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BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

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: :  
In the Matter of : :  
: :  
Petitions by AT&T Communications : DOCKET NO. 960847-TP  
of the Southern States, Inc., : DOCKET NO. 960890-TP  
MCI Telecommunications :  
Corporation and MCI Metro Access :  
Transmission Services, Inc., :  
for arbitration of certain terms :  
and conditions of a proposed :  
agreement with GTE Florida :  
Incorporated concerning :  
interconnection and resale under :  
the Telecommunications Act of :  
1966. :  
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THIRD DAY - MID-AFTERNOON SESSION

VOLUME 17

Pages 1906 through 2001

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN SUSAN F. CLARK  
COMMISSIONER J. TERRY DEASON  
COMMISSIONER JULIA L. JOHNSON  
COMMISSIONER DIANE K. KIESLING  
COMMISSIONER JOE GARCIA

DATE: Wednesday, October 16, 1996

PLACE: Betty Easley Conference Center  
Room 148  
4075 Esplanade Way  
Tallahassee, Florida

REPORTED BY: JOY KELLY, CSR, RPR  
Chief, Bureau of Reporting  
(904) 413-6732  
H. RUTHE POTAMI, CSR, RPR  
Official Commission Reporter

APPEARANCES:  
(As heretofore noted.)

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## WITNESSES - VOLUME 17

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

1  
2 (Transcript follows in sequence from  
3 Volume 16.)

4 **CHAIRMAN CLARK:** Call the hearing back to  
5 order. Go ahead, Mr. Lemmer.

6 **DENNIS B. TRIMBLE**  
7 **BERT I. STEELE**  
8 having been called as a panel of witnesses on behalf  
9 of GTE Florida and, being duly sworn, continued  
10 testimony as follows:

**CONTINUED CROSS EXAMINATION**

11 **BY MR. LEMMER:**

12 **Q** Mr. Steele, just a couple more questions on  
13 this area of the study. A few minutes ago we were  
14 discussing the labor costs that were being applied to  
15 various factors in here, and I believe you indicated  
16 you received that information from your finance  
17 department; is that correct?

18 **A** (By Witness Steele) The labor rates, yes.

19 **Q** And do those labor rates reflect 1995 actual  
20 labor rates, do you know?

21 **A** I know that they're representative for the  
22 1995 period.

23 **Q** But you're not aware of whether they're  
24 actual rates from 1995 or whether they're some sort of  
25 estimate? You don't know?

1           A     They're based on actual data for the 1995 --  
2 they would apply for the 1995 period, yes.

3           Q     Now, were you here earlier today for  
4 Mr. Fuhr's cross examination of Mr. Wood? Were you  
5 present for that?

6           A     I'm not sure if I was here for all of it,  
7 but a good portion of it, yes.

8           Q     There was a discussion that went on for some  
9 time in which Mr. Fuhr paged through an input summary  
10 for the Hatfield model. Do you remember that line of  
11 questioning?

12          A     Yes, I do.

13          Q     And that input summary for Hatfield had a  
14 large number of what I'll call data inputs, but I  
15 won't go through each one of them; but it talks about  
16 spacing of poles, manholes, various and sundry  
17 assumptions of that nature.

18                   Is it a correct assumption that the ones  
19 that GTE used for coming up with its prices for the  
20 unbundled network elements are embedded in its COSTMOD  
21 system; is that correct?

22          A     No.

23          Q     And where would I find those?

24          A     Well, if you could be specific to what items  
25 you're referring to, I'd be glad to address those.

1 For example, if you want to take fill factors, those  
2 are inputs to the model, as we just discussed earlier.  
3 If you want to talk about labor rates, they're input  
4 prices for the models. If you want to talk about the  
5 algorithms relevant to sizing cables, just like they  
6 are in the Hatfield model, they're contained within  
7 the model. I'm not sure exactly what you're referring  
8 to.

9           If you're talking about the cost for a  
10 concentration device that is specifically for GTE, it  
11 would be more -- pick the items that you would like to  
12 ask me, I'd be glad to answer it.

13           Q     You answered my question. Thank you. Okay.  
14 Let me ask a couple of questions about the -- as I  
15 believe was described, Mr. Trimble, in your  
16 introductory remarks about the addition, or the plus  
17 factor, that's added to the TELRIC cost. And if  
18 you're the appropriate one to answer my questions,  
19 please do.

20           As I remember what you said in your summary  
21 statement, that the derivation or calculation of the  
22 common cost was based upon 1995 revenue, at least in  
23 one of your examples; is that correct?

24           A     (By Witness Trimble) That is correct.

25           Q     And isn't it correct that GTE's 1995 revenue

1 was based upon its costs?

2 A GTE's 1995 revenues is based on its retail  
3 prices.

4 Q Well, let me be more specific then. Isn't  
5 it true that GTE's retail prices were determined in a  
6 rate of return type of situation for GTE Florida?

7 A Yes, at one given point in time.

8 Q And in that type of rate setting situation,  
9 isn't it correct that prices are based upon costs?

10 A Prices are based on various factors in rate  
11 proceedings. Cost is one of those factors.

12 Q Now, in giving your definition of common  
13 costs and the fact that common costs will be an  
14 additive factor for determining prices for unbundled  
15 network elements, to the extent that GTE's revenues go  
16 up next year, will you adjust your prices?

17 A No.

18 Q If they go down, will you adjust your  
19 prices?

20 A No.

21 Q Now, in using revenues and -- let me  
22 rephrase the question. Would you agree that your  
23 determination of common cost is based upon 1995 costs  
24 in either one of your scenarios?

25 A In the USOA account scenario it is based on

1 1995 reported costs. In the other scenario, in terms  
2 of revenues minus TSLRICs, the best way to look at it  
3 is it's based on revenues minus forward-looking costs.

4 Q But we just agreed, did we not, that at  
5 least a factor in the revenues for 1995 were costs  
6 that GTE experienced in 1995; isn't that correct?

7 A I hope that's a true statement, yes.

8 Q Given your agreement that costs are directly  
9 relevant to your scenario based on the USOA accounts  
10 and they have some relevance to the revenue  
11 calculation, did you take into consideration that GTE  
12 has written off \$4.6 billion of equipment last year?

13 A I'm actually trying to figure out how that  
14 write-off would affect anything. If you would look at  
15 the costs that we've determined as common, there are  
16 hardly any capital assets involved in those costs.

17 Q So it's your testimony, then, that despite  
18 the relevance of costs to the 1995 results, the fact  
19 that GTE wrote off \$4.6 million is not relevant?

20 A I'm saying it's not relevant in terms of the  
21 determination of common costs. It is also not  
22 relevant in terms of the determination of  
23 forward-looking TELRICs.

24 Q Do you contend that your common costs are  
25 forward-looking economic costs?

1           A     Yes.

2           Q     And what basis do you use to support that  
3 position?

4           A     I believe if you look at the categories that  
5 are involved in those costs, whether it be  
6 provisioning expenses, testing, engineering, human  
7 resources, many of those costs, the vast majority of  
8 them, are labor related costs.

9                     I do not believe and I have no indication  
10 that those costs are going to go down or go up. Our  
11 assumption here is that those costs and productivity,  
12 inflation and productivity, will equally offset each  
13 other, and that they are truly forward-looking. They  
14 may be conservative in terms of forward-looking.

15          Q     So then is it fair to say that GTE in  
16 measuring its forward-looking common costs assumed  
17 that there would be no impact of the advent of  
18 competition in its marketplace?

19          A     We assumed that for these cost categories  
20 that the advent of competition would not diminish the  
21 amount of these costs and, in fact, it may increase  
22 the amount of these costs.

23          Q     And did you conduct a study to substantiate  
24 that assumption?

25          A     No. I just basically used what I consider



1 common sense on my standpoint in terms of the amount  
2 of additional effort in many of these categories that  
3 I think the opening of the market will introduce.

4 Q Now, do you have any knowledge as to why GTE  
5 wrote off \$4.7 billion worth of equipment last year?

6 A I am not familiar with the rationale behind  
7 that at all.

8 Q Well, let's assume that the rationale was  
9 because of the advent of competition. Would that  
10 change your opinion as to the impact competition is  
11 going to have on GTE's costs?

12 A Well, the question is in terms of -- let me  
13 answer it in two parts. First of all, I do not  
14 believe that write-off has anything to do with GTE's  
15 level of common costs. That write-off would be more  
16 reflective of what we've done in terms of our TELRICs.

17 Q So is it your testimony that there are no  
18 fixed assets in your common costs?

19 A There are some assets. I do not believe  
20 we're writing off -- as part of that write-off, had  
21 anything to do with motor vehicles or general purpose  
22 computers, et cetera.

23 Q Now, are you aware that last year, 1995, GTE  
24 had an over 50% total return to its shareholders?

25 A Actually, I would like to know how that

1 number was derived before I comment.

2 CHAIRMAN CLARK: Mr. Lemmer, are we still  
3 going to be using this confidential exhibit?

4 MR. LEMMER: No, Madam Chairman, I'm  
5 finished with it.

6 CHAIRMAN CLARK: We are, Mr. Melson? Okay.

7 MR. LEMMER: What I'd like to have marked  
8 for identification purposes is the 1995 annual report  
9 for GTE.

10 CHAIRMAN CLARK: We'll mark it as exhibit  
11 53.

12 (Exhibit 53 marked for identification.)

13 Q (By Mr. Lemmer) Mr. Trimble, if you would  
14 turn to Page 18 of that report and look at the top few  
15 sentences at the paragraph that begins on the  
16 left-hand side.

17 A (By Witness Trimble) Yes.

18 Q And do you see the statement in there  
19 regarding the 52.4% return in that paragraph?

20 A Yes. I see that that was based on share  
21 price appreciation and dividends.

22 Q And isn't it a fair statement that the  
23 pricing methodology that you support for unbundled  
24 network elements and any other interconnection element  
25 that's based on that pricing methodology, that the

1 point of that pricing methodology is to preserve GTE's  
2 revenue flows as it has been historically? Isn't that  
3 correct?

4 A That is incorrect.

5 MR. LEMMER: I have no further questions.

6 CHAIRMAN CLARK: Mr. Melson.

7 CROSS EXAMINATION

8 BY MR. MELSON:

9 Q I've got just a few. Mr. Trimble, your  
10 proposed price in this proceeding for unbundled loops  
11 is equal to the interstate -- for 2-wire unbundled  
12 loop is equivalent to the interstate special access  
13 rate; is that correct?

14 A (By Witness Trimble) Yes; it's equivalent to  
15 the interstate entrant's facility rate.

16 Q Interstate what?

17 A Entrant's facility rate.

18 Q And the last time we had one of these  
19 proceedings, I believe your recommendation was based  
20 on an intrastate special access rate; is that correct?

21 A I believe it was based -- that is correct.

22 Q And the effect of the change in your  
23 recommendation from the use of an intrastate rate to  
24 an interstate rate adds about \$9.00 a month to your  
25 proposed price; is that correct?

1           A     That is correct.

2           Q     Did your pricing proposal take into account  
3 Dr. Sibley's proposed modified efficient component  
4 pricing rule methodology?

5           A     The answer is yes.

6           Q     Did you take into account his recommendation  
7 for a non-bypassable end user charge?

8           A     We did not incorporate any recommendation on  
9 an end user charge in my testimony. I do believe that  
10 that is an area that must be addressed in the future,  
11 though.

12          Q     Would you agree that that type of issue  
13 perhaps would be more appropriately addressed in a  
14 universal service proceeding?

15          A     A universal service proceeding would address  
16 that type of charge. I believe the end user charge  
17 also may be more encompassing than just universal  
18 service.

19          Q     Could you turn to Page 21 of your I guess  
20 it's direct testimony. Can you tell me, just  
21 summarize very briefly how you applied the modified  
22 ECPR for -- excuse me -- market driven, I guess, is  
23 what the "M" stands for -- market driven ECPR in  
24 developing your pricing recommendation?

25          A     Yes. The procedures employed in MECPR, or

1 for that fact, in terms of what the FCC termed ECPR,  
2 are to compute the opportunity costs involved in  
3 pricing decisions.

4           The computation of that occurred in Exhibit  
5 DBT-4, and what we did was evaluate opportunity costs  
6 for both business and residence users, or business and  
7 residence loops, to develop finally what occurs on  
8 Page 3 in the top chart, what I would call the FCC's  
9 vision of ECPR, what is the contribution preserving  
10 loop rate. The number you see there which is weighted  
11 for "biz and rez" in the bottom right-hand corner is  
12 \$38.49.

13           Now, MECPR says you must constrain that  
14 result by realities of the marketplace. You cannot  
15 price above, or you should not price above the, quote,  
16 unquote, stand-alone costs for a new entrant, or for  
17 that fact, for any individual company competing.

18           We viewed the 2-wire entrants' facility  
19 rates in the interstate arena as a reasonable proxy  
20 for the stand-alone costs and constrained the loop  
21 rate to that number. That, in essence, is ECPR. ECPR  
22 in the final result, or MECPR, says you will produce  
23 rates as much as you can that incent efficient entry,  
24 but do not, quote, unquote, incent inefficient entry  
25 nor subsidize entry.

1           Q     If that ceiling price of stand-alone cost  
2 was not triggered, if that was not a limiting factor  
3 in a given situation, isn't it the case that the MECPR  
4 would produce a rate where GTE essentially would be  
5 totally indifferent to providing the service at retail  
6 itself or selling, in this case, the network elements  
7 to a competitor?

8           A     That is a fair assessment, yes.

9           Q     This next question is probably for  
10 Mr. Steele.

11          A     (By Witness Trimble) Thank you.

12          Q     Could you turn to Page A-136, which is under  
13 Tab 9 in the confidential cost binder? Can you tell  
14 me what that customer service record research activity  
15 represents?

16          A     (By Witness Steele) Yes. It represents the  
17 work time activity that's required to support this  
18 particular rate element, which is for an unbundled  
19 loop, new service offered to an alternative LEC.

20                     It was information that was provided by  
21 GTE's open market transition team, which identified  
22 the new processes that GTE would have to put in place  
23 to provide this service to ALECs for unbundled loops.

24          Q     And this would be the service where an ALEC  
25 calls GTE and says, I'd like to find out what services

1 a customer currently has?

2 A (By Witness Trimble) Let me answer that.

3 The answer is yes.

4 Q All right. And the work time in column A is  
5 the amount of time it takes to perform that function  
6 in minutes?

7 A That is the OMT's -- the work team assigned  
8 to this, that is their estimate; that is correct.

9 Q If you would turn to page -- I think this is  
10 for Mr. Steele again, although I'm sure you all will  
11 correct me -- Page A-1, which is the first page under  
12 Tab 4.

13 A (By Witness Steele) Yes, I have it.

14 Q I am looking at the utilization factor at  
15 the very bottom of the page which is expressed in  
16 percentage terms, and then the average utilization  
17 which is two lines higher, which is also expressed in  
18 percentage terms. Are those two percentages regarded  
19 as confidential? I was trying to figure out whether  
20 we can talk about them in the concrete or in the  
21 abstract.

22 A (By Witness Trimble) Let me make a  
23 determination for you. They are not confidential now.

24 Q That was my recollection, actually. Could  
25 you describe for me what the 55% represents and what

1 the 70% represents, and how the two numbers interact  
2 in the cost study?

3           **A**     **(By Witness Steele)** Yes, I can. When GTE  
4 performs a TELRIC cost, a per unit cost for this  
5 particular element, the basic principles that are  
6 outlined in our Tab 1 in concert with the FCC's  
7 report, Paragraph 682, indicates that a  
8 forward-looking average fill factor should be  
9 employed, and that's the 55%.

10                   The 70%, as I testified earlier, represents  
11 how the cost items labeled one, two, three, four,  
12 five, six lines above that were determined as they  
13 were provided to the process described earlier,  
14 starting with Exhibit 52, as they carried forward to  
15 Exhibit 3, et cetera.

16                   So the output runs of the model were  
17 developed and already available at a 70%, and to be in  
18 concert with the requirements for a TELRIC cost study,  
19 I need to adjust those based on average  
20 forward-looking fill factors.

21           **Q**     Were you present during Mr. Woods' cross  
22 examination earlier?

23           **A**     Yes.

24           **Q**     Would that correspond, do you believe, to  
25 what he described as a realizable fill factor?



1           A     I have not reviewed the Hatfield model, so  
2 I'll just give you my interpretation at this point  
3 based on his clarifications of fill factors.

4                     This would not correspond to the input to  
5 the Hatfield model. This would correspond to the  
6 actual relationship that would result; and he gave an  
7 example of that, which is on the record.

8           Q     All right. Earlier you used the term "pair  
9 gain". Is that what other people have referred to in  
10 this proceeding as digital loop carrier systems?

11          A     Yes. I believe the Hatfield model calls it  
12 a concentration device.

13          Q     And I believe some GTE witnesses have  
14 referred to it as a digital loop carrier.

15          A     Yes, it is.

16          Q     And if I remember your cost study correctly,  
17 you assume, for purposes of pricing unbundled loops,  
18 digital loop carrier on fiber for loops that are over  
19 12,000 feet; is that correct?

20          A     Yes, that is correct.

21          Q     And do you assume what's been referred to as  
22 universal digital loop carrier, integrated digital  
23 loop carrier or next generation digital loop carrier?

24          A     Integrated loop carriers is how our TSLRIC  
25 cost studies were performed where they're actually

1 integrated with the switch technology such as our  
2 residential one-party service. The 2-wire and 4-wire  
3 are cost studies for private line special access as  
4 well as unbundled loops are based on nonintegrated.

5 Q Which is the more cost-effective technology?

6 A For unbundled loop service the most  
7 cost-effective technology for GTE is nonintegrated.

8 Q For provision of local service, which is the  
9 most cost-effective technology?

10 A When the loop is integrated with GTE's  
11 switch, it is with the integrated technology. An  
12 example I gave 30 seconds ago was for residential  
13 one-party service. That's the most efficient use of  
14 the technology.

15 Q Let me ask the question this way: Is the  
16 use of a loop by GTE in providing residential service  
17 less costly than the provision of an unbundled loop to  
18 a third party?

19 A As it relates to this particular item of a  
20 concentration device?

21 Q Yes, sir.

22 A It is more expensive for us to provision  
23 that with a nonintegrated technology.

24 Q Does GTE use next generation digital loop  
25 carrier in its network?

1           A     We're beginning the introduction of that  
2 technology; still in its development stage, testing  
3 stage for GTE.

4           Q     And would you regard that at this point as a  
5 forward-looking technology?

6           A     I would regard that as being in violation of  
7 basic rational thinking on GTE's part, and also not --  
8 excuse me -- contrary to the requirements of the First  
9 Report and Order of the FCC.

10          Q     I guess I don't think that's the question I  
11 asked. I thought I asked, would you regard next  
12 generation digital loop carrier as a forward-looking  
13 technology.

14          A     That particular technology certainly should  
15 be considered to be forward-looking technology. It's  
16 technology that we're currently evaluating, and in new  
17 development areas it wouldn't surprise me in the  
18 future that we'll be using it more.

19          Q     I'm sorry?

20          A     In new development areas in the future it  
21 would not surprise me that we'd be using it more.

22          Q     I didn't hear the "not" the first time. Is  
23 next generation digital loop carrier a less  
24 expensive -- provide a less expensive means of  
25 providing unbundled loops than the universal digital

1 loop carrier that you assumed in your study?

2 A Based on the preliminary information I  
3 have -- and, again, it's just preliminary -- it would  
4 be more expensive.

5 Q It does not require the use of channel banks  
6 in the central office, however, does it?

7 A It does not require the use of channel  
8 banks; that is correct.

9 Q Now, one difference between your TSLRIC  
10 study and your TELRIC studies was the use of a land  
11 factor to include land and building investment in the  
12 TELRIC numbers; is that correct?

13 A No.

14 Q How were land and buildings taken into  
15 account in the development of your TELRIC costs?

16 A Both the TELRIC and TSLRIC studies utilized  
17 a land and buildings factor. It's documented on the  
18 late-filed exhibits as number --

19 Q Two?

20 A Yes, Exhibit Number 2.

21 Q In determining that land factor, did you use  
22 the book cost of the land, or did you inflate it to a  
23 current market value?

24 A As documented in the exhibit, we used Turner  
25 indices to provide that on a current cost basis.

1 Q And do you know overall what the magnitude  
2 of the adjustment was that resulted from the  
3 application of the Turner indices?

4 A I know that we did not adjust it at all for  
5 land, and I was somewhat concerned about that; and for  
6 buildings, I do not have that specific information  
7 with me.

8 Q Let me ask this: Do current digital  
9 switches occupy less building space than mechanical  
10 switches used to occupy? Do they have a smaller  
11 footprint?

12 A I would say they have a smaller footprint,  
13 yes.

14 Q Did you make any adjustment to the building  
15 accounts to reflect that the forward-looking  
16 technology may use less space than currently exists in  
17 your central offices?

18 A The only adjustment that was made is the  
19 converted to current cost based on the Turner indices.

20 Q So the answer is no?

21 A There is no adjustment relative to the size  
22 of the office, nor did I make any evaluation of if an  
23 office would cost me more or less, other than what's  
24 captured by the Turner indices.

25 Q Can you tell me what the Turner index is, or

1 the Turner indices are?

2 A Yes, I can. It provides a relationship, a  
3 mathematical relationship, of how to take a vintage of  
4 plant, such as a building, and convert that into 1995  
5 dollars.

6 Q And if I understand from some questions you  
7 answered earlier, GTE used COSTMOD to develop your  
8 loop investment estimates; is that correct?

9 A Yes; that particular technology module,  
10 COSTMOD, called the loop module.

11 Q And for purposes of determining feeder  
12 length, isn't it true that that model assumes a  
13 symmetrical serving arrangement in which feeder routes  
14 go out north, south, east and west from the central  
15 office?

16 A The model determines the size of the cables  
17 that leave the central office based on four routes.  
18 There's no requirement to indicate that they're north,  
19 south, east and west. The reason for that is we go in  
20 our own internal systems and determine the actual loop  
21 lengths for our customers, and that's what's  
22 incorporated in the model.

23 Q But there would be --

24 A It's very different than what the Hatfield  
25 model is doing.

1           Q     But there would be four feeders leaving each  
2 center office; is that correct?

3           A     Yes, that is correct; there are four  
4 feeders, but that information is used specifically to  
5 determine the cable sizes as a necessary algorithm of  
6 the standards in GTE. The specifics, lengths, route  
7 mileage for the facilities, are determined based on  
8 our systems for actual customers that GTE has.

9                     I might point out that that is -- you know,  
10 that's one of the problems. Although I'm not an  
11 expert in the Hatfield model, I'll tell you that that  
12 is one of the problems in that particular model,  
13 whether it's some geometry that are used to calculate  
14 the route mileage -- anytime you're on a north, south,  
15 east or -- route, the ratio of route miles to air  
16 miles will be one to one, which would seriously  
17 underestimate the total route mileage and, therefore,  
18 the cost for GTE's facilities.

19           Q     And what is the basis for the knowledge of  
20 the Hatfield model that underlay the answer you just  
21 gave?

22           A     Mr. Woods' testimony.

23           Q     And beyond Mr. Woods' testimony you're not  
24 familiar with details of the Hatfield model?

25           A     I am very knowledgeable in the BCM model as

1 well as the BCM-2 model, as Mr. Wood testified. The  
2 Hat -- excuse me -- the BCM+ model began its  
3 enhancements from using the BCM-1, as he referred to  
4 it. So I have a talking knowledge in the model, plus  
5 I have reviewed his testimony today, and I've done  
6 this type of stuff for about 12 to 15 years, so I know  
7 what he's talking about.

8 Q Mr. Trimble could you turn to your exhibit  
9 DBT-3?

10 A (By Mr. Trimble) Yes.

11 Q If I wanted to calculate the percentage  
12 markup over GTE's estimate of TE, or TELRIC in your  
13 proposed rates for the items shown on this exhibit,  
14 would I divide the column entitled "Contract Rates" by  
15 the column entitled "TELRIC"?

16 A That is correct.

17 Q And would you accept, subject to check, that  
18 that produces a 42% markup for a 2-wire local loop?

19 A Yes, I will.

20 Q And would you accept, subject to check, that  
21 it produces 1,129% markup for a common shared  
22 transmission facility on a per-mile basis?

23 A I don't think that would be correct, but I  
24 don't have any calculator -- I do have my calculator.

25 Q Could you try that one for me, please?



1           A     If you could tell me which line item.

2           Q     It's the last line item under parens 4,  
3 "Transport Facility Per Mile."

4           A     How much did you say?

5           Q     1,129% markup; 12.29 times the cost.

6           A     Yes, okay. I agree.

7           Q     Okay. And if we were to look up above under  
8 Direct Trunk Transport, the second entry, the DS-1  
9 Facility Per Airline Mile, would you agree with me  
10 that that produces a 3,107% markup?

11          A     If that is what those numbers say. The  
12 recommended contract rates there are the interstate  
13 rates, and we do know, and as we have all known, that  
14 there are great discrepancies in terms of existing  
15 rate structures and their balance.

16          Q     That's all I've got. Thank you,  
17 Mr. Trimble.

18                   COMMISSIONER DEASON: Staff?

19                   CROSS EXAMINATION

20 BY MS. CANZANO:

21          Q     Good afternoon, Mr. Trimble and Mr. Steele.  
22 We just have a few questions. Before we begin we  
23 would like to mark for identification exhibits we have  
24 prepared.

25          A     (By Witness Trimble) Yes.

1 Q Do you have a copy -- and all of these are  
2 confidential exhibits -- of DBT-9, consisting of your  
3 deposition transcript from September 30th and  
4 Late-filed Deposition Exhibits 1 through 13?

5 A I do not have a copy of the deposition  
6 transcript with me.

7 Q Have you reviewed the copy?

8 A Yes.

9 Q Do you have any changes to make to that copy  
10 or the exhibits?

11 A Other than inconsequential typos, I would  
12 have no change. The exhibits do have at least one  
13 change.

14 Q And what is that?

15 A On Late-filed Deposition Exhibit 13, I think  
16 in the second paragraph it says, "Total revenues are  
17 1995 year-to-date regulated revenues for  
18 GTE North-Illinois." That is a typo. It should be  
19 "GTE-Florida."

20 Q Thank you.

21 MS. CANZANO: At this time we would like  
22 that marked for identification as an exhibit.

23 CHAIRMAN CLARK: Just so I'm clear, it's the  
24 DBT-9?

25 MS. CANZANO: DBT-9.

1           **CHAIRMAN CLARK:** Which is the deposition  
2 transcript and late-filed deposition exhibits, and  
3 they're all confidential?

4           **MS. CANZANO:** Yes.

5           **CHAIRMAN CLARK:** That will be Exhibit 54.  
6           (Exhibit 54 marked for identification.)

7           **MS. CANZANO:** And, also, just for your  
8 information, Staff will be distributing to the  
9 Commissioners and the parties excerpts from that,  
10 which do not need to be marked for identification, but  
11 just we'll be crossing on that.

12           It's also my understanding that GTE has  
13 agreed to stipulate into the record the confidential  
14 cost studies from Docket No. 950984, which Staff has  
15 identified as BIS-3, and we'd like that marked for  
16 identification as an exhibit at this time.

17           **CHAIRMAN CLARK:** That will be Exhibit 55.

18           **MS. CANZANO:** Thank you.

19           (Exhibit 55 marked for identification.)

20           **MS. CANZANO:** And, likewise, we would like  
21 to marked for identification BIS-2, and this would be  
22 GTE's response to Staff's first request for production  
23 of documents, Nos. 1 through 14. And we would like it  
24 marked for identification.

25           **CHAIRMAN CLARK:** That will be marked as

1 Exhibit 56.

2 MS. CANZANO: Thank you. And that has also  
3 been stipulated into the -- well, I'm sorry. GTE has  
4 agreed to stipulate that into the record.

5 CHAIRMAN CLARK: Okay.

6 (Exhibit 56 marked for identification.)

7 MS. CANZANO: At this time Staff is  
8 distributing excerpts from Late-Filed Deposition  
9 Exhibit 1.

10 CHAIRMAN CLARK: I'm sorry. Do you want to  
11 pick these up now, the other confidential exhibits?

12 MS. CANZANO: I believe that's AT&T's.

13 BY MS. CANZANO:

14 Q Please turn to what is Attachment A, which I  
15 believe is the second sheet that has been handed out.

16 What Staff would like to know is where did  
17 you get the numbers under the column labelled "MR  
18 Direct?"

19 A (By Witness Steele) Those numbers are from  
20 our financial systems for the specific maintenance and  
21 repair items that are listed down the left-hand side,  
22 with the exception of the items that have a "T" to the  
23 right of them, which is based on total GTE. You'll  
24 see a note, if you will, on Attachment A, upper  
25 left-hand corner "T-total GTE surrogate factor."

1 Q Yes.

2 A That's where each of the maintenance  
3 repair -- those are actual expenses incurred by GTE.  
4 And all of them are for Florida except those couple  
5 there that are labelled with a "T".

6 Q And do these numbers support the numbers we  
7 have distributed as the first page under the annual  
8 charge factors?

9 A Yes. I'll have to pull my own copy out  
10 because I cannot read the one that has been given to  
11 me.

12 Q Okay. (Pause) Just for your own  
13 information, Staff has a hard time reading what was  
14 handed to us, also. It's not very clear.

15 A I apologize. Yes, they do support the  
16 specific question that was asked of Staff of, quote,  
17 "determination of annual operating expense factors on  
18 A-3, "which would be A-3 of Exhibit 36. And also  
19 throughout the late-filed exhibits this particular  
20 Late-filed Exhibit No. 1 is referred to for other  
21 items that were requested by Staff.

22 Q Yes. Could you please turn to the account  
23 listed for poles and it's 241110.

24 A Yes, I have that.

25 Q Why is that number on the first chart

1 different than the number reflected on Attachment A?

2           A     That's a good question. I don't know. I  
3 just saw it now. I can only speculate, but I'd be  
4 more than happy to check on it.

5                     That particular item is labelled as a T and  
6 it's probably my error I didn't go back, check, make  
7 sure that finance actually used that in the end.

8                     It appears that finance actually had  
9 state-specific data for that and I did not show the  
10 right response exhibit for that item. I'd be glad to  
11 check on that.

12           Q     What about for 242110, aerial cable  
13 retail -- metallic, sorry. That also doesn't appear  
14 to correspond.

15           A     It appears that I've done a poor job on this  
16 particular response.

17           Q     Okay. We're going to move on now.  
18                     What switching technology did you use in  
19 your cost studies?

20           A     They are outlined in the Tab 1. The  
21 Northern or Nortel DMS product line, the Lucent  
22 Technology 5ESS and the either AG Communication  
23 Systems or Lucent Technology, I'm not sure now, for  
24 the GTD-5.

25           Q     Do you believe that the GTD-5 switch is a

1 forward-looking technology?

2 A Yes, I do.

3 Q Why?

4 A According to extensive discussions with  
5 operations personnel, it represents the most efficient  
6 outcome for GTE. They have significant line additions  
7 and other additions to the switch, which based on  
8 their assessment, is the most efficient outcome for  
9 our company.

10 Q As far as you know, does GTD-5 switch  
11 provide all of the features and services that are  
12 offered by the DMS 100 and 5ESS switching  
13 technologies?

14 A I have not evaluated any of the switches. I  
15 know -- from that extent I know that there are some  
16 things that are available on the GTD-5 that are not  
17 available on other technologies.

18 For example, in this arbitration process  
19 it's been brought to my attention that GTD-5 is much  
20 more flexible in providing some time of operator  
21 services that have been asked for by various parties.  
22 So in that respect I believe it is more advanced, if  
23 you will, than the other two.

24 I know that there are certain other  
25 functionalities I know that are under development now.

1 I don't have the specifics on them as it relates to  
2 some of the expanded features. But I don't have  
3 specific information on it. These are the --  
4 certainly in line with everything I've performed here  
5 to support Mr. Trimble, both the TELRIC and TSLRIC  
6 analyses.

7 Q To your knowledge does the GTD-5 offer ISDN?

8 A I know that there's some development. I do  
9 not know if that is in place yet.

10 Q As far as you know is GTE Florida installing  
11 new GTD-5 switches in Florida?

12 A I'm almost positive that we wouldn't be  
13 installing any GTD-5 base units. As a matter of fact,  
14 to my knowledge I don't believe we're installing any  
15 Lucent Technology 5ESSs.

16 I believe at this particular time we have  
17 under evaluation the installation of a tandem switch  
18 in this area, and I'm not sure what the final product  
19 selection is. It wouldn't surprise me if it's a  
20 Nortel DMS 200. Most of our states -- excuse me,  
21 lines and central offices in the state are digital  
22 switches already, if not all of them. And I'm not  
23 aware of any switch replacement of significance other  
24 than the one tandem I just mentioned.

25 MS. CANZANO: Thank you. Staff has no



1 further questions.

2 CHAIRMAN CLARK: Commissioners? Redirect.

3 MR. FUHR: Thank you. Just a couple of  
4 questions.

5 REDIRECT EXAMINATION

6 BY MR. FUHR:

7 Q Mr. Steele, was Cost Mod the only cost model  
8 that was included in the testimony and exhibits that  
9 you submitted in this proceeding?

10 A (By Witness Steele) Other than Cost Mod and  
11 SCIS, the only other model that was included was the  
12 Benchmark Cost Model Version, Release 2, commonly  
13 referred to as BCM2. And that was provided in  
14 Exhibit 36 -- I'm not sure of the tab. Hold on a  
15 second, please. (Pause)

16 It's under Exhibit 36, Tab 21, labelled  
17 "Benchmark Cost Model Version 2" in the Table of  
18 Contents.

19 Q Mr. Steele, do you have that in front of  
20 you?

21 A Yes, I do.

22 Q How do the numbers that were generated in  
23 this model compare to those that you have testified to  
24 in the past hour and a half?

25 A I need to provide some clarification.

1 Contained under Tab 21 are two assessments of cost.  
2 The first one is with the BCM2 where that's analyzed  
3 in its default capacity. What I mean by that is  
4 anybody can acquire this model. I think it costs  
5 \$100. And you can run it for GTE's operations in the  
6 state of Florida. And when you run that without  
7 making any changes, it gives you the number which is  
8 at the bottom, which is nonproprietary, \$25.44.

9 There's also another analysis in that tab,  
10 which is based on a change in the inputs to the model  
11 to be Lucent Technology contract prices to GTE. And  
12 that produces a number, again which is not proprietary  
13 of, \$33.61.

14 Now, I have to take note that that number of  
15 \$33.61, although it's more representative of GTE, it  
16 adds some properties of fully allocated cost, I would  
17 agree with Mr. Wood in that regard. But there is  
18 information in this filing that I can adjust that  
19 number. I'd have to go to late-filed exhibit -- I  
20 forget the exhibit number for the late-filed exhibit.

21 MR. MELSON: Chairman Clark, I'm going to  
22 object at this point. He has more than answered the  
23 question and his answer now appears to be going beyond  
24 the scope of any of the cross.

25 MR. FUHR: I'm content with the answer he's

1 already given, so that's fine.

2           **CHAIRMAN CLARK:** Okay.

3           **Q**       **(By Mr. Fuhr)** Mr. Steele, you were asked  
4 about your experience with the Hatfield Model and you  
5 explained also a criticism with respect to one element  
6 of the model that Mr. Wood testified to earlier. Are  
7 there any other aspects of his discussion here that  
8 you heard while you were here in this room that you  
9 would comment on.

10           **MR. MELSON:** Again, objection. I think that  
11 goes beyond the scope of the cross.

12           **MR. FUHR:** If I might respond, I don't  
13 remember who was still in here, there was a question  
14 asked of Mr. Steele with respect to his familiarity  
15 with the Hatfield Model. Mr. Steele testified with  
16 respect to the Hatfield Model and the use of how it  
17 takes the network north, south, east, west.  
18 Configuration of the system. There was a follow-up  
19 question asked on cross examination about Mr. Steele's  
20 familiarity of the Hatfield Model. I think he's  
21 opened up that area.

22           **CHAIRMAN CLARK:** What was your question just  
23 now?

24           **MR. FUHR:** My question was simply are there  
25 any other areas that he heard Mr. Wood testify to with

1 respect to the Hatfield Model that he wished to  
2 comment on. That was the only question I was going to  
3 ask.

4 MR. MELSON: Commissioner Clark, I think the  
5 response speaks for itself. But the question to him  
6 was what was his familiarity with the model. The  
7 redirect now is is there anything you don't like about  
8 the model, and that would have been a proper subject  
9 of prefiled testimony, not of redirect.

10 CHAIRMAN CLARK: Yes. Mr. Fuhr, I agree on  
11 that point. I think that goes beyond what is allowed  
12 for cross examination.

13 MR. FUHR: The question that was asked  
14 before that, on cross, elicited a specific criticism  
15 of an aspect of information and outputs that the  
16 Hatfield Model generated.

17 MR. MELSON: Just because --

18 CHAIRMAN CLARK: You're indicating that I  
19 may have been out of the room when that --

20 MR. FUHR: That was my recollection.

21 CHAIRMAN CLARK: Okay.

22 MR. FUHR: Chairman Deason and Garcia were  
23 here.

24 CHAIRMAN CLARK: Okay. Mr. Melson.

25 MR. MELSON: I asked him his familiarity

1 with the Hatfield Model. He described that. He then  
2 gratuitously said "and here's something bad about it."  
3 His counsel is now asking him is there anything else  
4 bad about it? That's beyond the scope of the question  
5 I asked.

6           **COMMISSIONER KIESLING:** I wasn't here for it  
7 either, but it would seem to me on redirect asking a  
8 question of "Do you have any other comments you want  
9 to give us?" is pretty broad. And it allows the  
10 witness to say anything he wants to say.

11           **CHAIRMAN CLARK:** I'm just going to check  
12 with Commissioner Deason.

13           **COMMISSIONER DEASON:** Well, I was here and I  
14 do recall the question and the answer. I think that  
15 the answer went beyond the original cross examination  
16 question and it could have been subject to an  
17 objection except for the liberality of this Commission  
18 to allow witnesses to expand their answer. Therefore,  
19 given that I think that the redirect question goes  
20 beyond what would normally be considered proper  
21 redirect.

22           **MR. FUHR:** That's fine, Chairman.

23           **CHAIRMAN CLARK:** Okay.

24           **MR. FUHR:** I have no further questions.

25           **CHAIRMAN CLARK:** All right. Exhibits.

1           **MR. FUHR:** Chairman Clark, I'd like to move  
2 the admission of exhibits 49, 50, and 51.

3           **CHAIRMAN CLARK:** That will be admitted into  
4 evidence without objection.

5           **MS. CANZANO:** What about Exhibit 36?

6           **MR. FUHR:** And Exhibit 36, which I believe  
7 had earlier been marked simply for identification.

8           **CHAIRMAN CLARK:** It will be moved into the  
9 record without objection.

10          **MR. LEMMER:** AT&T moves Exhibit 52 and 53.

11          **MS. CANZANO:** Staff moves Exhibit 54, 55 and  
12 56.

13          **CHAIRMAN CLARK:** They will be admitted not  
14 record without objection. Our next witness is  
15 Mr. DellAngelo, and then Mr. Drew, and then  
16 Ms. Menard.

17                   (Exhibits 36, 49, 50, 51, 52, 53, 54, 55 and  
18 56 received in evidence.)

19          **COMMISSIONER KIESLING:** While I was gone  
20 someone put a copy of "Direct Testimony of Dennis  
21 Trimble" in my seat. That wasn't what I didn't have.  
22 It was the direct testimony of Mr. Steele.

23          **CHAIRMAN CLARK:** Okay. We weren't intending  
24 to give you Mr. Steele. The one from Mr. Trimble is  
25 the unredacted one.

1                   **COMMISSIONER KIESLING:** Okay. Thank you.

2                   **CHAIRMAN CLARK:** We were going to leave you

3 to find your own Mr. Steele testimony.

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**MICHAEL J. DELLANGELO**

1  
2 was called as a witness on behalf of GTE Florida  
3 Incorporated and, having been duly sworn, testified as  
4 follows:

**DIRECT EXAMINATION**

5  
6 **BY MR. GILLMAN:**

7       **Q**     Could you state your full name for the  
8 record, please?

9       **A**     Michael L. DellAngelo.

10               **COMMISSIONER KIESLING:** Was he sworn?

11               **MR. GILLMAN:** Yes, he was sworn. I'm sorry.

12       **Q**     **(By Mr. Gillman)** You have been sworn,  
13 Mr. DellAngelo, have you not?

14       **A**     Yes, Monday morning.

15               **COMMISSIONER KIESLING:** Oh.

16       **Q**     **(By Mr. Gillman)** And by whom are you  
17 employed?

18       **A**     GTE Telephone Operations.

19       **Q**     And what do you do at GTE?

20       **A**     I work in Carrier Product Management in a  
21 group called AIN Program Management.

22       **Q**     And Mr. DellAngelo, did you have cause to be  
23 prefiled your direct testimony in Docket No. 960847-TP  
24 consisting of 29 pages?

25       **A**     Yes.



1 Q And was there an exhibit MLD-1 attached to  
2 that piece of testimony?

3 A Yes.

4 MR. GILLMAN: At this time, Chairman Clark,  
5 I'd ask that exhibit MLD-1 be marked for  
6 identification purposes as Exhibit 56.

7 CHAIRMAN CLARK: 57.

8 (Exhibit 57 marked for identification.)

9 Q (By Mr. Gillman) Mr. DellAngelo, did you  
10 also have cause to be filed the direct testimony under  
11 your name in Docket No. 960980-TP consisting of two  
12 pages?

13 A Yes.

14 Q And there were no exhibits attached to that  
15 testimony, was there?

16 A No.

17 Q Do you have any changes to make to either  
18 piece of this testimony?

19 A Yes. I have one change on the testimony for  
20 docket 960847-TP.

21 Q And what is that change?

22 A On Page 14, Line 17, the paragraph number  
23 where it says "198" should be changed to "203"; 203.

24 Q Do you have any other changes?

25 A No, I don't.

1           Q     If I asked you the same questions which  
2 appeared in these two pieces of testimony, would your  
3 answers here today under oath be the same?

4           A     Yes.

5           MR. GILLMAN: At this time, Chairman Clark,  
6 I'd ask that the direct testimony of the  
7 Mr. DellAngelo filed in 960847 and 960980 be inserted  
8 into the record as though read.

9           CHAIRMAN CLARK: They will be inserted into  
10 the record as though read.

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**GTE FLORIDA INCORPORATED****DIRECT TESTIMONY OF MICHAEL L. DELLANGELO****DOCKET NO. 960847-TP**1  
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25**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Michael L. DellAngelo. My business address is 600 Hidden Ridge, Irving, TX, 75038.

**Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

A. I am employed by GTE Telephone Operations (GTE) as Program Manager in the Advanced Intelligent Network (AIN) Program Management Group. I provide direction and technical support for all aspects of AIN implementation within GTE's public switched network. I investigate technical infrastructure requirements necessary to deliver new services via the AIN.

**Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.**

A. I have a Bachelor of Science degree in Electrical Engineering from Michigan Technological University located in Houghton, Michigan. I have been employed with GTE for 25 years in a variety of technical and managerial positions. My previous experiences have included: central office equipment engineering; engineering and cutover of analog and digital stored program control

1 switching offices; technical standards and support; outside  
2 plant/facilities engineering and construction; capital budgeting;  
3 Open Network Architecture (ONA); and business case planning  
4 for new feature developments on switching systems. For the  
5 past four years I have been involved in all aspects of GTE's  
6 planning efforts to support the deployment of an AIN network  
7 infrastructure. During the past year, I have represented GTE in  
8 preparing the Intelligent Network (IN) Industry Project which was  
9 presented to the Federal Communications Commission (FCC) as  
10 a telecommunications industry effort to objectively address the  
11 unbundling of AIN functions.

12

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. The purpose of my testimony is to address AT&T's request that  
15 GTE unbundle Advanced Intelligent Network ("AIN"). I will  
16 describe what AIN is, identify relevant portions of the Act,  
17 identify the disputed issues relevant to AIN, and explain GTE's  
18 position relevant to each issue.

19

20 **Q. PLEASE PROVIDE AN OVERVIEW OF THE AIN ISSUES THAT**  
21 **WILL BE ADDRESSED IN YOUR TESTIMONY.**

22 A. The Telecommunications Act of 1996 (the "Act") requires  
23 incumbent local exchange carriers ("ILECs") to provide, on an  
24 unbundled basis, nondiscriminatory access to network elements  
25 at any technically feasible point. In its First Report and Order, the

1 FCC interpreted the Act's unbundling provisions to require ILECs  
2 to make their Advanced Intelligent Network ("AIN") Service  
3 Control Point ("SCP" or "database") available to competitors  
4 either through the sale of local switching services or, if adequate  
5 safeguards exist, through interconnection of the competitor's  
6 local switch to the ILEC's Signaling Transfer Points ("STPs"). The  
7 Act also requires that ALECs have access to ILECs' Service  
8 Management System ("SMS") and Service Creation Environment  
9 ("SCE"). GTE is currently identifying what steps are necessary  
10 and how much it will cost to modify its network to comply with  
11 the FCC's Order so that AT&T and other telecommunications  
12 service providers can offer the same AIN services being offered  
13 by GTE.

14  
15 In addition to the access ordered by the FCC, AT&T makes two  
16 requests, neither of which for GTE is technically feasible: (1)  
17 AT&T seeks access to all available AIN Trigger Detection Points  
18 ("TDPs") in ILEC end office switches, and (2) AT&T wants to  
19 interconnect its network with GTE's Signaling System 7 ("SS7")  
20 network in order to exchange AIN messages between GTE's end  
21 offices and AT&T's AIN SCP. However, end office switches were  
22 not designed to support the direct (*i.e.*, unmediated) access  
23 AT&T seeks. Such direct access could severely harm the  
24 reliability and security of the public-switched network system,  
25 other telecommunications service provider networks and end-

1 users. In addition, direct access by AT&T raises significant  
2 operational concerns. In an effort to resolve these problems, GTE  
3 has been actively participating in the "LEC Proposal for an  
4 Industry IN Project," which seeks to identify and resolve the  
5 technical and operational issues associated with unbundling AIN.  
6 Until a resolution is possible, however, AT&T's requests for direct  
7 access are not technically feasible.

8  
9 **Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?**

10 A. Section A describes AIN. Section B sets forth the relevant  
11 provisions of the Act. Section C provides a list of the issues to  
12 be arbitrated, accompanied by a summary of each party's  
13 position. Finally, Section D explains GTE's position on the  
14 unbundling of AIN in detail.

15  
16  
17 **SECTION A: DESCRIPTION OF AIN**

18  
19 **Q. WHAT IS AIN?**

20 A. AIN allows the development of new services on a centralized  
21 basis. However, in order to properly understand AIN, it is  
22 important to recognize how it differs from the SS7 network  
23 (which is described in the Direct Testimony of Douglas N. Morris)  
24 and traditional Intelligent Network ("IN") applications. These  
25 differences highlight why direct access to AIN poses unique risks

1 that are not inherent in granting access to SS7 networks and IN  
2 applications.

3

4 **Q. PLEASE DESCRIBE SS7 AND TRADITIONAL "IN" APPLICATIONS.**

5 **A. Current generation network switching systems are controlled by**  
6 **an internal, special purpose computing environment designed to**  
7 **facilitate call processing. All call processing programs and**  
8 **associated line, trunk, and customer data are stored internally**  
9 **within this computing environment. As explained below, these**  
10 **systems are not designed to protect against the actions of one**  
11 **service provider from affecting other service providers' networks.**

12

13 With the advent of new services, such as Database 800  
14 ("DB800"), Calling Name Delivery ("CNAM"), and Calling Card  
15 Validation ("CCV") for Alternate Billing Systems ("Operator  
16 Services"), all of which require the storage and retrieval of  
17 millions of records, it is not technically feasible to store this  
18 information in every switching system supporting the application.  
19 The technical solution developed to manage the millions of  
20 records associated with these new applications consists of  
21 centralized network databases, each of which is accessed by  
22 switches using special internal call processing logic. The  
23 switching systems equipped with the special internal call  
24 processing logic are called Service Switching Points ("SSPs").  
25 The centralized network databases are called Service Control

1 Points ("SCPs"). Data is loaded into the SCP through the Service  
2 Management System ("SMS").

3  
4 In its simplest form, signaling messages are sent via SS7 network  
5 links, traveling from the SSP through one or more Signaling  
6 Transfer Points ("STPs") (or intersections) before reaching their  
7 final destination, the SCP. As shown in Exhibit No. MLD-1, when  
8 a call reaches the SSP, the SSP's internal call processing logic  
9 identifies whether access to a centralized SCP (or database) is  
10 required. If so, the SSP suspends the call while it queries the  
11 SCP for further instructions. Using the SS7 network, the SSP  
12 releases a packet (or envelope) which is addressed with routing  
13 information (known as Signaling Connection Control Part "SCCP")  
14 coded to direct the packet through the appropriate STPs and  
15 eventually to the SCP. In addition to the routing codes, the  
16 packet contains a message in the form of unique signaling codes  
17 called Transaction Capabilities Applications Part ("TCAP"). The  
18 TCAP is necessary to query the SCP, which responds by sending  
19 a TCAP message back to the originating SSP, where the call is  
20 being held.

21  
22 This intelligent network architecture has been implemented  
23 universally within the United States for DB800, CNAM, and CCV  
24 applications. As the following examples demonstrate, safeguards  
25 designed to protect the integrity of the network can be



1           programmed into the SSP and SCP because, for each IN  
2           application, the message structure and parameters are predefined  
3           and locked-in. This ability to predefine responses at both ends of  
4           the IN message path is not technically feasible with AIN. In fact,  
5           as explained below, AIN's advantages derive from the fact that  
6           the query and response parameters are not predefined, allowing  
7           multiple services to be provided from a generic database.

8  
9           For example, DB800 is an application that uses the IN  
10          architecture. When a switch equipped with 800 SSP call  
11          processing logic receives an 800 dialed call (including expanded  
12          toll-free calling, 888, etc.), the switch suspends call processing  
13          and launches an 800 TCAP query message to the 800 SCP (or  
14          database) to obtain call routing information. The 800 SCP  
15          searches for the record associated with the dialed 800 number  
16          and returns a response TCAP message containing the appropriate  
17          routing information. The only routing information that can be  
18          returned is the interexchange carrier ("IXC") code assigned to the  
19          800 number dialed or a plain old telephone service ("POTS")  
20          number associated with the 800 number. The SCP or SSP also  
21          will create 800 application-specific Automatic Message  
22          Accounting ("AMA") records for proper 800 service billing.

23  
24          CNAM is an example of another IN application. When a call is  
25          terminated to a line equipped with CNAM service, the SSP will

1 launch a query to the CNAM database to retrieve the name of the  
2 calling party. The SSP sends a CNAM-specific TCAP query  
3 message containing the Calling Party Number. The CNAM  
4 database retrieves the Calling Name associated with the Calling  
5 Party Number received at the SSP. The *only* function performed  
6 by the CNAM IN application is the delivery of a Calling Name if  
7 available in the CNAM database. The operation of all normal  
8 switch-based features and AMA billing will function as if the IN  
9 application had not been encountered.

10

11 CCV is an IN application that supports Operator Services Systems  
12 ("OSS") for alternate billed calls. The key function of this  
13 application is to validate Calling Card Numbers entered by the  
14 caller. After the OSS has collected the Calling Card Number, a  
15 query is launched to a Line Information Database ("LIDB") to  
16 determine if the Calling Card Number is valid. The results of this  
17 validation will determine *only* if the call is authorized to be  
18 completed.

19

20 Each of the three applications described above is based upon a  
21 unique set of industry standards defined by the American National  
22 Standards Institute ("ANSI") SS7 network standards and Bellcore-  
23 developed Technical Requirements. IN applications require  
24 application-specific logic (computer software or programs)  
25 resident in the serving SSP. All message structures and

1 parameters are specifically defined and hard-coded into both the  
2 SCP and SSP for each application. Thus, the application cannot  
3 dynamically route to any destination, and the messages between  
4 the SSP and the SCP are locked-in so that any party accessing  
5 the SCP will get a predefined response over which it cannot  
6 exercise control. Also, and particularly relevant to understanding  
7 how AIN is different, SS7 network signaling and IN applications  
8 cannot modify, add, or delete parameters such as Calling Party  
9 Number and Calling Party Number Privacy indicators, or impact  
10 switch billing AMA information.

11

12 **Q. PLEASE DESCRIBE AIN AND HOW IT DIFFERS FROM IN.**

13 **A.** AIN was introduced in the late 1980s and, unlike IN, is designed  
14 to allow a variety of services to be provided from a centralized  
15 AIN SCP. Although AIN applications send messages through the  
16 same SS7 network and, thus, flow in much the same way as IN  
17 applications, there are some fundamental differences. Unlike IN,  
18 AIN defines trigger detection points (or "TDPs") within the SSP.  
19 If a call triggers a TDP, call processing is suspended while the  
20 SSP queries the AIN SCP. As with IN applications, the TCAP  
21 query is contained in an information packet and routed using the  
22 SS7 network, traveling through the appropriate STPs and  
23 eventually to the AIN SCP. However, instead of going to a  
24 unique SCP database containing predefined responses (e.g.,  
25 DB800, CNAM, or CCV), the AIN SCP has generic capabilities

1 that allow it to facilitate the provision of many different services.  
2 Unlike the predefined messages and responses triggered by IN  
3 applications, the TCAP returned by the AIN SCP can override  
4 normal SSP switch functions, add, delete, and modify call  
5 processing information, and create unique AMA billing records,  
6 thereby giving the AIN SCP complete control of the internal  
7 switch call processing environment and potentially affecting the  
8 entire network. Thus, with AIN, extreme care must be taken to  
9 assure that AIN services do not adversely impact other end-user  
10 switch-based services or required AMA billing record generation.  
11

## 12 SECTION B: AIN AND THE TELECOMMUNICATIONS ACT OF 1996

13

14 Q. PLEASE PROVIDE HOW THE ACT ADDRESSES AIN.

15 A. The Act provides that each incumbent local exchange carrier  
16 ("ILEC") has the following duties:

17 UNBUNDLED ACCESS. -- The duty to provide, to  
18 any requesting telecommunications carrier for the  
19 provision of a telecommunications service,  
20 nondiscriminatory access to network elements on an  
21 unbundled basis at any technically feasible  
22 point. . .

23 47 U.S.C. § 251(c)(3) (1996). The Act further provides that,

24

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[i]n determining what network elements should be made available for purposes of subsection (c)(3), the [FCC] shall consider, at a minimum, whether --

(A) access to such network elements as are proprietary in nature is necessary; and

(B) the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer.

47 U.S.C. § 251(d)(2) (1996).

The FCC has interpreted these provisions to require ILECs to provide access to AIN in three ways:

- (1) by purchasing local switching services from the ILEC;
- (2) if the competing carrier deploys its own local SSP or STP, by connecting to the ILEC's STP provided there is adequate mediation; or
- (3) by connecting to the SMS, provided there is adequate mediation.

See In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, CC Docket No. 96-98, FCC 96-325 (released Aug. 8, 1996) (the

1 "Order") ¶¶ 486, 487-88 and 493. The ILEC is not required to  
2 connect third party call-related SCPs (or databases) to the ILEC's  
3 signaling system. *Id.* ¶ 501.

4  
5 **SECTION C: UNRESOLVED ISSUES BETWEEN GTE AND AT&T**

6  
7 **Q. WHAT ARE THE ISSUES TO BE ARBITRATED IN THIS**  
8 **PROCEEDING?**

9 A. The issues presented in this arbitration flow predominately from  
10 the parties' differing views of the purposes and requirements of  
11 the Act. The issues about which the parties disagree are as  
12 follows:

13  
14 (1) *Is direct access to AIN TDPs technically feasible?*

15  
16 **AT&T's Position:** Unbundled access to AIN is technically  
17 feasible at all AIN TDPs.

18  
19 **GTE's Position:** Direct access to AIN TDPs is not  
20 technically feasible and, therefore, not required under the  
21 Act. Because TDPs reside in SSPs, the TDPs are not  
22 equipped to handle multiple users and are not capable of  
23 being partitioned for use by different service providers.  
24 Access could harm the network system, other  
25 telecommunications service providers and end-users.

1 (2) *Is GTE required to accept at its STP signaling messages*  
2 *from AT&T's AIN SCP?*

3

4 **AT&T's Position:** Interconnecting AT&T's AIN SCP to  
5 GTE's STP is technically feasible. Just as carriers are  
6 certified for interconnection, they can be certified for AIN  
7 interconnection.

8

9

10 **GTE's Position:** Permitting AT&T and other third parties to  
11 interconnect foreign AIN SCPs to GTE's STP is not  
12 technically feasible and would result in harm to the  
13 network, other telecommunications service providers and  
14 end-users.

15

16

#### SECTION D: GTE'S POSITION

17

18

19 **Q. WHAT IS GTE'S GENERAL POSITION CONCERNING THE**  
20 **DISPUTED ISSUES?**

21 A. In its Order, the FCC concluded that unbundling is "technically  
22 feasible" if access to network elements can be achieved without  
23 significant technical or operational concerns, whether or not  
24 modifications to the ILEC's facilities are necessary. *Id.* ¶ 198.  
25 Thus, GTE is required by the Order to modify its network to

1 comply with the Order. This will allow AT&T to offer the same  
2 AIN services offered by GTE.

3  
4 AT&T's requests, however, go beyond the unbundling required by  
5 the Order. AT&T requests direct (i.e., unmediated) access to all  
6 available end office AIN TDPs, which are located in the SSP, and  
7 wants to interconnect its AIN SCP to GTE's SS7 network for the  
8 purpose of exchanging AIN TCAP messages. In defining  
9 "technically feasible," however, the FCC explicitly excluded  
10 access to network elements that would negatively affect network  
11 reliability and security:

12 [L]egitimate threats to network reliability and security must  
13 be considered. . . . Negative network reliability effects are  
14 necessarily contrary to a finding of technical feasibility.  
15 Each carrier must be able to retain responsibility for the  
16 management, control, and performance of its own network.  
17 Order, ¶ <sup>203</sup>198.

18  
19  
20 Direct access to AIN, as requested by AT&T, would threaten  
21 network reliability and security. Specific examples of the types  
22 of harm that would occur are described below. In addition, direct  
23 access to AIN raises significant operational concerns. Therefore,  
24 until it is possible to deploy adequate safeguards to protect  
25 against the threats to network reliability and security and the



1 operational concerns are resolved, direct access to AIN is not  
2 technically feasible.

3

4 **Q. SHOULD DIRECT ACCESS TO TDPs BE ALLOWED?**

5 A. No. Direct access to TDPs is not technically feasible. AT&T has  
6 attempted to obfuscate through oversimplification the serious  
7 harm to network reliability and security that could result if,  
8 without adequate mediation, AT&T is given direct access to  
9 TDPs. In addition, direct access raises significant operational  
10 concerns. AT&T, on other hand, contends that direct access to  
11 TDPs is technically feasible, and no different from the type of  
12 access currently available for IN applications and SS7 networks.

13

14

15 **Q. WHY IS ADEQUATE MEDIATION CRITICAL?**

16 A. As explained above, there is a fundamental difference between  
17 traditional IN applications and AIN. Unlike IN applications, which  
18 are service specific, AIN introduces generic capabilities that can  
19 be used to provide many different services. AIN introduces a set  
20 of functional capabilities that allow an AIN SCP to control internal  
21 switch call processing functions. This robust set of capabilities  
22 allows the AIN SCP to control routing functions and call  
23 processing information which can have a detrimental impact on  
24 all AIN subscribers, switch-based end-users' services and normal  
25 AMA billing record generation. Thus, adequate mediation must

1 be deployed to ensure that the TCAP message does not corrupt  
2 the SSP or the network.

3  
4 Mediation is the generic term used to describe safeguards that  
5 allow multiple third-party access to an existing closed operating  
6 system. Mediation represents a set of real-time and procedural  
7 functions to facilitate secure, cost-effective and network-efficient  
8 third-party access to an existing AIN. The key functions to be  
9 managed and controlled by mediation include: privacy, security,  
10 routing, billing, screening, feature interactions, operational  
11 procedures, reliability, provisioning, performance monitoring, error  
12 handling, customer care, network management, and  
13 interconnection testing.

14  
15 In the absence of adequate mediation, there are numerous  
16 scenarios that could arise in regard to call processing.

17  
18 **Q. COULD YOU DESCRIBE IN MORE DETAIL THE HARMS ARISING**  
19 **FROM INADEQUATE MEDIATION?**

20 **A. Potential consequences of third-party access without adequate**  
21 **mediation include:**

22  
23  
24 • Third parties can change the Billing Number forwarded to  
25 an IXC on a real time call-by-call basis. Incorrect billing

1 numbers will result in IXCs being unable to bill for calls or  
2 billing calls to the wrong customer.

3

4 • Third parties can change the Carrier Identification Code on  
5 a real time call-by-call basis. This will override an end  
6 user's presubscribed carrier or 10XXX dialed carrier codes.  
7 This capability allows practices known as "slamming" to  
8 occur on a real time call-by-call basis.

9

10 • Third parties can change the Calling Party Number of the  
11 originator. This will negatively impact terminating type  
12 services which utilize the Calling Party Number such as the  
13 customer local area signaling services ("CLASS") selective  
14 call services, Calling Number Delivery, Calling Name  
15 Delivery, and Automatic Recall.

16

17 • Third parties can change the Privacy Indicator of the  
18 Calling Party's Number. A Calling Party that may have  
19 dialed the \*67 privacy code to make their number private  
20 can have that number changed to "Public" by a third party.

21

22 • An AIN generic capability allows an AIN SCP to Activate  
23 and Deactivate AIN triggers on a real time basis. A third  
24 party can control any AIN trigger assigned in the office  
25 independent of the AIN service provider. In other words,

1 one AIN service provider can activate or deactivate triggers  
2 that are assigned to another AIN service provider. Any AIN  
3 provider has full access to all AIN triggers in the switch.

4

5 • All IN applications and AIN provide an overload control  
6 mechanism known as Automatic Call or Code Gapping  
7 ("ACG"). The purpose of ACG is to allow an SCP that  
8 encounters an overload condition to request the SSP to  
9 limit the number of queries it sends to the SCP while in  
10 overload condition. ACG controls are activated on an  
11 application level. An ACG control activated by a DB800 IN  
12 application will only impact 800 dialed calls. From an AIN  
13 0.1 ACG perspective, AIN call processing is considered a  
14 separate application. If a third party's SCP were to  
15 encounter an overload condition and activate ACG  
16 controls, the controls are applied to all AIN services for all  
17 AIN service providers. AIN calls encountering ACG  
18 controls will be routed to final treatment and not  
19 completed. Controls must be implemented which prevent  
20 one AIN service provider's platform from affecting all other  
21 AIN service provider's services. These controls are  
22 considered a part of mediation.

23

24 • AIN AMA record generation is under the total control of an  
25 AIN SCP. If a third party's SCP provides erroneous billing

1 information or does not deliver expected billing information,  
2 GTE, IXCs, or potentially other providers may not be able  
3 to bill correctly for their services.

4

5 • AIN call processing capabilities allow an AIN service to  
6 request the serving switch to play announcements or play  
7 announcements and collect digits. These AIN  
8 announcements are specially recorded for AIN services and  
9 are accessed by AIN services via Announcement ID  
10 numbers. There are no industry standards which define  
11 the message content for AIN announcements or the ID  
12 assigned to the announcement. Without an industry  
13 standard, third parties will face significant interconnection  
14 and implementation issues across multiple LEC networks.

15

16 • There are specific AIN trigger precedence rules over switch  
17 based functions. Depending upon the trigger activated, the  
18 subscriber may not be able to call emergency 911 service.

19

20 Allowing direct access to AIN without adequate mediation could  
21 result in serious harm to the reliability and security of the  
22 network. Thus, until adequate mediation is available, direct  
23 access is not technically feasible.

24

25 **Q. IS ADEQUATE MEDIATION CURRENTLY FEASIBLE?**

1       A.    No.  AT&T states that existing AIN standards already contain  
2           adequate safeguards, and that additional mediation will only result  
3           in unacceptable costs and delays.  However, there are no existing  
4           standards or mediation functions performed in the network TDPs.

5  
6           Effective mediation would require that the switch be partitioned,  
7           a feat that is not easily accomplished, or provided by external  
8           mediation platforms.  The internal computing environment of a  
9           switching system was not designed to support a multi-user  
10          environment.  Because TDPs are contained within the switch,  
11          they too cannot support a multi-user environment without  
12          mediation.  Unlike IN applications, which have been hard-coded  
13          to allow only a specific operation to occur, AIN does not provide  
14          for these safeguards.  AIN will allow operations under control of  
15          the AIN SCP to occur that can negatively affect call processing  
16          and end-user service operation.

17  
18          Because AIN standards are relatively new and have not been  
19          developed and implemented industry-wide, it is not technically  
20          feasible to provide direct access to TDPs.  The first industry  
21          standards defining AIN functional requirements were issued by  
22          Bellcore Technical Requirements documents released in August  
23          1992, and titled as AIN 0.1 requirements.  The implementation of  
24          these requirements by major switch vendors began incrementally  
25          through a phased approach beginning in 1994.  No switch

1 vendor, however, supports all of these requirements. In many  
2 cases, switch vendors are only now beginning to deliver many of  
3 these required functions. As a result, there are many undesirable  
4 interactions and incompatibilities between switch-based features  
5 and new AIN services.

6  
7 In addition to addressing these call processing issues, business  
8 processes between GTE and a third-party AIN service provider  
9 must be defined. This requires new interfaces and mediation  
10 functions on GTE's operational support systems to support the  
11 day-to-day business processes for ordering, provisioning, security,  
12 billing, and trouble resolution. Adequate processes and systems  
13 to manage these interactions are not yet available, creating  
14 significant administrative and market issues for GTE. These  
15 issues become even more complex when third-party access is  
16 considered.

17

18 **Q. DOES ACCESS TO IN APPLICATIONS MEAN THAT ACCESS TO**  
19 **AIN IS TECHNICALLY FEASIBLE?**

20 **A.** No. AT&T has concluded that because centralized databases,  
21 such as LIDB, are being used successfully by ILECs, third-party  
22 access to GTE's TDPs is technically feasible without additional  
23 mediation. This comparison to IN and AIN applications, however,  
24 fails to recognize the fundamental difference between IN  
25 applications and AIN.

1 Each IN application, as explained above, supports a specific  
2 service. Safeguards, which are necessary to assure that end-user  
3 services are not affected and network integrity is not jeopardized,  
4 are hard-coded into the specific logic for each application in both  
5 the SSP and SCP. In the existing AIN environment, these  
6 safeguards do not exist. Just because the IN LIDB application  
7 can be successfully mediated, it in no way supports AT&T's claim  
8 that access to AIN TDPs can occur without mediation.

9  
10 AT&T also incorrectly suggests that because the proposed LRN  
11 solution for Local Number Portability ("LNP") makes full use of  
12 SS7 network protocols and will be implemented in a multi-carrier  
13 and multi-vendor environment, that AIN TDP access is feasible  
14 without any form of mediation. The LRN solution being  
15 considered by the industry requires the development of a service-  
16 specific application for LRN in the local switching office. The  
17 architecture being prepared uses a unique AIN-like PODP trigger.  
18 Although misleadingly referred to as an AIN-based solution  
19 because of the use of the PODP trigger, the LRN solution is only  
20 another IN application. The proposed LRN solution requires  
21 expanded SS7 network changes, in addition to communicating  
22 TCAP messages between the SSP and SCP. These expanded  
23 changes require that an identifier be included in the SS7 forward  
24 call indicator parameter to indicate if a LRN database query has  
25 already been completed. This prevents multiple LRN queries from



1 being generated for the same call. Application specific logic  
2 (computer software or program) will be hard-coded into both the  
3 SSP and new LNP SCP database. It is nothing more than an  
4 expanded DB800 IN application in which the PODP trigger is hard-  
5 coded with predefined safeguards.

6

7 **Q. DOES DIRECT ACCESS RAISE SIGNIFICANT OPERATIONAL**  
8 **CONCERNS?**

9 A. Yes. The FCC concluded that unbundling is "technically feasible"  
10 if access can be achieved without significant technical or  
11 operational concerns. Order, ¶ 198. In addition to the technical  
12 problems with AT&T's request for direct access to TDPs, AT&T's  
13 request raises significant operational concerns.

14

15 There are two distinct categories of TDPs or triggers: (1)  
16 subscribed and (2) public office dialing plan ("PODP") triggers.  
17 Subscribed triggers are assigned to specific lines or trunks,  
18 whereas PODP triggers are assigned at the office dialing plan  
19 level. Subscribed triggers are only encountered on calls that  
20 originate or terminate to the specific line or trunk equipped with  
21 the trigger. As defined by Bellcore's AIN 0.1 Technical  
22 Requirements, examples of subscribed triggers are off-hook  
23 immediate, off-hook delayed, and terminating attempt. These  
24 triggers are assigned and provisioned on individual end-users'  
25 lines, and will be encountered only when calls originate or

1 terminate from these provisioned lines. An assigned trigger can  
2 be routed only to one AIN SCP database. It cannot be shared by  
3 multiple providers.

4  
5 PODP triggers are provisioned at the office dialing plan level of  
6 the switch translator. These triggers are encountered when any  
7 line or trunk dials the number or code assigned to the trigger.  
8 Examples of PODP triggers are the 3/6/10 digit PODP, vertical  
9 service code (\*XX), and N11. Similar to a subscribed trigger, an  
10 assigned PODP trigger can be routed only to one AIN SCP  
11 database. It cannot be shared by multiple providers. Also, it is  
12 questionable whether these triggers can ever be assigned  
13 independently to third parties. The key reason is that these are  
14 shared industry numbers or codes which are not controlled by any  
15 single party.

16  
17 AT&T insists that it needs access to all triggers to be competitive.  
18 However, AT&T disregards many of the issues raised by its  
19 request for access to such triggers. For example, PODP triggers  
20 can be assigned to such codes as 411, 555, and \*99 vertical  
21 service codes. These number resources are very limited and their  
22 use must be closely controlled. Except for a few \*XX codes, all  
23 other codes are already assigned for specific services (e.g., \*67  
24 is used for Calling Party Number privacy control). Numerous  
25 concerns in regard to assignment consequently arise, including

1           whether these limited numbering resources would be assigned to  
2           a very small number of AIN service providers; which AIN service  
3           providers would receive access to these limited numbering  
4           resources; and what criteria would be used to assign these codes.  
5           Assignment of a code to one AIN service provider and not another  
6           arguably could significantly disadvantage other service providers.  
7           It is easy for AT&T to demand access to these triggers.  
8           However, there are numerous other providers who would make  
9           similar demands which could not be accommodated. In short,  
10          there are significant operational concerns that must be resolved  
11          before direct access to TDPs is technically feasible.

12

13          **Q.    IS FOREIGN AIN INTERCONNECTION TO GTE'S STP**  
14          **TECHNICALLY FEASIBLE?**

15          A.    No.  AT&T's conclusion that it is technically feasible to send  
16          messages between its AIN and GTE's STPs disregards the serious  
17          consequences associated with third-party interconnection without  
18          mediation.  The issue is not whether AT&T and GTE can send and  
19          receive AIN TCAP messages between their networks.  That is  
20          relatively simple.  Rather, the real issue is the need to mediate the  
21          content of the TCAP message.  It is the content rather than the  
22          *mere transmission of the message that can corrupt the network.*  
23          Although AT&T was able to interconnect an AT&T AIN 0.1  
24          capable SCP to BellSouth's off-line laboratory SSPs, these test  
25          results demonstrate only that AIN TCAP messages can be sent

1 and received. The result says nothing about the real problem --  
2 the ability to mediate content.

3

4 AT&T's proposed interconnection arrangement results in SSP  
5 queries being routed directly to the foreign AIN SCP via SS7  
6 network links, traveling through GTE's STPs. Current STP  
7 gateway screening, however, only mediates routing codes (the  
8 SCCP); it does not provide any mediation of the contents of AIN  
9 TCAP messages. Thus, STP gateway screening will not control  
10 against the threat of harm to the reliability or security of the  
11 network, other system providers' networks or end users.

12

13 *Specific criteria and rules must be established before an*  
14 *interconnection arrangement can be considered technically*  
15 *feasible. In the case of AIN, interconnection criteria must assure*  
16 *that the integrity of the network is not compromised. Because*  
17 *foreign AIN interconnection would negatively affect the reliability*  
18 *and security of the public switched network and service to the*  
19 *end-user, the arrangement is not technically feasible.*

20

21 **Q. ARE THERE INDUSTRY EFFORTS UNDERWAY TO DEVELOP**  
22 **STANDARDS NECESSARY TO UNBUNDLE AIN?**

23 **A.** Yes. The near-term solution, which can be implemented  
24 immediately, would allow an ALEC to purchase existing GTE AIN  
25 service or work jointly with GTE to create and deploy ALEC

1 specific AIN services that operate on GTE's AIN databases. This  
2 is essentially what the FCC ordered. This approach allows an  
3 ALEC to enter the market immediately and avoids the problems  
4 inherent with multiple platform/multiple provider mediation  
5 requirements. With this implementation, the ALEC can gain  
6 access to GTE's underlying AIN capabilities without direct access  
7 to AIN triggers.

8  
9 With respect to the long-term solution, unbundling must be  
10 provided pursuant to uniform technical standards. Thus, GTE has  
11 been an active participant in the FCC Docket related to AIN  
12 unbundling, FCC Docket 91-346, and the LEC proposal for an  
13 industry project to define uniform technical standards and open  
14 interfaces for AIN trigger access.

15  
16 FCC Docket 91-346, In the Matter of Intelligent Networks, was  
17 initiated to unbundle access to ILEC AIN networks. While the  
18 FCC has referred to this proceeding by the misnomer "Intelligent  
19 Networks," what actually is being examined is AIN unbundling.  
20 AT&T has advocated the same position before the FCC as it does  
21 in its petition, *i.e.*, that direct access to AIN triggers is possible  
22 without mediation. Since AT&T has not been successful in  
23 convincing the FCC, it is also actively lobbying this same position  
24 in state proceedings. The public record for FCC Docket 91-346,  
25 however, clearly demonstrates that direct access to AIN triggers

1 is not technically feasible without implementation of mediation  
2 functions at both the network and operational support systems  
3 levels.

4  
5 In addition to participation in the FCC proceeding on AIN  
6 unbundling, the Tier 1 ILECs are participating in a plan called the  
7 "Industry IN Project." This effort is intended to develop technical  
8 standards and business processes necessary to provide third  
9 parties access to ILEC AIN networks at all interconnection points,  
10 including AIN triggers. Although the FCC has not yet officially  
11 endorsed the Industry IN Project, the Tier 1 ILECs have started  
12 the process of implementing this plan. An independent company  
13 was contracted by the Tier 1 ILECs to solicit the industry for their  
14 interest in participating in the IN Project. Five hundred thirty-six  
15 letters were mailed in March 1996 to 382 separate business  
16 entities. Sixty-eight companies responded to the letter. Forty  
17 companies expressed interest in participating, with 19 willing to  
18 participate in the project planning phase. Various conference calls  
19 beginning in April 23, 1996 have been held by this formal IN  
20 Project Organizing Committee to develop a plan for this project.

21

22

23 Thus far, AT&T has decided not to participate in the Industry IN  
24 Project. This suggests that AT&T is not seriously interested in  
25 obtaining access to AIN triggers. GTE recommends that the

1 Commission use the results of the FCC Docket and the Industry  
2 IN Project to direct its decisions on the unbundling of AIN.  
3

4 **Q. WILL YOU PLEASE SUMMARIZE YOUR TESTIMONY?**

5 A. AT&T's request for direct access to AIN is not technically feasible  
6 because adequate mediation does not exist to protect the  
7 reliability and security of the public local exchange network. In  
8 addition, direct access to AIN raises significant operational  
9 concerns. GTE is working with the industry to develop solutions  
10 to AIN unbundling. Until these solutions are developed, however,  
11 AT&T should not be permitted the direct access it seeks in its  
12 petition.  
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14 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

15 A. Yes, it does.  
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**GTE FLORIDA INCORPORATED**

**DIRECT TESTIMONY OF MICHAEL L. DELLANGELO**

**DOCKET NO. 960980-TP**

**Q. PLEASE STATE YOUR NAME AND ADDRESS.**

A. My name is Michael L. DellAngelo. My business address is 600 Hidden Ridge, Irving, TX, 75038.

**Q. ARE YOU THE SAME MICHAEL L. DELLANGELO WHO SUBMITTED DIRECT TESTIMONY IN RESPONSE TO AT&T'S ARBITRATION PETITION IN DOCKET 960847-TP?**

A. Yes. That Testimony was submitted on September 10, 1996.

**Q. WHAT WAS THE PURPOSE OF THAT EARLIER-FILED TESTIMONY?**

A. That Testimony explained GTE's position on unbundling the Advanced Intelligent Network (AIN), in the context of AT&T's arbitration request for such unbundling.

**Q. HAVE AT&T AND MCI RAISED SIMILAR ISSUES WITH REGARD TO AIN UNBUNDLING?**

A. Yes. I believe the two companies' requests for AIN unbundling are fundamentally the same. GTE's position in response to the respective companies will thus be the same. For this reason, it would be unduly repetitive to submit wholly new testimony with regard to



1 MCI, particularly since the AT&T and MCI arbitration dockets have  
2 been consolidated for hearing and resolution. I am therefore  
3 adopting my Direct Testimony in the AT&T arbitration as my Direct  
4 Testimony in this MCI arbitration. If there are any MCI-specific issues  
5 and positions that must be addressed, I will do so in my Rebuttal  
6 Testimony.

7

8 **Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

9 **A. Yes, it does.**

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1 BY MR. GILLMAN:

2 Q Mr. DellAngelo, do you have a summary of  
3 your testimony?

4 A Yes, I do.

5 Q Would you please give that now?

6 A Thank you. Good afternoon Chairman Clark,  
7 Commissioners and Staff.

8 The purpose of my testimony is to explain  
9 why the advanced intelligent network, or AIN  
10 interconnection requested by AT&T is not technically  
11 feasible and will harm the network by impacting  
12 network reliability and security.

13 The secondary purpose, it's explained why  
14 AT&T's position that it is technically feasible  
15 without additional mediation is totally incorrect  
16 without real facts to support their claim. What is  
17 the AIN connection arrangement requested by AT&T that  
18 is not technically feasible?

19 AT&T has requested that they interconnect  
20 their AIN service control point to GTE's SS7  
21 signalling network so that their AIN service control  
22 point can receive and send AIN messages with a GTE  
23 central office switch.

24 Essentially what they are requesting is that  
25 multiple third-party AIN service control point

1 platforms receive direct access to AIN triggers in the  
2 same switch. Why is this type of interconnection not  
3 technically feasible?

4 To answer this question we must first  
5 understand the architecture of a Stored Program  
6 Control switching system.

7 The switching systems have been designed  
8 very carefully to assure that service interruptions do  
9 not occur. All common equipment, such as control  
10 computers, are duplicated.

11 These switching systems are controlled by  
12 special purpose computers. The operating system of  
13 these computers was designed as a very closed  
14 operating system. They were not designed to be  
15 controlled by external processing environments. With  
16 the introduction of AIN the operating system was  
17 opened up such that external computing environments  
18 such as AIN service control points could take control  
19 of basic call processing functions. Under this  
20 environment the switch will execute whatever  
21 instruction the AIN service control point platform  
22 requests the AIN service control point can change call  
23 processing parameters, such as calling party number or  
24 billing numbers. SCP can return different destination  
25 numbers than those dialed by the caller, or

1 instructions to write the call to a particular  
2 switched trunk group. The AIN service control point  
3 has total control of switch-produced billing records  
4 when these records are produced, and the information  
5 stored in these records.

6           Harms that will impact network reliability  
7 and security occur when multiple service providers,  
8 AIN service control points, computing environments,  
9 are connected to the same switch. With this network  
10 architecture all AIN service control point platforms  
11 have direct control of the switching functions  
12 contained in the switch. The switch is not  
13 partitioned to prevent actions requested by one  
14 party's service control point from impacting other AIN  
15 service providers customers, the overall integrity of  
16 the switch and all end users served by that switch.

17           In my testimony I've listed examples of some  
18 of these harms. I'd just like to mention one of them  
19 as an example. AIN service control points can send  
20 instructions to the switch, turn AIN services on and  
21 off. The service control points instruction to the  
22 switch contains the telephone number, the trigger type  
23 and the on or off action requested.

24           Now, let's assume that AT&T had their AIN  
25 service control point connected to GTE's network, and

1 was providing an AIN service to their customers. Also  
2 assume that MCI had an AIN service control point  
3 connected to GTE's network and also providing AIN  
4 service to their customer.

5 In this scenario, AT&T's AIN platform can  
6 return instructions to turn MCI's customers' service  
7 on and off. And vice versa -- MCI's also could return  
8 instructions to turn AT&T's customers services on and  
9 off.

10 Remember my earlier comment, that this  
11 closed operating system, the switch, is now being  
12 controlled by multiple service providers platforms and  
13 does not have the ability to prevent actions from one  
14 party's platform for impacting others. This is just  
15 one example. There's a lot more.

16 Also in my testimony I've explained --  
17 provided explanations for some of the reasons that  
18 AT&T has presented to explain that this type of  
19 interconnection is feasible.

20 Not one of the reasons addressed the harms  
21 that will occur when multiple AIN service providers  
22 interconnect their platforms to GTE's network.

23 One of the fundamental reasons AT&T has used  
24 as STP gateway screening, which has been identified as  
25 a safeguard. STP gateway screening only provides

1 mediation functions for basic SS7 network  
2 interconnection. The fact is that STP gateway  
3 screening does not provide any protection for the  
4 harms that will occur when messages are exchanged  
5 between an AIN service control point and the switch.

6 STP gateway screening can be compared to  
7 sending information in a envelope. Gateway screening  
8 simply looks at the sending address, the receiving  
9 address and the type of the message contained within  
10 the envelope. The gateway screening tables will  
11 determine if the sending address is authorized to send  
12 this type of message to the receiving address.

13 Gateway screening does not look at the  
14 content that is contained within the envelope. All of  
15 the example of harms that I've identified are caused  
16 by the content of the message.

17 In order for any message to be sent between  
18 a switch and the STP, the gateway screening tables  
19 must be changed to authorize the sending of these  
20 messages. However, once authorized, no protection is  
21 provided to prevent the harms to the network.

22 AT&T has made comparisons between  
23 intelligent network, or IN applications, and advanced  
24 intelligent network, or AIN applications. This  
25 comparison, like used in Mr. Caplan's comment, is like

1 comparing yellow to squares. In my testimony I  
2 explain the differences.

3 I have been involved with the issue of  
4 unbundling AIN at the federal level for the last year  
5 and a half. I have reviewed every AT&T proposal  
6 presented to the FCC on this topic and there have been  
7 many. There are no facts to support their claim that  
8 the interconnection they are requesting is technically  
9 feasible. All of the harms I've explained in my  
10 testimony are real and will happen. Nothing that AT&T  
11 has presented will prevent these harms from occurring.

12 GTE is an active participant in a industry  
13 project initiated to address all AIN interconnection  
14 requests from third parties in a open industry forum.  
15 AT&T has refused to participate and suffers to date.  
16 The harms we are dealing with are serious and must be  
17 addressed by appropriate industry standard bodies.

18 GTE recommends that this Commission support  
19 this industry project and require AT&T and others who  
20 are requiring this type of interconnection to actively  
21 participate in this industry project. Appropriate  
22 interconnection standards which incorporate necessary  
23 safeguards are required before AT&T's request can be  
24 implemented.

25 Mr. Crafton's comments that mediation will

1 result in increased cost, call delays and greater  
2 failure rate is not a valid reason why mediation is  
3 not required. It would be irresponsible for GTE to  
4 allow such interconnections without adequate  
5 safeguards.

6 Furthermore, the architecture shown by AT&T  
7 which consists of separate STP mediation devices is  
8 not the only solution. Others include adding  
9 mediation to STPs and/or switches. This is part of  
10 the reason why an industrial standard solution is  
11 required such that an efficient and cost-effective  
12 solution is implemented.

13 That concludes my opening comments.

14 MR. GILLMAN: Tender the witness for cross  
15 examination.

16 CHAIRMAN CLARK: Mr. Melson.

17 MR. MELSON: No questions.

18 CHAIRMAN CLARK: Ms Azorsky.

19 CROSS EXAMINATION

20 BY MS. AZORSKY:

21 Q Good afternoon, Mr. DellAngelo. I'd like to  
22 start sort of basic and move up to the advanced  
23 intelligent network.

24 Isn't it true, Mr. DellAngelo, that AT&T  
25 connects its SS7 signalling network STPs to GTE's



1 STP's today?

2 A Yes, they do.

3 Q In those scenarios, the switch to STP  
4 connection is frequently referred to as signalling  
5 link A, is it not?

6 A The link between a switch and the STP is a  
7 signalling link A.

8 Q Similarly the STP-to-STP connection is  
9 frequently referred to as signalling link D; is that  
10 correct?

11 A Correct.

12 Q And just so the record is clear, a  
13 signalling link is really nothing more than digital  
14 private line; is that correct?

15 A Right. It's a 56 kilobit private facility.

16 Q And there is an ANSI standard that sets a  
17 protocol for the physical and logical connection to  
18 the STP; is that correct?

19 A Yes.

20 Q Now, you discussed in your summary the fact  
21 that the AIN database, or the AIN system allows the  
22 switch to do more than switches have been able to do  
23 in the past with regard to call control logic; is that  
24 correct?

25 A It really doesn't allow the switch to do

1 more itself. What it has done is rather than the  
2 logic that runs, executes in a switch, it's removed  
3 that logic and allowed a third party, external  
4 computer to control that switch externally. That's  
5 what it allows.

6 Q And that AIN, the AIN systems are allowing  
7 innovative services in the provision -- or the  
8 provision of innovative services to customers; is that  
9 correct?

10 A Well, it's a different architecture to  
11 deliver some enhanced services. Okay.

12 A lot of the services that are considered  
13 AIN could be developed in switches, it's just that you  
14 have to develop the code and switches. So rather than  
15 developing the switches, you use external computers.

16 Q And those external computers, companies  
17 providing service to consumers have the opportunity to  
18 create additional items without going back to the  
19 switch manufacturers and asking them to modify the  
20 switches; is that true?

21 A That is one of the intents of AIN.

22 Q Okay.

23 A Yes.

24 Q Now, you talked about the STP and the SCP.  
25 The STP is basically the switch of the SS7 Signalling

1 System; is that correct?

2 A Correct, it's a packet switch.

3 Q Okay. And it's also true, is it not, that  
4 one STP pair, and the databases that are associated  
5 with, it could be attached to switches throughout the  
6 country. Is that correct?

7 A If what you're asking me -- a given STP pair  
8 can have switches connected to it anywhere in the  
9 country, it's just a matter of establishing a 56  
10 kilobit data link between the switch and the STP.  
11 That's the process that that occurs.

12 Q So if a new service is developed and that  
13 new service is set up in a database with a SCP and  
14 that SCP is associated with a STP pair, that new  
15 service really only needs to be developed and  
16 provisioned once and that STP pair could connect to  
17 markets throughout the country?

18 A To switches throughout the country.

19 Q Switches throughout the country and,  
20 therefore, markets throughout the country?

21 A Correct.

22 Q Now, do you -- I might have misunderstood  
23 from your summary, do you mean to say -- do you  
24 understand that AT&T wants to connect its databases  
25 directly to GTE's switches?

1           A     No.  And that's not what I'm trying to say.  
2                     What AT&T is asking for is that their SCPs,  
3 which can be connected to their STP, can gain direct  
4 access to the triggers -- I say direct access from a  
5 logical perspective; not physical connection but the  
6 queries can be sent from a GTE switch to an AT&T -- a  
7 their-party control, service control point, AT&T and  
8 many others.  A query can be sent from the switch from  
9 the SS7 network to an AT&T SCP and, of course,  
10 responses can come back from AT&T's SCP to the switch.

11           Q     You do understand what AT&T is proposing is  
12 a STP-to-STP connection?

13           A     That not the issue.  The issue not the  
14 type -- the interconnection you mentioned will occur  
15 between STP and STP.  The issue is it's the content of  
16 the information that gets sent once that connection is  
17 established.

18           Q     I just want to explore one more area to make  
19 sure it's clear on the record.

20                     You discussed an application level.  Now, an  
21 application level, as I understand it, is a database  
22 within the SCP; is that correct?

23           A     Application level is 800 toll free calling  
24 or 888.  That's an intelligent network 800 -- it's an  
25 application that resides in a service control point.

1 It's fixed for that purpose only.

2 AIN is an application by itself, it's a  
3 generic application that can be used for many  
4 services. That's the application level for AIN is AIN  
5 itself.

6 Q Is it possible to separate AIN services into  
7 a number of different databases that would be separate  
8 application levels?

9 A Okay. The application -- when I mention  
10 application I'm talking about the AIN generic  
11 application. Now the question you just asked, can  
12 different AIN services be contained in different AIN  
13 platforms --

14 Q Yes.

15 A -- yes.

16 Q Would they in that scenario be considered  
17 separate application levels?

18 A No, it's the same application. It's an AIN  
19 application, just like an 800 application or calling  
20 card verification application. It's an -- AIN is the  
21 application. As far as the switch is concerned, it's  
22 AIN. It has nothing to do with the service. It's  
23 AIN.

24 Q And the switch could not -- is it your  
25 testimony that the switch would not differentiate

1 between the separate databases?

2 A Essentially that's correct.

3 Q If it's AIN it would be AIN as one  
4 application even if it were six different databases.

5 A Yeah. What my testimony is saying, the AIN  
6 is an application in the switch. That when an AIN  
7 trigger is encountered in that switch, it launches out  
8 queries in that it accepts the response that comes  
9 back from that query and it will perform whatever  
10 action that response comes back with. That is the  
11 like. That is AIN application. Independent of what a  
12 service is, it's the application. AIN does not know  
13 one application from the other at the switch level.

14 Q And it doesn't distinguish database from  
15 database at the switch level. Is that your testimony?

16 A Not really.

17 Q Let's talk about the STP addressing for a  
18 moment.

19 You use the terminology an envelope?

20 A Yes.

21 Q So let's follow your envelope example to try  
22 to make this a little simpler.

23 As I understand it the call would come in  
24 from that caller with AIN services and it would hit  
25 the AIN trigger, which releases the inquiry or query.

1 Is that correct?

2 A Results in a query.

3 Q And that query we might visualize an  
4 envelope that contains the query and has addressing  
5 information on the outside?

6 A Correct.

7 Q Okay.

8 Q What is in that address?

9 A What is in the address?

10 Q Let's try to make this little simpler. The  
11 address tells the envelope where to go, what database  
12 to go to; is that correct?

13 A Indirectly. What the address says is which  
14 STP do I have to get to to do global title translation  
15 to determine what database I have to go to.

16 Q So the address has to be translated before  
17 it's going to actually get to a database.

18 A But basically it's the address which  
19 indirectly will determine eventually where that query  
20 will get you, what database it will get you as a  
21 recipient of that query.

22 Q Will you also agree with me that the address  
23 shows the source of the query?

24 A Yes.

25 Q A return address, if you will?

1           A     Yes.

2           Q     Okay.  So we have an envelope that has an  
3 address and return address.  Now it's also my  
4 understanding that if this message somehow ends up  
5 somewhere it shouldn't be in the signalling network,  
6 it will be discarded; is that correct?

7           A     What do you mean by doesn't belong in the  
8 network?

9           Q     If it were to end up in the wrong place?  If  
10 it were to go to the wrong database.

11          A     Hypothetically, I think where you are headed  
12 is if the SS7 routing tables are set up to route a  
13 given query from a switch to a given database, okay,  
14 and it gets to that database, and for some reason that  
15 database doesn't accept it, it's going to return an  
16 error message back not accepting the message.

17          Q     The message essentially would be discarded  
18 or it would fail?

19          A     Yes.

20          Q     Okay.  And one of the reasons for an error  
21 message might be that it didn't belong here in the  
22 first place.  It should have gone to some other  
23 database; is that correct?

24          A     Yeah, that very well could be the reason;  
25 doesn't recognize it because it's not authorized.



1 Q Okay. Now, you said earlier that our  
2 envelope also contained a return address. Is that  
3 correct?

4 A Well --

5 Q It has to find a way to get back to the  
6 collar?

7 A If you use my envelope analogy, which I  
8 think is a simple way to think of STP gateway  
9 screening functions, you have the sending address up  
10 in the upper left-hand corner and you have the  
11 recipient sitting typical in the middle of the  
12 address. Gateway's greeting says "Is this sender  
13 allowed to send this message to this recipient," the  
14 type of message in here, like a T-cap message. When  
15 the message comes back it knows the return address  
16 because you sent it up in the upper left-hand corner  
17 so it's the process it uses to return that message  
18 back to the sender.

19 Q And is there also a function where if it  
20 doesn't get back to the right place it could be  
21 discarded?

22 A Yes, it would.

23 Q Okay. Now, there are also, are there not,  
24 translation types associated with the SS7 network?

25 A Yes. They are in STPs, part of global title

1 translation.

2 Q Now, in this current monopoly environment  
3 the translation types are used to identify different  
4 service types; is that correct?

5 A Service or applications, we're playing with  
6 words here. Like example, there's a translation type  
7 used for like toll free 800 database. That means IN  
8 application.

9 Q Okay. Is there one translation type  
10 associated with all the IN services?

11 A Yes, it depends. Yes and no.

12 When you get into routing AIN messages  
13 you're now dealing with platform capability, SCP  
14 platform capabilities in addition to services. For  
15 example, I use my sample, some SCP technologies  
16 require that you identify the service that is running  
17 in that platform based upon a subsystem number. We'll  
18 get to there. Which means you have to have multiple  
19 subsystem numbers for every service. There are other  
20 platform architectures that allow one subsystem number  
21 to access many different services running in that  
22 platform.

23 Now, I mention that because that's the way  
24 it would works at the platform. The way subsystem  
25 numbers are identified is when you do this global

1 title translation in an STP it will determine both the  
2 destination, which is the recipient address plus the  
3 subsystem number associated with that application.

4 Q I want to back up a step here.

5 In a competitive environment could you use  
6 translation types to identify a local service provider  
7 service type combination?

8 A One translation type?

9 Q For example, AT&T AIN services or MCI AIN  
10 services, GTE AIN services, a different translation  
11 type for each of those categories?

12 A Okay. I know where you are headed.

13 Q Could you please -- I'll allow you to  
14 explain but could you please answer my question yes or  
15 not before you explain?

16 A Could you assign translation type for a  
17 provider, is that what you're saying?

18 Q Yes.

19 A Maybe. Okay. There's a limitation in SS7  
20 network on how many translation types are supported.  
21 The protocol supports 256. And of those they are  
22 subdivided into different categories as to how they  
23 are assigned. Well, there's intranetwork versus  
24 internetwork. And today in the network, through the  
25 ANSI standards, they only have like 32 translation

1 types assigned for internetwork. And we're talking  
2 about internetwork stuff here. And about, I think, 13  
3 of those are already assigned for other applications.  
4 So if you went to the number that are currently  
5 assigned for internetwork, out of 32 you might be able  
6 to support 23 different translation types.

7 Q They are out there and you see no reason  
8 that they couldn't be assigned other than this  
9 capacity issue you addressed?

10 A If the industry assigns them that way.

11 Q Okay. If translation types were used as a  
12 part of the addressing process, so that AT&T's  
13 translation type was included as part of the address,  
14 if that message ended up in someone else's network,  
15 wouldn't it be discarded through the process that we  
16 just discussed?

17 A If that message was sent to the wrong  
18 network, yes, it would be discarded. But that is not  
19 the issue.

20 The issue is not whether or not it can get  
21 to the right network. SS7 protocol will allow it to  
22 get to the right network. The issue -- it issue go  
23 back fundamental -- is that when I'm launching those  
24 queries out to multiple different databases, not use  
25 different translation types to get there, the problem

1 is that I have multiple service control points  
2 controlling that same switch. And actions -- the  
3 response that comes back from those different  
4 platforms can impact not just the customer that is  
5 served by that particular AIN service, it affects  
6 other customers on the switch, customers that aren't  
7 even served by that switch. That's the issue. It's  
8 not the routing of the message through the SS7  
9 network.

10 Q The message that goes out from a caller's  
11 lines -- a caller who as AIN services initiates a  
12 call. That call can only -- the AIN process can only  
13 affect that caller's line; is that correct? The  
14 message isn't going to go back to another caller's  
15 line, is it?

16 A Well, it depends. It depends upon what  
17 trigger you're talking about, okay, that's being  
18 encountered as far as, you know, what interaction will  
19 occur. Because the interactions will be different  
20 depending upon trigger point in the switch. I'll give  
21 you example. I used this example in my testimony.

22 And I'll use two of my lawyers as an  
23 example, Ms. Casman and Mr. Gillman. If Ms. Casman  
24 originates a call in the network and she wants her  
25 number to be private, her calling party number

1 private, so she makes it private. And now somewhere  
2 along the line when she dials a number that call  
3 encounters an AIN call processing. And that call  
4 processing doesn't have to be in the switch she's  
5 served by, it could be another switch. That AIN  
6 service as a result of that call processing changes  
7 her privacy indicator to public, and now the call gets  
8 terminated to Mr. Gillman and he subscribes to the  
9 calling party number delivery service. All of a  
10 sudden her number will be displayed on his CPE device.  
11 And when she originated her call she wanted it  
12 private, okay? And no, you're example that will  
13 happen. It's a matter of where you hit the network,  
14 but that will happen, can happen.

15 Q Mr. DellAngelo, you've used that example and  
16 you also said earlier that the switch executes  
17 whatever instructions the SCP sends?

18 A Yes.

19 Q Isn't it the owner of the switch who  
20 provisions the AIN triggers and the switch?

21 A The trigger provisioning is not the issue.  
22 If we -- this built up. For example, we started  
23 talking about how messages get routed through the  
24 network. Okay.

25 To begin, if you ever interconnect networks

1 together and if we were to set up routing so that a  
2 switch could route a message from it to a given SCP,  
3 of course, the appropriate translations have to be set  
4 up in the SS7 signalling network to allow that to  
5 occur. That has to be built. Once that is built I  
6 can now exchange messages. Okay. Now, once that has  
7 occurred, okay -- once that has occurred, the next  
8 step I have to do to provide an IN service is I have  
9 to go in and provision the triggers in a switch that's  
10 associated with the service. Before you can ever  
11 launch these queries, you have to have a trigger  
12 provision. But once you provision it and go through  
13 the provisioning process, it now says anytime a  
14 trigger gets hit, it will launch a query to this  
15 external platform. That's all set up. Now calls will  
16 occur. Once that is all set up, the example I just  
17 used, all of this has been done -- provisioned, the  
18 network routing is all in place, queries will get  
19 there there and now the privacy example I went through  
20 occur.

21           Because the switch, when you do  
22 provisioning, has nothing to do with does it prevent  
23 any actions that are made by the STP to not occur on  
24 the switch. Once it's opened up, the platform has  
25 total control of that switch. It's not a provisioning

1 issue. It's not controlled by provisioning.  
2 Provisioning only simply assigns a trigger and sends  
3 the order out to the query.

4 Q Mr. DellAngelo, you've mentioned this  
5 concern and other concerns about interconnecting AIN  
6 networks. Were you aware that the American National  
7 Standard Institute recently approved in T-1.112-96  
8 Chapter 3, Sections B.8.2 through B.8.4, a protocol  
9 for addressing messages between signalling networks of  
10 different local service providers?

11 A I'm not familiar with that standard, but it  
12 has nothing to do with the issues I'm talking about.

13 Q But it's a recognition that this  
14 internetwork connection and addressing occurs,  
15 wouldn't you agree?

16 A The internetworking standards occur. I mean  
17 they exist today. Networks are interconnected.  
18 That's not the issue.

19 (Transcript continues in Volume 18.)

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