

BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

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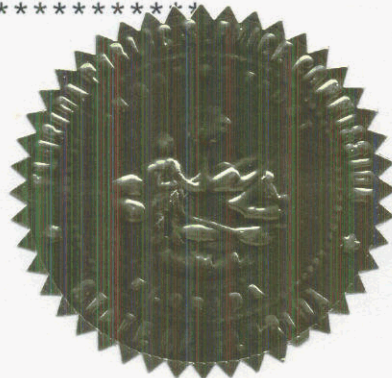
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In the Matter of : DOCKET NO. 990649-TP  
:   
INVESTIGATION INTO PRICING :   
OF UNBUNDLED NETWORK :   
ELEMENTS. :   
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PHASE TWO

VOLUME 9

Pages 1293 through 1354



PROCEEDINGS: HEARING  
BEFORE: CHAIRMAN J. TERRY DEASON  
COMMISSIONER E. LEON JACOBS, JR.  
COMMISSIONER LILA A. JABER  
DATE: Tuesday, September 19, 2000  
TIME: Commenced at 2:05 p.m.  
Concluded at 3:35 p.m.  
PLACE: Betty Easley Conference Center  
Room 148  
4075 Esplanade Way  
Tallahassee, Florida  
REPORTED BY: TRICIA DeMARTE  
Official FPSC Reporter  
(850) 413-6736  
APPEARANCES: (As heretofore noted.)

DOCUMENT NO.  
11926  
9-21-00

## I N D E X

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## WITNESSES

PAGE NO.

D. DAONNE CALDWELL

Continued Cross-Examination by  
Mr. Lamoureux  
Cross-Examination by Mr. Melson1297  
1326

## E X H I B I T S

NUMBER	DESCRIPTION	ID.	ADMTD.
97	Ennis Deposition Transcript and Exhibits	1296	1296
98	Stinson Deposition Transcript and Exhibits	1296	1296
99	Zitzmann Deposition Transcript and Exhibits	1296	1296
100	McCracken Deposition Transcript and Exhibits	1296	1296
101	Murphy Deposition Transcript and Exhibits	1296	1296
102	Latham Deposition Transcript and Exhibits	1296	1296
103	Pate Deposition Transcript and Exhibits	1296	1296
104	Cost study worksheet FL-ULM.xls	1351	

CERTIFICATE OF REPORTER

1355

## P R O C E E D I N G S

1  
2 (Transcript continues in sequence from  
3 Volume 8.)

4 CHAIRMAN DEASON: Call the hearing back to  
5 order. I have in front of me a list of exhibits from  
6 BlueStar Networks, Incorporated. I assume this list has  
7 been shared with all the parties?

8 MR. BRESSMAN: Yes, we believe it has been.

9 CHAIRMAN DEASON: Okay. Very well. We will go  
10 ahead and identify the exhibits on the list, and I'll just  
11 number them beginning with the first and proceeding  
12 consecutively. They will be numbered: 97, 98, 99, 100,  
13 101, 102, and 103.

14 Any objection to the exhibits which have been  
15 identified 97 through 103?

16 MR. ROSS: Mr. Chairman, I don't have an  
17 objection, but I believe our agreement with counsel was  
18 that we had no objection to the depositions provided the  
19 errata sheets were included as part of the deposition. I  
20 have not checked to verify that each of the errata sheets  
21 is in fact included to the extent one was provided, but if  
22 counsel will represent that fact, I have no objection.

23 MR. BRESSMAN: That's has, in fact, happened.  
24 The errata sheets are attached.

25 CHAIRMAN DEASON: Very well.

1 MR. ROSS: Thank you, Mr. Chairman.

2 CHAIRMAN DEASON: With that clarification then,  
3 show that Exhibits 97 through 103 are admitted.

4 (Exhibits 97, 98, 99, 100, 101, 102, and 103 are  
5 admitted into evidence.)

6 MR. BRESSMAN: Mr. Chairman?

7 CHAIRMAN DEASON: Yes.

8 MR. BRESSMAN: I just wanted to point out, there  
9 is one more deposition, the deposition of Mr. Greer. And  
10 we're just trying to work out the final confidentiality  
11 provisions on that, and we'll file that as a separate  
12 exhibit.

13 CHAIRMAN DEASON: Very well. Staff, do you have  
14 some language for a proposed issue?

15 MS. KEATING: I believe we do. Actually, we  
16 were going to suggest having two legal issues. The  
17 first one would be Issue A, and that would be, "What is  
18 the current state of the law with regard to the use of a  
19 forward-looking cost methodology for computing rates for  
20 unbundled network elements?"

21 Then Issue B would be, "Based on the current  
22 state of the law set forth in Issue A, what is the  
23 Commission's authority to establish rates for unbundled  
24 network elements at this time?"

25 CHAIRMAN DEASON: Okay. Any objection to the

1 wording of those issues? Hearing no objection, that will  
2 be satisfactory. And the parties will be allowed to brief  
3 those; is that correct?

4 MS. KEATING: That's correct. You may want to  
5 specify, though, an extended page limit from that that was  
6 set forth in the prehearing order.

7 CHAIRMAN DEASON: What is the limit within the  
8 prehearing order?

9 MS. KEATING: It's 80 pages.

10 CHAIRMAN DEASON: Eighty? Well, we can extend  
11 it then to 100. How about that? Is that sufficient?

12 No one is objecting; it must be fine then.

13 Who's going to read all of those?

14 Any other preliminary matters before we resume  
15 cross-examination? Okay. You may proceed.

16 D. DAONNE CALDWELL

17 continues her testimony under oath from Volume 7:

18 CONTINUED CROSS EXAMINATION

19 BY MR. LAMOUREUX:

20 Q Hello, again, Ms. Caldwell.

21 A Hello.

22 Q When we broke, we were talking about network  
23 terminating wire and intrabuilding network cable. And all  
24 I'm trying to get at is a bottom-line comparison of the  
25 recurring and the nonrecurring costs for NTW versus INC.

1           What I've written up on the board at the break  
2 are just the rates out of the rate sheet. And you can  
3 confirm that I have written the numbers up there  
4 correctly, but just to short circuit this process, when I  
5 want to gain access to the network terminating wire, I pay  
6 about 46 cents on a recurring monthly basis, and I pay a  
7 \$65 one-time nonrecurring fee, and that gets me everything  
8 I need to gain access to that network terminating wire.

9           Whereas on the INC side, the recurring rate is  
10 about \$3.87, and I have to actually pay three separate  
11 nonrecurring charge elements of \$113, \$333, and \$109 for a  
12 total of about \$555 to gain access to that INC. Is that  
13 comparison correct?

14           A     I don't think the NRC for INC is on a per pair.  
15 I think that may be a difference.

16           Q     Okay. Well, let me see if I can ask some  
17 questions about that. On the NTW situation when I pay my  
18 46 cents and my \$65, what that gets me access to is the  
19 pair of NTW that I want to serve a tenant in the garden  
20 apartment; correct?

21           A     That is correct because BellSouth prewires all  
22 of the pairs to the access terminal.

23           Q     Okay. And on the INC situation, the first ALEC  
24 that gains access in that equipment closet in the basement  
25 will have to pay the whole \$555 for the entirety of that

1 25-pair access terminal that BellSouth will install in the  
2 equipment closet for the ALEC to gain access to the INC;  
3 is that right?

4 A The bottom two numbers are associated with the  
5 25-pair panel.

6 Q Okay. All right. Let me see if I understand it  
7 then. For the INC situation, the high-rise building, if  
8 you will, the ILEC will pay \$442 to have the 25-pair panel  
9 installed, and then for the pair of INC, it will pay a  
10 recurring rate of 387 and \$113; is that right?

11 A I believe that is correct.

12 Q Okay. And the first ALEC that gains access to a  
13 high-rise building basically will pay for the entirety of  
14 that panel to be installed in the equipment closet, the  
15 whole \$442; is that right?

16 A They pay for the panel to be installed, but I  
17 may need to defer this one to Mr. Milner, but my  
18 understanding from what I've included in the cost is that  
19 that is -- that panel is dedicated to an individual ALEC.  
20 It's not shared, as in the NTW, which could be a different  
21 scenario. So when you talk with the first one in there,  
22 they are paying for the setup of the panel that they will  
23 use. But we do need to verify that through Mr. Milner on  
24 the technical specifications.

25 Q Well, and just as an example, let's say an ALEC

1 is able to obtain as a customer one tenant in a high-rise  
2 building and that tenant only has ten lines, for example.  
3 To gain access to that building, the ALEC will have to pay  
4 for the entirety of the 25-pair panel to be installed in  
5 the basement of that building, even though that ALEC may  
6 only need ten lines' worth of INC?

7 A Yes. And that's because we assign or dedicate  
8 that panel to the individual ALEC, and it comes in -- 25  
9 is the smallest pair of panel that I know of that you can  
10 get.

11 Q Can you tell me why BellSouth assigned or  
12 allocated the cost of the access terminal on a per pair  
13 basis for NTW but assigned the entire cost of the access  
14 panel to the first -- to an individual ALEC for INC?

15 A Okay. The underlying cost assumptions, I'll  
16 have to differ to Mr. Milner for the technical reasons to  
17 why they are handled differently. I can tell you how I  
18 costed them, but he'll have to explain the why.

19 Q Okay. From a cost perspective, can you tell me  
20 why, or is it all technical reasons?

21 A It's really technical reasons. From a cost  
22 standpoint, I had just costed those two structures.

23 Q And the bottom line is, they are costed  
24 differently. You pay for the terminal on a per pair basis  
25 for a network terminating wire, but you pay for the whole



1 panel for an INC?

2 A Yes, from a cost standpoint, but I believe  
3 Mr. Milner can discuss the reasons why.

4 Q Okay. At Page 54 of your rebuttal testimony --  
5 it must be your direct, I'm sorry. That's not right  
6 either. Oh, it's Page 54 of your rebuttal, I'm sorry.  
7 And I think you just said this in your testimony as well.  
8 You say that access terminals for INC are dedicated to a  
9 particular ILEC -- or ALEC; correct?

10 A Correct.

11 Q Now, that's only because that's the manner in  
12 which BellSouth requires ALECs to connect up to INC, is it  
13 not?

14 A That's the manner in which BellSouth provides  
15 it, but Mr. Milner has to discuss the technical reasons we  
16 provide it that way.

17 Q So you wouldn't know whether there are any  
18 technical reasons that access terminals have to be  
19 dedicated to a single ALEC in the INC situation?

20 A No, that's not my question.

21 Q Okay. Let's change subjects. One of the issues  
22 in this proceeding is the mix of DLC vendor equipment at a  
23 given DLC site in the model. Would you agree with me on  
24 that?

25 A Correct.

1 Q Okay. And in order to arrive at an aggregate  
2 mix of DLC vendors, the BellSouth cost model uses a mix of  
3 vendors at each DLC site; is that correct?

4 A Not really. What we do is, we develop the total  
5 cost of Vendor A for a system and the total cost for  
6 Vendor B. And then what we do is, at each location, we  
7 put the probability that it will be a Vendor A ring or a  
8 Vendor B ring. So you never actually mix the equipment at  
9 the remote site because it's just a method of calculating  
10 those probabilities.

11 Q Do you have a copy of your deposition  
12 transcript, by any chance, there?

13 A No, I don't.

14 Q Okay. What I've handed you is a copy of the  
15 transcript from your deposition, Page 196, and there's  
16 some highlighted passages at the beginning of that page.

17 Do you recall that I asked you in your  
18 deposition whether the BellSouth cost model mixes DLC  
19 vendors at each site?

20 A We talked about it, I do remember that.

21 Q Do you recall what you -- can you read what your  
22 answer was to that question at the deposition? In  
23 particular, Line 4 of Page 196, didn't I ask you, "Does  
24 BellSouth's cost studies mix vendors at each site"?

25 A Okay. The question was BellSouth -- "Well,

1 BellSouth means -- actually mixes vendors at each site,  
2 does it not?"

3 And I said, "To reach the aggregate, yes."

4 Q Is it your testimony that that's not correct?

5 A No. I mean, my testimony is that the way I  
6 worded this answer in the deposition is not correct. If  
7 in actuality you meant that we put Vendor A and Vendor B  
8 on the same ring, what we did was, we -- internal to the  
9 model, we calculated -- I think the weighing is something  
10 like a 60/40 weighing. So we have a System A that could  
11 be 60 percent, a System B that could be 40 percent, so  
12 what we did is at each individual site, we took a 60/40  
13 weighing, but that doesn't mean that we actually put  
14 Vendor A at site one and Vendor B at site two.

15 Q Well, from a cost perspective, doesn't it  
16 reflect the fact that at a given site, you've got  
17 60 percent of cost associated with Vendor A and 40 percent  
18 cost associated with Vendor B?

19 A The numbers reflect that, but I don't look at  
20 that as mixing vendors at different sites on a location.  
21 I think of that more as a probability that that's Vendor A  
22 at that site or Vendor B.

23 Q So there's a 60 percent probability that Vendor  
24 A is at that site and a 40 percent probability that Vendor  
25 B is at that site?

1           A     Correct. And that is assumed at every location  
2 around the ring, so you don't mix vendors on the ring.  
3 That's the only point I'm trying to make.

4           Q     Now, in reality at any given DLC site, there's  
5 only going to be one set of vendor equipment; right?

6           A     That's correct.

7           Q     Okay. So there's never going to be a situation  
8 where a vendor site is 60 percent chance of Vendor A and a  
9 40 percent chance of Vendor B. It will either be Vendor A  
10 or Vendor B at that site?

11          A     It will be Vendor A or Vendor B, but it's a 60  
12 percent probability it will be Vendor A and 40 percent  
13 will be B. It's just a modeling assumption.

14          Q     I meant in the real world, you're never going to  
15 have a situation where a technician walks out to a DLC  
16 site and there's a 60 percent chance that it's Vendor A or  
17 a 40 percent chance of Vendor B. He'll be able to look at  
18 that site and say, it's Vendor A or it's Vendor B.

19          A     Yes, I agree with that. But the 60/40 split in  
20 the model is just a modeling convention. It doesn't mean  
21 that I'm really going to put 60 percent of one vendor and  
22 40 percent of another. It's just a modeling convention.

23          Q     Okay. But what AT&T and MCI have done in  
24 rerunning the BellSouth model is assume that every site is  
25 either Vendor A or Vendor B depending on whether it's less

1 expensive for Vendor A or Vendor B's equipment to be at  
2 that site. Would you agree with me on that?

3 A That is my understanding. The problem with that  
4 is, you mix vendors on a ring.

5 Q We'll talk about that in a second.

6 A Okay.

7 Q If you could, turn to Page 29 of your rebuttal  
8 testimony for me. Towards the bottom around Line 20, you  
9 say that using BellSouth's methodology, if one were to  
10 examine the cost of each IDLC site individually, some  
11 would potentially be high but others would be lower than  
12 if one were to use the methodology purposed by Mr. Pitkin  
13 and Mr. Donovan; correct?

14 A Yes.

15 MR. LAMOUREUX: Okay. I'd like to hand out an  
16 exhibit. This is already an exhibit behind Mr. Pitkin's  
17 and Donovan's testimony, so I'm not going to need to have  
18 it marked or anything. But for the record, it's  
19 Exhibit 9 to their testimony.

20 Q Ms. Caldwell, have you seen this exhibit to  
21 Mr. Pitkin's and Mr. Donovan's testimony before?

22 A I think I have seen it. I don't remember a lot  
23 of detail about it, but yes.

24 Q All right. If you would, assume with me that  
25 the numbers on here are accurate. Okay. That for given

1 sites with certain number of lines, the amount of  
2 investment represented on the left-hand side is the right  
3 number to go with each site. Okay?

4 A Okay.

5 Q And let's take as an example -- let's look at a  
6 site that has 960 lines. Okay. Would you agree with me  
7 that it's always going to be less expensive to use Vendor  
8 B at that site because Vendor B equipment is always less  
9 expensive?

10 A I'm trying to think how this works with the  
11 other systems in the ring. If all you were doing is just  
12 looking at the cost associated with that individual site,  
13 then Vendor B would be less. I would agree with that.

14 Q It would always be less; correct?

15 A I believe so at that site.

16 Q Okay. And at that site, since Vendor B would  
17 always be the less costly alternative, any mix that  
18 included some amount of Vendor A and some amount of Vendor  
19 B would always be more expensive than just using Vendor B;  
20 correct?

21 A At that individual site, but what you have to  
22 remember is, you have to look at the ring as a whole, and  
23 you have the CO, and then you have at a minimum three  
24 nodes on that CO. So you want to look at the cost of the  
25 entire ring with all the sites, not each individual site.

1 Q And I understand that, and I'll get to that in a  
2 minute, but I just want to focus on that specific site.  
3 Let's say there are no constraints on the equipment that  
4 can be deployed on that site because of the ring. Okay.  
5 If I just looked at that site, would you agree with me  
6 that it's always going to be less expensive to use Vendor  
7 B and that trying to put some sort of mix of Vendor A and  
8 Vendor B at that site is always going to be more expensive  
9 than just looking at Vendor B?

10 A From just the pure numbers, I would agree with  
11 you.

12 Q Okay. Conversely, let's -- if you look at a  
13 site with, say, 448 lines, would you agree with me that  
14 it's always going to be less expensive, again, without the  
15 constraints of what equipment you can deploy because of  
16 the ring, just looking at that site, it's always going to  
17 be less expensive to use Vendor A and that trying to mix  
18 somehow Vendor A and B together is always going to be more  
19 expensive than just deploying Vendor A?

20 A Right.

21 Q And generally, there's a crossover point, and in  
22 this case it happens to be seven sites with 768 lines,  
23 that above that breakpoint, it's always going to be  
24 cheaper to use Vendor B, and below that breakpoint, it's  
25 always going to be cheaper to use Vendor A. Would you

1 agree with me on that?

2 A Yes.

3 Q Okay. So just mathematically, would you agree  
4 with me that it's not true that using BellSouth's  
5 methodology looking at each IDL site individually, some  
6 would be high but others would be lower than if one was to  
7 use the methodology proposed by Mr. Pitkin and  
8 Mr. Donovan?

9 A I believe in terms of -- if you just look at  
10 each individual site, I was not thinking about it that  
11 way. I was thinking about the entire ring when I wrote  
12 that.

13 Q Okay. But you would agree with me that looking  
14 at each individual site, it's always going to be correct  
15 that it's less expensive to deploy one vendor or another  
16 rather than trying to mix the two vendors together?

17 A If that is all you're doing is just looking at  
18 the exact numbers, I would agree.

19 Q Okay. And I want to talk about this concept of  
20 the SONET ring for a second. Okay. As I understand what  
21 you are saying, if you've got a ring, you have to have the  
22 same equipment vendor at each DLC site on that ring;  
23 right?

24 So if I've got a ring from this central office,  
25 I have to have, just for example, Vendor A equipment only



1 on that ring. I can't mix together Vendor A and some  
2 other site with Vendor B on that ring; is that right?

3 A On that ring, correct.

4 Q Okay. Isn't it -- from a cost modeling  
5 perspective, though, as long as you've got enough fiber  
6 assumed to loop up all of the DLC sites, couldn't you mix  
7 A and B by having one ring that connects A and a second  
8 ring that connects all the B sites?

9 A Yeah. I mean, you could connect all the A's and  
10 all the B's, but I don't see why you would do that at the  
11 same location.

12 Q Well, if you're trying to model the cost to  
13 linkup a given number of DLC sites and it's always going  
14 to be cheaper at each individual site to use either A or B  
15 from a cost modeling perspective as long as you've got  
16 enough fiber, isn't it always a cost minimization  
17 assumption that you could linkup all the A sites with one  
18 set of fiber and all the B sites with the other set of  
19 fiber and that way maintain the cost minimization idea of  
20 only deploying A or B at a given site depending on whether  
21 it's cheaper for the number of lines at the site?

22 A No, I don't agree with that.

23 Q Why not?

24 A I mean, because what are you actually going to  
25 be placing in the network? We're trying to determine the

1 cost that BellSouth will incur to actually provide these  
2 unbundled network elements. And at locations, we're not  
3 going to be placing A and B and running different fiber  
4 rings to serve them. We're going to be placing either  
5 Vendor A and Vendor B, and we have a meld that we use of  
6 what BellSouth is actually deploying in their network and  
7 will going forward. In fact, it is a going-forward vendor  
8 meld; not exactly what we have today because what we have  
9 today is different. So we're looking at what we will be  
10 deploying going forward in the future, and that's what you  
11 model when you're determining the cost of what BellSouth  
12 will incur to provide these UNES.

13 Q Is it your testimony that the model that  
14 BellSouth has filed in this proceeding models the actual  
15 network that's in place today in Florida that BellSouth  
16 uses to provide service to its retail customers?

17 A No. It's going to model a forward-looking  
18 network, but we applied BellSouth's engineering principles  
19 and engineering guidelines to the best of our ability to  
20 make it a forward-looking -- a model that reflects a  
21 forward-looking cost BellSouth will incur.

22 Q Is it your testimony that forward looking means  
23 whatever BellSouth deployment directives say should be  
24 deployed in the network?

25 A I'd hate to tie the term "forward looking" to

1 that. I believe the cost that I am required to provide to  
2 this Commission are the forward-looking costs that  
3 BellSouth is willing incur going forward, because that's  
4 what we're trying to do is determine the cost BellSouth  
5 will incur going forward to provide UNEs, and that's what  
6 we're going to base our rates on.

7 Q The model that BellSouth has filed in this  
8 proceeding, the network that that model designs, that does  
9 not look like the actual network that BellSouth is going  
10 to be using to provide UNEs to ALECs, does it?

11 A No, it doesn't. It's more of a view of how you  
12 would model and actually build the network to the customer  
13 locations. There are assumptions in there that, I think,  
14 are extremely forward looking as to the cutover for DLC  
15 and how much DLC we'll place, but it is, to the best of  
16 our ability, something we feel that is achievable.

17 COMMISSIONER JABER: May I ask a question so  
18 that I understand in my own mind what you just said? What  
19 adjustments have you made to what BellSouth does today,  
20 what the BellSouth network is today, to comply with the  
21 forward-looking principles? And -- well, answer that for  
22 me first.

23 THE WITNESS: All right. First of all, if we'll  
24 just take the loop because that seems to be where most of  
25 the questions are. What we have in our new loop model is,

1 we have each individual customer location, and then we  
2 decide, going forward, if you were going to serve this  
3 customer, how could you serve this customer? And there  
4 are certain assumptions.

5           For instance, if that customer is beyond  
6 12,000 feet of the CO, we're going to serve them on  
7 digital loop carrier. There are probably many cases on  
8 copper today, but we'll say in the future I'm going to  
9 serve that customer on digital loop carrier, and so,  
10 therefore, I have made that adjustment. So I have put a  
11 lot more of my network on digital loop carrier.

12           One of the other things is, we have eliminated  
13 the existing cable routes. In other words, where you come  
14 out of the CO and you may go down a street and turn right  
15 and go down five or six blocks and turn left, we did not  
16 use the existing cable routes. What we did is, we modeled  
17 new cable routes based on assumptions within the model,  
18 and I will have to defer those detailed assumptions to  
19 Mr. Stegeman to explain what he calls the minimum spanning  
20 road tree is how he placed all those cables. But that's a  
21 difference. We didn't use existing routes. We used a  
22 forward-looking approach as if you were building it from  
23 scratch today.

24           COMMISSIONER JABER: When you don't use existing  
25 routes and you place a customer using digital loop

1 carriers, does that result in an increased cost?

2 THE WITNESS: It should result in a decreasing  
3 cost, especially with a digital loop carrier.

4 COMMISSIONER JABER: Thank you.

5 THE WITNESS: Okay. Oh, may I add one more  
6 thing to that too? Since we were just talking about the  
7 forward-looking, I only talked about the model structure,  
8 but in a lot of my assumptions for my material prices,  
9 they are going forward and the vendor melded. All of  
10 those type costs that I have in the model are reflective  
11 of a forward-looking standpoint also.

12 BY MR. LAMOUREUX:

13 Q If I may, I was a little inarticulate when I did  
14 the last drawing. Isn't it possible that you could have  
15 one ring, one set of sheath connecting all those DLC  
16 sites, but within that sheath some of the fiber just  
17 connects the A sites and the rest of the fiber in that  
18 sheath just connects the B sites? Doesn't that happen  
19 actually in the network today?

20 A That could happen, but I do not consider those  
21 sites on the same ring. I have two rings, your blue ring  
22 and your black ring.

23 Q Is it your testimony then that each set of fiber  
24 constitutes a separate ring?

25 A No. Each set of electronics put together

1 constitute a ring.

2 Q Let me ask it this way. How many sets of fiber  
3 are assumed in the BellSouth model for each ring that  
4 connects a set of DLC sites from a given central office?

5 A To the best of my recollection, it is six fibers  
6 all the way around the ring.

7 Q Is that a set of 12 total?

8 A No.

9 Q Six?

10 A Just six.

11 Q Okay. Is that the default input in the BSTLM?  
12 Did BellSouth use six, or did it use 12 as an input?

13 A I thought we used six. Whether or not it's a  
14 default, Mr. Stegeman can answer that one. I don't  
15 remember.

16 Q Okay. Let me change subjects. At Page 24 of  
17 your rebuttal, you discussed the issue of extended range  
18 cards, loop length, and copper gauge. In that discussion,  
19 you first say that Mr. Pitkin's and Mr. Donovan's proposal  
20 ignores BellSouth's design principles as addressed by  
21 Mr. Milner; correct?

22 A Yes.

23 Q Specifically, what design principles in  
24 Mr. Milner's testimony are you referring to there?

25 A I believe I was still at this point -- and it's

1 been a while since I looked at this -- was talking about  
2 the cutover for the 26/24 gauge copper, to the best of my  
3 recollection.

4 Q Okay. Ms. Caldwell, what I've handed you is  
5 Mr. Milner's direct testimony in this proceeding,  
6 particularly Pages 22 and 23 of his direct testimony, and  
7 take as much time as you need to look that over.

8 But my question would be, given what he says in  
9 his direct testimony, wouldn't you agree that Mr. Milner  
10 sets forth the appropriate design criteria as the  
11 economics of the various network designs?

12 A Yes, he supports the 12,000 cutover based on  
13 economic principles.

14 Q In other words, the question of whether you  
15 crossover from copper to fiber at 12,000 or some other  
16 point, whether you use extended range cards or whatever,  
17 simply depends on the economics of the best way to design  
18 network to carry voice services?

19 A Yeah, as long as you stay within the design  
20 criteria of the service that you're offering.

21 Q Okay. And isn't that exactly what Mr. Pitkin  
22 and Mr. Milner have done in their running of the model to  
23 determine whether it's more efficient to use extended  
24 range cards or other solutions in the network design is  
25 look at whichever of those runs produces the best

1 economics?

2           A     Yes, they looked at the best economics, but  
3 there were some underlying problems with our extended  
4 range line cards in that we had them all set at the same  
5 price. So, therefore, you didn't get any cost difference  
6 when you went beyond the limits of a range card.

7                     And what that is, if you go beyond a certain  
8 loop length on copper, you have to place a different card  
9 into some systems to get the necessary transmission that  
10 you require, and there's a cost difference for those  
11 cards.

12           Q     If I were to tell that you Mr. Pitkin and  
13 Mr. Donovan reran the model with the correct inputs for  
14 those range cards and came up with the exact same  
15 conclusion as to which was the more economical way to  
16 design the network, would that change your testimony?

17           A     Well, it would change the part about them using  
18 the right range cards. I don't know about the run.

19           Q     Would you agree with me that on principle, what  
20 you need to do is run the model and do a sensitivity run  
21 to see which produces the best economics, using extended  
22 range cards or using, you know, different gauges and  
23 different lengths of copper, whichever of those runs  
24 produces the best economics, that's the run that you  
25 should go with?



1           A     I still think -- no, not exactly, because I  
2 still think what you need to do is to look at BellSouth  
3 deployment guidelines. I mean, we have guidelines for all  
4 of our states, including Florida, where we have certain  
5 requirements that we design our plant will carry a serving  
6 area with certain amount of distribution copper; we will  
7 not place copper within so many thousand feet. Those type  
8 guidelines need to also be recognized because it's what  
9 BellSouth is actually doing in the network.

10           Q     If we are constrained by following the BellSouth  
11 deployment guidelines and what BellSouth is doing in its  
12 network, why shouldn't we be just looking at a model that  
13 goes out and looks exactly at what the network -- what is  
14 in the ground in the network today in Florida in BellSouth  
15 territory?

16           A     Well, I think you still have to look at the  
17 forward-looking approach as to what BellSouth would be  
18 doing going forward, but you still need to recognize the  
19 costs BellSouth will incur.

20           Q     Would you agree with me that in order to  
21 determine whether the cost model really is forward looking  
22 or not, you shouldn't simply assume that BellSouth's  
23 deployment guidelines are forward looking, that they  
24 should receive some amount of scrutiny?

25           A     I mean, yes, you can scrutinize those

1 guidelines, but they are internally scrutinized with  
2 extensive studies, economic studies to determine a lot of  
3 this criteria.

4 Q But would you agree with me that the mere fact  
5 that the model follows BellSouth's deployment guidelines  
6 does not in and of itself make the model forward looking?

7 A If I followed your question, the answer is that  
8 just because it followed our guidelines, it doesn't make  
9 it forward looking. It makes it forward looking, I think,  
10 for all the reasons I discussed earlier about the design  
11 changes and things of that type.

12 Q Okay. Let's change subjects for a minute and  
13 talk a little bit about structure loadings. Okay. In  
14 this proceeding, BellSouth used factors in the cost  
15 calculator part of the model to determine structure  
16 investment rather than use the actual structure  
17 calculations that are directly in the loop model; is that  
18 right?

19 A Yes, we use loading factors.

20 Q Why do you believe it's appropriate to use those  
21 structure factors rather than use the structure  
22 calculations that are directly in the loop model?

23 A The loading factors that we have are based  
24 upon -- our data that we have available is forward looking  
25 where we can analyze it; we feel it is representative. It

1 is not saying that you should never use any of those  
2 inputs into the model. It's just that we feel that they  
3 do give an appropriate view of the amount of poles and  
4 conduit that we will be required to place to support these  
5 services going forward.

6 Q Is it fair to say then that you believe that the  
7 structure approach that's directly in the BellSouth loop  
8 model as BellSouth filed it here in Florida is not  
9 representative of structure costs?

10 A I'm sorry, Mr. Lamoureux, I didn't follow that.

11 Q Okay. The BellSouth loop model can directly  
12 calculate those structure costs; correct?

13 A Yes, it can.

14 Q Okay. But rather than use that direct  
15 calculation, BellSouth applied some factors to come up  
16 with those installed structure costs?

17 A Yes, we use leading factors. Correct.

18 Q So my question is, do you believe that the  
19 structure approach that's directly in the BellSouth loop  
20 model that BellSouth filed here in Florida is not  
21 representative of the calculation of structure costs?

22 A I can't say yes or no, but let me answer to  
23 see -- because there were two negatives in there and I got  
24 lost. The ability that the model gives you to build poles  
25 and conduit within the model if you input the correct

1 numbers will accurately calculate poles and conduit. So  
2 from that standpoint, the model is sound in what it will  
3 allow you to do.

4           BellSouth chose to use our pole and conduit  
5 loading factors because the information was really more  
6 readily available to us, we've used it before, we  
7 understand that. Getting the cost of placing all of the  
8 structures can be very difficult in just gathering all of  
9 the data, but if that was the question, does the model  
10 accurately do it, yes, it will accurately do it.

11           Q     Okay. Now, are you a witness in the USF  
12 proceeding in Georgia that's going on right now?

13           A     Yes, I am.

14           Q     In Georgia and filing the BCPM, BellSouth has  
15 criticized the use of structure factors, has it not, and  
16 instead has chosen to use direct calculation of structure  
17 for the synthesis model?

18           A     I don't remember us criticizing the factors, but  
19 we did use the input structure for the BCPM.

20           Q     Okay. So rather than using the factors in that  
21 proceeding, you used the direct calculation and structure  
22 in the synthesis model?

23           A     Yes, we did. And we used a significant number  
24 of the FCC default values.

25           Q     Last subject. Nonrecurring costs, just a few

1 questions. In its nonrecurring cost study, BellSouth has  
2 included work times associated with the LCSC; is that  
3 correct?

4 A Correct, we have.

5 Q And essentially the LCSC -- local carrier  
6 service center; is that right?

7 A Correct.

8 Q Okay. Essentially what the LCSC is, is a  
9 collection of BellSouth service representatives who input  
10 service orders for processing -- who input ALEC service  
11 orders for processing by BellSouth and then provisioning  
12 by BellSouth; is that generally right?

13 A Yes, and talking to the ALEC about questions and  
14 things of that type. Correct.

15 Q So the LCSC is an intermediary group between the  
16 ALEC, who submits the orders, and then the downstream  
17 provisioning groups within the BellSouth system?

18 A I wouldn't call it necessarily intermediary, but  
19 it is the first system or first center in BellSouth that  
20 an ALEC would contact.

21 Q Now, assuming an ALEC uses electronic interfaces  
22 to submit its orders to BellSouth, if the ALEC order  
23 contains an error, the interface should electronically  
24 return that error to the ALEC to correct. Would you agree  
25 with me on that?

1           A     My understanding is, if it's like an input error  
2 on the form, you have a wrong field populated, something  
3 of that type, it will return it.

4           Q     For example, if there's a field in the form for  
5 the zip code and that always has to have five digits in  
6 it, if an ALEC puts four digits in that field, the  
7 electronic interfaces are supposed to catch that, send  
8 that back to the ALEC so that the ALEC can correct that  
9 order?

10          A     For that particular one, yes.

11          Q     Okay. And so the only way the LCSC would ever  
12 get involved, assuming an ALEC uses electronic interfaces,  
13 would be to reinput for some reason an order that the ALEC  
14 has already sent across the interfaces; isn't that right?

15          A     Let me answer that from terms of the cost study.

16          Q     Yes.

17          A     Okay. What I looked at in my cost was, when a  
18 service -- when a local service request is to be processed  
19 by an ALEC and it's sent to BellSouth electronically, the  
20 only cost I have recognized is a fallout rate. And that  
21 would be a fallout rate that is based upon that particular  
22 order falling out because of an error on it that the  
23 system is not able to detect and then whether or not it's  
24 a design fallout. Now, Mr. Pate can answer more about  
25 what is each one of those categories, but that is the type

1 cost that I have in my study.

2 Q Okay. Let me follow up on that. You said that  
3 the fallout rate reflects errors that the systems might  
4 not be able to detect; correct?

5 A Yes.

6 Q Well, the only way the system wouldn't detect an  
7 error for some reason would be if, for some reason, the  
8 interfaces hadn't been designed to be able to catch an  
9 error; correct?

10 A I'm going to have to defer that one to Mr. Pate.  
11 There are reasons for it to fall out, but I can't get into  
12 those. I just obtained the rate and used it.

13 Q Would you agree with me that for those systems  
14 that are in the ordering part of the process, and I'm not  
15 talking about the ones downstream in provisioning, but in  
16 the ordering part of it, the only reason that an order  
17 would ever fall out would be if for some reason BellSouth  
18 specifically designs it to fall out or for some reason the  
19 interfaces have not been designed to be able to catch the  
20 error. Are there any other situations that would cause a  
21 fallout other than those two?

22 A I need to defer you to Mr. Pate. I just don't  
23 know.

24 Q Okay. To your knowledge, does BellSouth have  
25 any separate group in its retail operations that reinputs

1 orders that contain errors on them from the initial  
2 service representatives?

3 A We don't have a separate group that reinputs  
4 orders because they are input by the service rep to begin  
5 with.

6 Q And if there's an error on that order, the  
7 system chucks it back out, for lack of a better word, and  
8 the service rep corrects the order and puts it back in;  
9 correct?

10 A Because it's a manual process right now whereby  
11 the service rep puts the order into the system.

12 Q So there's no separate group after the service  
13 representative group that for some reason an order would  
14 fall out and they would then reinput the order. The order  
15 always goes back to the service reps who then put the  
16 order back in themselves?

17 A Correct, because it's all manual now. It's how  
18 it's done.

19 Q When you say, "it's all manual now," do you mean  
20 in the BellSouth retail operations?

21 A No, from the service representatives inputting  
22 the order into the system. They are keying the order in.

23 Q All right. Similarly, there's no separate work  
24 group in BellSouth's retail operations that coordinates  
25 with the provisioning group and the service



1 representatives as the UNE center and the ACA center does  
2 with CLECs, is there?

3 A Well, I know you have the ACA -- A-C-A-C, which  
4 is the ACAC, I'm sorry of the acronyms, but that  
5 particular group deals with our interexchange carriers,  
6 and so there is an ACAC in the interexchange carrier  
7 world.

8 In the retail world, we have business and  
9 residence customers. The service representatives usually  
10 do it all. You don't have a separate center, but that  
11 activity is done by the service rep usually in the  
12 business center or the residence service centers that we  
13 have.

14 Q Let me ask you this way. What the UNE center  
15 does essentially is coordinates or intermediates between  
16 the BellSouth provisioning people and the ALEC service  
17 representatives. Is that a fair assessment?

18 A Yes, and it handles problems, those type  
19 questions that they would get. Yes.

20 Q Okay. And the retail side of BellSouth's  
21 operations, there's no intermediary work group that  
22 coordinates between the service reps and the provisioning  
23 center. If there's a problem, the BellSouth service reps  
24 talk directly to the provisioning people, don't they?

25 A They talk directly to the provisioning center,

1 but they are the UNE center in a way because they talk to  
2 the customer.

3 Q Well, when an ALEC submits an order over to  
4 BellSouth, that ALEC has its own service representatives,  
5 doesn't it?

6 A Yes.

7 Q Is there any reason that those service  
8 representatives can't interface directly to BellSouth's  
9 provisioning people the same way that BellSouth's service  
10 representatives interface directly to the provisioning  
11 people?

12 A I can't answer how those centers are established  
13 and why they are necessary.

14 MR. LAMOUREUX: I have no further questions.

15 CHAIRMAN DEASON: Mr. Melson.

16 CROSS EXAMINATION

17 BY MR. MELSON:

18 Q Ms. Caldwell, Rick Melson representing WorldCom  
19 and Rhythms Links. How are you this morning -- afternoon?

20 A I'm fine.

21 Q I'm going to try not to replot any ground,  
22 although just to make it flow better, I may ask a couple  
23 of questions that are similar to what you've answered  
24 before.

25 I believe you've agreed that the Commission

1 ought to be setting rates based on forward-looking costs;  
2 is that correct?

3 A Correct.

4 Q And they ought to be based on a long-run cost  
5 study; is that also correct?

6 A Correct.

7 Q And it's your position that this study that  
8 BellSouth has presented in this proceeding meets those  
9 forward-looking long-run criteria?

10 A Yes.

11 Q And if I understood your answer to Mr. Lamoureux  
12 earlier, by that you mean that BellSouth's cost study is  
13 based on a network architecture that BellSouth actually  
14 expects to put in place in the future?

15 A Yes. The only thing is, just to clarify a  
16 little bit, because we talked a little bit about the loop  
17 model. BellSouth may not necessarily follow the exact  
18 routes that the loop model does because it's more of a  
19 proxy-type approach as to how you would place it. But in  
20 terms of using the type switches and equipment, yes, it's  
21 what BellSouth could achieve in the future.

22 Q Okay. In terms of technology, in particular,  
23 it's the forward-looking technology?

24 A Yes.

25 Q And I think one example you gave of that earlier

1 is that in at least one or two of your scenarios, you  
2 model the deployment of more integrated digital loop  
3 carrier than what actually exists in your network today;  
4 was that correct?

5 A Yes, I did.

6 Q And if I understood, that's because the  
7 integrated digital loop carrier, which I think -- is that  
8 the GR303?

9 A We talked about GR303 being a version of  
10 integrated digital loop carrier, yes.

11 Q All right. And that's because that's really the  
12 forward-looking technology?

13 A For switch services, yes.

14 Q Now, in a forward-looking network, would you  
15 agree with me that there are no copper loops longer than  
16 18,000 feet?

17 A Yes.

18 Q And in a forward-looking network, there are no  
19 load coils; is that correct?

20 A Yes.

21 Q And in a forward-looking network, there's no  
22 bridge tap in excess of 2,500 feet; is that correct?

23 A I believe 2,500 is the limit. That's what we  
24 modeled in the loop model. When I talk the -- we talked  
25 about our scenarios. We had the BST2000 that we used to

1 study the two-wire analog loop that can be served on both  
2 copper and digital loop carrier. So in that environment,  
3 I studied a network that deployed digital loop carrier,  
4 and it did not include load coils nor bridge tap beyond a  
5 certain limit.

6 In the scenario run when you had a combo, which  
7 is where BellSouth is providing the port and the loop put  
8 together, I filed 100 percent integrated digital loop  
9 carrier because it can ride on integrated, and then it  
10 again had no load coils and no bridge tap.

11 In the third scenario that we filed, which was  
12 copper only, that was just simply a convention we used to  
13 get a copper loop that could exceed 12,000 feet because in  
14 my other two scenarios there were none. So those are the  
15 three scenarios and how I used them.

16 Q All right. So in two of the scenarios, you --  
17 well, even in the all copper scenario -- well, let me back  
18 up half a step.

19 You would agree with me that a 100 percent  
20 copper network is not a forward-looking network?

21 A It would not be something that we would deploy  
22 going forward. It was just a convention to get a copper  
23 loop that did not have an artificial limitation of  
24 12,000 feet on it.

25 Q And, in fact, BellSouth has got no plans to

1 deploy a 100 percent copper network; is that correct?

2 A That's correct.

3 Q And, as you said, you did an all copper scenario  
4 that you used for the purpose of pricing DSL-capable loops  
5 essentially; is that right?

6 A I used it for the ADSL, the HDSL, and the  
7 unbundled copper loops. I want to be real clear. We have  
8 a new element called the universal data channel, and I  
9 know some people refer to that as IDSL. So that one does  
10 ride digital loop carrier.

11 Q All right. But for the four other varieties of  
12 DSL, you modeled a 100 percent copper network; is that  
13 right?

14 A Yes, because by definition those loops are  
15 copper. We are providing a copper-compatible loop.

16 Q And that was based then on your assumption that  
17 those DSL technologies require 100 percent copper; is that  
18 correct?

19 A Yes. In order to put the electronics, you are  
20 buying -- or we are providing to the ALEC an unbundled  
21 copper loop that they can then place all their electronics  
22 on. There is no electronics on that loop at all.

23 Q All right. Now, assume hypothetically that a  
24 plug-in card was available for a digital loop carrier  
25 system that would permit DSL to be provided over a

1 DLC-base system. And just for convince, I'm going to call  
2 that DSL over DLC, digital subscriber line over digital  
3 loop carrier. Are you with me on the assumption?

4 A Yes.

5 Q If that DSL over DLC technology were available  
6 today, would you agree that it would be appropriate to  
7 include that technology in a forward-looking cost study?

8 A If that was something the ALECs were going to  
9 require, yes, we could provide that. I think the one  
10 thing where I have a little confusion on is, we provide a  
11 copper loop that is like ADSL or xDSL capable, so the ALEC  
12 can put all of their equipment on it. If you're talking  
13 about a loop in which BellSouth would be provisioning the  
14 loop with a digital loop plug, that type thing, then, yes,  
15 we could study that.

16 Q You did not study a network in which you  
17 provided a DSL-capable loop that used the DSL over DLC  
18 technology. That's not something you studied; is that  
19 correct?

20 A Well, the only loop I know that we have studied  
21 is the universal data channel in which we place into the  
22 digital loop carrier a particular plug that allows the  
23 ALEC to transmit IDSL.

24 Q All right. Let's put aside the universal  
25 digital channel and the IDSL service. For other types of

1 DSL service such as ADSL or HDSL or -- you are aware there  
2 are other varieties of DSL service beyond just those two?

3 A Yes, that's what the unbundled copper loop is  
4 for, I believe.

5 COMMISSIONER JABER: Ms. Caldwell and  
6 Mr. Melson, excuse me. Can you talk to me in layman's  
7 terms about xDSL and ADSL and tell me what -- one is  
8 high-speed Internet access, and the other is what?

9 MR. MELSON: Let --

10 THE WITNESS: Whatever.

11 MR. MELSON: Let me find out if this witness  
12 knows.

13 THE WITNESS: I can give some level of the  
14 technical -- let me start from maybe my level, and then  
15 you can add, or we can have one of our other witnesses to  
16 add a little bit. My understanding is that when you're  
17 looking at your ADSL, which I think that stands  
18 asynchronous digital subscriber line, basically we think  
19 of that as being offered with Internet service where you  
20 can get both the voice and the data channel on the loop.  
21 And what we are -- to tie it down to cost studies what  
22 I've looked at is, I have looked at just the cooper loop;  
23 nothing else. There is no electronics of any kind.

24 And what happens then is, the ALEC can purchase  
25 that copper loop from us, and it meets certain



1 specifications and requirements that other people can talk  
2 in detail about, but basically then the ALEC can place  
3 their equipment on each end of it so that they can have a  
4 physical facility that will transmit both the data and the  
5 voice and provide it to their customer.

6           Now, when you go to the HDSL, my understanding  
7 is that's just a higher speed level. I think it used to  
8 be high bit rate digital subscriber line which I think  
9 runs -- it used to -- it looks more like a 1.544 or what  
10 we call a DS1, which is like 24 voice --

11           COMMISSIONER JABER: That's so helpful to me.

12           THE WITNESS: I'm trying. I like to think of it  
13 as -- when we think about DS1, I always think of that in  
14 terms of 24 voice grade circuits. That's kind of like an  
15 easy way for me to remember it. And I know I go back to  
16 terms that I've used in the past because I kind of try to  
17 relate those to the new technologies.

18           And so what we provided there is, again, a  
19 copper that allows them to put their equipment on it, and  
20 that would be for a customer where they needed the higher  
21 bit speed.

22           COMMISSIONER JABER: All right. Now, going back  
23 to your testimony, though. The cost studies that you  
24 looked at do take into account voice data transmission  
25 over Internet which you called ADSL?

1 THE WITNESS: Yes. But all I studied was the  
2 loop, the copper loop. I have no electronics in my study  
3 at all. That is assumed that the ALEC will purchase their  
4 own equipment, and they can put whatever they want on it,  
5 in other words.

6 COMMISSIONER JABER: I'm sorry for the  
7 interruption.

8 MR. MELSON: No problem. And, Commissioner, I  
9 think when we get to Rhythms witness Mr. Riolo, he can  
10 answer if you've got some more questions about the various  
11 varieties of DSL loops. And I know to somebody that --  
12 I'm still learning this ADSL, DSL over DLC stuff myself.

13 The point is -- that I'm trying to get to is  
14 whether you have to assume all copper for a DSL-capable  
15 loop or whether there are other technologies in place  
16 today or that will be in place that would support DSL  
17 service, and if so, whether this witness has modeled those  
18 newer technologies in her cost study.

19 BY MR. MELSON:

20 Q And with sort of that preview, Ms. Caldwell, my  
21 understanding, is it for the purpose of costing  
22 DSL-capable loops, you looked only at a copper loop, as  
23 you said, with no electronics?

24 A I keep coming back to this other channel, but  
25 just very clear, for ADSL, HDSL, and then we have

1 something called unbundled cooper loop that can be used  
2 for any of these xDSL, I studied copper only in the cost  
3 study.

4 Q All right. And let's talk just for a minute  
5 about IDSL so that we can put it aside because that's  
6 really not the focus of what I want to talk about to you  
7 today. There is a service available that has been  
8 available for years called IDSN, integrated -- ISDN, I'm  
9 sorry. Can you tell me what that stands for?

10 A Until you said the acronym backwards, I could.  
11 Integrated digital subscriber network, I think.  
12 Integrated -- yes, ISDN, integrated subscriber -- ISDN.

13 Q Well, that's a service that's available today?

14 A Integrated something digital -- integrated  
15 subscriber digital network, I think that's it.

16 Q All right. And that essentially is an offering  
17 that allows ordinarily two streams of data and a third --  
18 it allows three streams of data to ride over a single  
19 channel; is that correct?

20 A Yeah. Basically on a loop, it allows you to put  
21 two equivalent voice grade circuits and then a smaller  
22 amount of -- for just your -- for additional information.

23 Q And there is a technology available that allows  
24 a particular type of DSL service known as IDSL to be  
25 provided over that IDSN facility -- ISDN?

1 A ISDN, correct.

2 Q And for that particular type of IDSL loop, you  
3 studied a loop with electronics on it, which is what the  
4 ISDN has?

5 A Basically, it's the exact same cost as the ISDN  
6 loop.

7 Q All right. And, in general, the transmission  
8 speed that you can get for IDSL is going to be lower than  
9 the transmission speed you can get with other flavors of  
10 DSL?

11 A I believe that's a true statement, yes.

12 Q All right. So I think now we've talked about  
13 IDSL. Let's put that aside. And the rest of my questions  
14 are going to focus exclusively on loops that are capable  
15 of carrying other types of DSL service, including ADSL,  
16 HDSL, and some others.

17 A Okay.

18 Q For purposes of those DSL-capable loops, you  
19 modeled an all copper network?

20 A Correct.

21 Q And you did not consider any technology that  
22 might be available to provide those varieties of DSL  
23 service over a system that included digital loop carrier;  
24 is that correct?

25 A That is correct. I studied the UNEs that we

1 have defined that the ALECs will be purchasing, and I did  
2 not have one defined other than the copper offerings we  
3 have.

4 Q Do you know whether the technology is available  
5 today to essentially put a plug-in card in a digital loop  
6 carrier system and create a combination fiber/copper loop  
7 that is capable of carrying these DSL services?

8 A I do not know myself.

9 Q Okay. If that technology were available today  
10 and were being deployed by BellSouth, is that something  
11 that -- is that a technology that you would want to model  
12 in your cost study?

13 A I think -- I have to tell a little bit about  
14 what I modeled in my cost study. What I'm looking at is  
15 UNEs we would be providing to the various ALECs based on  
16 their request. So normally there's a process by which the  
17 negotiation individuals' product managers talked with the  
18 ALECs about what they need, what they require, what's  
19 available, and then once that is determined, then I do the  
20 cost study based upon how it will be physically offered to  
21 them, whether it be copper, if we had something new coming  
22 on. So I think there's a process by which we would look  
23 at that and then provide that. Going into this study, I  
24 did not have anything to study. I do not know of that  
25 technology.

1 Q Okay. Let me fast-forward a minute to some  
2 questions I was going to get to later, and then we'll come  
3 back to where I was. You have -- I believe you said --  
4 and again keeping the IDSL aside, you've defined basically  
5 four types of DSL-capable loops in your study: ADSL,  
6 HDSL, what you call an unbundled copper loop-short, an  
7 unbundled copper loop-long; is that correct?

8 A Correct.

9 Q And is it your understanding that in this  
10 proceeding, the data ALECs are advocating that the  
11 Commission should simply establish a single category of  
12 DSL-capable loop that has no particular length limitation  
13 and use that single category as the product we would like  
14 to buy and we would like BellSouth to cost and price?

15 A I can't answer that in terms of what you were  
16 advocating that you would desire. I need to defer that to  
17 Mr. Latham because he's the product manager for our xDSL  
18 unbundled loops. From a cost standpoint, what I have  
19 looked at is, is basically what I understand is available  
20 and being offered today.

21 Q All right. And which witness was it you  
22 referred that question to?

23 A Mr. Latham.

24 Q Mr. Latham. If Mr. Latham had told you that  
25 what the data ALECs wanted to buy was a DSL-capable loop

1 without any loop -- without any length limitation, and  
2 they didn't care whether that facility that they were  
3 provided for that service was all copper or whether it  
4 was -- made use of a plug-in card that would permit that  
5 technology over a DLC system, then I take it, you would  
6 have studied something different than what you actually  
7 studied in this proceeding; is that right?

8       A     I might have still studied the ones I have.  If  
9 you're talking about a new offering, my understanding is,  
10 there are physical and technical limitations on the  
11 equipment.  And this comes from reading some of the  
12 testimony and some of my own knowledge that -- so from  
13 that standpoint, what we are offering is something that's  
14 technically feasible in the network, something that the  
15 ALECs can use, and something that we can provision to them  
16 to meet their requirements.  That's what I've studied so  
17 far.

18               If you're looking at a new offering, then what  
19 we normally do is, we work with the ALECs and get a  
20 description through Mr. Latham in this case who is the  
21 product manager, and then they would work with the cost  
22 departments, and I would help determine what pieces of  
23 equipment to put in the study.

24       Q     Are you aware -- let me ask this.  Your cost  
25 study covers what time frame, 2000 to 2003?

1           A     Yes.  Wait a minute.  2000, 2002.  Wait a  
2 minute.  2000, 2001, three years, 2002.

3           Q     All right.  2000 to 2002.  If technology to  
4 provide DSL over digital loop carrier was going to be  
5 available and deployed by BellSouth in that cost study  
6 time frame, would you agree with me that would be an  
7 appropriate technology for BellSouth to consider in its  
8 cost study?

9           A     There are a lot of if's in that.

10          Q     Okay.  Assume hypothetically that BellSouth is  
11 going to deploy DLC cards that are capable of supporting  
12 DSL service and that they are going to deploy them during  
13 this cost study period, in that situation would it be  
14 appropriate to consider that technology in a  
15 forward-looking cost study?

16          A     If in fact it was something the ALECs wanted and  
17 the product team had looked at it and was willing to offer  
18 it.

19          Q     I'm going to change subjects on you a little.  
20 You were asked some questions by Mr. Lamoureux regarding  
21 the in-plant factor and the application of that to copper  
22 loops.  Do you recall that series of questions?

23          A     Yes, I do.

24          Q     And I believe that you indicated that the  
25 BellSouth loop cost model primarily places small 25 or 50



1 pair of cables predominately rather than large cables; was  
2 that correct?

3 A That's correct.

4 Q Would that same thing be true in your all copper  
5 scenario?

6 A I have not seen that run made that shows a  
7 different size cables on the all copper run. I would  
8 anticipate there would be some differences.

9 Q And would the difference be that in the all  
10 copper run, you would be deploying exclusively copper in  
11 the feeder plant where typically larger cable sizes would  
12 be located?

13 A That's true. I'm just trying to think of -- the  
14 way the -- I'm sorry, it takes me a minute to remember all  
15 these runs. When you look at the copper run, when you  
16 look at the run that is 18,000 feet, predominately what we  
17 have studied in the BST2000, which is the first study we  
18 ran through the loop model, and it's what we actually  
19 analyzed for the pair sizes that actually come out of the  
20 cable, there is a mixture of copper and fiber close into  
21 the CO, but I'm talking through this to try to get it  
22 straight in my mind.

23 I think in that particular case that still would  
24 have the predominate placement of those cables close in to  
25 be distribution cables. So based on that, I would have to

1 say there would be some larger-sized cables placed in that  
2 scenario.

3 Q Okay. Just to be sure I understood your answer,  
4 in the all copper scenario, you would expect a higher  
5 proportion of the larger-sized cables to be placed?

6 A I would expect a difference, yes. Correct.

7 Q Did you make any adjustment -- well, let me ask  
8 it this way. Was the same in-plant factor used in both  
9 the BST2000 scenario and in the all copper scenario?

10 A Yes, it was. But in terms of looking at any  
11 type distortion that factor is actually based upon  
12 predominately 25- and 50-pair cables, so I think there's a  
13 good relationship there. I do not feel that it will cause  
14 a great big difference there.

15 Q Well, let me ask this. I believe you agreed  
16 earlier with Mr. Lamoureux that there would be some  
17 distortion with respect to the larger cable sizes because  
18 essentially you're assuming that if a cable has ten times  
19 as many pairs, it costs ten times as much to dig the  
20 trench and bury the cable or whatever; is that correct?

21 A Yes. And that's all from the averaging effect.

22 Q Right.

23 A Basically what we've done is, we've looked at  
24 the average cost to place a dollar of investment. So you  
25 do get some differences in the spread when you do an

1 averaging.

2 Q To the extent there is a distortion in the  
3 BST2000 scenario and to the extent that the all copper  
4 scenario places a higher proportion of the larger cable  
5 sizes, would you agree with me that there would be more  
6 distortion in the all copper scenario?

7 A I think the all copper would show some -- a  
8 greater difference. In terms of the underlying -- the  
9 BST2000 run, the basic run, the in-plants are  
10 predominately based on the same size cable the model is  
11 placing in that run. So I don't see in that particular  
12 run there's a big difference, in that and the combo run,  
13 but it would be different in the all copper.

14 Q And it is the all copper run where there is a  
15 possibility of a greater distortion that was used to  
16 calculate the costs for the various varieties of  
17 DSL-capable loops?

18 A I think you would see a larger difference.

19 Q Okay. I'd like to talk for a minute about  
20 nonrecurring charges. Do you agree in principle that the  
21 same network design assumptions that underlie your  
22 recurring cost study should be used when you develop  
23 nonrecurring costs?

24 A Yes, in principle. Correct.

25 Q And is it fair to say that none of the three

1 recurring cost scenarios that you performed designed a  
2 network that deployed load coils?

3 A Yes, there are no cost in there for deploying  
4 them. There is also no cost in there for removing them.

5 Q And is it fair to say that none of your three  
6 scenarios designed a network with more than 2,500 feet of  
7 bridge tap?

8 A Yes.

9 Q All right. And you would also agree that your  
10 cost study contains a cost for loop conditioning that  
11 would apply when an ALEC requests BellSouth to remove load  
12 coils or bridge taps from a particular loop that exists in  
13 BellSouth's network today; is that correct?

14 A Yes. That's a separate UNE, or unbundled  
15 network elements, for the removal of the load coils, and  
16 then we have one for the removal of bridge tap.

17 Q Okay. But those are elements that would not  
18 exist in any of your -- well, in any of the networks that  
19 you modeled for recurring cost purposes?

20 A Yes. The load coils are not in the recurring  
21 cost studies, but what we're talking about here is the  
22 cost to go out there and remove them from existing plant.  
23 It's a reality. They are there today, and they are going  
24 to have to be removed, and BellSouth incurs a cost for  
25 that physical work, and we are allowed to recover that

1 cost.

2           Basically, the FCC said they recognized that  
3 load coils may not exist in a forward-looking environment,  
4 but they are there today, and we are allowed to recover  
5 the cost of removing those load coils.

6           Q     Would you also agree that the FCC rules don't  
7 permit the sum of your recurring charges and your  
8 nonrecurring charges to exceed your total forward-looking  
9 cost?

10          A     I guess not because I didn't understand that.

11          Q     Okay.  When you do a cost study based on  
12 forward-looking cost principles, isn't it true that the  
13 sum of the recurring cost plus the nonrecurring cost  
14 cannot exceed the total cost that BellSouth incurs on a  
15 forward-looking basis, if you know?

16          A     I don't know exactly what principle you're  
17 talking about.  I mean, from a forward-looking standpoint,  
18 I looked at the investment necessary to deploy the loop,  
19 and that's my recurring in similar simple terms, and then  
20 I looked at the cost to provision to place it into  
21 service, and that was my nonrecurring.  And those are the  
22 cost.  They are separate and different cost.  So if you're  
23 talking about for that facility to put it to work, if it's  
24 the sum of those two, then that would be the total cost.

25          Q     But your nonrecurring costs aren't developed in

1 the same model that develops your recurring costs?

2 A No. Most of the nonrecurring costs are in  
3 spreadsheets where we look at the time to perform each  
4 activity and multiply that times the labor rate of the  
5 individual doing that activity.

6 Q I want to talk to you for a minute about the  
7 charge you've proposed for electronic access to loop  
8 makeup information. Can you tell us in just a few words  
9 what loop makeup information is?

10 A Loop makeup information is, if you look at a  
11 facility that starts at the central office and goes to a  
12 customer's location, the customer's premises, it's going  
13 to be composed of different pieces of cable, different  
14 gauges of cable, it may have some electronics on it,  
15 things of that type.

16 So when you're looking at a loop makeup, it's  
17 the physical -- how much copper cable you have, what gauge  
18 of cable it would be, like 26 or 24, and whether or not  
19 there's electronics on it, whether or not there are load  
20 coils, whether or not there's bridge tap.

21 So you're looking at the physical makeup.  
22 That's why we use that term of that particular loop, and  
23 that's what you're actually getting from your loop makeup  
24 information.

25 Q And would you agree with me that a DSL provider

1 is interested in loop makeup because the makeup of the  
2 loop can affect, first, whether or not a DSL service can  
3 be offered at all and, second, what type of DSL service or  
4 speed the carrier may be able to attain over that  
5 facility?

6 A Yes, they are interested.

7 Q Now, at Page 52 of your direct testimony at  
8 Lines 15 through 16, you say that BellSouth did not  
9 include in this filing the cost of the OSS, or operation  
10 support services, interfaces that have been developed to  
11 allow competitors to access BellSouth's provisioning  
12 systems; is that correct?

13 COMMISSIONER JABER: Where is that, Mr. Melson?

14 MR. MELSON: Well, I hope it's at Page 52 of the  
15 direct, Lines 15 and 16. This is not the revised direct;  
16 it's the original, original direct.

17 BY MR. MELSON:

18 Q Did I represent that accurately, Ms. Caldwell?

19 A Yes. We're talking about the OSS electronic  
20 interfaces for ordering your services; correct.

21 Q All right. And you didn't include any costs for  
22 the electronic interfaces for preordering either, did you?

23 A Correct.

24 Q All right. Isn't loop makeup -- a loop makeup  
25 inquiry essentially a preordering function?

1           A     I never really looked at that that way because  
2 you may actually get the loop makeup information and never  
3 place an order.

4           Q     Well, that's true of any preordering situation,  
5 isn't it? You may make a preorder inquiry, and then never  
6 place an order?

7           A     That's possible.

8           Q     All right. And is the reason that your cost  
9 study did not include costs for your preordering OSS or  
10 your ordering OSS is because this Commission has decided  
11 that those matters are going -- the developmental costs  
12 are going to be deferred and considered in a future  
13 proceeding after this OSS testing is finished?

14          A     Yes. In particular, as a result of some of the  
15 arbitrations for the -- what I've called the OSS  
16 electronic interfaces, which are our systems that we built  
17 specifically for processing the service orders and access  
18 to our preordering systems. So, yes, those are the items.

19          Q     Okay. But you, nevertheless, include in this  
20 cost study a proposed -- a cost of essentially 69 cents  
21 per transaction for electronic access to loop makeup  
22 information; is that correct?

23          A     Yes, I did. This system actually was developed  
24 well after the Commission had looked at the OSS EIs, or  
25 I'm sorry, the operational support systems electronic



1 interfaces, so it was a new one. So I filed it in this  
2 cost study.

3 Q And essentially it's a new function that's going  
4 to be added to one of the existing OSS interfaces. This  
5 information will be available through -- is that correct?

6 A Yeah, access to this will be through, I believe,  
7 either TAG or LENS. Mr. Pate knows that in detail. But  
8 this is not the cost for any changes to the OSS, the  
9 electronic interfaces. This is the cost to allow our  
10 systems new hardware, new software that we would have had  
11 to place for purely allowing the mechanized access to our  
12 loop facility assignment system.

13 Q But when you developed your original OSS, part  
14 of that development cost is for access from LENS or TAG to  
15 other legacy BellSouth systems to obtain information from  
16 those legacy systems; is that correct?

17 A Yes. Your more -- what I vision is your more  
18 pure ordering systems, yes.

19 Q All right. Would you agree that to be  
20 consistent with this Commission's prior rulings that OSS  
21 development and interface costs are going to be considered  
22 in future proceedings that the electronic access to loop  
23 makeup information would fall into that same general  
24 category?

25 A No, I really didn't look at it that way because

1 this is actually providing access to a system that's used  
2 by our engineering department to get physical information  
3 about our facilities. And I looked at the other OSS  
4 electronic interfaces as access to the operational systems  
5 that are for really ordering and provisioning up front.  
6 So I saw it as a difference was why I included it in the  
7 cost study.

8 Q But it's still a method of providing to an ALEC  
9 access to information that BellSouth has access to  
10 internally?

11 A Yes.

12 Q All right. I'd like to spend just a few minutes  
13 talking about the development of the nonrecurring costs.  
14 Is it fair to say that the major inputs into the  
15 nonrecurring cost study for each unbundled network element  
16 or the steps you had to identify the tasks that needed to  
17 be performed, you had to determine the time required to  
18 complete each task, you had to determine the appropriate  
19 labor rate for the person or group that would be  
20 performing that task, and then if it was a task that  
21 didn't need to be performed on 100 percent of the orders,  
22 you needed to determine what percentage of the time that  
23 task needed to be performed? Is that a fair summary?

24 A Yes.

25 Q Let me hand out to you a copy of one of the

1 spreadsheets that comes out of your cost study. It's  
2 FL-ULM.xls, and it's essentially, if I understand it  
3 correctly, the input sheets for the unbundled loop  
4 modification element; is that correct?

5 A Yes, it's the input sheets. And I believe you  
6 also have the worksheets in here where they would multiply  
7 different numbers together.

8 MR. MELSON: All right. And, Commissioners, I  
9 guess first I'd like to have this identified, if I could,  
10 as the next numbered exhibit. I believe it would be 104.

11 CHAIRMAN DEASON: That's correct, 104.

12 (Exhibit 104 marked for identification.)

13 BY MR. MELSON:

14 Q And, Ms. Caldwell, I will tell you there are  
15 only 15 of 16 pages attached here because at the time I  
16 was copying this I wasn't sure whether or not some of the  
17 information on Page 16 was proprietary, so I elected to  
18 leave it off. That was -- included some demand  
19 information. I understand now that is not proprietary.  
20 Is that your understanding?

21 A I don't believe that that 16th sheet is  
22 proprietary.

23 Q You believe it is not?

24 A I believe it is not.

25 Q Okay.

1           A     I can double-check the cost study to see how it  
2 was stamped, but --

3           Q     All right.  Would you -- and essentially,  
4 unbundled loop modification is one of the elements that  
5 you provided a cost for, and if I understand correctly,  
6 that unbundled loop modification would be the charge that  
7 would be applied if an ALEC asked to have load coils or  
8 bridge tap removed from a particular loop; is that  
9 correct?

10          A     Correct.

11          Q     Could you turn with me to Page 11 of this  
12 exhibit, and look at Lines 14 and 15?  Can you tell me  
13 what the items on those two lines represent?

14          A     Let me just be sure I'm with you.  Page 11,  
15 Lines 14 and 15?

16          Q     Yes, ma'am.

17          A     This was incorrectly labeled on this worksheet.  
18 We have filed -- the Staff, I believe, asked about this at  
19 my deposition, and we filed a late-filed to explain what  
20 these items were.  I can't remember exactly what the  
21 labeling was, but it was late-filed to the Staff's  
22 request.

23          Q     All right.  Bear with me just a minute.  This  
24 was not intended to be a trick question.  I didn't know  
25 you had a late-filed exhibit on that.  There is a stack of

1 your late-filed deposition exhibits. Could you tell me  
2 which one I should be looking at?

3 A Yes. Give me just one minute, please.

4 CHAIRMAN DEASON: Perhaps now is a good time to  
5 take a break. We'll take a ten-minute recess.

6 (Brief recess.)

7 (Transcript continues in sequence in Volume 10.)

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1 STATE OF FLORIDA)

2 : CERTIFICATE OF REPORTER

3 COUNTY OF LEON )

4  
5 I, TRICIA DeMARTE, Official FPSC Commission Reporter,  
6 do hereby certify that the Hearing in Docket No. 990649-TP  
7 was heard by the Florida Public Service Commission at the  
8 time and place herein stated.

9 It is further certified that I stenographically  
10 reported the said proceedings; that the same has been  
11 transcribed under my direct supervision; and that this  
12 transcript, consisting of 62 pages, Volume 9 constitutes a  
13 true transcription of my notes of said proceedings.

14 I FURTHER CERTIFY that I am not a relative, employee,  
15 attorney or counsel of any of the parties, nor am I a  
16 relative or employee of any of the parties' attorney or  
17 counsel connected with the action, nor am I financially  
18 interested in the action.

19 DATED THIS 20th DAY OF SEPTEMBER, 2000.

20  
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25