug-in material price to account for all engineering labor, all installation labor, sales tax, and miscellaneous items of plant.

4) The Hardwire Loading is developed specifically for the hardwire (cabinets, shelves, etc.) circuit equipment. This loading adjusts the hardwire material price to account for all engineering labor, all installation labor, sales tax, and miscellaneous items of plant.

Q. (TO MS. CALDWELL) PLEASE DISCUSS SUPPORTING STRUCTURE LOADINGS.

A. **(By Ms. Caldwell)** In most cases, major items of plant require some type of support. For instance, aerial cable hangs on poles, underground cable runs through conduit and circuit and switch equipment resides in a central office building on a plot of land. Also, circuit and switch equipment require power generators and other equipment such as bays, batteries and racks. The

Supporting Structure Loadings calculate the investment for five support structures: poles, conduit, land, buildings and supporting equipment and power.

The loop requires all five of these support structures. Because the average loop includes aerial cable and underground cable and circuit equipment, it also requires investment for poles, conduit , land, buildings, and supporting equipment and power.

Q. (TO MS. CALDWELL) PLEASE PROVIDE AN EXAMPLE OF HOW FRCS ENSURE THAT LOADINGS ARE APPROPRIATELY APPLIED.

A. **(By Ms. Caldwell)** The installed investment for an analog loop provides a good example. Two primary components of an analog loop are the electronic equipment used with fiber feeder and aerial copper cable. These are assigned to FRC-257C (digital circuit-pair gain) and FRC-22C (aerial cable-metallic), respectively. To ensure that the cost of poles is included in the loop installed investment of the aerial cable, the pole loading was specifically applied to the aerial cable investment; that is FRC-22C. It would not be applied to FRC-257C.

Q. (TO MS. CALDWELL) DOES BELLSOUTH USE ANY OTHER LOADINGS TO ADJUST THE OUTPUT OF THE UNE MODELING?

A. **(By Ms. Caldwell)** Yes. First, BellSouth uses an Investment Inflation Factor which is used to adjust the material price for the average price changes expected over the study period. The Investment Inflation Factor is developed by FRC and is applied to all material prices included in the material build-up

Second, BellSouth uses a plug-in inventory loading that is applied only to working plug-in material prices to adjust the price for the investment in inventoried plug-ins. This loading reflects BellSouth's maintenance of an inventory, so that service can be quickly established and so that defective plug-ins can be quickly replaced.

For the loop, the plug-in inventory loading is applied to the working plug-in in the digital loop carrier systems.

Q. (TO MR. ZARAKAS) ARE THE LOADINGS USED BY BELLSOUTH IN ITS COST STUDY AN ACCURATE REPRESENTATION OF FORWARD-LOOKING COSTS?

A. **(By Mr. Zarakas)** Yes. The loadings used by BellSouth reflect forward-looking costs based on historical relationships. The loading were developed based on accounting relationships between the investment or expenses needed to install or support material to the total installed investment. These loadings reflect fundamental aspects of installation and supporting structures which will not be affected by technological or process innovation. For example, the cost of installing poles and conduit will be similar in the future as it is today. By applying the loadings, BellSouth has identified all of the capitalized cost associated with the UNE being examined.

2. FACTORS

Q. (TO MR. ZARAKAS) PLEASE DISCUSS THE USE OF FACTORS IN THE TELRIC CALCULATOR©.

A. **(By Mr. Zarakas)** After applying the loading, the TELRIC Calculator© applies what are called "factors" to the capitalized investment. With the exception of the Common Cost Factors, factors are applied to investments identified in UNE modeling. These factors convert the investment (a total number) into a recurring cost, similar to the way a mortgage converts the purchase price of a house into monthly payments. Shared and common costs, which are only applicable in the calculation of TELRIC economic costs, will be discussed together later in our testimony. Excluding these, BellSouth used four types of factors in its cost study: (1) a capital cost factor; (2) a factor that addresses operations and maintenance expenses; (3) a factor that addresses ad valorem and other taxes; and (4) a factor that addresses gross receipts taxes. These factors are further discussed in Exhibit P-1, Section 4.

Q. (TO MS. CALDWELL) PLEASE DISCUSS THE CAPITAL COST FACTOR.

A. **(By Ms. Caldwell)** The capital cost factor is composed of three parts: a depreciation component; a cost of money component (i.e., the return on debt and equity capital associated with an unbundled network element); and a factor for income taxes associated with the equity returns. Together, these components convert an asset's investment cost into an equivalent stream of equal annual or monthly payments, in a manner similar to the way a mortgage converts a fixed loan amount into an equivalent stream of equal monthly payments.

Q. (TO MR. ZARAKAS) HOW DID BELLSOUTH DEVELOP THE CAPITAL COST FACTOR?

A. **(By Mr. Zarakas)** BellSouth used a relatively simple model called the Capital Cost Calculator to develop its capital cost factor. In the past, BellSouth used a more complex model (CAPCost developed by Bellcore) for such calculations. For this proceeding, TB&A worked with BellSouth to develop a simpler, but still realistic and accurate model to develop capital costs. The Capital Cost Calculator is an understandable model, which still includes critical parameters (such as expected economic life, expected salvage value, debt/equity ratios, cost of debt, cost of equity, and state and federal income taxes). As noted earlier, the breakdown of the calculation of this factor and the others are detailed in Exhibit P-1.

Q. (TO MS. CALDWELL) PLEASE DESCRIBE THE OPERATING EXPENSE FACTOR.

A. **(By Ms. Caldwell)** The operating expense factor, referred to as the "Plant-specific" factor, is applied to an investment in order to capture the costs associated with routine maintenance and repairs (e.g., inspection, trouble prevention, repairs, and replacements) necessary to preserve the economic life of the asset. Again this is explained in more detail in Exhibit P-1.

Q. (TO MS. CALDWELL) PLEASE DESCRIBE THE AD VALOREM AND OTHER TAX FACTOR.

A. **(By Ms. Caldwell)** The Ad Valorem Tax factor is applied to each FRC investment to take into account the property taxes levied on an investment. It is based on a ratio of property taxes, capital stock taxes and other non-income, non-revenue taxes to the total investment of telephone plant in service.

Q. (TO MS. CALDWELL) PLEASE DESCRIBE THE GROSS RECEIPTS TAX FACTOR THAT WAS INCLUDED IN THE TELRIC CALCULATOR©.

A. **(By Ms. Caldwell)** The Gross Receipts Tax Factor is applied to all costs to account for tax levied on revenues received. In Florida this has a relatively small impact on the cost, but we included this consideration to be complete.

3. SHARED AND COMMON COSTS

Q. (TO MR. ZARAKAS) PLEASE DISCUSS SHARED AND COMMON COSTS WITH RESPECT TO BELLSOUTH'S COST STUDIES.

A. **(By Mr. Zarakas)** Up to this point in the testimony, we have discussed costs that are directly related and clearly assignable to the provision of an unbundled network element, the TSLRIC. For example, in the case of an analog loop, the installed investment was developed by taking into account the major materials (such as cable) and equipment, as well as loadings (such as poles) that would need to be put in place to provide loop services. However, other types of costs are also involved in providing telephony services.

These costs are more general to the business and not uniquely assignable to any single UNE. Over the years, regulators (i.e., the FCC and various state commissions) have recognized that these are bona fide costs of doing business and have required that telephone companies document the way that these costs should be allocated. These costs can be shared, when they are attributed to specific UNEs, or common to all UNEs when they cannot be attributed either directly or indirectly to an UNE.

Q. (TO MR. ZARAKAS) HOW DID BELLSOUTH DEVELOP ITS SHARED AND COMMON COST FACTORS?

A. **(By Mr. Zarakas)** BellSouth reviewed the various types of costs involved in running a wholesale business and decided to use the cost attribution philosophy of BellSouth's Cost Allocation Manual (or CAM) to assign costs to specific UNEs. Under this approach, all costs that were directly assignable to a wholesale service or product were so assigned.

Other costs, however, could not be charged directly to specific accounts. For these costs BellSouth first used the cost attribution guidelines included in its CAM to attribute these costs to their relevant network investment account. These are shared costs. When this was not possible, the wholesale costs that were considered unattributable, or costs that were common to the provision of wholesale network services, but which could not be assigned to any specific UNE, were designated as common costs.

A detailed discussion of shared and common cost factors is included in Exhibit P-1, Section 4. Also, Mr. Walter Reid, who is providing testimony on behalf of BellSouth, provides a detailed account of BellSouth's development of shared and common cost factors.

(By Ms. Caldwell) It is important to note that BellSouth has attempted to directly assign as much cost as possible. Indeed, the wholesale common costs, when BellSouth was through, only comprised 5.0% of its total wholesale costs.

Q. (TO MR. ZARAKAS) DOES BELLSOUTH'S METHODOLOGY DEVELOP AN ACCURATE REPRESENTATION OF SHARED AND COMMON COSTS?

A. **(By Mr. Zarakas)** Yes, BellSouth's methodology for developing shared and common costs involved a structured approach to developing the shared and common costs associated with a wholesale telephone network.

BellSouth had three options to determine shared and common costs: First, an arbitrary percentage could be chosen as a proxy for unassignable costs. Second, all of the unassignable costs that relate to regulated operations on BellSouth's books could be accumulated and a general factor reflecting these costs could be created and applied to all of the UNEs. Third, UNE-specific factors reflecting the allocation of these costs could be developed.

BellSouth chose to pursue this last option in the testimony filed this date. This option is more difficult to achieve than the former two options (and to some may be less appealing than a simple approximate percentage add-on to reflect shared and common costs). However, this methodology reflects years of work on the part of the FCC and the state commissions and brings the greatest degree of accuracy with respect to cost allocation that I am aware.

4. OTHER COSTS

Q. (TO MS. CALDWELL) PLEASE COMMENT ON OTHER COSTS WHICH ARE INCLUDED IN THE DEVELOPMENT OF ECONOMIC COSTS.

A. **(By Ms. Caldwell)** BellSouth's cost study also identifies nonrecurring costs, or one-time costs that are typically associated with installing or disconnecting an unbundled network element. The generic process for developing the nonrecurring costs for unbundled network elements is as follows:

- Determine the cost elements to be developed.

- Define the work functions.
- Establish work flows.
- Determine work times for each work function.
- Develop directly assigned labor costs for each work function (labor rate x work time).
- Accumulate work function costs to determine the total nonrecurring costs for each cost element and add gross receipts tax (which reflects TSLRIC).
- Apply the shared and common cost allocation factor (which then reflects TELRIC economic cost).

Defining the work flows and gathering the work times is part of the UNE modeling. Converting the work times to cost is accomplished in the TELRIC Calculator©. The modeling step is of particular importance in determining the nonrecurring cost when BellSouth receives an order for both an unbundled loop and an unbundled port on the same service request. BellSouth had to develop entirely new work flows to accommodate this situation. These new procedures were then incorporated into the cost studies contained in Exhibit P-3.

Q. (TO MS. CALDWELL) DO THE ECONOMIC COSTS THAT WERE DEVELOPED BY THE TELRIC CALCULATOR© REFLECT ALL OF BELLSOUTH'S COST ASSOCIATED WITH ITS WHOLESALE TELEPHONE OPERATIONS?

A. **(By Ms. Caldwell)** No, when we reach this point, we have provided for recovery of all the forward-looking costs of a wholesale company operating a theoretical network. However, BellSouth, as well as new facility-based entrants, will experience a mix of old, current, and emerging technologies in their network over time. It is impossible, with the rate of technology advances, to maintain a network comprised entirely of least-cost, forward-looking, hypothetical technology. Thus, we need one more step to recover the costs of

BellSouth's actual network. For this, BellSouth developed a cost additive to reflect the differences between the theoretical cost and the actual cost of the UNE. This additive is called the Residual Recovery Requirement.

Residual Recovery Requirements were considered for both the local loop and the port since the embedded investment for these network elements represents well over seventy percent of BellSouth's embedded network investment in Florida. Also, the embedded network deployed for interoffice facilities is 100% fiber and corresponds to forward-looking technologies more closely than the local loop and local switching port. Details and results of this analysis are in Section 6 of Exhibit P-1.

SECTION III - OPEN TELRIC MODEL

Q. (TO. MR. ZARAKAS) WHAT DO YOU MEAN BY "OPEN TELRIC MODEL?"

A. **(By Mr. Zarakas)** In the recent arbitration dockets and also earlier in this proceeding, BellSouth's studies were criticized by opposing parties as being difficult to follow and "closed" (i.e., a "black box"). A critical part of TB&A's engagement was to facilitate the development of open (that is, a clearly understandable and auditable) cost studies. To this end, TB&A worked extensively with BellSouth to make the overall cost study as understandable and open as possible.

Such an approach to cost studies is highly beneficial to BellSouth internally because it allows greater examination and review of the cost study. Further, such an open cost study will make review by the Florida Public Service Commission easier and more productive.

Q. (TO MR. ZARAKAS) WHAT IS THE PRIMARY MEANS THROUGH WHICH BELLSOUTH HAS MADE ITS COST STUDIES OPEN FOR REVIEW?

A. **(By Mr. Zarakas)** BellSouth has used the TELRIC Calculator© as the primary medium for making its cost studies open for review. Up until this point, we have referenced the TELRIC Calculator© with respect to BellSouth's cost study process. We have also developed a user-friendly model (which runs on a personal computer). This model was developed by BellSouth with assistance from TB&A, and achieves several goals.

First, the TELRIC Calculator© integrates UNE modeling with the loadings and factors. Second, the TELRIC Calculator© presents the various calculations for the UNEs in an orderly and understandable manner.

Finally, the TELRIC Calculator© facilitates user interaction. Data and inputs (including data used in the UNE modeling, as well as loadings and factors) are available for the user to change, if desired, and produce alternate "what-if" scenarios. The TELRIC Calculator© is also directly linked to the UNE modeling stage of each unbundled network element and, in turn, either further linked to other underlying models (such as the Loop model) or is able to be traced to those models. In many places, a user is able to delve deeper into the underlying assumptions and data, reviewing and/or modifying the inputs to the models.

Q. (TO MS. CALDWELL) WHAT ASSURANCE IS THERE THAT THIS MODEL WILL PRODUCE ACCURATE RESULTS?

A. **(By Ms. Caldwell)** The design for the application of the factors and loadings in the TELRIC Calculator© was developed by experienced cost analysts and supervisors. This application was based on knowledge of how the factors were calculated, how the material prices were developed and on sound economic principles. Several test runs using existing spreadsheets which converted investments to costs were compared against the TELRIC Calculator© results. Additionally, the TELRIC Calculator©'s final outputs were reviewed for reasonableness by the cost analysts and supervisors.

Q. (TO MS. CALDWELL) ARE ANY ASPECTS OF BELLSOUTH'S TELRIC DEVELOPMENT NOT OPEN TO USERS?

A. **(By Ms. Caldwell)** Yes, and we have touched on these earlier. Two aspects of the cost studies could not be made completely open. First, SCIS is a complex model and a copyrighted Bellcore product and thus, is proprietary. Although we considered a wholesale re-creation of a model to develop switch-related costs, we concluded that SCIS reflected years of focused development and provided the best reflection of Florida-specific UNE costs. Further, Bellcore and BellSouth personnel have been and will continue to be available to answer questions for the Commission, its staff, and parties regarding the intricacies of SCIS, subject to the appropriate proprietary protections being afforded to the material.

Second, vendor-specific prices are used in BellSouth's models. BellSouth receives discounts off retail list prices which are negotiated on the basis of the volumes of BellSouth's commitment, and I am told that our contracts obligate us to maintain the confidentiality of those negotiated prices. I understand that

the vendors are concerned that disclosure of BellSouth's discounts would impair negotiations between the vendors and other parties.

(By Mr. Zarakas) BellSouth has a number of steps to work around this need for confidentiality. First, TB&A has spot checked several of BellSouth's spreadsheets (such as the price calculator) and models (such as the Loop Model) to ensure that they included accurate vendor prices. Also, to allow users to view vendor prices, vendor data has been melded by the probability of using various vendors. This melded data is open for review.

SECTION IV - CONCLUSIONS

Q. (TO MR. ZARAKAS) PLEASE SUMMARIZE YOUR OVERALL CONCLUSION WITH RESPECT TO BELLSOUTH'S COST STUDIES.

A. **(By Mr. Zarakas)** Based on TB&A's review of and participation in BellSouth's cost study process, we believe that the cost studies presented by BellSouth to the Florida Public Service Commission represent reliable results that are representative of the economic costs associated with providing Florida-specific unbundled network elements.

BellSouth has followed the appropriate guidelines for developing these cost studies and has made each step of its cost study process as open as possible to the Commission for review.

Q. (TO THE PANEL) DO THE INVESTMENT BUILD-UPS IN BELLSOUTH'S COST STUDY REFLECT FORWARD-LOOKING NETWORK ARCHITECTURE?

A. **(By Mr. Zarakas)** Yes, a forward-looking network architecture was an important part of BellSouth's cost study and was assured through at least two controls. First, BellSouth took a multi-disciplinary and highly iterative approach to determining the network architecture to be used in this cost study. This effort involved cost analysts, product managers and network engineers. It was also a focus of the cost study review process.

(By Ms. Caldwell) Additionally, the models that were used in the cost study process were designed to reflect a forward-looking network (while retaining appropriate Florida-specific data). Notably, the loop model assumed a forward-looking loop architecture (e.g., fiber feeder was used in all loops over 12,000 feet in length), and SCIS was modeled using only Lucent 5ESS and Nortel DMS 100/200 digital switches.

Q. (TO MR. ZARAKAS) HOW WOULD YOU CHARACTERIZE BELLSOUTH'S UNE MODELING STEP?

A. **(By Mr. Zarakas)** BellSouth's UNE modeling was designed to develop UNE-specific costs from the bottom-up. Further, the build-up reflected state-specific characteristics to the greatest extent possible. BellSouth's cost study process was both "granular" (in terms of the specificity of its models) and detailed (in terms of the depth and location-specific aspects of data). Although such an approach is lengthier than a less exacting model, UNE-specific and Florida-specific accuracy requires more rather than less detail. The inaccuracies resulting from too little detail increases as the number of UNEs increases and the distinctions between UNEs become smaller and more subtle.

TB&A is not aware of any other methodology that has as much granularity of structure coupled with as much detail of data inputs.

Q. (TO MS. CALDWELL) DID BELLSOUTH PRESENT A COMPLETE REFLECTION OF THE COSTS ASSOCIATED WITH PROVIDING AN UNBUNDLED NETWORK ELEMENT?

A. **(By Ms. Caldwell)** Yes, BellSouth's cost studies reflect the complete costs associated with unbundled network elements. This was an important guideline associated with BellSouth's cost studies. A less complete and less granular approach to this cost study process may be easier (and therefore perhaps more appealing to some), but would risk being incomplete and may result in a deficient recovery of UNE-related costs.

In developing the installed investment, BellSouth's cost analysts, planners, and engineers were asked to consider all the details associated with providing UNEs (on a forward-looking basis). Subsequently, shared and common costs were added to TSLRIC to produce TELRIC economic costs. Additionally, the cost analysis for Florida includes a calculation to determine the costs (over and above TELRIC economic costs) to BellSouth for the actual network, the Residual Recovery Requirement.

Q. (TO MR. ZARAKAS) CAN THE INPUTS AND RESULTS OF BELLSOUTH'S COST STUDY BE TRACED AND UNDERSTOOD?

A. **(By Mr. Zarakas)** Yes. BellSouth's cost studies are auditable and understandable. Further, the cost study model is open and available to the Commission to view and use to conduct "what-if" scenarios.

Q. (TO MR. ZARAKAS) WHAT CONTROLS HAVE BEEN PUT IN PLACE TO ENSURE THAT BELLSOUTH'S COST STUDY PROCESS ULTIMATELY PRODUCES ACCURATE RESULTS?

A. **(By Mr. Zarakas)** Four types of controls are incorporated into BellSouth's cost study process. First, the UNE modeling process is a highly iterative process, involving numerous checks along the way. Ultimately, the UNE modeling was reviewed in detail by a panel of BellSouth personnel from the Cost Matters department and other involved BellSouth departments. This process involved examination of the logic and the data used in the UNE modeling. It also involved cross-checking the many build-ups to ensure consistency. TB&A actively participated in this comprehensive review process for the development of the cost study filed with the Commission.

Second, the division of labor and responsibilities involved in the cost study ensured that the appropriate expertise was focused on the various parts of the cost study. UNE modeling was developed by various cost analysts who were assigned responsibility for specific unbundled network elements based on areas of expertise and familiarity with the tools needed to develop accurate costs. The analysts employed specialized models to address the costs associated with specific portions of the network. In this way, BellSouth leveraged years of analyst training and expertise into the cost study process to produce economic cost studies, as efficiently and effectively as possible.

Another group within Cost Matters was focused on the various loadings and factors. This group is familiar with the relevant accounting records and reports, which are the basis of loading and factor development.

Third, the entire cost study effort (UNE modeling and loading and factor development) was subject to extensive reviews by numerous parties. Finally, the TELRIC Calculator© itself ensures a level of accuracy in the mechanical calculation of both TSLRIC and TELRIC and economic costs.

Q. (TO THE PANEL) DOES THIS CONCLUDE YOUR TESTIMONY?

A. **(By the Panel)** Yes, it does.

BELLSOUTH TELECOMMUNICATIONS, INC.

REBUTTAL TESTIMONY OF

D. DAONNE CALDWELL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKETS NOS. 960757-TP/960833-TP/960846-TP/960916-TP/971140-TP

DECEMBER 9, 1997

Q. PLEASE STATE YOUR NAME, OCCUPATION AND ADDRESS.

A. My name is D. Daonne Caldwell. I am an Acting Director in the Finance Department of BellSouth Telecommunications, Inc. (hereinafter referred to as "BellSouth" or "the Company"). My area of responsibility relates to economic service costs. My business address is 675 W. Peachtree St., N.E., Atlanta, Georgia, 30375.

Q. ARE YOU THE SAME D. DAONNE CALDWELL WHO FILED DIRECT PANEL TESTIMONY IN THIS DOCKET?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to rebut testimony by various witnesses for AT&T, MCI and WorldCom.

Q. **HOW IS YOUR REBUTTAL TESTIMONY STRUCTURED?**

A. My testimony is structured to respond to the main cost issues as discussed in the filed testimonies. I plan to outline the errors and misrepresentations contained in the arguments offered by the witnesses and to verify the validity of the methodology and data used to develop BellSouth's Total Service Long Run Incremental Costs (TSLRIC) and TSLRIC plus shared and common.

The testimony is organized to address the basic areas of contention:

~~I. Operational Support Systems (OSS) Study~~

II. AT&T/MCI Collocation Model

III. AT&T/MCI Nonrecurring Model

There are two additional subjects criticized by intervenors; the cost of capital used in the BellSouth studies and the economic lives used in the depreciation calculations. These two items will be discussed by Dr. Billingsley and Mr. Cunningham, respectively.

~~I. Operational Support Systems Study~~

Q. SEVERAL WITNESSES DISCUSS OPERATIONAL SUPPORT SYSTEMS. PLEASE COMMENT.

A. Most of the testimony carried the theme that OSS costs are recurring costs and should not be recovered as nonrecurring costs. Rather than discuss cost recovery,

which is in Mr. Varner's testimony, let me explain how OSS costs are identified in the BellSouth cost studies.

OSSs fall into two categories, Electronic Interfaces and Legacy Systems. Electronic Interfaces are new systems developed by BellSouth for the sole purpose of providing Alternative Local Exchange Company (ALEC) electronic pre-ordering, ordering, maintenance, and billing capability. The Electronic Interfaces provide the ALECs access to BellSouth's Legacy Systems. Legacy Systems are the systems that existed prior to local competition and are used by BellSouth to perform numerous functions in the provisioning of telecommunications services.

The BellSouth cost studies calculate costs for both categories, Electronic Interfaces and Legacy Systems. The costs associated with the Legacy Systems, reflecting central processing units, software, programming labor, maintenance, etc., are included in the shared and common factors discussed by Mr. Reid.

The costs for the Electronic Interfaces are not included in the shared and common factors. The costs for these systems are calculated in a separate study, contained in the study documentation, since they are new and were developed solely for the ALECs. This study includes the development expenses and three years of maintenance expense associated with the new systems and program enhancements to four Legacy Systems, Advanced Billing System (ABS), Application for Telephone Number Load, Administration and Selection.(ATLAS), Products/Services Inventory Management System (P/SIMS), and Regional Street Address Guide (RSAG). The upgrades to the Legacy Systems have been made

solely to provide ALECs access to these systems and would not have been made otherwise.

These expenses are predominately programming labor, however some investment for computer equipment and labor associated with Product Commercialization and training are included. The OSS costs are calculated for three years and then divided by the total orders (demand) during that three year period to produce a cost per order.

II. AT&T/MCI Collocation Model

Q. WOULD YOU PLEASE ELABORATE ON THE BASIC AREAS OF DIFFERENCES BETWEEN BELLSOUTH STUDY AND THE AT&T/MCI COLLOCATION MODEL SPONSORED BY MR. BISSELL AND MR. KLICK?

A. Yes. The main differences surround the application fee, space preparation fee, use of gypsum walls, cable lengths, and the use of the R.S. Means guidelines. I will address the application and space preparation fee and Ms. Redmond will address the other items.

Q. PLEASE DESCRIBE THE FUNCTIONS CONTAINED IN BELLSOUTH'S APPLICATION FEE COST CALCULATION.

A. BellSouth's Application Fee covers the cost of a service inquiry function which is performed to determine if the ALEC's request for physical collocation can be met.

It includes marketing, project management, engineering, and administrative time associated with review, research, and planning due to the request, as well as a written response to the customer. The chart below outlines the work groups involved and their associated time requirements.

Work Group	Time (Hours)
Interexchange Network Access Coordinator	40.0
Marketing	27.5
Property & Services Management	3.5
Outside Plant Engineering	0.5
Common Systems Capacity Management	8.0
Circuit Capacity Management	8.0
Total	87.5

Project management for collocation is a labor-intensive function that is done in BellSouth by the Interexchange Network Access Coordinator (INAC). The INAC is the point of contact for all other engineering groups responsible for collocation activities and interfaces with all groups and the customer to identify and resolve issues relating to the collocation application. Each application is unique, even though the same customer may always have roughly the same requirements, since those requirements apply to different central offices. While a central office will likely receive more than one collocation request, each request is from a customer with particular specifications. The special circumstances of each collocation application drive the amount of planning and coordination that must be done in all work groups associated with physical collocation.

On page 17 of his testimony, Mr. Porter states "BST does not need to market to WorldCom." The marketing effort included in the study is not the selling function associated with marketing, as Mr. Porter apparently believes. Rather, the marketing expense in the cost study reflects the marketing and administrative functions performed by BellSouth as part of the processing of the collocation application request; these functions include meetings with the applicant, clarifying terms and conditions, meeting with the INAC, processing the application, preparing and distributing the response, and entering customer information for billing to occur.

Property & Services Management and Outside Plant Engineering determine space availability and research options for the point of interconnect. Common Systems Capacity Management and Circuit Capacity Management perform planning functions and site visits with respect to space, power, and cabling requirements and availability.

Q. PLEASE DESCRIBE THE FUNCTIONS CONTAINED IN BELLSOUTH'S SPACE PREPARATION COST CALCULATION.

A. BellSouth's Space Construction is the cost of the physical construction of the collocation enclosure and includes the cost of Property Management personnel to oversee the construction of the enclosure. BellSouth hires an outside architect and a contractor to construct the enclosure, but BellSouth Property Management oversees the construction to ensure the quality of construction complies with

BellSouth standards. As Ms. Redmond explains in her testimony, each central office has unique characteristics, local ordinances differ, and ALEC requirements vary. Thus, space preparation can only be handled on an individual case basis (ICB).

Q. CAN YOU COMPARE THE BELLSOUTH ESTIMATES WITH THE ATT/MCI MODEL'S RESULTS?

A. It is impossible to identify the exact cause of the differences on a functional basis since the AT&T/MCI model utilizes a different rate structure and different work groups. However, Mr. Bissell provides a summary in Exhibit RB-1, Chart 6 of the AT&T/MCI model's total for two functions; 52 hours per CLEC request and 66 hours for initial planning. If I assume the 52 hours closely relates to BellSouth's application fee, one can readily see the AT&T/MCI model underestimates the effort required by BellSouth by 35.5 hours (87.5 - 52). Since space preparation is priced on an individual case basis, for reasons previously explained, a comparison cannot be made to the AT&T/MCI result of 66 hours.

VII. AT&T/MCI Nonrecurring Model

Q. DO YOU AGREE WITH THE ASSUMPTIONS USED IN THE MODEL?

A. The structure and approach of the model appear to be reasonable. However, it is readily apparent the model is founded on assumptions that are impossible to achieve and will not be achieved in the foreseeable future.

Q. WHAT ARE SOME OF THE ASSUMPTIONS THAT YOU DISAGREE WITH?

A. The first assumption I disagree with is that the service order and the provisioning process is one giant integrated operation. Mr. Lynott's testimony provides us a perfect example of just how unrealistic this assumption is. He states, "These architectures are important because they are forward looking intelligent processor controlled network elements that can communicate over standard interfaces to the OSSs in such a manner that little-or-no manual intervention is required for provisioning or maintenance activities." The technology described by Mr. Lynott in this statement is not currently available at our serving area interfaces, and this capability is not planned in the foreseeable future. As Mr. Stacy explained in his testimony in Georgia Docket 7061-U:

> "One of the earliest TMN compliant network elements to be developed was the SONET node. This technology began to be commercially deployed in ILEC networks in the mid-1980's. However, even today, over 10 years after the initial deployment, the ability of these nodes to communicate with the OSS is still severely restricted, because the systems from different manufacturers do not use the same information to report their capabilities or status changes to the OSS. ..... This example of one of the oldest versions of TMN compliant technology illustrates how long it takes in the real world to translate vision into reality."

Nonrecurring forward-looking costs should reflect the costs that BellSouth expects to incur and thus must be based on technologies that exist today which BellSouth expects to deploy, not some hypothetical technology.

Work order activities such as engineering requests for manual assistance and connect and test are required in order for BellSouth to provide a reliable product, on time, that meets the customer's needs regardless of whether the customer is an individual or an ALEC or whether the order was received manually or electronically.

The model also assumes that all testing is collected in the recurring rates. This is not true. Service order testing was specifically excluded from the recurring costs as described in Section 4 of the study documentation.

Q. DO YOU AGREE WITH THE FALL-OUT RATE USED IN THE NRC MODEL?

A. No. The NRC model allows a reasonable time of ~~19~~ 30 minutes to resolve a fallout situation. This is comparable to BellSouth's 15 minutes. The model, however, grossly understates the percentage of orders that will require some intervention. Mr. Lynott refers to Southwestern Bell's EASE system, a system which BellSouth doesn't use, but failed to provide any description or documentation of the system. Without sufficient documentation, it is impossible to determine if the system even performs the activities required by Mr. Lynott's scenario. However, he does state the fall-out quoted is for resale orders, not unbundled network elements.

Mr. Lynott makes the statement that "Even BellSouth admits that low fallout rates currently are achievable." and attributes this statement to Mr. Stacy. Mr. Lynott has conveniently taken Mr. Stacy's quotation out of context in implying BellSouth believes a 97% is attainable. The complete statement reads as follows:

> "BellSouth has achieved a flow-through rate of approximately 97% in certain exchanges for retail residential services, although many other exchanges are significantly lower. This rate has been achieved after approximately 15 years of effort in designing, and re-designing the network and the OSS supporting provisioning. When business services are examined, however, the story is very different. Despite similar efforts over a long period of time, the best flow through rates for business orders are about 80%. This is directly related to the complexity of business orders."

BellSouth estimates a 20% front-end fall-out rate for ALEC wholesale orders from the Electronic Interface. Mr. Lynott's argument that BellSouth's estimate implies an inefficient operation is totally erroneous, particularly since he offers ~~makes this~~ no supporting documentation as to the efficiency of AT&T's nor MCI's electronic systems to support his view. In contrast, BellSouth's fall-out rate is based on actual experience with electronic ordering. The 20% front-end fall-out rate was estimated after consulting with subject matter experts who had experience with orders from Interexchange Carriers (IXCs) for access service. In the early stages of electronic ordering by the IXCs there was a fall-out rate in excess of 30%. Over time, the front-end fall-out rate has fallen to 10%. Over a three year period, it is

anticipated that the error rate will follow a similar pattern and the average over the three year period will be approximately 20%. We cannot control the quality of the data that will be input to our systems by ALECs. Mr. Landry addresses down-stream fall-out rates in his testimony.

Q. DO YOU AGREE THAT MIGRATION ACTIVITIES CAN BE ACCOMPLISHED AUTOMATICALLY?

A. No. Mr. Varner also addresses this issue in his testimony. Let me emphasize the migration of a customer from BellSouth to a new entrant is not just a record change. In an unbundled environment, the loop must be physically removed from our switch and then re-terminated on the ALEC's switch or recombined in the ALEC's space. This does not happen by magic, nor does improved OSS capabilities allow this to happen automatically. Once again the cost is caused by the ALEC, which must be recovered .

Q. DOES THE NRC MODEL CALCULATE TRAVEL TIME CORRECTLY?

A. No. The model assumes a travel time of 20 minutes and a probability of 20%. We agree with these two inputs, but not their application within the AT&T/MCI model. The model grossly understates the cost by assuming 4 activities per trip and by restricting travel to only copper loops. In the BellSouth study, travel time was estimated on a per order basis which already takes into account savings gained by grouping orders and the time limitations imposed by arbitration agreements. The BellSouth loop studies recognize additional units at the same location by

establishing a first cost and an additional cost. Travel is only assigned to the first unit. Also, the assumption that loops provided over digital loop carrier do not require a premises visit is incorrect. The technology required to allow this is not planned.

Q. WHY ARE THE LABOR RATES INCLUDED IN THE AT&T/MCI NONRECURRING MODEL INAPPROPRIATE?

A. The labor rates included in the AT&T/MCI NRC model have some very serious flaws in their assumptions and development and should not be approved by the Commission, for the following reasons:

1. The basic wage rate is based on data from the union contract, i.e., the highest pay zone in each state. The union contract was last negotiated and approved in 1995. This contract is up for re-negotiation next year. Since no calculations were made to inflate the wage data or include annual Cost of Living increases, this basic wage data is embedded historical data, which is inappropriate for developing labor rates to be applied in a forward-looking environment.

2. There are no labor expense loadings for motor vehicles and tools, which are certainly expenses directly associated with most plant work activities.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

MS. WHITE: Then would you all proceed with your summary, please?

A (Witness Zarakas) Good afternoon, commissioners. My involvement in developing the cost for BellSouth's unbundled network elements was focused on ensuring that a methodology and process were in place that would yield accurate as well as state-specific costs.

Accordingly, my portion of the panel's testimony addresses the process and controls incorporated into BellSouth's cost model as well as the general openness and support for the cost model.

I would like to make three primary points in my summary today. First, I would like to discuss BellSouth's cost study methodology. The clear objective in developing UNE costs is to reflect the costs of as forward-looking and efficient a network as one could operate in Florida. In other words, the network should be hypothetical in that it is not the network that BellSouth operates in Florida today, yet this hypothetical network should also be grounded in the realities of Florida.

While simple, I believe that this is a critical point. The BellSouth cost model was designed to produce forward-looking yet Florida-specific costs.

Several participants in various hearings related to UNE costs have questioned the hypothetical nature of BellSouth's study saying that it reflects the actual cost of the BellSouth network that is in place today. I disagree.

The real question relating to methodology is this: Just how hypothetical a model should be adopted as the basis for Florida-specific costs and prices?

This is an important and a critical issue and one which I believe BellSouth has appropriately addressed. The cost study which is presented today is based on an efficient and forward-looking technology, and in that sense it's very hypothetical, yet it is grounded in realities which will not likely change in the future and, therefore, those realities should be reflected in a cost study.

My second point relates to the role of my firm, Theodore Barry & Associates, or TB&A, with regard to the BellSouth cost study. BellSouth, like many telephone companies, has been involved in developing costs for quite a few years, but recently recognized that the cost study for unbundled network elements would be different than its past cost study efforts, and this would be different in several regards.

First, the cost study would focus on forward-looking costs, something that has not necessarily been done in the past.

Second, the cost study would be voluminous, and I think that's proved to be true just by the sheer size of the cost study presented to the Commission today.

And, third, that the cost study would receive considerable attention from a whole range of interested parties, a prediction I also believe has been proved true.

BellSouth asked me and my firm to help them make sure that their cost study was forward-looking and reflected the requirements associated with developing UNE costs.

They further asked that we work with them to develop a process capable of producing consistent and accurate cost studies in a very efficient fashion so that they would be able to meet the demands for the cost studies by the various commissions; other commissions, obviously, in addition to the Florida Commission.

Such a process had to integrate the various individual aspects of cost study analysis and had to develop checks for consistency and continuity. We

approached this project as we have in many process and management audits.

We worked at developing a method and process as well as guidelines that were used by the cost analysts to develop UNE costs based on input from numerous subject matter experts.

The subject matter experts provided information into our cost study, information relating to the hypothetical yet the Florida-specific network that I spoke of a few minutes ago. And those experts will also be explaining assumptions throughout the testimony before the Commission in the next several days.

There is one final point that I would like to make in my summary today, and that involves the openness and support relating to the cost study. Making a large study also an open study was an important and a considerable task.

The need for an open model was a driver in developing the cost study process and it required that all inputs and assumptions be clearly stated and available to anyone who wants to inspect them. I believe that this goal has been met.

The cost study is well-documented and, further -- and I believe that this is an important

additional point -- the cost study is presented through our TELRIC calculator which automates many of the lengths and calculations associated with the cost study.

It's gone an additional step in that it allows reviewers to change inputs to reflect their own views. Thus, if any party disagrees with any of the details of the cost study, they can change the inputs to get a revised result. Or, in other words, if a subject matter expert representing one of the interested parties disagrees with a BellSouth subject matter expert, they can change the assumptions in the BellSouth cost study and a corresponding result would be produced.

In summary, the BellSouth cost study provides an open and supportable treatment of a very complex issue. It follows a hypothetical framework for also using Florida-specific characteristics to ground it in reality, and it is designed to facilitate the input of other interested parties.

That concludes my summary, and Ms. Caldwell will now address some of the issues relating to the nature of the costs and some of the specific unbundled network elements.

WITNESS CALDWELL: Good afternoon. First of

all, many of the unbundled network element rates have been set by this Commission in previous arbitration proceedings.

In order to establish permanent rates for other unbundled network elements, BellSouth has provided documented cost support for the following: Unbundled local loops, sub-loop 2-wire distribution, sub-loop 4-wire distribution, network interface device, 2-wire ADSL, which is asymmetrical digital subscriber line, 2-wire HDSL, which is a high bit rate digital subscriber line, and a 4-wire HDSL.

For unbundled ports, we have provided 4-wire analog voice grade port and then a cost study for all of the features that would be associated with that port; unbundled transport facilities, dedicated DS-1, and for this only nonrecurring was required; directory assistance, and for that we have looked at directory assistance transport; and then, of course, virtual and physical collocation.

BellSouth has conducted studies whose underlying foundation is total service long run incremental costs, TSLRIC. It is based on the economic theory that costs should be long run, forward looking, reflect least cost, efficient technologies, and include directly attributable costs which are

determined based on cost causation.

The main purpose of this hearing is to set rates, rates which will be based on costs. Thus, BellSouth has included additional layers to the TSLRIC results to ensure BellSouth is compensated for costs the company will incur in providing unbundled network elements to ALECs.

Shared and common costs augment the TSLRIC results to account for these costs to BellSouth. Mr. Reid addresses this methodology in determining the shared and common cost that was used in our studies.

Additionally, another cost component, the residual recovery requirement, is added to capture the difference between the forward-looking TSLRIC plus shared and common results and the actual cost to providing unbundled network elements.

As Mr. Varner has explained, the residual recovery requirement is only applied to the loop and port elements. The TSLRIC plus shared and common, plus residual recovery requirement costs provide the cost supports for the rates presented by Mr. Varner.

Nonrecurring costs were also developed for each rate element. To be consistent with the studies which form the basis of the rates already set by this Commission, these costs assumed a manual ordering

process.

However, BellSouth realizes that the most probable way in which orders will be received will be via an electronic medium. Thus, we have also developed the cost of the manual increment included in the manual cost.

If one wants to determine the cost of ordering an unbundled network element electronically, subtract this increment from the appropriate manual result. And Mr. Varner has provided that in his exhibit.

In summary, BellSouth has developed cost support for the unbundled network elements I have previously mentioned to facilitate the rate setting process. These costs, both recurring and nonrecurring, follow the TSLRIC principles as supported by this Commission.

Additionally, shared and common costs plus the residual recovery requirement have been added to reflect the costs BellSouth will incur in providing these elements.

Thank you.

MS. WHITE: Ms. Caldwell and Mr. Zarakas are available for cross-examination.

MR. PELLEGRINI: Chairman Johnson, at this

time Staff would offer P-7 and ask that it be marked for identification. That consists of Ms. Caldwell, then Mr. Zarakas' deposition transcript January 14, 1998, as well as the deposition and Late-filed Deposition Exhibit Nos. 1 through 18. That should be Exhibit 14, I believe.

CHAIRMAN JOHNSON: It will be identified as 14 and short titled Staff's P-7.

(Exhibit 14 marked for identification.)

MR. PELLEGRINI: And, in addition, Staff would offer P-8 which consists of the confidential deposition and Late-filed Deposition Exhibits 1, 2, 3, 6 and 16, and that is Item G in the confidential packet.

CHAIRMAN JOHNSON: Okay. Could you give me a short title for what you were referring to?

MR. PELLEGRINI: Confidential deposition, Caldwell/Zarakas.

CHAIRMAN JOHNSON: Confidential depo, Caldwell and Zarakas.

MR. PELLEGRINI: Yes.

(Exhibit 15 marked for identification.)

CHAIRMAN JOHNSON: Thank you. And the witness is available for cross-examination?

MR. LEMMER: Madam Chairman, Tom Lemmer for

AT&T.

CROSS EXAMINATION

BY MR. LEMMER:

Q Good afternoon, Ms. Caldwell and Mr. Zarakas.

Ms. Caldwell, you mentioned in your summary that the cost causation is a component of how you went about preparing your study, correct?

A (**Witness Caldwell**) That's correct.

Q And would it be fair to say that the concept of cost causation is to match a cost with what causes the cost to be incurred?

A That's fair.

Q And would you agree that the concept of cost causation is an important concept for developing appropriate costs presented to this Commission?

A Yes.

Q Now, when we're talking about nonrecurring costs, would it be fair to say that we're talking about costs that are incurred because of a specific event that occurs?

A Yes. In particular, we're talking in these studies about costs associated with the provisioning of a service.

Q And when we're talking about nonrecurring

costs, we're also talking about a cost that benefits one particular -- in the competitive world, one particular CLEC; would that be correct? Again, using your example of provisioning.

A Yes. In fact, the cost is caused by that one particular CLEC that's placing the order, whether it be for a loop or for a port.

Q Now, when we're talking about recurring costs, which are the other type of costs that's presented in your study -- is that a fair statement; we're talking about nonrecurring costs and recurring costs?

A Yes.

Q And when we're talking about recurring costs, we're talking about a cost that is caused by more than one event. Fair statement?

A I don't think about it in terms of events. I have a little trouble with yes and no on that. It is the cost associated with -- in particular what we're looking at here would be an investment related cost, a cost that is going to carry with it -- even though you expend the money one time, you have ongoing costs, such as depreciation, cost of the money associated with that investment. So those are the type recurring costs we have. That's my capital.

Then we also have costs associated with that investment, which will be maintenance, that is the ongoing maintenance associated with that particular item of plant.

Q And these type of costs, the capital costs, the maintenance costs that you just referred, confer a benefit on whoever is using that particular investment that you're talking about; for example a loop. Fair statement?

A Yes.

Q And there may be multiple users of a loop over time; isn't that correct?

A That is correct.

Q And when we're talking about identifying recurring costs when a service is installed -- and let's just say it's plain old telephone service -- the installation of that would involve certain investments such as cable and cross-connects and that sort of thing; is that correct?

A I have to break that into two categories. If you're looking at the investment associated with a service -- in this case let me just deal with the loop portion of a basic local exchange service -- you have investment associated with the cable, the large items of plant that are necessary to make that particular

service -- excuse me -- that particular investment able to provide service. Those are all capital costs, and we include those in our recurring costs.

Certain of the cross-connects that are associated with establishing the service, those -- the time associated with making those cross-connects are done at the time a service order is generated to install service. So those particular items could be in the nonrecurring.

Q Now, these cross-connects that you just mentioned, if they were installed when a service was brand new, service was being initially installed, those cross-connect costs would be associated with that new installation. Fair statement?

A Yes. Associated with the service order that installs it the first time, correct.

Q Now, if you have a -- let's just focus on a loop. If you have a loop in place, but that loop were to somehow be upgraded or transformed through the addition of certain types of equipment to that loop, that equipment would be considered capital investment, correct?

A In most cases there are rules as to the size of equipment. The value of that equipment sometime may be expensed. But in the loop, the only thing I

can think in our study that ever would be expensed would be the separate NID we discussed this morning, the ALEC NID, which would be expensed. It's not physically connected to the loop. Other than that, all the loop is capitalized items.

Q And I believe you said capital costs result in recurring costs through depreciation, correct?

A Yes.

Q Once equipment is installed -- and let's continue to focus on the loop -- that investment is fixed. I mean, the cost of installing that loop is the cost that's reflected to BellSouth's books; isn't that correct?

A Yes.

Q And that cost is reduced through depreciation, correct?

A That is one method of recovery, yes.

Q And it might be increased through improvements like we've just talked about, correct?

A Yes.

Q And that loop physically will remain in place; isn't that correct?

A It will remain in place for the usable life of the plant, yes.

Q And the remaining in place of that loop is

known through a practice that's known as dedicated outside plant; isn't that correct?

A That is one -- yes. That is one example of where the physical loop remains connected, correct.

Q So the loop is installed, and from a costing point of view, those costs continue out through the costing life of the loop, and physically that loop stays connected. Fair statement? So that the costs and physical existence of that loop run together?

A Yes; but I need to explain a fine point here. The investment associated with all of the cable, the NID, all those particular items of plant, those are capitalized items, and they are capitalized onto BellSouth's books and depreciated over the usable life of the item of plant.

The nonrecurring costs that are associated with when the actual loop is placed into service, those particular costs are expensed. So they would not be depreciated over the life of the plant. I just wanted to make that distinction for you.

Q But because they're nonrecurring costs, those types of costs that you just said were nonrecurring, would not be repeated in the future absent some other event requiring that they be incurred; isn't that correct?

A For that particular loop, yes, they would not be incurred again. However, I need to again explain a little bit here.

When you place the loop in service the first time, there are nonrecurring costs associated with the service order of provisioning and connecting and testing that facility. If that particular loop is left dedicated to that particular customer's location, you could have some different nonrecurring costs associated with it, but you would not incur all of the same ones. For instance, you would not be traveling again.

Q I'm sorry. I didn't catch that.

A You would not be traveling on the second installation.

Q Now, from the standpoint of identifying nonrecurring costs, there are also other costs other than investment type costs that are recurring costs, such as, you know, the head of the organization, accountants, lawyers, those types of costs; isn't that correct?

A Yes. We identified those in our shared and common costs.

Q And the cost of middle management supervisors, those are also nonrecurring -- excuse

me -- those are also recurring costs; isn't that correct?

A In terms of middle management, the -- I'm not sure how everybody defines middle management. So let me give you my definition of where the costs are.

If I'm looking at the first level of supervision of an installation technician, that is included in the direct cost of that technician. That would be seen in our labor rates. The costs above that in most cases are going to be included in your shared and common.

Now, in some of our studies, you would have a second level of management, because they do true customer relations or interfacing with customers. For instance, in some of the application fee of collocation we discussed this morning, there are some second level management positions. You will see them identified in our studies as I believe it's marketing pay band 58. So those would be your second level management.

They are identified as direct costs, because the time that they work on that application fee is directly associated with that unbundled network element for that customer.

Q Now, when we're talking about share the

costs, we're talking about costs that exist because there is an activity that occurs within BellSouth's organization. In other words, there are supervisors who supervise the activity of a particular type of department. Installation, for example. Fair statement?

A Could you repeat the first part of that question?

Q My question is we're talking about shared costs, and when you're talking about shared costs you're talking about the type of cost that's incurred because there is a type of activity that BellSouth undertakes to perform. And I just used installation as an example. Is that a fair statement?

A There are shared costs associated with installation, yes.

Q And those shared costs exist because there are -- again continuing my example -- there are individuals that perform the installation function and they need to be supervised. So you have supervisory type of shared costs, correct?

A Yes, there is some supervision there, correct.

Q Now, common costs are required simply because in a sense the organization exists. Is that a

fair statement?

A Yes.

Q Again, it's the head -- it's the lawyers, it's the accountants, the organizational type of costs?

A Yes; specific costs that cannot be assigned to any service or, in this case, any element.

Q Now, in developing the recurring costs that were developed for this study, I believe you stated in your testimony that those costs reflect a TSLRIC approach; is that correct?

A Yes.

Q And that approach is to develop long run incremental costs correct?

A Correct.

Q And those costs are to be reflective of economic costs, correct?

A That's correct.

Q Now, your cost study presents a cost number to this Commission to consider for purposes of determining rates that I believe you stated in your summary is reflective of the TSLRIC plus shared, plus common, plus the residual; is that correct?

A That is correct. We supplied two numbers to the Commission. We supplied, first of all, the TSLRIC

number that included no shared and common. Then we provided a number that included shared and common for each unbundled network element, and on the loop and port, where appropriate, we also included the residual recovery requirement number.

Q Now, the residual recovery requirement for, say, the port is the difference between the historical cost for the port less the TSLRIC, plus shared and common; isn't that correct?

A Yes. In terms of the historical, as it was discussed this morning, you begin with -- and I'd like to kind of explain this so you understand the term "historical".

We started with the investment associated with the nontraffic-sensitive portion of the switch that you would have in the state of Florida. That's what the port would be associated with that particular unbundled network element.

So once we have that investment, that represents the gross investment we have in switches in the state of Florida. So what we then do is take that investment and convert that to cost using our forward-looking annual cost factors just like we had done in our TSLRIC studies with one adjustment. We adjusted the cost of money to include the existing

cost of debt for BellSouth.

So when you look at that particular calculation, the overall cost of money is less than the 11.25 we used in the TSLRIC, but that is the foundation of the number that we're subtracting from; and we do subtract both the combined TSLRIC plus shared and common.

Q The historical costs that you just defined are predicated upon the investment values that are currently on BellSouth's books; isn't that correct?

A Yes, for those items of plant.

Q And the cost that BellSouth is proposing for this Commission to study is the historical cost, because that is the higher cost for the port and for the loop; isn't that correct?

A We are proposing the impact of residual recovery requirement, but I think I've clearly stated we did not take pure embedded costs. We looked at it with forward-looking depreciation; we looked at it with forward-looking equity, and then forward-looking maintenance and the expenses associated with it.

Q Well, now, Ms. Caldwell, the depreciation doesn't change the cost that's being calculated, does it? It just spreads it over a different period of time, but ultimately you recover the same amount of

cost; isn't that correct?

A That's correct. Ultimately you recover the same amount of cost. But what we're looking at here would be a monthly cost, so the monthly value would differ based upon the depreciation life.

Q But the bottom line is if you had an investment worth $100, you're going to recover that $100 whether you use a ten-year life or a five-year life; isn't that correct?

A Yes.

Q So then the bottom line is what is being presented to this Commission is historical costs for purposes of determining the rates?

A They are the costs BellSouth will incur based upon the investments that we have.

Q And isn't it true that based on the TSLRIC studies that assume the TSLRIC came out to be a nickel, that the cost proposed to this Commission would not change; it would be the same cost that's being proposed in your study?

In other words, the TSLRIC number, TSLRIC plus common, plus shared is really not a meaningful figure for this Commission, is it, because BellSouth is asking for the historical costs?

A What we have proposed is the TSLRIC plus

shared and common and residual recovery requirement, which I feel we've stated includes the cost of the historical investment that we have.

The TSLRIC is meaningful to the Commission. First of all, the Commission asked for it and, also, it gives you an understanding of where the forward-looking costs are as well as the amount of shared and common that we have to recover, and then what the amount of residual recovery would be that we need to -- excuse me -- the actual value amount of the residual recovery requirement.

So based upon having all of that information, that helps you make the decision as to what the correct rates should be.

Q But, for example, if we're looking at the loop distribution for the 2-wire analog voice grade loop, we're look at a TSLRIC plus shared and common of $10.24 with a residual or recovery of $2.33, so we're talking about a proposed cost of about $12.47. Would you agree that's accurate?

A I happen to have Mr. Varner's exhibits. I believe it's $10.24 plus $2.33 was the $12.57.

Q $12.57, yes. If the TSLRIC dropped down to $5 through adjustments made by this Commission, BellSouth would still propose that -- essentially the

$10.47 -- $10.57; isn't that correct?

A That would be our proposed rate, correct.

Q Now, the recurring costs that are proposed to this Commission on a TSLRIC basis is to represent the most efficient, least cost, forward-looking technology; isn't that correct?

A Yes.

Q It is to represent what the future would hold looking at what technologies are available, what impact they will have in the future, how they will impact costs; isn't that correct?

A Yes, I would agree with that.

Q And for purposes of the TSLRIC study that BellSouth conducted for presentation to this Commission, the placement of the wires for the network in Florida by BellSouth are assumed to be the same going into the future as they are today; isn't that correct?

A No, I do not agree with that. The loop study -- when you say placement of wires, I'm assuming that's what we're discussing -- the loop studies that we provided for were for distribution plant. They were also for the ADSL and HDSL loops. What we have done is to consider forward-looking, most efficient costs; and with that we included only 26-gauge copper

in those particular offerings, which today it could actually be served on 22-gauge, which is a more expensive copper facility.

Q But isn't it a fact that the location of the placement of the cables has not changed?

A The actual location, which I often refer to as the infrastructure, that is the actual route from the central office to the customer's home, or in this case could be a business also, that does not change.

Q Isn't it also true that the assumption as to what is aerial and what is buried is not changed? You used the current percentages for today?

A Yes, we did. We based that analysis on a sample of customers for residence and business customers in the state of Florida, and we used the same distribution to aerial, buried, and underground facilities with the understanding that those were the economical placements at that point in time when they were originally placed; and we see no reason to feel that they would change going forward.

Q And vendor prices that are used for purposes of your study are the vendor prices that are in place today; isn't that correct?

A Vendor prices are from our existing contracts that have a three five-year life. Those are

the prices that BellSouth will be paying in our studies we've done from 1997 to '99. Those are the prices we will be paying for items of plant.

Q And the fill factors, would you tell me what a fill factor is?

A Another term for fill factor is a utilization factor. It represents the amount of plant that is not currently being used.

For instance, let's say you have a 100-pair cable. If you have a utilization factor of 70, that means 70 of those pairs in that cable are working today. The 30% would be the facilities that are there for administration, spare, and growth.

Q And to the extent that there is capacity in a cable or capacity in some piece of equipment that is not being utilized, given the application of fill factors, the current users of that cable or equipment pay for the unused capacity; isn't that correct?

A That is correct. You calculate your investment for that item of plant, and then you divide by your utilization or fill factor; and in essence what that does is assign to each one of the working facilities a fair share of the spare, because you need spare facilities in plant. They are nonrevenue-producing, so you need to identify them

with the working pairs. It's a direct cost. You need spare for maintenance, for administration, and for growth to serve the next customer.

Q And so the lower the fill factor, the higher the cost to the current users; isn't that correct?

A Yes.

Q And the fill factors used in BellSouth's study for forward-looking purposes are the fill factors that exist today; isn't that correct?

A There's several different items of fill factors. Let's talk first about the cable fill factors, which is used in the loop studies.

Those fill factors are the fill factors that BellSouth is achieving today in the state of Florida. We talked to our network in -- excuse me -- our network experts on outside plant, and they provided to the cost organization the fill factors as they are, and said looking forward they did not see any change in those fill factors as we move into the next -- well, the future as we go here. Our study was three years.

So from our standpoint, they may be what is actually working there today. However, network assures us those are projected in the time frame we're studying here.

In the other items of plant -- I'm not quite as familiar right off the top with each one of those factors -- but in every case we looked at what the factors were today and then we looked at if there were going to be any change. And I do know that at least one example, and a multiplexer -- which is only used in the residual recovery study -- but the actual multiplexer factor was changed from what it was today because they felt they could get more efficient going into the future.

Q In the assessment by these experts regarding fill factors in the future, you don't understand whether they considered the impacts of competition or not, do you?

A Not in detail. We discussed that in the deposition. My understanding was that they did take it into consideration, but I do not have any detailed information on that. Mr. Baeza who will be testifying for network could possibly answer that one for you.

Q Now, for purposes of developing the recurring costs in the study, the investment costs were developed as the result of taking a sample; isn't that correct?

A For the loop, yes.

Q And that sample is stated to be a

statistically valid sample; isn't that correct?

A That is correct. And Mr. Ellis Smith filed testimony to that effect.

Q And as a result of that sample, cost -- investment, I should say -- for such items as cable and equipment were developed, correct?

A The physical makeup of the loop was determined from that sample. The actual investment was calculated using material prices from our vendors and then applying it to the items of plant identified in the sample.

And I need to state again here that we did not use the sample as it exists today entirely. We recast each one of those loops. And, say, for instance we're looking at the distribution. Going forward we only considered 26-gauge copper cable, because that's the most cost-effective way to provide the distribution. So those considerations were made.

Q You spoke of recast. Based on what is in the cost study, there was a sample taken of approximately 300 -- the sample was 350 loops, give or take one or two; isn't that correct?

A I think that was about correct.

Q And for residence, there were approximately 175 loops used in the sample; isn't that correct?

A Approximately.

Q And there were 175 business loops taken, correct?

A Approximately.

Q This sample excluded any ESSX loops; isn't that correct?

A That is correct. We looked at residence and business customers.

Q Now, you can provide telephone service over ESSX loops, can't you?

A Yes, ESSX service is provided; that's correct.

Q And ESSX loops are copper loops; isn't that correct?

A That is correct. The reason ESSX was excluded from the sample was that in the very beginning when we started looking at the study, we looked at where unbundled network elements we felt would be provided; and for that we used residence and business customers.

ESSX is a unique offering. Where the customers are that purchase ESSX has been driven to some degree by the rate structure, because we had -- throughout the time period we've had rate structures associated on distance sensitive pricing. So with

that, that forced the customers to be very close in.

And, also, ESSX customers purchase loops in very large numbers, like 5,000, 10,000; and we did not feel that was going to be representative of individuals buying unbundled network elements, one loop, two loops, three loops, even 10 loops. If you're going to buy that many loops for unbundled network purposes, then a DS-1, which we are offering, would be a much more economical way to serve that customer. So that's why ESSX was omitted from the sampling process.

Q Isn't it true that ESSX loops on average are sold in a bundle of about eight loops?

A I do not remember that number. I thought it was a little bit higher.

Q But it's certainly a lot less than 5,000; isn't that correct?

A Oh, yes.

Q In fact, it's somewhere less than 10; isn't that correct? The grouping is less than 10 loops for your average ESSX purchase?

A I cannot answer that. I do not remember exactly. I will agree it was less than the 5,000, but I did not think it was less than 10; but I cannot remember.

Q And on average, an ESSX loop is shorter than other loops. Isn't that a fair statement?

A Yes. I mentioned that in terms of the pricing structure.

Q And on average, an ESSX loop is less costly than a non-ESSX loop. Isn't that a fair statement?

A Yes; based on the length and physical makeup, which is going to be predominantly copper.

Q Now, the purpose of the analysis of the cost study was to develop certain costs relating to HDSL and ADSL loops as one of the purposes of the study, correct?

A Yes.

Q Both of those items are new to BellSouth of Florida; isn't that correct? Or those services, I should say.

A Yes, the services.

Q Are there any HDSL services that are operational today in the state of Florida?

A I do not know if there is any operational today. I do know that BellSouth uses HDSL, which is a DS-1 offering, and we will use it in some locations to provide DS-1 service, but we do not call that HDSL service at this point in time. That's just a function of the network. But I do not know to what degree that

is deployed in Florida.

Q So you don't know to what degree ADSL or HDSL is employed in the state of Florida?

A No, I do not. Mr. Baeza may can answer that.

Q Now, in the sample that was taken, the description in the cost study states of the 175 residential loops, around 100 of those loops were ADSL and HDSL loops; isn't that correct what the study says?

A They were ADSL and HDSL compatible. What we did was we look at the transmission requirements. The ALEC is going to be providing all of the electronics. All BellSouth would provide would be the copper facility. So we looked at copper facilities that met the distance requirements.

For instance, on ADSL it's 18,000 feet, and on HDSL it's 9,000 feet. But at the time the sample was taken, there were no HDSL or ADSL loops in the state of Florida; and if there are any now, there would be very few.

Q ESSX loops would be shorter than those maximum distances permitted for ADSL and HDSL; isn't that correct?

A I have not seen the average length in the

state of Florida for ESSX customers, so I cannot answer that.

Q But ESSX loops are very short loops; isn't that correct?

A Yes. I've said they're short, yes.

Q Now, another part of the recurring costs that are in your study relates to the drop; isn't that correct?

A That's correct.

Q And the drop is the wire that runs from the distribution cable to the customer?

A Yes.

Q Would you agree with that? Do you know the average number of pairs in the state of Florida that run to a residential customer?

A It's in the study. I would have to look it up. It's between one and two.

Q Now, isn't it true that for purposes of the study, that there is a cost reflected in the study for buried drops that reflect five pairs in that buried drop?

A Yes. That is the size facility that BellSouth is deploying in all of their network across the region.

Q So that unused 3-pair capacity in the drops

is a cost that the current users are paying for, correct?

A Yes, because that drop goes from the serving terminal to the customer's location.

Q And if you were a CLEC who bought that drop or leased the drop for sale to a customer, you would be -- that CLEC would be paying for those three unused pairs in that buried drop; isn't that correct?

A That is correct. But when you place the five-pair drop, the reason you place that is this is going to be -- and this is buried -- so you're actually burying it in individuals -- under their driveways, in their lawns, through their flower beds. And the placing cost is the predominant cost of the facility, not whether or not you have two pair or three pair or five.

So from that standpoint, BellSouth has decided that the economical way to go is to place the 5-pair drop so you do not have to go back and place additional drops at a later point in time and again invade someone's home; which would be their lawn in this particular case.

So that's the reason that we've gone with the five pair, and it doesn't matter if that five pair is associated with an end user of BellSouth or if it's

going to be associated with an ALEC's end user.

COMMISSIONER CLARK: Ms. Caldwell, do you know what the incremental cost is of just adding those three pairs?

WITNESS CALDWELL: Right off I do not, but I could calculate that. It is within the study.

COMMISSIONER CLARK: What is the reason BellSouth chose five pair?

WITNESS CALDWELL: In terms of the five, I cannot answer, but Mr. Baeza should be able to. That is one of his areas.

Q **(By Mr. Lemmer)** Ms. Caldwell, let's talk about nonrecurring costs for a few minutes. When we're talking about nonrecurring costs, we're talking about what have been grouped as essentially three or four different types of events.

There is provisioning. Would you agree with that?

A Yes.

Q Let me start off with first there's ordering. That's one. Would you agree?

A Yes.

Q And then there's provisioning?

A Yes.

Q And then there's installing?

A Yes.

Q And then there's disconnecting?

A Yes.

Q So would you agree that those are the four groupings of what I'll call activities or events relating to nonrecurring costs?

A Yes, I could accept those. In our study we document them a little bit differently by different names, so just let me clarify that for people who have looked at this study.

We look at service order processing. Then we look at our engineering, which would be under your term "provisioning". Then we look at our connect and test, which I would put under your term "installation". And then you have in some cases travel, which I believe would be under your term "installation". And then finally, we do have the disconnect activity as a separate, stand-alone item.

Q And the nonrecurring costs that are presented to this Commission in your study are a function of the time of those activities times a labor rate. Fair statement?

A Yes, that's a fair statement.

Q So then the accuracy of the -- let me rephrase my question. So then the need for a

particular activity is certainly important for determining nonrecurring costs. Would you agree with that?

A Definitely.

Q And the time associated with that particular activity is important also?

A Yes.

Q And the labor rate is also an important factor, correct?

A Yes.

Q Now, the labor rate that's used in your study reflects the salary, the wages paid to the individual who is performing a type of nonrecurring activity plus a portion of shared and common costs; isn't that correct?

A In the TELRIC study where you add on the shared and common, in the TSLRIC it does not include the shared and common component.

Q So in the TELRIC portion of your study, the nonrecurring costs that are presented to this Commission include the -- what I'll call the labor component plus a shared cost component, plus a common cost component; isn't that correct?

A That's correct. As Mr. Reid will explain in his testimony, for each individual labor rate there is

assigned a certain portion of the shared cost to account for the back office that supports that individual's and shared items these individuals may use.

Q Now, for each one of the types of shared costs that are included in these rates, is it your testimony that those costs exist because there are ordering, provisioning, installing, and disconnecting activities?

A Yes. They are associated with the fact that you have a technician or a service representative that performs those activities, and because you have them, there are shared costs that we have assigned to them.

Q Now, I understand that the cost study associates those costs with the nonrecurring activity. But my question to you is, does the nonrecurring activity cause BellSouth to incur those costs?

A Yes; because you have an individual on the payroll, a technician for instance, that's purpose is to install telephones. So installing telephones is, by definition, a nonrecurring activity; so, therefore, the nonrecurring cost has shared costs associated with it.

Q But if you had a supervisor who supervised someone who installed telephones and supervised other

individuals who did not install telephones, that supervisor's costs benefit both activities, the installation and the other activity; isn't that correct?

A That is correct.

Q And if the installation activity was zero, and there were a lot of events or requirements on the other side of the house, that supervisor would still be supervising, wouldn't he?

A That is correct, but we would not have assigned any of that cost to an installing activity, because there were no activities for installation.

Q And that's my point. The installation does not cause the incurrence of the supervisor's cost; isn't that correct?

A In dealing with the shared cost, there are costs by definition that are shared. And what you are dealing with here is, by some method you are assigning those to particular activities or particular unbundled network elements. This goes from basically the definition in the FCC order for TELRIC, is that shared costs are costs that should be assigned to their greatest possibility down to the individual unbundled network elements.

So from a pure economic standpoint, and in

the TSLRIC, we did not include any of those shared costs. However, when you are assigning shared costs, that's basically what you're doing; you're assigning it to the different functions.

There has to be a method of allocation, and that's what Mr. Reid discusses is exactly how he allocated those costs from a shared category to the individual elements; in this case, the labor rates.

Q Can you tell me where in the FCC order the FCC order requires the allocation of a shared cost to a nonrecurring activity?

A It doesn't specifically say shared cost to a nonrecurring activity, but it does say that when you're defining the TELRIC cost associated with unbundled network elements, that you would assign -- many of your costs that had been shared in the past will now become costs directly associated with offering unbundled network elements; and that definition can be expanded to both recurring and nonrecurring.

Q Now, shared costs are generally considered to be recurring costs; isn't that correct?

A In many cases, correct.

Q And so by placing a shared cost component on a labor cost for a nonrecurring activity is making a

recurring cost a nonrecurring cost; isn't that correct?

A What we are doing is associating it with the cost causer. The fact that you have a technician performing the activity is why you have the shared cost. So we have assigned it to the technician performing the activity.

Q So then you're telling me when a technician installs a service, that that technician causes the incurrence of a supervisor's salary?

A First level, definitely, but that's in the direct labor rate. In terms of the shared costs, again, these shared costs are costs that are shared by more than one element. All we have done in our study is to allocate them as we deem appropriately using a solid methodology to assign them to the cost causer.

Q Now, the nonrecurring costs that are presented to this Commission support a nonrecurring charge, correct?

A That's correct.

Q And the nonrecurring charge is an up-front payment that the CLEC has to make before the CLEC offers any of sort of service to a customer; isn't that correct?

A That is correct.

Q Are you familiar with the LCSC?

A Yes.

Q And when there is an electronic order, the LCSC results in manual activity only to the extent that there is a problem with the service order; isn't that correct?

A That is correct.

Q And that manual activity, as defined in BellSouth's cost study, would be someone dealing with the error on the service order, which might be contacting the CLEC and saying "your order has an error." Fair statement?

A That's a fair statement.

Q And the study assumes that that type of error or fallout occurs 20% of the time; isn't that correct?

A That is correct.

Q Now, BellSouth's study doesn't reflect the fact that errors can be electronically referred back to the ordering CLEC, does it?

A In the actual number that's provided, the 20%, it does imply to some degree that there could be some electronic send-backs. This would still be the ones that fall out, but it's not a hundred -- excuse me -- the number does not reflect 100% that all

electronic orders are sent back to the ALEC.

Q In fact, it reflects that 20% of those orders will be manually dealt with by BellSouth; isn't that correct?

A That is correct.

Q Let me ask you -- and hopefully you have it in front of you -- I'm looking at Exhibit 10, which is a late-filed exhibit by Mr. Varner.

A I do not have Mr. Varner's late-filed exhibits.

MS. WHITE: I'm sorry, Mr. Lemmer. Was that 2 or 10?

MR. LEMMER: Exhibit 10, and it should have -- what I'm looking at has a cover letter dated January 20th, 1998.

Q **(By Mr. Lemmer)** Do you see that?

A Yes.

Q And what I am looking at Is Exhibit Varner 2, and I'm looking at Page 1 of two.

A Okay. Exhibit 2, Page 1 of two, dated the January the 13th?

Q I don't have a date on mine, but the heading at the top says "Percent Rejected Requests."

A Okay.

Q Do you have that?

A Yes, I do.

Q And there was some discussion this morning in Mr. Varner's testimony regarding this exhibit. Were you present for that testimony?

A Yes.

Q Now, if you look down to the lower extreme right-hand corner in the "Total" column and under the column "Adjusted Flow-through," you see a figure of 92.7%. Do you see that?

A Yes.

Q And there was some discussion earlier that the math may be incorrect. Do you remember that discussion?

A Yes.

Q Well, by hand, I recalculated it, and that number should be somewhat over 95%. Would you accept that for purposes of discussion?

A Yes, for purposes of discussion.

Q Now, that Adjusted Flow-through column presents a column relating to orders that would flow through without any manual activity by BellSouth if the order from the CLEC was correct; isn't that right? And let me refer you to the next page and the last footnote.

A Okay.

Q I'm sorry. Would you agree that that number under the Adjusted Flow-through in the Total column represents what would flow through without any manual effort by BellSouth if the service order from the CLEC were correct?

A I've not seen this report before, and I'm not familiar with it, so I can only judge by that is the statement that's on the assumption.

Q So then if errors in the service order were to be rejected electronically by BellSouth so that it went back to the CLEC for correction, BellSouth projects that there will be a 92 or 95% flow-through; isn't that correct?

A Based on this -- again, based what I read here. I'm not totally familiar with it.

Q Well, this exhibit would indicate that the 20% assumed fallout rate in your study is incorrect; isn't that right?

A Well, the 20% fallout assumes that up-front systems would require the fallout before you even get to this stage.

What we're looking at is the fallout that results in the electronic interface stage, and within three-year time frame that we're looking at for '97 through '99, our indications are that would be 20%.

So my understanding -- again, I'm not fully familiar with all the numbers on here, but it would be prior to the systems that's listed here. Those are the electronic interface fallouts I'm talking about, all the new systems that's being built today.

Q Now, do you have any understanding as to what the current technological capability of these types of systems are from the standpoint of electronic, I'll call them, kick-out? They spot an error, they refer it back to the ordering company.

A No, I do not.

Q Does the 20% that is reflected in the study for the fallout rate consider the fact that there can be electronic kick-outs and resolution by the ordering company?

A My understanding, it does. That number is provided by the LCSC organization to the cost analyst, and my understanding is that based upon the time frame that we asked them, '97 to '99, all the plans that they had in place for providing electronic flow-back, all of that was taken into consideration, and there would still be 20% that needed to be handled.

Q Now, based on your understanding, is the Varner Exhibit 2 in this Exhibit 10 consistent with or contrary to the 20% in the cost study?

A Again, I'm not totally familiar with it. I don't see that it's in -- or contrary to what I'm saying, because based on this assumption, this assumes -- again, the very last line -- this assumes that the projected flow-through of the CLEC orders, that the CLEC has already been removed from that. That's not -- the 20% that I'm talking about I do not see included in these numbers.

Q Now, also in the area of nonrecurring costs, there are certain instances where there is travel time calculated?

A Yes.

Q And drives the calculation of a cost, correct?

A Correct.

Q And one aspect of the travel time relates to the placement of cross-connects; isn't that true?

A Yes, travel to the -- in this particular case we're talking about distribution plant predominantly. So it's cross-connects at the feeder distribution interface.

Q Now, isn't it true that -- well, let me rephrase my question. BellSouth follows the policy that we talked about earlier of dedicated outside plant; isn't that correct?

A That is true, but the services we're offering here -- in particular, loop distribution -- dedicated outside plant would not be appropriate there, because dedicated outside plant means you're connecting it all the way from the BellSouth central office to the customer's premises.

Well, in this case we're going to only be providing to the ALEC the distribution portion that will then be cross-connected to the ALEC's cross-box to get to the ALEC's feeder.

Q What about the loops that are costed in this study? The cross-connects would stay in place for those loops; isn't that correct?

A Oh, yes, for the ADSL and HDSL; that is correct.

Q So there wouldn't be any travel relating to those cross-connects, would there?

A There would be travel a certain percentage of the time, because you would not have everything dedicated to outside plant, and that's taken into consideration.

Q Well, let me see if I understand, then. In the situation where a service has been provided to a customer, and that service is being switched over to a CLEC, that loop is operational, correct? I mean, a

service, is being provided, correct?

A Yes.

Q And if the service is being provided, the cross-connects are in place, correct?

A That is correct.

Q And when the cross-connects are in place, is BellSouth going to go out into the field to remove those cross-connects when a CLEC orders that particular loop?

A No. That's what I was saying. We take into consideration in the study a percentage of time that we would have to travel and a percent of time we do not.

The one thing I need to look at the study probably to verify that is, in looking at the ADSL and the HDSL, what has to be done in those particular services is you have to have a service inquiry, and you must be sure that that particular loop is able to handle the electronics of ADSL and HDSL. So I need to verify the amount of travel associated with that particular loop.

Previously when I was talking about that you would not dispatch, that was from my remembrance of the 2-wire analog loop where dedicated outside plant would be appropriate, and we only dispatch, I believe,

20% of the time on that one.

Q But the dispatch you just described does not relate to cross-connects, does it?

A It relates to -- in the last explanation? I mean, can you reword your question?

Q You gave an explanation as to there may be travel relating to having to upgrade, or to upgrade the wire to make it an ADSL compatible type loop, for example; correct?

A Yes.

Q There would not be travel -- I mean, if that loop was operational, the loop is operational, right?

A Yes.

Q And when it's operational, the cross-connects are in place; isn't that correct?

A Yes.

Q Now, do you have Mr. Varner's revised Exhibit AJV-1 available to you?

A I have at least -- yes, I believe I have it all.

Q And we can simply look at the first page of it to begin with. And under the middle column where we're dealing with the nonrecurring costs that are proposed -- and we can just look at the A.2.2 loop distribution.

A Right.

Q 2-pair wire analog voice grade loop. There is a nonrecurring cost specified for electronic of $396.69, correct?

A Correct.

Q Can you tell me how much of that amount relates to activities and services provided by the LCSC?

A Yes. I need to refer to the cost study to do that. Excuse me one moment. (Pause) If you look at -- let me talk about the --

Q What page of the cost study are you on?

A I'm on Page 1636 and also 1637. On Page 1636 what we're talking about here is the TSLRIC plus shared and common.

If you look under the third column of numbers where it's total TELRIC, you'll see the 438.03. Okay.

Now, go to the next page, which is 1637. This is each one of the work centers identified, and in the next to the last column you will see the direct costs for the first that we're dealing with. The total there for the TELRIC is 409.71.

So looking at the second set of numbers, they're divided up. You have like one category of

functions and then the second category. You'll notice that under the service inquiry job function code 2300, the customer point of contact is listed here as ICSC. That is really the LCSC. The reason it was listed as the ICSC is that's what it was originally called when we started this particular analysis.

So associated with that, if you go over to the next to the last column, you will see $4.54. That is the cost associated with handling the manual service order by the LCSC.

Q Ms. Caldwell, the third item in this block of numbers that you're talking about that has the JFC 2300, that also relates to LCSC, doesn't it?

A Yes, it does. I was going to get to that.

Q I'm sorry.

A That one is the service inquiry where they're actually taking the information and sending it on to contact to see if there are facilities, and the numbers associated there is 43.90, I believe.

Q Are there any other tests described on this page relating to the LCSC?

A Let me just review them just to be absolutely sure. (Pause) Not in this particular section.

Let me just explain to you that the top

section up there is just to calculate the TSLRIC portion, so the actual times would be repeated whether it's TSLRIC or TELRIC.

Q So then looking at this particular UNE for loop distribution 2-wire, of the $409 TELRIC nonrecurring cost, approximately 47, $48 relates to LCSC activity; is that correct?

A That's correct.

Q Do you know whether that relative proportion, roughly, you know, 10, 12%, would hold for the other UNEs?

A No. It's not going to hold, because the other UNEs -- depending on what you're actually discussing here, is when you're dealing with the distribution or the ADSL or the HDSL loops, you could have service inquiry.

When you move into the other services, such as the DS-1, those activities would have different work times, because the loops that we're looking at here, for instance, like this distribution, it requires a lot of more activity for service inquiry and things of that type, because we're actually having to see if the facilities are available and if they are conditioned to provide the service.

So I feel that that percentage is a little

bit higher for this one, but I would have to look at them to verify for each one.

MR. LEMMER: That's all I have. Thank you.

CROSS EXAMINATION

BY MR. ADELMAN:

Q Good afternoon, Ms. Caldwell, Mr. Zarakas. I'm David Adelman. I represent MCI. Nice to see you again.

A **(Witness Caldwell)** Good afternoon.

Q Let's start with you, Ms. Caldwell, and ask you a few questions that follow up on some topics we discussed during the discovery phase of this proceeding.

You are sponsoring the cost model and cost analyses which supports the rates and pricing related to physical collocation, correct?

A Yes.

Q And we talked a little bit about the application fee. What is the claimed cost associated with the services related to the application fee for Florida, the physical collocation application fee?

A You mean the value?

Q The costs. What does your study and analyses show as the costs which support the proposed rate for the application?

A I'm looking at the cost summary, which is Page 3 of the summary. It's in Section 1 of P-1 of the study.

This is the TSLRIC plus shared and common. The application cost is $7,186.

Q And that is, generally put, the cost of providing an estimate for physical collocation to an ALEC; is that correct?

A Yes.

Q Just so I understand, before an ALEC can even know what it would cost for physical collocation in a particular central office in Florida, that ALEC must go out of pocket for at least $7,000; is that correct?

A Yes. That's the cost associated with determining if there's space, and then what it would cost or -- excuse me -- to determine an estimate of what it would cost to provide that space.

Q What is the price? Is the price equal to the cost in the case of the application fee? Do you know?

A For physical it is the same.

Q Now, going beyond that $7,000 application fee, let's assume that the ALEC wants to collocate in a particular central office. There are costs

associated with that, correct?

A Yes.

Q And included in that are the costs associated with job functions performed by the I-N-A-C, INAC, correct.

A That's correct.

Q What does that stand for, I-N-A-C?

A I believe it's interexchange network access center.

Q Tell me what the service -- what services are performed by the INAC group?

A One of their functions is to coordinate among all the individual departments that would be working on the collocated space, such as your engineering group, your building group, your central office. So they perform a coordination function is one of the items that they do.

They also coordinate with the -- through the marketing organization, but they coordinate with the individual ALECs to determine what their requirements are to be sure that we understand them and that we're meeting those.

Q So it's a group of people, more than one person, that coordinates other groups of people, including engineers and marketing types, correct?

A Yes.

Q What are the costs, according to your study and analyses, associated with the job functions performed by the INAC group?

A I would need to look at the study. It will take me just a minute.

Q Sure. In the interests of time, I'll take a rough estimate.

A I'm sorry. I can't quite lay my hand on that. I'm just trying to remember that the percentage of time that would have been associated with them -- I know they have a significant number of activities associated with them. But I'm sorry; I can't put my hand on it right now.

Q Is it more than $1,000?

A Where I'm having some difficulty is the way the particular cost study is laid out in naming the functions. So maybe this will get to your point. In other words, in just looking at that individual center. The marketing cost is greater than $1,000, and that would include some of those activities that we have been talking about.

Q How much greater than $1,000?

A This one is 1,100.

Q Now, you said that would include --

A Oh. Excuse me. I'm sorry. That is the TSLRIC number. So since we have been talking about TELRIC, let me be sure we have the record straight. That is about 1,500.

Q And you said that 1,500 includes some of the costs associated with services performed by the INAC but not all, correct?

A Yes. I'm just not quite sure how these numbers are laid out. In the cost study on Page 1907, it does have each one of the individual centers pointed out. INAC is not listed separately. It appears to be associated with some of these visits in one of the job bands.

Q Just so I understand, then, if I wanted to look at the cost study and determine what I'm paying for and I wanted to see how much I pay for the services performed by the INAC, I wouldn't be able to do that, would I?

A Not from just this page. However, we have provided data requests that detail each one of these activities. So there is a cross-reference in the data request.

Q You said you were looking at Page 1907; is that correct?

A Yes.

Q The TELRIC number for the combined six job functions described on that page equals to something in excess of $6,700; is that correct?

A Yes.

Q And that includes some coordinating functions and marketing functions, correct?

A Yes, it does.

Q Now, is the cost associated with the INAC and these marketing functions, the 67-plus-hundred-dollar cost, is that the same for the first request for a particular central office as it is for additional requests for that same central office?

A Yes, it is.

Q In other words, if MCI Metro were to request physical collocation for the Hialeah central office, they would incur -- or BellSouth claims there would be this $6,700 incurred for these coordinating functions, correct?

A Yes.

Q And then if the next week AT&T made a -- made the same request for physical collocation in the Hialeah central office, BellSouth claims there would be the same $6,700 costs incurred, correct?

A Yes. We would coordinate the CLEC's request and, again, in the building be sure this facility is

available.

Q So would you agree, then, that it is BellSouth's position that there are no economies realized as a result of multiple requests for physical collocation?

A That is correct, because each request is unique.

Q But the INAC, for example, coordinates with engineers, and engineers go to the Hialeah central office and examine the space as part of that initial collocation request, correct?

A Yes.

Q And then a week later, this time acting on AT&T's request, they go to that same central office and look at that same space, the same engineers, but it still costs the same; is that correct?

A Yes. They go back to inspect to be sure that their facility is still available and exactly where that collocator's equipment would be positioned, depending on what that order --

Q But you have assumed -- I'm sorry.

A I was just saying, depending on what the CLEC was going to place.

Q I understand. And the same would be the case for the third, fourth, fifth request for the same

central office, correct?

A Yes.

Q So is it fair to say that BellSouth assumes no economies of scale and scope when it comes to job functions related to physical collocation?

A For the application, that's correct.

Q Well, we're past the application now. We're going forward with the activities of the INAC and in the marketing group, et cetera; correct?

A Okay.

Q Same answer; no economies of scale and scope?

A In terms of the rate elements, such as your cable support structure, your power, those particular elements that have costs associated with them, those are unique for each individual collocator.

The one economy of scale or scope that you would incur in any of these items would be where we applied utilization factors that's based on sharing with multiple collocators, as well as sharing with BellSouth.

In terms the ICB -- which I did not prepare the costs for; I only know some information about it -- there is -- when the actual wall that may separate BellSouth from the collocators is built, that

is prorated. So that must be considered between more than one locator.

Q I understand. You're getting a little bit ahead of me. We'll get to that. Right now I'm talking about the marketing and engineering coordinating function. I'm talking about before there is any space preparation.

A Okay. In that case they would be the same for every collocator.

Q Meaning there are no economies of scale and scope assumed for purposes of BellSouth's determination of costs associated with those functions, correct?

A That is correct. Every collocator is unique.

Q But not -- when you say every collocator is unique -- before we leave this point -- I'm talking about the same central office, and a request that comes in, let's say, on consecutive days; MCI on day one, AT&T on day two. They both want physical collocation. They both want to do it in the Hialeah central office. There's no savings associated with those two virtually identical applications for that same central office; is that your assumption?

A Yes.

Q You referred to ICB. What does ICB stand for?

A Individual case basis.

Q And is it correct that BellSouth is urging this Commission to adopt a policy whereby the charges for space preparation associated with physical collocation are set at ICB, individual case basis?

A Yes. I believe Mr. Varner discussed that earlier.

Q And you are the witness responsible for providing cost support associated with physical collocation rates including space preparation; is that correct?

A We did not conduct a cost study for space preparation because it would be for each individual customer. So I do not -- I am not sponsoring a cost study for that one.

Q And just to be clear, BellSouth is not sponsoring a cost study through any other witness in this proceeding which provides costs associated with space preparation for physical collocation; is that correct?

A That is correct. It would be handled on a case-by-case basis.

Q But there are witnesses appearing later in

this proceeding for other parties that have provided cost analyses associated with space preparation. You're aware of that, aren't you?

A Yes, I am.

Q So you'd agree, then, to the extent there is a study or analyses in the record, it's not one provided by BellSouth, correct?

A Yes, I would agree.

Q Let's move to nonrecurring charges, and what I'd like to do is talk about one job function by way of example.

I recognize that there are many nonrecurring costs that BellSouth claims are associated with the elements which are the subject of this proceeding, and I want to talk about job function code 2300. You're familiar with that one, correct?

A Yes.

Q And can you just describe briefly for the Commission what is encompassed or what is covered by job function code 2300?

A The 2300 job function code is the job function code associated with the service representative in the LCSC, which stands for the local carrier service center; and their function is to take service orders over the phone.

They also, if there is a fallout from the electronic interface, they would handle that fallout by calling the ALEC, getting the information, and in some cases talking with the ALEC and the ALEC's customer to process the order.

They also talk with the customers on a going-forward basis about -- and in this case the customer would be the ALEC -- the ALEC about any service changes, any questions the ALEC could have about their individual customers. That's their activities.

Q So it's correct that ALECs placing orders electronically would have some interaction with the LCS, correct?

A Yes.

Q That is where there is fallout or some kind of error in BellSouth and there is no electronic way of notifying the ALEC that the error in the order has occurred, correct?

A That is an example, yes.

Q And BellSouth -- the studies you're sponsoring assume a 20% fallout rate. I think you said that in response to a question by Mr. Lemmer, correct?

A Yes.

Q Now, for job function code 2300 the LCS functionality, tell me what is the charge or what is the cost which you have included for the NRC associated with 2-wire loop distribution for functions performed under job function 2300 by that room full of people?

A Okay. I think that was the question we talked about earlier.

Q It is. And if it's helpful, you might want to refer to your Late-filed Deposition Exhibit 18. That's the one you filed today.

A Yes. Do you have the number, Mr. Adelman?

Q The number? I'm sorry. My pages aren't numbered.

A I've got the late-fileds.

Q My pages aren't numbered. It's Item No. 18.

A Oh. That's fine.

Q Have you located that document?

A Yes. Thank you.

Q And you provided the information in response to that request, correct?

A Yes.

Q And is it correct that as reflected in this document, for 2-wire loop distribution, BellSouth in your study has assumed and thus charged ALECs, or

proposes to charge ALECs, for .05 hours, or three minutes, for each loop order, correct?

A For each loop on the order.

Q Okay. In other words, it's calculated on a per-loop basis, not a per-order basis; correct?

A That is correct.

Q So you would assume three minutes of work by this room full of people for an order of one loop, correct?

A Yes. That three minutes is calculated by 15 minutes to handle the order times a 20% fallout.

Q I understand. And if there was an order by an ALEC, such as MCI, for 20 loops, one order, 20 loops, how much time have you assumed for purposes of charging in our example MCI for processing that order?

A We have assumed in the cost study three minutes per loop. So that would be three minutes on the first and then three minutes for each additional, which would be -- in this particular case I believe you said 20.

Q Yes.

A So it would be 60 minutes.

Q So it would be one hour. In both cases, in the order for one loop and the order for 20 loops, it was one order, just to be clear; correct?

A In your example, yes.

Q So is it fair to say that for purposes of the job function 2300 costs associated with 2-wire loop distribution, BellSouth has not assumed any economies of scale or scope associated with processing those orders?

A Yes. The information from the LCSC provided to the cost organization was that for each item on the order it would take them 15 minutes to clear that particular fallout.

Q Now, let's look at the late-filed data requests, or deposition request. What you were asked to do there is assume that there were economies of scale and scope; in other words, assume that the job function 2300 services could be performed on a per-order basis versus a per-loop basis; is that correct?

A Yes.

Q And you calculated the difference, or I'll call it the savings, associated with that changed assumption, correct?

A That is correct.

Q And what is the difference, or the savings as I'll call it, if you changed that assumption?

A All right. For the distribution, the A.2.2

for the first there is no change because that would still include the three minutes.

You see it in the additional in the far right-hand column of -- this is again Item No. 18, Page 1 of one, is $14.55.

Q And that is a savings of $14.55 if we simply assume that the work is performed on a per-order versus per-loop basis, correct?

A That is correct.

Q What's A.11.1? Tell me what that is. That is the analog voice grade loop and cost element, unbundled two-wire loops, incremental cost manual service order, correct?

A (Witness Caldwell) Yes.

Q And what is the savings there? If we just change that one assumption, we assume that it's going to be processed manually on a per order versus per loop basis?

A For the first there is no difference, for the additional it's $11.64.

Q And would you agree that there are other NRCs, or nonrecurring charges, where BellSouth has assumed that orders are processed by BellSouth personnel on a per loop or per element basis as opposed to a per order basis?

A Yes, there are certain items that are required, for instance, in terms of some of your engineering, it's required to engineer each loop, that type of thing.

Q And I know we talked about some of those during your deposition, and you indicated to me that Witness Landry would be a good person to talk to about those?

A Yes. Excuse me. In particular for the work times assigned to each one of those work centers.

Q Let's talk about switching a little bit.

A Okay.

Q Vertical features, what are vertical features? Can you tell the Commission what vertical features are, please?

A They are a software generated functions of the switch that provide additional capabilities to your line. Falling in that category are your custom calling features, such things as three-way calling, call waiting, things of that type.

Q And these are features that are built into the switch or port for purposes of this proceeding, correct?

A They are -- they have been identified in the cost for each item separately for each feature, and

then they would be associated overall with the port in the end when Mr. Varner establishes his rates.

Q Right. And you are the witness responsible for providing the Commission with cost support in support of the rates Mr. Varner is sponsoring, correct?

A That is correct.

Q And you relied on the "SCIS", or SCIS model, in part, for costs associated with the port, including vertical features, correct?

A Yes. We use the SCIS which is a model provided by Bellcore. We use the model office portion as well as the intelligent network portion referred to as SCIS/IN.

Q But the SCIS and the SCIS/IN model do not provide, in BellSouth's opinion, the full amount of costs associated with the switch because BellSouth alleges there are additional costs associated with these vertical features, correct?

A I'm not sure I follow you. What we have in the cost study is we have -- from SCIS/IN we have the cost associated with the switch itself, the investment in the processor. Then in addition to that you have right-to-use fees, which are fees you pay for use of the software, and that is calculated separately.

SCIS/IN does not calculate right-to-use fees which are your expensed items.

Q Okay. That's all I'm asking. BellSouth alleges that the costs associated with the port are covered in the SCIS model and include these RTU fees which are not covered by the SCIS models, correct?

A Yes.

Q And has BellSouth provided detailed cost analysis and information associated with the RTU fees to the Commission?

A We have provided a list of the right-to-use fees, which features they are associated with, and then we have converted them to cost for each one of the items.

Q When you say a list of RTU fees, have you explained how the RTU fees are allegedly assessed on BellSouth? And by this, I mean have you made the distinction between RTU fees which are -- which you claim are incurred by BellSouth on a per use basis as opposed to assumed loaded into the port?

A I don't think I quite follow the question.

Q Okay. Let me rephrase it then. How many vertical features are there?

A Approximately 28.

Q Okay. And for those 28, does BellSouth

claim there's an RTU or an additional cost for all of them?

A To the best of my memory, yes.

Q Okay. And we'd be able to look in your cost study and determine whether that is correct or not?

A Yes. For each individual feature the right-to-use cost is identified separately.

Q Okay. And these RTUs, or right-to-use fees you claim are fees charged by the switch vendors to BellSouth, correct?

A For the software, correct.

Q And you agree that in some cases the -- even BellSouth claims that the RTU fees are only charged by the vendor if the vertical feature is used or engaged, activated. Is that correct?

A It depends upon the switch. For the right-to-use feature associated with the switch, excuse me -- for the right-to-use features that we have associated with the features, each one of these is paid when a switch is activated with that particular package that includes that right-to-use fee. And that is different depending upon the switch type, whether it be a 5ESS, which is a Lucent switch, or if it be the DMS-100, which is the Northern Telecom switch. And we handle the cost associated with the

right-to-use fees uniquely. In particular, in the 5E, when you buy the switch and you equip it, there is a certain amount that you pay per line, and it includes various features. With that we assign that cost to the line, and it is identified in the port studies separately.

For the DMS-100 that is definitely different in how the vendor charges for the right-to-use fees. Each one of the packages that we pay for is included on the -- excuse me, in the feature study for each individual feature.

Q Okay. Let's talk about the DMS-100 switch. There are just two switches that you assume for purposes of your study?

A Yes. In our study we only use the two switches I mentioned.

Q Okay. The DMS you said -- for the DMS, at least, in layman's terms is it fair to say that the software associated with the vertical feature is included with the switch? In other words, the assumption is that it's installed in the port and is available for use by BellSouth?

A Unless I got my switches backwards, which I probably need to check, the 5E comes with the package associated with the lines. You pay for it on a per

line basis.

Q And for the 5E are you proposing that pricing or rates be based not only on what the SCIS model generates but also on the RTU adder?

A Yes, we have that number on per line basis, and we amortize it over the life of the switch, which in this case is going to be ten years.

Q Okay. And for the DMS-100 you allege that you get a switch, but you don't get the software associated with the vertical features; is that correct?

A You pay for packages that include certain groups of vertical features, and there are several packages listed in the cost study.

Q And when BellSouth pays for these packages -- well, does BellSouth pay for the packages and fully load all of their switches today?

A I cannot answer for every feature, but for the predominant features such as your call waiting, your three-way calling, we do equip the switches when they are placed with those particular functions.

Q And that's part of the investment in the switch on BellSouth's books, correct?

A No, it's not part of the investment. It is an expensed item, so it's handled separately. It's

never included in the investment for that switch.

Q Mr. Zarakas, I'll talk to you for you few minutes.

I listened to your summary, and tell me if this is a fair characterization. You claim that the Commission needs to decide just how hypothetical a study should be used for purposes of determining UNE costs in Florida; is that correct?

A (**Witness Zarakas**) That's correct.

Q And you claim that the BellSouth study sponsored by Ms. Caldwell is the lesser of the hypothetical study. Is that the distinction you're drawing?

A Lesser compared to what?

Q I don't know, that's what I'm asking you. What have you compared the BellSouth study to?

A In general looking at other models that have been brought forth by industry in general.

Q But you haven't done an in-depth analysis of any other forward-looking study for a telecommunications network, have you?

A We've looked at, I think, most of the studies and models that have been used in industry; most of the models and studies that have been used in this jurisdiction and others. But as far as a

detailed in-depth look at all of the nuances of them, no, we have not done that.

Q Can you please identify a single study for which you or your firm spent more than, say, 200 hours looking at other than the BellSouth study?

A I don't think we tracked it by hours, but I'm going to say we probably didn't look at any study for more than 200 hours.

Q You have, I assume, looked at the BellSouth study for more than 200 hours?

A Oh, yes.

Q Now, of course, you didn't conduct an engineering review of that study, did you?

A That is correct.

Q What you did was you looked at information provided to you by BellSouth for purposes of your verification, correct?

A Well, I think that you might have mischaracterized our involvement with the BellSouth model. We were involved in developing the BellSouth model, working with personnel from BellSouth to put the TELRIC calculator and aspects of the cost study together. I think what you were referring to at the end there was the information that actually went into that cost study came from BellSouth personnel.

Q Okay. Thank you. That is what I was referring to. The inputs, I'll call them.

A That's right.

Q You did not do any review of the inputs put forward by BellSouth before this Commission that was independent of BellSouth, did you?

A That's a fair characterization. We developed guidelines. We spoke with all of the subject matter experts to make sure that they were taking a forward-looking approach. But we did not bring our own engineers in, our own network people, et cetera, to come up with their own independent numbers. BellSouth experts are the ones that came up with the inputs.

Q Well, not even talking about bringing in your own engineers and looking at it, you didn't communicate with anyone outside of BellSouth for purposes of verifying those inputs, did you?

A That's right. We used BellSouth experts. That's what I meant to imply there.

MR. ADELMAN: I have no further questions. Thank you. Thank you.

CHAIRMAN JOHNSON: All right.

MR. SELF: Yes, I have some questions.

CROSS EXAMINATION

BY MR. SELF:

Q Mrs. Caldwell and Mr. Zakarias, my name is Floyd Self, and I'm representing WorldCom. If I could first ask Mr. Zakarias --

A (**Witness Zarakas**) It's a tough name. It's actually Zarakas.

Q I'm sorry. That's why I'll only ask you one question, then. (Laughter)

Does BellSouth Corporation or any of its subsidiaries have any financial interest or other economic or controlling interest in Theodore Barry and Associates?

A No.

Q Okay. And thank you.

Ms. Caldwell, I have that right, yes?

A (**Witness Caldwell**) Yes.

Q I want to follow up on some of what, I guess, got started with Mr. Varner earlier. And I'll tell you up front what I'm ultimately trying to get to, if that will help in the questions that I'll ask you. And what I want to do is identify any electronic and manual order-taking costs that may be included on Exhibit AJV-1. And do you have the revised AJV-1

handy?

A Yes.

Q Okay. The first thing I'd like to ask you, just for illustrative purposes, is if you could, please, identify in cost study, the pages of the study that relate to the TSLRIC, plus shared and common costs, that relate to the two-wire ADSL loop that shown on Page 1 of AJV-1.

A You said the nonrecurring?

Q Yes.

A Okay. Give me just one moment. For reference let me be sure I'm talking about the correct numbers here. We're talking about element A.6.1 the manual of $661.10. Is that correct?

Q Yes. That one as well as the 619.76 in the electronic column.

A All right. The 661.10 is found on Page 1657, and the complete breakdown of the numbers that are used to develop the $661.10 is actually found on Page 1658, which is the next page that lists the centers. Okay.

Q Thank you. And now the electronic?

A The electronic is actually calculated by subtracting the manual from the $661.10. And the amount to subtract, the input sheet is Page 688.1,

that provides the breakdown of the work time --
(Pause)
Let me check one thing to give you another page reference, please.
Q Sure.
A All right. The amount that is subtracted is for 2-wire loop which we'll be talking about here in terms of 2-wire, should be $41.34. And that's calculated on Page 1670.0. Give me just a moment, please.
(Pause) Yes, that is the correct page.
Q Okay. If you could just walk me through the calculations so I can be certain that I understand how we went from manual to electronic.
A Okay. All right. First of all, let's talk about the manual.
Q Okay.
A All right. Let's turn to Page 1658. I'm going to keep referencing back to the numbers so that we're all together.
Q That will be fine.
A We're talking about the number on AJV-1 of $661.10.
Q That's correct.
A That number is found on Page 1657. It's in

bold print about the middle of the page under TELRIC. Move up to the top of that column, and you see the number $618.37.

Q Yes.

A Okay. Now go to the next page which is 1658. This is where that number is developed. Look at the bottom section numbers, second from the last column, you see the $618.37.

Q Okay.

A That number is actually calculated on this page, and I'll not talk through all of it, but I'll -- let me see if this will work.

For each work center that's listed over on the left, you will see the job function code of that work center, you will see the center that is actually performing the activity. And, again, I mentioned earlier while testifying that the ICSC, you need to think of that as the LCSC; that's simply a name change of the center. Under the installation, that is the work time in hours that that center would be involved, and we're talking about manual. That is multiplied times your labor rate which is four columns over.

The disconnect, which is first, is the third column over because we're just talking about the first so far, you have the disconnect work time. As you can

see, not all centers are included in disconnect. The disconnect work time is multiplied times the labor rate, and a discounted disconnect factor is applied. That factor is found in -- it's the tenth column over. And that's to account for the fact the work is performed in the future, but we're actually determining it up front. Okay.

So at this point you multiply your labor time times your labor rate for installation. You multiply your disconnect time times your labor rate, apply the disconnected disconnect factor, add the two numbers together, and the second to the last column includes the cost that would be attributed or caused by each one of these centers.

Q Okay. And if I understand correctly, the JFC code, 2300, those are the ones that pertain to the LCSC?

A That is correct.

Q And with respect to the 2-wire ADSL loop, there are actually three different amounts. If we were simply trying to pull out the LCSC cost, we would have to add on this particular sheet three different lines in order to get the total LCSC cost that's reflected on this sheet for ADSL.

A In terms of looking at the entire center,

that is correct. Those three numbers would represent the total cost associated with the LCSC.

Let me explain that earlier I mentioned the first item here that has the .08 hour, that is the cost really associated with the original service order. There is some additional service inquiry, that is because you're seeing if the facilities are available in this particular center. But they are all performed by the LCSC personnel.

Q Okay. Just so I understand that last comment, what you're saying is that there are some LCSC functions that are not associated with service ordering; is that correct?

A Yes. You have a service order and the individual will be working on the service order, but it's not just taking the service order. That's the distinction I'm trying to make. You have time associated with taking the order from the customer, but then there is additional service inquiry beyond that when the order is passed on to other centers to see if the facilities are available. That's just the distinction between the two work activities.

Q Okay. All right. So that's how we get the number ultimately that appears on AJV-1 in the manual column, the last column on Page 1 there, correct?

A Yes.

Q All right. And is the difference with respect to the 661.10 that appears in the manual column and the 619.76 that appears in the electronic column solely reflected by the difference of these three 2300 JFCs?

A In fact, it's normally just the first item that's listed here. What you're doing is you're taking the $661.10 and subtracting $41.34, and that number 41.34 is rate element A.11.1 that's listed on the cost summary. That number is calculated on Page 1670.1.

Q This $41.34 that appears on Page 1670.1.

A Yes.

Q Does that always reflect the difference between the numbers in the electronic and manual column for all of the rates that appear on AJV-1?

A No. There is a different number for each individual center.

Q And why is that?

A Well, it depends upon the activities and the original amount of time that was associated with this item. What you're dealing with here is A.11.1 is the unbundled 2-wire loop. So for any 2-wire loop, that would be the costs that you would be subtracting. So

this we're talking about is the ADSL, which is a 2-wire loop. But there are other rate elements in here, such as ports, et cetera, that would have different work times.

Q Okay. And the basis for the $41.34 that appears on Page 1670.1, backing up, there's a shared cost here of $8.77, approximately, and then a direct cost of 29.90, approximately.

A Yes.

Q Where did those two numbers come from?

A The next page, 1670.2. Looking at the bottom set of numbers, the second to the last column, you'll see the $38.67.

Q Yes.

A And then directly above that you will see the $29.90.

Q Okay. So am I correct in saying that with respect to revised Exhibit AJV-1 the difference between the number 661.10 in the manual column and the 619.76 in the electronic column solely reflects the difference between the manual service order taken; is that correct?

A That is correct.

Q And would that statement be true with respect to all of the other prices contained on

Exhibit AJV-1?

A Yes. The methodology is identical.

Q The methodology is identical. The numbers are different because the inputs are different?

A Yes.

Q All right. Give me just a moment here, please. (Pause)

All right. If I'm ultimately trying to get to the point of identifying for each of the rate elements that appear on AJV-1, this manual cost, at the moment there's not one convenient place to go find that number, correct? Let me try again.

A Repeat your question.

Q Let me try again.

If I just subtract the electronic -- the number appearing in the electronic column from the corresponding number appearing in the manual column, I will have captured all of the cost that's associated with the manual service order-taking; is that correct?

A For manual service order-taking, yes, associated with the LCSC.

Q Okay. With respect to the electronic column, are there any manual service order taking costs for LCSC that are included in that column?

A There are no manual service order taking

activities. There is a cost associated with fallout. The 20% that I was talking to Mr. Adelman about, that 20% is included in the electronic, which is the three minutes per order that we discussed earlier.

Q Okay. Just a moment please.

MR. SELF: Thank you very much.

WITNESS CALDWELL: You're welcome.

CHAIRMAN JOHNSON: We're going to take a 15-minute break, and then we'll begin with Staff's examination.

(Brief recess.)

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(Transcript continues in sequence in Volume 4.)

Volume 5

B

C

D

E

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