

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by AT&T) Docket No. 960833-TP
 Communications of the Southern) Docket No. 960846-TP
 States, Inc., MCI) Docket No. 960916-TP
 Telecommunications Corporation,)
 MCI Metro Access Transmission)
 Services, Inc., American)
 Communications Services, Inc.)
 and American Communications)
 Services of Jacksonville, Inc.)
 for arbitration of certain terms)
 and conditions of a proposed)
 agreement with BellSouth)
 Telecommunications, Inc.)
 concerning interconnection and)
 resale under the)
 Telecommunications Act of 1996)
)

SECOND DAY - LATE AFTERNOON SESSION

VOLUME 8

PAGES 1125 through 1287

PROCEEDINGS: HEARING

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

DATE: Thursday, October 10, 1996

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

REPORTED BY: LISA GIROD JONES, RPR, RMR

APPEARANCES:

(As heretofore noted.)

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1 PROCEEDINGS

2 (Hearing reconvened at 3:30 p.m.)

3 (Transcript continues in sequence from
4 Volume 7.)5 CHAIRMAN CLARK: Let's go back on the record.
6 Ms. Barone, you were questioning.

7 MS. BARONE: Yes.

8 DON J. WOOD
9 having been called as a witness on behalf MCI, and being
10 duly sworn, continues his testimony as follows:

11 CONTINUED CROSS EXAMINATION

12 BY MS. BARONE:

13 Q Mr. Wood, earlier you were discussing the
14 algorithm that's found in the documentation of the
15 Hatfield Model. Can you show me specifically where in
16 the --17 CHAIRMAN CLARK: Monica, I'm sorry, I just
18 turned off the mike. It's back on.19 COMMISSIONER GARCIA: Just don't say the
20 secret word again, all right, and that won't happen.21 Q (By Ms. Barone) Can you specifically show me
22 in the Hatfield Model documentation where I can find a
23 description of all the model's algorithms?24 A Well, you won't to find the formulas, if
25 that's what you mean, without stepping through the

1 actual spreadsheet. The verbal description of the
2 calculations is the document that we've been referring
3 to here as Hatfield Model, Model Description.

4 Q Can you go through that for me and identify
5 where those formulas are?

6 A Well, that's what I'm saying. To get to the
7 formulas you're going to need to look at the spreadsheet
8 and work through that. That's why we've provided the
9 spreadsheet, and in a form where you can actually walk
10 through it.

11 Q So are you saying that they're not really in
12 the -- they are not in the documentation and that you
13 would actually have to go to the model?

14 A Well, you're right. Certainly if we were
15 going to print up some paper documentation that included
16 every formula, it would be unwieldy. So this is a
17 verbal description of the calculation process. But if
18 you actually want to step through specific calculation
19 by specific calculation, you can do that in the
20 spreadsheet. But there are over a million cells, as I
21 understand it, and thousands of calculations. So to
22 print it would kill lots of trees.

23 Q So just to clarify, then, the descriptions are
24 not in the documentation and that you would actually
25 have to go to the model; is that correct?

1 A The formulas aren't, that's right.

2 Q Would you agree that the Hatfield Model is
3 complex?

4 A All cost models are complex to some degree.
5 Certainly the intent is to make it no more complex than
6 necessary to be accurate. But it is -- inherently,
7 there's some complexity here. There's lots of data to
8 be used.

9 Q And that model comes on a CD-ROM; is that
10 correct?

11 A That's right.

12 Q And I think you testified earlier that it
13 requires 128 megabytes of RAM just to load the model; is
14 that correct?

15 A That's right. That's a function of the fact
16 that it's an Excel spreadsheet, and unlike some other
17 spreadsheets, Excel loads the entire file at one time.
18 So it takes quite a bit of RAM to do that.

19 Q So would it be correct that a model this large
20 and complex probably has hundreds or even thousands of
21 formulas?

22 A Thousands is correct, yes.

23 Q Do you know if there are any locked cells in
24 any of the spreadsheets that comprise the Hatfield
25 Model?

1 A I believe the census block data and the US
2 Geological Survey data, is my understanding, is locked.
3 I don't think the other cells should be. I think the
4 answer is, with the exception of that data, which there
5 really is never any reason to change, I believe the
6 other data should be unlocked. Certainly that's the
7 intent.

8 Q Are there any other cells that you're aware of
9 that are locked, other than those two?

10 A Not that -- well, that would be thousands that
11 fall into those two categories. But other than those
12 two categories, I don't think so.

13 Q So did you just say that there may be
14 thousands of cells that are blocked within those two
15 categories?

16 A That's right, when we're looking at census
17 data by census block group, and I understand there are
18 almost 5,000 census block groups in Florida. So for
19 Florida alone, we're talking about 5,000 cells that have
20 some population information in them that shouldn't be
21 changed because that's census data. So those would be
22 locked, that's right. It would be quite a few.

23 Q Mr. Wood, you filed your direct testimony on
24 August 21st, 1996; is that correct?

25 A That's right.

1 Q Is the Hatfield Version 2.2, Release 2, that
2 you used to prepare your exhibits, the same model that
3 was submitted as an ex parte filing with the FCC in
4 Docket 96-45? And that's the universal service docket?

5 A Actually, it depends on the date of the
6 filing. And I don't know off -- unless you know offhand
7 the date of the ex parte filing.

8 Q Yes, that was filed September 10th, 1996.

9 A In that case, yes, I'm certain that it's the
10 same version.

11 Q Sir, can you tell me exactly what was filed
12 with the FCC on this date?

13 A No, I couldn't, not without looking. I'm not
14 responsible -- I don't have the responsibility. Neither
15 company has asked me to put their filings together, so I
16 don't know what they've presented.

17 Q So you don't know whether it was the model
18 documentation and the model printouts for the 49 BOCs in
19 SNET; you're not aware of that?

20 A It's my understanding that documentation and
21 results were filed, but in terms of exactly which pages
22 would be there, I don't know. I haven't looked.

23 Q Would you accept, subject to check, that the
24 CD-ROM was filed on that date?

25 A Sure.

1 Q Isn't it true that once this ex parte filing
2 was made, the model on CD-ROM was then available for
3 purchase from the International Transcription Service?

4 A Yes. In fact, I believe it was available for
5 purchase even prior to that filing date. It has been
6 available in its current form for some number of weeks
7 now.

8 Q So was the first time the model was available
9 for public review and evaluation, was that on September
10 10th, 1996?

11 A Well, this model has been available for at
12 least a year now in some form. Release 1 was provided
13 to the FCC back in May. The final version of Release 2
14 was released late in August. So certainly it has been
15 public in some form since the end of August, the
16 beginning of September, but I don't think there's a
17 magical date of which it became public.

18 Q So the release that you're relying upon in
19 your exhibits, that was available in August to the
20 public; is that correct?

21 A At the end of August, and again, the reason
22 that I made the updated filing in my testimony is that
23 we had a filing date that was immediately preceded the
24 finalization, and we did need to correct that tax
25 calculation error, which was found and corrected about

1 the time or very soon after that I filed my original
2 direct testimony here.

3 Q Sir, if it was available prior to September
4 10th, 1996, how could one go about getting a copy of
5 that?

6 A I believe directly from ITS.

7 Q Would that have been in CD-ROM form?

8 A I think so, yes. I don't know if there's a
9 download option, an Internet download or not. It would
10 be quite a file to download.

11 Q Sir, do you know on what date Version 2.2,
12 Release 2, was filed with the FCC prior to September
13 10th, 1996?

14 A Not offhand, no.

15 Q Sir, I would like to turn your attention to
16 the Hatfield Model Unbundled Network Element Summary.
17 You provided that to us in your direct testimony on Page
18 24. I would like to ask you, what is the difference
19 between the version supplied in your direct testimony
20 and that supplied, or the update filed with us on
21 September 17th, 1996? Could you please go through the
22 changes?

23 A Well, the only changes that it reflects --
24 that the updated information reflects is the fact that
25 the tax calculation formula was changed slightly in the

1 model. And it was then rerun with the same input data
2 to create the second -- what you received as the revised
3 exhibit.

4 Q Sir, what rates are you proposing for the
5 elements that you've listed in the summary?

6 A We're proposing rates equal to the results in
7 DJW-3 revised 9-12-96.

8 Q Sir, could you repeat that?

9 A I'm sorry, the correct numbers are in Exhibit
10 DJW-3, as it was revised on September 12th. Again, the
11 only difference in those and the previous numbers is
12 the -- they reflect the change in the tax calculation.

13 Q Are the rates you're proposing -- are you
14 suggesting, rather, that the rates should be set at the
15 cost listed in your summary?

16 A Yes. Again, those costs include all the costs
17 that an efficient wholesale provider would incur. So in
18 that sense they're fully compensatory and we believe
19 they should be the same as the rates.

20 Q Sir, do you know whether MCI has reached an
21 agreement with BellSouth on collocation rates and
22 charges?

23 A I don't know. I'm not involved in that
24 process at all.

25 Q So you don't know whether BellSouth has

1 provided TELRIC-based cost studies for collocation?

2 A If they have, I have not seen them.

3 Q So you wouldn't know or have an opinion which
4 company should bear the cost for MCI's conversion from
5 virtual collocation to physical collocation?

6 A That's purely a policy issue, and they have
7 not asked me to develop that policy.

8 MS. BARONE: Thank you, sir. That's all I
9 have.

10 WITNESS WOOD: Thank you.

11 CHAIRMAN CLARK: Commissioners? Redirect?

12 MR. MELSON: Thank you, Commissioner.

13 REDIRECT EXAMINATION

14 BY MR. MELSON:

15 Q Mr. Wood, you were asked by Mr. Lackey, I
16 believe, about the inputs into the model and whether any
17 Florida-specific data were used. If we were to look at
18 your late-filed Deposition Exhibit 8, which has been
19 included as part of Exhibit 37, would that show Florida-
20 specific information on dial equipment minutes, line
21 counts and so forth?

22 A My recollection is that the document that
23 you're referring to is a -- includes all the defaults
24 that are national. It would not include the Florida-
25 specific numbers until we supplement them. As filed, if

1 this is actually -- if this is how it's filed, then this
2 page represents both the line count and dial equipment
3 minutes that are Florida-specific.

4 Q And let me represent to you and to the
5 Commission, that is how the deposition exhibit was
6 filed.

7 A Right. And I just wanted to make sure that we
8 had included this page correctly, and it appears that we
9 have.

10 Q Mr. Wood, let's pick up again, for a minute,
11 Exhibits 32, 33, 34, 35, that Mr. Lackey used.

12 A Yes, sir.

13 Q I believe you indicated that the square census
14 block group assumption shown on Exhibit 33 was not used
15 in the two lowest density areas; is that correct?

16 A Well, specifically, when you look at the
17 distributions on Exhibit No. 34, that assumption does
18 not hold true for the lowest density zones because what
19 you find is that out in the country people live on long
20 roads and in towns, and at crossroads rather than being
21 distributed across the countryside. That was a
22 recognized shortcoming in the first version of the
23 benchmark cost model. It was corrected in the version
24 that's used here today. It's also been corrected by
25 US West and Sprint, as I understand it, in their update

1 of the benchmark cost model. So it was a commonly
2 understood problem and it's been addressed.

3 Q If we wanted these exhibits to accurately
4 reflect the minimum density to which this equal
5 distribution assumption applied, what number would we
6 have to change that four lines per square mile to?

7 A Well, we would need to go up to 200 lines per
8 square mile, as I indicated to Mr. Lackey, in order to
9 carry this equal distribution assumption forward.

10 Q Turn to Exhibit 35, if you would. Would you
11 expect that a census block group with a density of 200
12 lines per square mile or more would typically have the
13 type of population distribution with population centers
14 at two diverse ends of the census block group?

15 A No. As I indicated to Mr. Lackey, he has
16 chosen here an extremely unusual example. It does, in
17 fact, demonstrate one possible example in which
18 distribution investment would be slightly understated.
19 It is -- there are at least an equal number of
20 possibilities where the distribution investment would be
21 overstated slightly. But this diagram certainly is
22 designed to prove his point, but it would be an
23 extremely unusual occurrence of population.

24 Q Staff asked you several questions about the --
25 affecting the model of using 70 percent factor rather

1 than 100 percent. And in another place they asked you a
2 question about using a different factor for a different
3 item. If you had those types of questions about a cost
4 study that BellSouth submitted, would you be able to
5 answer them?

6 A No. And that's -- as I described in my
7 summary, I don't want to get lost in this process here.
8 The fact that I'm having detailed conversation with
9 Staff or with Bell indicates that we're dealing in an
10 unprecedented, uncharted territory here. We could not
11 look at the BellSouth cost models and have that same
12 type conversation with regards to what the inputs are.
13 Staff has run some sensitivity analysis on these inputs,
14 and that's exactly why we provided them with the model,
15 was to allow them to do it, to make it possible.
16 BellSouth had that same opportunity. We do not have
17 that equivalent opportunity, nor does the Staff with the
18 BellSouth cost models.

19 Q Finally, let me hand out to you a document and
20 ask you if this appears to be a transcript of a portion
21 of your cross examination by Mr. Lackey in North
22 Carolina.

23 MR. LACKEY: Could I inquire as to what page
24 you're talking about?

25 MR. MELSON: Pages 115 through 122.

1 CHAIRMAN CLARK: Did the court reporter get
2 the Pages 115 through 122?

3 THE REPORTER: Yes, ma'am. Thank you.

4 Q (By Mr. Melson) I believe earlier -- let me
5 ask you, can you identify that as a transcript of
6 your -- a portion of your testimony in North Carolina?

7 A Yes, sir, I can, and it is.

8 Q And Madam Chairman, I would like to have that
9 marked as Exhibit No. 38.

10 CHAIRMAN CLARK: The transcript will be marked
11 as Exhibit 38.

12 (Exhibit No. 38 marked for identification.)

13 Q (By Mr. Melson) Mr. Wood, I believe
14 Mr. Lackey asked you a question earlier about a
15 particular Q and A appearing at Page 122 of that
16 transcript. In your opinion, would the Commission get a
17 better picture of the nature of your testimony if they
18 were to examine the entire document that's just been
19 identified as Exhibit 38?

20 A Yes, sir. And that was exactly my concern,
21 that this Q and A out of context on Page 122 did not
22 have with it the preceding discussion that began on Page
23 115. And I think this is a much more accurate
24 representation of my discussion with Mr. Lackey last
25 week.

1 MR. MELSON: Thank you. I've not got no
2 further questions.

3 CHAIRMAN CLARK: Exhibits?

4 MR. MELSON: MCI would move Exhibits 30, 31
5 and 38.

6 CHAIRMAN CLARK: Without objection, those
7 exhibits will be admitted in the record.

8 MR. LACKEY: BellSouth moves exhibits that 32
9 through 36.

10 MS. BARONE: Staff moves 37.

11 CHAIRMAN CLARK: Exhibits 32 through 37 will
12 be admitted in the record without objection.

13 (Exhibit Nos. 30, 31, 32, 33, 34, 35, 36, 37
14 and 38 received into evidence.)

15 CHAIRMAN CLARK: Thank you, Mr. Wood.

16 MR. MELSON: And may the witness be excused?

17 CHAIRMAN CLARK: Yes, Mr. Wood may be
18 excused.

19 (Witness Wood excused.)

20 * * *

21 MR. MELSON: And MCI would call Dr. Nina
22 Cornell.

23 NINA W. CORNELL

24 was called as a witness on behalf of MCI, and having
25 been duly sworn, testified as follows:

1 DIRECT EXAMINATION

2 BY MR. MELSON:

3 Q Dr. Cornell, could you state your name and
4 address for the record, please?5 A My name is Nina W. Cornell. My address is
6 1290 Wood River Road. That's three words. Meeteetse,
7 M-E-E-T-E-E-T-S-E, Wyoming 82433.8 Q And what is your occupation or profession,
9 Dr. Cornell?

10 A I'm an economist.

11 Q And have you prefiled direct testimony in this
12 docket dated August 23rd, 1996 and consisting of 47
13 pages?

14 A Yes.

15 Q And have you also prefiled rebuttal testimony
16 in this docket dated September 16th, 1996 and consisting
17 of seven pages?

18 A Seventeen?

19 Q I'm sorry, 17. I can't read.

20 A Yes.

21 Q Do you have any changes or corrections to
22 either piece of testimony?

23 A No.

24 Q And if I were to ask you the same questions
25 today, would your answers be the same?

1 A Yes.

2 MR. MELSON: Chairman Clark, I would ask that
3 Dr. Cornell's direct and rebuttal testimony be inserted
4 into the record as though read.

5 CHAIRMAN CLARK: Dr. Cornell's direct and
6 rebuttal testimony will be inserted into the record as
7 though read.

8 Q (By Mr. Melson) And Dr. Cornell, was there
9 attached as an exhibit to your direct testimony a copy
10 of your biography designated as Exhibit NWC-1?

11 A I believe so, yes.

12 Q And with the exception that it may not reflect
13 testimonies within the past couple of weeks, is that a
14 true and accurate resume?

15 A I believe so, yes.

16 MR. MELSON: I would ask that that be
17 identified as Exhibit 39.

18 CHAIRMAN CLARK: It will be identified as
19 Exhibit 39.

20 (Exhibit No. 39 marked for identification.)

21

22

23

24

25

1 DIRECT TESTIMONY OF NINA W. CORNELL

2 ON BEHALF OF MCI

3 DOCKET NO. 960846-TP

4 August 23, 1996

5

6

I. PERSONAL BACKGROUND

7

8 Q. PLEASE STATE YOUR NAME AND ADDRESS.

9

10 A. My name is Nina W. Cornell. My address is 1290 Wood River Road, Meeteetse,
11 Wyoming 82433.

12

13 Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
14 BACKGROUND AND EXPERIENCE.

15

16 A. I am an economist in private practice, specializing in microeconomic analysis of
17 regulatory and antitrust issues. Until late 1988, I was with the firm of Cornell,
18 Pelcovits & Brenner Economists Inc., of which I was president.19 Before entering private practice, I was Chief of the Office of Plans and Policy,
20 Federal Communications Commission (FCC). As Chief of the Office of Plans and
21 Policy, I served as chief economist to the Commission and participated in virtually all
22 FCC agenda meetings.23 Prior to being associated with the FCC, I was the Senior Staff Economist for
24 regulatory, transportation, environmental, and health and safety issues for the Council of
25 Economic Advisers (CEA). In this position I reported directly to Charles L. Schultze,

1 Chairman of the Council.

2 Prior to being with the CEA, I was employed as an economist with the Council
3 on Wage and Price Stability, where I served on the Task Force on Reform of Federal
4 Energy Administration Regulations. Before joining the Federal Government, I spent
5 four years at the Brookings Institution as a Research Associate. I am a graduate of
6 Swarthmore College, and received my Ph.D. in Economics from the University of
7 Illinois in 1972.

8

9 Q. HAVE YOU PUBLISHED ANY PAPERS ON TELECOMMUNICATIONS?

10

11 A. Yes. I have published a number of papers on the regulation of telecommunications as
12 well as on other regulatory and natural resource issues. A list of my publications is
13 contained in my resume -- Exhibit 31 (NWC-1).

14

15 Q. HAVE YOU TESTIFIED BEFORE?

16

17 A. Yes. I have served as an expert witness in several court and a number of regulatory
18 proceedings, particularly proceedings involving telecommunications issues. I have also
19 testified before various committees of the U.S. Congress. A list of my testimonies is
20 also contained in my resume.

21

22 Q. WHAT IS THE BASIS OF YOUR TESTIMONY?

23

24 A. MCI assembled a group of seven economists to evaluate the economic issues that need to
25 be addressed by state regulators during the arbitrations under the Telecommunications

1 Act of 1996 ("the 1996 Act"). The seven economists are Gus Ankum, Steven R.
2 Brenner, Richard Cabe, myself, Sarah Goodfriend, A. Daniel Kelley, and Terry L.
3 Murray. These economists produced a jointly authored white paper. The testimony that
4 follows is the same as that white paper, except that it has been converted into
5 question-and-answer format.

6

7

II. ECONOMIC PRINCIPLES

8

9 Q. HOW HAS THE 1996 ACT CHANGED THE WAY TELECOMMUNICATIONS IS
10 TO BE REGULATED IN THE UNITED STATES?

11

12 A. The 1996 Act calls for competition to replace regulated monopoly whenever market
13 conditions permit. This is stated most clearly in Section 257(b), which reads:

14 NATIONAL POLICY—In carrying out subsection (a), the
15 Commission shall seek to promote the policies and purposes of
16 this Act favoring diversity of media voices, vigorous economic
17 competition, technological advancement, and promotion of the
18 public interest, convenience, and necessity.

19 Subsection (a) calls for the Federal Communications Commission ("FCC") to complete a
20 proceeding within 15 months of enactment of the 1996 Act to identify and eliminate
21 market barriers to entry.

22

23 Q. WHAT ARE THE CURRENT TELECOMMUNICATIONS MARKETS IN WHICH
24 THE INCUMBENT LOCAL EXCHANGE CARRIERS STILL HAVE MARKET
25 POWER OR EVEN A MONOPOLY?

1

2 A. Incumbent local exchange carriers (LECs) possess market power, and often monopoly
3 positions, in many local exchange service markets. The First Report and Order issued
4 by the Federal Communications Commission ("FCC") in CC Docket No. 96-98, In the
5 Matter of Implementation of the Local Competition Provisions in the
6 Telecommunications Act of 1996 ("Order") is intended to begin eliminating market
7 barriers to entry, and to establish rules to govern opening entry into local exchange
8 markets.

9

10 Q. HAS THE FCC DECIDED ALL OF THE ISSUES THAT NEED TO BE DECIDED
11 BEFORE ENTRY CAN BECOME EFFECTIVE COMPETITION IN LOCAL
12 EXCHANGE MARKETS?

13

14 A. No. In that Order, the FCC has decided a number of major issues, but has left others to
15 the states to decide. The issues left to the states are sufficient that the intent of Congress
16 could be thwarted if consistent principles are not used to decide them.

17

18 Q. WHAT ARE THE PRINCIPLES THAT THE FCC RELIED ON IN MAKING THE
19 DECISIONS IT MADE?

20

21 A. In terms of its economic underpinnings, the FCC's Order rests on six basic premises.

22

23 Q. WHAT IS THE FIRST OF THE FCC'S SIX BASIC ECONOMIC PREMISES?

24

25 A. The first basic economic premise of the FCC establishes as the fundamental requirement

1 for achieving the goals of the 1996 Act that the incumbent local exchange companies
2 must share with entrants their economies of density, connectivity, and scale. As the
3 FCC said:

4 The incumbent LECs have economies of density, connectivity,
5 and scale; traditionally, these have been viewed as creating a
6 natural monopoly. As we pointed out in our NPRM, the local
7 competition provisions of the Act require that these economies
8 be shared with entrants. We believe they should be shared in a
9 way that permits the incumbent LECs to maintain operating
10 efficiency to further fair competition, and to enable the entrants
11 to share the economic benefits of that efficiency in the form of
12 cost-based prices. (Paragraph 11, footnote omitted)

13

14 Q. WHAT IS THE SECOND OF THE FCC'S BASIC ECONOMIC PREMISES?

15

16 A. The second basic economic premise of the FCC is that nondiscrimination means that the
17 incumbent LECs must not discriminate between an entrant and itself, or between
18 different entrants based on any criterion other than cost differences. As the FCC noted:

19

20

21

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25

We believe that the term "nondiscriminatory," as used
throughout section 251, applies to the terms and conditions an
incumbent LEC imposes on third parties as well as on itself.
(Paragraph 218)

Also, incumbent LECs may not discriminate against parties
based upon the identity of the carrier (*i.e.*, whether the carrier is
a CMRS provider, a CAP, or a competitive LEC). (Paragraph

1 218)
2 Thus, we conclude it would be insufficient to define the
3 obligation of incumbent LECs to provide "nondiscriminatory
4 access" to mean that the quality of the access and unbundled
5 elements LECs provide to all requesting carriers is the same.
6 As discussed above with respect to interconnection, an
7 incumbent LEC could potentially act in a nondiscriminatory
8 manner in providing access or elements to all requesting
9 carriers, while providing preferential access or elements to
10 itself. (Paragraph 312, footnote omitted)

11 On the other hand, price differences based not on cost
12 differences but on such considerations as competitive
13 relationships, the technology used by the requesting carrier, the
14 nature of the service the requesting carrier provides, or other
15 factors not reflecting costs, the requirements of the Act, or
16 applicable rules, would be discriminatory and not permissible
17 under the new standard. (Paragraph 861)

18

19 Q. WHAT IS THE THIRD BASIC ECONOMIC PREMISE OF THE FCC?

20

21 A. The third basic economic premise of the FCC is that telecommunications is an industry
22 with a great deal of technological change, and that its rules should not interfere with the
23 pace or pattern of that change. As the FCC stated:

24

25

The rapid pace and ever changing nature of technological
advancement in the telecommunications industry makes it

1 essential that we retain the ability to revise our rules as
2 circumstances change. Otherwise, our rules might impede
3 technological change and frustrate the 1996 Act's overriding
4 goal of bringing the benefits of competition to consumers of
5 local phone services. (Paragraph 246, footnote omitted)

6

7 Q. WHAT IS THE FOURTH BASIC ECONOMIC PREMISE OF THE FCC?

8

9 A. The fourth basic economic premise of the FCC is that forward-looking economic costs,
10 not embedded costs, should be the basis for pricing interconnection and unbundled
11 elements. As the FCC stated:

12 In the following sections, we first set forth generally, based on
13 the current record, a cost-based pricing methodology based on
14 forward-looking economic costs, which we conclude is the
15 approach for setting prices that best furthers the goals of the
16 1996 Act. In dynamic competitive markets, firms take action
17 based not on embedded costs, but on the relationship between
18 market-determined prices and forward-looking economic costs.
19 (Paragraph 620)

20 The substantial weight of economic commentary in the record
21 suggests that an "embedded cost"-based pricing methodology
22 would be pro-competitor -- in this case the incumbent LEC --
23 rather than pro-competition. (Paragraph 705, footnote omitted)

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25 Q. WHAT IS THE FIFTH BASIC ECONOMIC PREMISE OF THE FCC?

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A. The fifth basic economic premise of the FCC is that rates must recover costs in a manner that reflects the way they are incurred. This takes on special significance because rate structures that do not consistently reflect the way forward-looking economic costs are incurred, for example, by imposing nonrecurring charges for recurring costs, may become vehicles for over-recovery of costs, and thus, act as a barrier to entry. The FCC applies this principle, for example, to shared facilities to equitably match, insofar as practical, costs and payments for benefits in time. As the FCC stated:

...we find that imposing nonrecurring charges for recurring costs could pose a barrier to entry because these charges may be excessive, reflecting costs that may (1) not actually occur; (2) be incurred later than predicted; (3) not be incurred for as long as predicted; (4) be incurred at a level that is lower than predicted; (5) be incurred less frequently than predicted; and (6) be discounted to the present using a cost of capital that is too low.

(Paragraph 747)

We require, however, that state commissions take steps to ensure that incumbent LECs do not recover nonrecurring costs twice and that nonrecurring charges are imposed equitably among entrants. (Paragraph 750)

A state commission may, for example, decide to permit incumbent LECs to charge the initial entrants the full amount of costs incurred for shared facilities for physical collocation service, even if future entrants may benefit. A state commission may, however, require subsequent entrants, who take physical

1 collocation service in the same central office and receive
2 benefits as a result of costs for shared facilities, to pay the
3 incumbent LEC for their proportionate share of those costs, less
4 depreciation (if an asset is involved). Under this approach, the
5 state commission could require the incumbent LEC to provide
6 the initial entrants *pro rata* refunds, reflecting the full amount of
7 the charges collected from the subsequent entrants.

8 Alternatively, a state commission may decide to permit
9 incumbent LECs to charge initial entrants a proportionate
10 fraction of the costs incurred, based on a reasonable estimate of
11 the total demand by entrants for the particular interconnection
12 service or unbundled rate elements. (Paragraph 750)

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14 Q. WHAT IS THE SIXTH BASIC ECONOMIC PREMISE OF THE FCC?

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16 A. The sixth basic economic premise of the FCC is that the incumbent LECs have virtually
17 no incentives to voluntarily provide the various unbundled network elements and
18 interconnection needed by entrants at prices or under the terms and conditions that would
19 make effective competition a reality. Instead, incumbent LECs have both the incentive
20 and the ability—absent regulatory intervention—to force entrants to accept prices, terms,
21 and conditions that would be insufficient to bring consumers the benefits the 1996 Act
22 sought to convey. As the FCC stated:

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Because an incumbent LEC currently serves virtually all
subscribers in its local serving area, an incumbent LEC has little
economic incentive to assist new entrants in their efforts to

1 secure a greater share of that market. An incumbent LEC also
2 has the ability to act on its incentive to discourage entry and
3 robust competition by not interconnecting its network with the
4 new entrant's network or by insisting on supracompetitive prices
5 or other unreasonable conditions for terminating calls from the
6 entrant's customers to the incumbent LEC's subscribers.

7 (Paragraph 10, footnote omitted)

8 Congress recognized that, because of the incumbent LEC's
9 incentives and superior bargaining power, its negotiations with
10 new entrants over the terms of such agreements would be quite
11 different from typical commercial negotiations. As distinct from
12 bilateral commercial negotiation, the new entrant comes to the
13 table with little or nothing the incumbent LEC needs or wants.
14 The statute addresses this problem by creating an arbitration
15 proceeding in which the new entrant may assert certain rights,
16 including that the incumbent's prices for unbundled network
17 elements must be "just, reasonable and nondiscriminatory."

18 (Paragraph 15, footnote omitted)

19 We find that incumbent LECs have no economic incentive,
20 independent of the incentives set forth in sections 271 and 274
21 of the 1996 Act, to provide potential competitors with
22 opportunities to interconnect with and make use of the
23 incumbent LEC's network and services. Negotiations between
24 incumbent LECs and new entrants are not analogous to
25 traditional commercial negotiations in which each party owns or

1 controls something the other party desires. Under section 251,
2 monopoly providers are required to make available their
3 facilities and services to requesting carriers that intend to
4 compete directly with the incumbent LEC for its customers and
5 its control of the local market. Therefore, although the 1996
6 Act requires incumbent LECs, for example, to provide
7 interconnection and access to unbundled elements on rates,
8 terms, and conditions that are just, reasonable, and
9 nondiscriminatory, incumbent LECs have strong incentives to
10 resist such obligations. The inequality of bargaining power
11 between incumbents and new entrants militates in favor of rules
12 that have the effect equalizing bargaining power in part because
13 many new entrants seek to enter national or regional markets.

14 (Paragraph 56)

15 In particular, a new entrant that has already constructed facilities
16 may have a relatively weak bargaining position because it may
17 be forced to choose either to accept transport and termination
18 rates not in accord with these rules or to delay its
19 commencement of service until the conclusion of the arbitration
20 and state approval process. (Paragraph 1065)

21

22 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

23

24 A. The purpose of my testimony is to provide an economic analysis of how state regulators
25 should take these same six basic premises into account in addressing the issues that are

1 reserved to state regulators to decide under the FCC's Order. This paper applies these
2 six premises to eight issues: (1) the need for additional unbundled network elements, (2)
3 the need to prevent discriminatory non-price terms and conditions for acquiring
4 unbundled network elements, (3) the need to identify the costs and cost structures of
5 unbundled elements and efficient unbundling, (4) the recurring rates to be charged for
6 unbundled elements, (5) the non-recurring rates to be charged for unbundled network
7 elements, including, in particular, the costs of unbundling that the incumbent LECs
8 should be allowed to charge entrants, (6) the costs and cost structure of transport and
9 termination of local exchange traffic, (7) the compensation rates for transport and
10 termination, and (8) the desirability of initiating state access reform now.

11

12 III. UNBUNDLED NETWORK ELEMENTS

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14 Q. WHAT ARE THE ISSUES THAT STATE REGULATORS MUST DECIDE WITH
15 RESPECT TO UNBUNDLED NETWORK ELEMENTS?

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17 A. There are five issues that state regulators must decide with regard to unbundled
18 elements. The first is whether to order the incumbent LECs to unbundle any elements in
19 addition to the minimum list ordered unbundled by the FCC. The second is to prevent
20 discriminatory nonprice terms and conditions for acquiring unbundled network elements.
21 The third is to identify the costs and cost structures of the unbundled elements
22 themselves and the costs associated with efficient unbundling of a wholesale LEC
23 network. The fourth is to set recurring rates for the unbundled elements, both those on
24 the FCC's list of elements to be unbundled and any additional elements. The fifth is to
25 set the non-recurring rates for ordering unbundled network elements. Both recurring

1 and non- recurring rates must be set to comply with the forward-looking economic
2 costing methodology known as TELRIC (Total Element Long Run Incremental Cost).
3 Both recurring and non-recurring rates must be structured to reflect how costs are
4 incurred.

5

6 Q. DO INCUMBENT LOCAL EXCHANGE CARRIERS WANT TO PROVIDE
7 UNBUNDLED NETWORK ELEMENTS IN A MANNER THAT FACILITATES
8 LOCAL EXCHANGE COMPETITION?

9

10 A. No. As the FCC stated:

11 As discussed above at sections II.A, II.B and V.B, we believe
12 that incumbent LECs have little incentive to facilitate the ability
13 of new entrants, including small entities, to compete against
14 them and, thus have little incentive to provision unbundled
15 elements in a manner that would provide efficient competitors
16 with a meaningful opportunity to compete. (Paragraph 307)

17 Therefore, refusing to provide additional unbundled elements and setting rates above
18 efficient economic costs both can prevent efficient competitors from having “a
19 meaningful opportunity to compete.”

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21 A. Additional Unbundled Network Elements: Loop Distribution Plant

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23 Q. THE FCC HAS ORDERED THAT A MINIMUM LIST OF UNBUNDLED
24 NETWORK ELEMENTS BE PROVIDED. CAN STATE REGULATORS ADD TO
25 THIS LIST?

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A. Yes. The FCC has determined that state regulators can order the incumbent LECs to unbundle more network elements than those on the FCC's minimal list.

Q. SHOULD STATE REGULATORS ADD TO THE FCC'S MINIMUM LIST OF UNBUNDLED NETWORK ELEMENTS?

A. Yes. One additional network element should be added to the list: unbundled distribution, which is a loop subelement. The network implementation white paper accompanying this white paper explains why this additional network element is needed, how it would be used, why it is technically feasible to unbundle, and why, for some period of time, it cannot be provided at an equal or lower cost or in as timely a fashion by (at least) MCImetro as by the incumbent LEC.

Q. WHY SHOULD ANOTHER UNBUNDLED NETWORK ELEMENT BE ADDED TO THE FCC'S MINIMUM LIST?

A. Forcing an entrant to purchase the whole loop even though it has facilities that could be used for a portion of the loop exemplifies an incumbent LEC practice, that, if it were to be sanctioned by a regulator, surely undermines the entrant's "meaningful opportunity to compete" using an architecture which rivals the incumbent's. The FCC provided clear instruction. The FCC identified a "technically feasible" standard and an "impairment" standard to which incumbent LECs should be held when states evaluate unbundling requests beyond the minimal FCC list.

1 Q. WHAT ARE THE "TECHNICALLY FEASIBLE" AND "IMPAIRMENT"
2 STANDARDS OF THE FCC?

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4 A. The 1996 Act gives entrants the right to have the incumbent LECs unbundle any
5 network element that it is technically feasible to unbundle. According to the FCC:

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We conclude that the term "technically feasible" refers solely to technical or operational concerns, rather than economic, space, or site considerations. We further conclude that the obligations imposed by sections 251(c)(2) and 251(c)(3) include modifications to incumbent LEC facilities to the extent necessary to accommodate interconnection or access to network elements. Specific, significant, and demonstrable network reliability concerns associated with providing interconnection or access at a particular point, however, will be regarded as relevant evidence that interconnection or access at that point is technically infeasible. . . . Finally, we conclude that incumbent LECs must prove to the appropriate state commission that a particular interconnection or access point is not technically feasible [sic].

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(Paragraph 198)

The incumbent LECs should be ordered to provide this additional unbundled network element because it is needed to minimize the cost to entrants of competing on a broad scale with the incumbent LECs for local exchange service. In the section of its Order discussing access to unbundled (proprietary) network elements, the FCC provided an economic and competitive interpretation to define the "impairment standard" to which incumbent LECs should be held when states evaluate requests for unbundling

1 beyond the FCC's minimal list. According to the FCC:

2 We believe, generally, that an entrant's ability to offer a
3 telecommunications service is "diminished in value" if the
4 quality of the service the entrant can offer, absent access to the
5 requested element, declines and/or the cost of providing the
6 service rises. . . . Accordingly, we interpret the
7 "impairment" standard as requiring the Commission and the
8 states, when evaluating unbundling requirements beyond those
9 identified in our minimum list, to consider whether the failure of
10 an incumbent to provide access to a network element would
11 decrease the quality, or increase the financial or administrative
12 cost or the service a requesting carrier seeks to offer, compared
13 with providing that service over other unbundled elements in the
14 incumbent LEC's network. (Paragraph 285, footnotes omitted)

15 As the accompanying Network Implementation white paper explains, it is both
16 technically feasible and economically necessary under the standards adopted by the FCC
17 to require incumbent LECs to unbundle Loop Distribution plant.

18
19 Q. DID THE FCC ELABORATE ON ITS IMPAIRMENT STANDARD?

20
21 A. Yes. The FCC elaborated on its meaning of the impairment standard when it explained
22 further that:

23 The interpretation advanced by most of the BOCs and GTE,
24 described above, means that, if a requesting carrier could obtain
25 an element from a source other than the incumbent, then the

1 incumbent need not provide the element. We agree with the
2 reasoning advanced by some of the commenters that this
3 interpretation would nullify section 251(c)(3) [of the 1996 Act]
4 because, in theory, any new entrant could provide all of the
5 elements in the incumbent' networks. Congress made it possible
6 for competitors to enter local markets through the purchase of
7 unbundled elements because it recognized that duplication of an
8 incumbent's network could delay entry, and could be inefficient
9 and unnecessary. (Paragraph 287, footnote omitted)

10 For me, the significance of the rejection of the incumbents' proposed standard is very
11 clear: Under the Act, no regulator may permit a refusal to unbundle, where technically
12 feasible, to result in the imposition of inefficiencies and unnecessary costs on entrants.
13 Such acquiescence is permission to undermine competition.

14
15 B. Discriminatory Practices: Terms and Conditions of Interconnection

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17 Q. IS THE IMPAIRMENT STANDARD THE ONLY STANDARD OR SAFEGUARD
18 CREATED TO PRESERVE EMERGING COMPETITION??

19
20 A. No. The impairment standard is one of a number of standards or safeguards created to
21 preserve emerging competition to its fullest potential. In paragraphs 217 and 218 of its
22 Order, the FCC found that Congress intended a more stringent legal standard of
23 nondiscrimination to apply under the 1996 Act section 251(c)(2) than under section
24 202(a) of the original Act. On this legal basis and considering the procompetitive
25 purpose of the 1996 Act, the FCC recognized, again, that "... the [incumbent] LEC has

1 the incentive to discriminate against its competitors by providing them less favorable
2 terms and conditions of interconnection than it provides itself..." finding that "by
3 providing interconnection to a competitor in a manner *less efficient* (emphasis added)
4 than an incumbent LEC provides itself, the incumbent LEC violates the duty to be 'just'
5 and 'reasonable' under Section 251(c)(2)(D)...."

6

7 Q. WHAT ARE OTHER WAYS THAT INCUMBENT LECs CAN UNDERMINE THE
8 PROCOMPETITIVE ASPECTS OF NETWORK UNBUNDLING?

9

10 A. Refusals to unbundle and improper pricing of unbundled elements, the main topics of
11 this section, are but two ways incumbent LECs may undermine the procompetitive
12 aspects of network unbundling. The Network Implementation white paper discusses
13 cross-connect points. Cross-connection facilities include the house cabling and jumper
14 cables that make it possible for an entrant's unbundled loop to be connected to its
15 collocation equipment. This "glue" that holds the network together and connects
16 unbundled elements must be priced properly. The pricing of house cabling and jumper
17 cables can be every bit as important in limiting the incumbent's ability to discriminate in
18 the provision of unbundled elements as is the pricing of the unbundled elements
19 themselves. The FCC pointedly addressed the example of cross-connect facilities to
20 unbundled loops, including the house cabling and jumper cables necessary to allow a
21 competitor to connect an unbundled loop to its collocated equipment, noting that several
22 entrants had alleged that incumbent LECs had required unreasonable rates, terms and
23 conditions for such cross-connection facilities in the past. (See Paragraph 386)

24 The Operations Support Systems Implementation white paper discusses the
25 various databases to which entrants must have access, and describes the various

1 functions -- pre-ordering, ordering, provisioning, maintenance and repair, and billing --
2 for which access to operations support systems are necessary. Refusal to provide access
3 to databases efficiently is an expression of discrimination. Terms and conditions of
4 access can become instruments for the creation of barriers to competition.

5 Similarly, the Ancillary Arrangements And Services Requirements white paper
6 describes seven specific ancillary arrangements or services, and, for each, recommends
7 specific state action needed to reduce barriers to competition.

8

9 B. Recurring Rates for Unbundled Network Elements

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11 Q. WHAT IS THE BASIS ON WHICH RECURRING RATES FOR UNBUNDLED
12 NETWORK ELEMENTS ARE TO BE SET?

13

14 A. The FCC has adopted a costing and pricing methodology based on forward-looking,
15 economic costs, finding that such a methodology best replicates the conditions of a
16 competitive market and reduces the ability of an incumbent LEC to engage in
17 anticompetitive behavior. (See, for example, paragraph 679). The FCC has said that
18 prices for unbundled network elements (and for interconnection) should "be based on the
19 TSLRIC (Total Service Long Run Incremental Cost) of the network element[s], which
20 we will call Total Element Long Run Incremental Costs (TELRIC)." (Paragraph 672)
21 The prescribed TELRIC costing methodology is provided in Part 1 of Title 47 of the
22 C.F.R. as Subpart F - Pricing of Elements, and applies to the costing and pricing of
23 network elements, interconnection, and methods of obtaining access to unbundled
24 elements, including physical collocation and virtual collocation. In the following
25 discussion, I use the term "element" to refer to items covered by Subpart F.

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1. Requirements for Conformity With the TELRIC Methodology

Q. WHAT IS REQUIRED FOR A STUDY TO CONFORM TO THE TELRIC
METHODOLOGY ORDERED BY THE FCC?

A. The cost study methodology ordered by the FCC essentially requires the study to be conducted as though the local exchange carrier was split into two virtually separate subsidiaries: a wholesale subsidiary and a retail subsidiary. The sole purpose of the wholesale subsidiary is to run the network and provide unbundled elements not only to entrants, but also to the retail subsidiary of the incumbent LEC. The methodology also requires that the costs be studied as though only the retail subsidiary puts network elements together to form services sold at retail to end users. According to the FCC:

Common costs also include costs incurred by a firm's operations as a whole, that are common to all services and elements (e.g., salaries of executives involved overseeing all activities of the business), although for the purpose of pricing interconnection and access to unbundled elements, which are intermediate products offered to competing carriers, the relevant common costs do not include billing, marketing and other costs attributable to the provision of retail service...(Paragraph 694)

We further conclude that, for the aggregate of all unbundled network elements, incumbent LECs must be given a reasonable opportunity to recover their forward-looking common costs attributable to operating the wholesale network.... (Paragraph

1 698)

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2. **States Must Examine Cost Studies to Set Element Prices**

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Q. **WILL STATE REGULATORS HAVE TO EXAMINE COST STUDIES TO SET
6 RECURRING RATES FOR UNBUNDLED NETWORK ELEMENTS?**

7

8

A. **Yes. I urge state regulators to begin to examine TELRIC cost studies now, recognizing
9 that the sooner states act to set prices in accordance with required cost studies, the
10 greater certainty all market participants will have. While the default proxies established
11 by the FCC provide some bounds for entry decisions, even use of these proxies will
12 require states to identify the appropriate translation of local loop proxy ceilings into
13 geographically-deaveraged rates. State regulators will have to examine cost studies
14 proposed for this purpose.**

15

**If the state regulator adopts a proxy for arbitration purposes, the proxy must be
16 superseded once the state regulator completes its review of cost studies and finds
17 compliance with the FCC rules. Thus, regardless of the way in which the state
18 commission resolves its immediate need to identify prices for interconnection,
19 collocation and unbundled elements, ultimately the commission will be required to
20 closely examine cost studies for compliance with the definitions and procedures set forth
21 in sections 51.505 and 51.511 of the FCC rules.**

22

23

3. **Incumbent LEC Cost Studies**

24

25

Q. **CAN STATE REGULATORS USE EXISTING INCUMBENT LEC COST STUDIES**

1 FOR THIS PURPOSE?

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3 A. No. The historical “just trust us” approach of incumbent LECs to cost studies is no
4 longer allowed. The FCC has called for all parties to be able to review cost information
5 and for state regulators to give “full and fair effect to the costing methodology” it
6 adopts. (Paragraph 619) Moreover, the states must take into account that the incumbent
7 LECs have an “asymmetric access to cost data.” (Paragraph 680) This gives the
8 incumbent LEC unequal power. Historically the inequality has been between those who
9 would critically evaluate LEC cost studies -- such as the commission staffs and others --
10 and the incumbent LECs. In paragraph 680, the FCC explains that, because of this
11 asymmetry of power over information, the FCC will require the incumbent LEC to “...
12 prove to the state commission that the rates for each element it offers do not exceed the
13 forward-looking economic cost per unit of providing the element.” (Section 51.505(e))

14 For an economist, this standard of “proof” can be met only if critical analysis of
15 the results of the cost study or model is possible in order to evaluate its reasonableness.
16 In turn, this requires examination so that judgments may be formed about the
17 reasonableness of inputs, outputs and the relationships used to translate inputs into
18 outputs, namely, the foundations and relationships of the “model” itself. In the
19 following section, I provide an example of a dramatic difference in cost claimed for
20 remote call forwarding. The magnitude of difference makes abundantly clear the
21 necessity of evaluating a model for reasonableness to obtain confidence in the results.

22 Moreover, from the analyst’s perspective, the results and summary of
23 methodology of a cost study are, in a sense, only the tip of the iceberg: behind each cost
24 study are a multitude of workpapers, and behind the workpapers are data sources and
25 assumptions. All of these need to be reasonably explained and subject to examination to

1 be able to determine whether a given cost study accurately reflects the appropriate
2 methodology and accurately estimates costs. Sufficient information must be available so
3 that informed analysis and evaluation is possible.

4 Historically, LEC cost studies have been "black box" models. By "black box" I
5 mean that the relationships used to translate from inputs to outputs are unavailable to
6 those who would bring engineering and economic judgments to bear and engage in an
7 open dialogue about the proper way to characterize and express cost-causation
8 relationships and the meaning and application of best practice operations and processes
9 in a model.

10 The lack of openness of incumbent LEC cost studies goes beyond the absence of
11 visible formulas and publicly-available documentation. It extends to issues of what data
12 are used as model or study "inputs." Historically, it has been difficult to assess the
13 reasonableness of LEC input data because it has not been easy or even possible to
14 compare the inputs from one LEC's studies to those used in the studies of another LEC.
15 Thus, apart from certain requirements for reporting uniformity, such as ARMIS filings
16 in compliance with the Uniform System of Accounts, it is not easy to bring together data
17 from different LECs in a form that facilitates comparisons. Extensive use of
18 non-disclosure requirements tends to protect rather than expose atypical or idiosyncratic
19 data and individual states do not typically require LECs to show how their data inputs
20 compare to data inputs used by other incumbent LECs.

21 The FCC has ruled that incumbent LEC cost studies must comply with the
22 requirements for forward-looking economic cost studies. It is now time for state
23 commissions to pry the lid, once and for all, from the LEC "black box" and expose the
24 inner workings of all proffered cost models to the light of open debate.

25

1 4. The Hatfield Model Complies With the Requirements for Cost Studies

2

3 Q. YOU HAVE SAID THAT THE COMMISSION CANNOT USE THE COST STUDIES
4 OF THE INCUMBENT LEC TO SET THE RECURRING RATES FOR
5 UNBUNDLED NETWORK ELEMENTS. IS THERE A COST STUDY THEY CAN
6 USE FOR THIS PURPOSE?

7

8 A. Yes. In contrast to the prevailing LEC practice of secrecy is the Hatfield Model, a
9 telecommunications costing model developed by Hatfield Associates, Inc. of Boulder,
10 Colorado at the request of AT&T and MCI. The Hatfield Model (Version 2.2, Release
11 2) is a model of the costs that an efficient local exchange carrier would incur to provide
12 basic exchange service and unbundled network functions.

13 The Hatfield Model is a publicly available model that allows users to examine
14 all the model's inputs, algorithms and results to evaluate whether the model produces
15 reasonable estimates of element cost. Some of the inputs the user can directly specify;
16 others are incorporated into the model itself, but both are readily visible to the user.
17 The inner workings of the model are captured by a set of Excel spreadsheets, which can
18 be studied to see exactly how inputs are transformed into outputs, stage-by-stage.
19 Documentation of the model includes descriptions of the model algorithms, inputs and
20 assumptions. The model is open for inspection and analysis. A user may run the model
21 to his or her heart's content to test the sensitivities of the model to changes in inputs.
22 These characteristics of the model make it appropriate to use as a basis for evidentiary
23 findings about the nature and magnitude of forward-looking economic cost. The
24 Hatfield Model (Version 2, Release 2.2) is the current evolution in a series of models
25 which, finally, have broken the incumbent LEC stranglehold on information necessary to

1 actually engage in the debate required for reasoned decisionmaking in this area.

2

3 Q. YOU NOTE THAT THE HATFIELD MODEL IS OPEN FOR INSPECTION AND
4 ANALYSIS. DOES IT MEET THE CRITERIA THE FCC HAS RULED MUST BE
5 MET FOR A TELRIC COST STUDY?

6

7 A. Based on a careful reading of the FCC's order and my understanding of the Hatfield
8 Model and its methodology, I believe that the model captures the costs that the FCC
9 requires to be included in the prices of unbundled network elements and interconnection
10 services. I also believe the Hatfield Model conforms more closely to the FCC costing
11 principles than the cost studies of the incumbent LECs with which I am familiar. One
12 way in which most incumbent LEC cost studies do not conform is that they have not
13 followed a TELRIC methodology. The Hatfield Model attempts to identify all of the
14 forward-looking costs that an efficient wholesale-only LEC would incur to produce the
15 entire range of network elements that the FCC's Order requires to be unbundled.

16 The Hatfield Model estimates cost of individual network elements by first
17 determining the capital requirements for each network element and then adding both the
18 capital-related and non-capital-related expenses for each element. Where plant is used
19 by only a single element, the Hatfield model assigns those costs to that individual
20 element, consistent with the requirements of the FCC's TELRIC methodology that the
21 capital costs and expenses be attributed directly to individual network elements "to the
22 greatest extent possible." (Paragraph 694) Where two or more network elements use
23 the same plant, the Hatfield Model attributes costs to each of the network elements that
24 use that plant so that the sum of the capital costs for each of the network elements equals
25 the total capital costs for providing all the network elements together. This approach

1 conforms with the FCC's requirement that the prices for network elements reflect the
2 economies of scale, scope and density that the incumbent LECs enjoy. (Paragraph 11)
3 Moreover, the model attributes costs common to a particular group of elements to only
4 those network elements using reasonable, nondiscriminatory factors (such as
5 apportioning the costs of shared plant according to the ratio of the costs of the plant that
6 is not shared between network elements). Therefore, it is consistent with the FCC's
7 requirement that the incumbent LECs not be allowed to recover costs of shared plant
8 disproportionately from network elements that would be especially hard for new entrants
9 to build themselves or acquire from another source at this time. (Paragraph 696)

10 To these estimates of capital and network operations costs that are either part of
11 the TELRIC of an individual element or that element's share of costs common to more
12 than one network element, the Model adds a 10% markup, as an estimate of
13 forward-looking overhead costs. This 10% markup reflects the level of "general and
14 administrative" costs that a firm operating in a competitive environment would incur to
15 provide a total level of output equivalent to the total quantity of each network element.
16 It includes a share of the expenses for corporate managers' salaries, support operations
17 such as the legal and human resources department, and the like.

18 The FCC's rules require that such overhead costs be included to the extent that
19 they vary with the output of particular network elements (despite their accounting
20 classification), and thus are part of the TELRIC of those elements. The FCC also
21 requires, to the extent that there are any such overhead costs that are common to several
22 wholesale elements, or to wholesale and other functions, that the prices of network
23 elements include "a reasonable share of common costs." The procedure of estimating
24 the overhead costs of a wholesale-only carrier, which is what Hatfield does by adding
25 the 10% markup, satisfies the FCC requirements. While statistical evidence and a

1 growing literature on activity-based accounting systems suggest that many of the costs
2 that have traditionally been considered “overhead” costs should actually be considered
3 service-specific or element-specific costs, the Hatfield Model method for treating
4 overhead costs renders any precise distinction between element-specific and “common”
5 overhead costs unnecessary. Insofar as the 10% markup captures all of the relevant
6 overhead costs, it includes any element-specific costs and a reasonable share of any
7 “common” overhead costs. This approach ensures that each network element recovers
8 at least its “reasonable” share of such common costs, to the extent that they exist.
9 Moreover, if regulators set prices for network elements equal to the costs that the
10 Hatfield Model reports for each element, these prices would allow a firm that is engaged
11 solely in providing network elements on a wholesale basis (with no retail functions) to
12 recover all of its economic costs of doing business, including a reasonable profit, but no
13 more. From this vantage point also, the Hatfield approach lies well within the bounds of
14 reasonableness. I therefore urge regulators to adopt the Hatfield Model costs as the
15 prices for unbundled network elements and interconnection services.

16

17 C. Non-Recurring Rates And Costs of Unbundling Elements

18

19 Q. DO STATE REGULATORS HAVE TO USE THE SAME PRINCIPLES IN SETTING
20 NON-RECURRING RATES FOR UNBUNDLED NETWORK ELEMENTS?

21

22 A. Yes. Incumbent LECs do not only charge recurring rates for the use of their networks,
23 they also charge non-recurring rates to recover the costs of ordering and any initial
24 non-recurring costs of making the service or element available. These rates must also be
25 set by state regulators. Granting incumbent LECs the discretion to set non-recurring

1 rates without regard to economic costs would allow them to act on their incentive to
2 impede or prevent entry just as much as granting them discretion to set recurring rates
3 without regard to economic costs. In particular, excessive non-recurring upfront costs
4 can function as a financial barrier to entry. (See, Paragraph 749 of the Order) Thus, all
5 of the same considerations that the FCC has laid out for determining proper recurring
6 costs should be applied to non-recurring costs.

7 One of the most important requirements a state commission can insist upon is
8 that charges for non-recurring costs reflect the forward-looking economic costing
9 principle required by the FCC. To do otherwise is to allow the incumbent LECs to
10 impose unduly high non-recurring costs on entrants not because they represent the
11 efficient costs of providing those unbundled elements but in order to impede or prevent
12 entrants from entering by using unbundled network elements. This requirement needs to
13 apply to two forms of non-recurring costs: the costs of ordering service, and the
14 determination of the costs of unbundling.

15 *This is not merely a hypothetical concern. The experience that has occurred in*
16 *several states with the ordering charges for Remote Call Forwarding (RCF) as an*
17 *interim local number portability solution offers a clear example of how non-recurring*
18 *charges can be used to prevent use of an element or function of an incumbent LEC's*
19 *network. Although the functions are performed in networks that use very similar*
20 *facilities, the prices to be charged to order RCF differed between Texas and Illinois by*
21 *an enormous amount.*

22 In paragraph 6 of a stipulation and agreement in the Texas Public Utility
23 Commission Docket No. 14940, signed by SWBT and a number of other parties, such as
24 Texas PUC and Time Warner Communications, SWBT commits to the following:

25 The Settling parties agree that SWBT will charge a Secondary

1 Service Order charge of \$16.95 per telephone number ported.
2 As an alternative to the \$16.95 charge per telephone number
3 ported, to recognize the efficiencies associated with large
4 volumes of service orders, SWBT agrees to allow the LSPs to
5 utilize a mechanized system to make bulk transfers of service
6 orders by using a similar system to that currently allowed in
7 Section 10 of SWBT's General Exchange tariff relating to Call
8 Management Services. Specifically, after payment of a one time
9 charge of \$4,100.00 for the initial programming, SWBT will
10 accept number changes via magnetic tape, or other agreed
11 medium, at a rate of \$10.00 per program run and \$1.00 per
12 telephone number ported. Any LSP or bill aggregator, (i.e., a
13 clearing house type entity) who submits orders on tape pursuant
14 to these provisions may submit orders on behalf of other LSPs
15 without payment of additional programming fees or additional
16 programming runs.

17 These provisions mean that if competitors collectively order 50,000 ported numbers over
18 the course of 50 orders of 1000 numbers per tape (possibly one tape per month) then the
19 effective service ordering charge is \$1.092 per number ported.

20 By contrast, in Ill. C.C. Docket 95-0296, Ameritech Illinois proposed Standard
21 Business Service ordering Charges of \$34.50. (ILL.C.C. No. 5, Part 2 - Section 28,
22 2nd Revised Page 5, Effective October 3, 1995.) Ameritech revised both the costs
23 studies and the service ordering charge a number of times; the proposed charges,
24 however, are never below \$30.00 per number ported. Also, I understand that the cost
25 studies supporting these charges, though proprietary, show costs greatly in excess of the

1 \$34.50, which caused Ameritech to claim that their rates were really very reasonable.
2 These costs were based, however, on ordering costs in a retail environment, not a
3 wholesale one.

4 In general, state regulators should require that the ordering systems whose costs
5 form the basis of part of any non-recurring charges should reflect electronic ordering,
6 ordering in bulk, and all other applicable efficiencies that can exist in a wholesale, rather
7 than a retail, market.

8
9 Q. YOUR LAST EXAMPLE DISCUSSED NON-RECURRING RATES TO RECOVER
10 THE COSTS OF ORDERING. DO NON-RECURRING RATES ALSO RECOVER
11 THE COST OF UNBUNDLING?

12
13 A. Yes. Just as with non-recurring costs for ordering a service, state regulators should also
14 insist that the costs recovered by the incumbent LECs for unbundling network elements
15 be calculated based on efficient unbundling. This is another area in which the incumbent
16 LECs can act forcibly on their incentives to impede or block competition. It is also an
17 area in which few of the other safeguards such as an insistence on strict
18 nondiscrimination can blunt the ability to act on those incentives. Therefore, state
19 regulators need to be particularly vigilant in examining with a critical eye claims about
20 the costs of unbundling.

21 In most cases, the costs of unbundling will be non-recurring costs. In this
22 regard, state regulators must take strongly into account the principle that costs be
23 recovered only once, and be recovered equitably. The FCC's example of how to treat
24 shared facilities for physical collocation service that will benefit future entrants matches
25 costs and payments for benefits in time when facilities are shared between or among

1 entrants. (See, Paragraph 750) This principle should be generalized, insofar as
2 practical, to all elements shared in time. Said differently, if the first entrant pays the
3 efficient costs that an incumbent LEC would incur to be able to provide a particular
4 unbundled network element, later users of the same unbundled network element should
5 share equitably in the recovery of that cost. The logic should apply to any non-recurring
6 cost that later entrants benefit from that an *original requester* pays.

7 Another way in which the FCC's example should be generalized is to include
8 the incumbent LEC as one of the possible beneficiaries through time. In effect, some
9 requests for unbundled network elements may be filled by the incumbent LEC by
10 upgrading the facility in a manner that will be valuable to the LEC in the future, while
11 charging the entrants for all of the costs of the upgrade. To the extent the incumbent
12 LEC will benefit from the upgrade because it regains use of the facility in the future,
13 through customer churn or some other event, the effect of such a charge would be to
14 force the entrant to bear the cost of the incumbent LEC's network upgrades that are
15 intended to make it easier for the incumbent to compete in the future. In this case, the
16 requirement that the charge be imposed equitably needs to be expanded to take into
17 account the future benefits to the incumbent LEC from activities taken to unbundle a
18 network element for an entrant that may only be used for a fixed period of time before it
19 reverts to the incumbent LEC to reuse.

20 An example of such a situation would arise if an entrant requests unbundled
21 loops, and to provide them the incumbent LEC has to condition them. If the entrant
22 later relinquishes the loop—perhaps because the customer has decided to return to the
23 incumbent LEC or because the customer moved and the new occupant chose the
24 incumbent LEC—the incumbent LEC benefits from the conditioning performed on the
25 loop.

1 Extending the principle of an equitable matching of costs and payments for
2 benefits in time to include the incumbent LEC's future use of facilities is particularly
3 important. The incumbent LEC has the incentive and the ability to force the entrants to
4 pay for unnecessary work (from the entrant's perspective) on unbundled network
5 elements in order to impede competitive entry. It is a double blow to competition to
6 have the entrant not only pay for unnecessary work, but to have that work position the
7 incumbent LEC to be in a better position to compete.

8

9

**IV. COMPENSATION FOR THE TRANSPORT AND
TERMINATION OF LOCAL TRAFFIC**

10

11

12 **Q. WHY IS THERE A NEED FOR COMPENSATION FOR THE TRANSPORT AND**
13 **TERMINATION OF LOCAL TRAFFIC?**

14

15 **A. Local networks must be interconnected if the public is to have any chance to gain the**
16 **benefits of local exchange competition. Consumers demand the ability to reach all**
17 **customers in the local calling area, and to do so without having to pay elevated prices to**
18 **reach customers that subscribe to a different local carrier. If local networks are not**
19 **interconnected, an entrant cannot provide this ubiquity of reach, and the incumbent can**
20 **use its absence to convince customers not to shift to the services of the entrant. Thus,**
21 **interconnection of local networks is absolutely essential if consumers are to have any**
22 **chance of getting the benefits of local exchange competition. Interconnection opens up**
23 **the question of what the compensation will be for terminating local exchange traffic.**

24

25 **Q. HOW HAS THE FCC RULED THAT COMPENSATION SHALL BE PROVIDED**

1 FOR THE TRANSPORT AND TERMINATION OF LOCAL EXCHANGE TRAFFIC?

2

3

A. The FCC has established a framework to govern interconnection and compensation for terminating local exchange traffic. Interconnection is the physical linking together of two networks, and the FCC has set rules that govern interconnection. The FCC has separated compensation into transport and termination. The FCC has ruled that termination of a local call by the incumbent LEC as used in the 1996 Act means the act of switching the call to the intended recipient at the end office switch that serves that subscriber. The FCC has also ruled that the 1996 Act separately discusses transport of that call to the end office when an entrant does not interconnect at that end office directly. As the FCC noted:

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We define "transport," for purposes of section 251(b)(5), as the transmission of terminating traffic that is subject to section 251(b)(5) from the interconnection point between the two carriers to the terminating carrier's end office switch that directly serves the called party (or equivalent facility provided by a non-incumbent carrier.) (Paragraph 1039)

23

24

25

We define "termination," for purposes of section 251(b)(5), as the switching of traffic that is subject to section 251(b)(5) at the terminating carrier's end office switch (or equivalent facility) and delivery of that traffic from that switch to the called party's premises.

Both of these functions are included in the FCC's rules governing compensation due the incumbent LEC for completing local calls that originate on another carrier's network.

Within the framework of its rules, however, there are a number of vital issues that state

1 regulators must still decide. In particular, state regulators must determine the actual
2 compensation to be paid the incumbent LEC and the compensation the incumbent LEC
3 shall pay the entrant.

4

5 A. Compensation to the Incumbent

6

7 Q. WHAT HAS THE FCC RULED SHALL BE THE APPROACH TO COMPENSATION
8 TO THE INCUMBENT?

9

10 A. The FCC rules governing compensation to the incumbent LEC for completing local calls
11 have several components. The FCC has ruled that the compensation for transport and
12 termination of local calls will be based on economic cost. To achieve this, the FCC
13 ruled:

14

15 States have three options for establishing transport and
16 termination rate levels. A state commission may conduct a
17 thorough review of economic cost studies prepared using the
18 TELRIC-based methodology outlined above in the section of the
19 pricing of interconnection and unbundled elements.

20

21 Alternatively, the state may adopt a default price pursuant to the
22 default proxies outlined below. If the state adopts a default
23 price, it must either commence review of a TELRIC-based
24 economic cost study, request that this Commission review such
25 a study, or subsequently modify the default price in accordance
with any revised proxies we may adopt. As previously noted,
we intend to commence a future rulemaking on developing

1 proxies using a generic cost model, and to complete such
2 proceeding in the first quarter of 1997. As a third, alternative,
3 in some circumstances states may order a "bill and keep"
4 arrangement, as discussed below. (Paragraph 1055, footnote
5 omitted)

6 If a state selects the first option, after performing the thorough review of the
7 economic cost studies both for conformance with the TELRIC principles the FCC has
8 given and for accuracy of results, it must set the rates to recover only what the FCC has
9 defined as economic costs. As the FCC stated:

10 Consistent with our conclusions about the pricing of
11 interconnection and unbundled network elements, we conclude
12 that states that elect to set rates through a cost study must use
13 the forward-looking economic cost-based methodology, which is
14 described in greater detail above, in establishing rates for
15 reciprocal transport and termination when arbitrating
16 interconnection arrangements. (Paragraph 1056, footnote
17 omitted)

18 The FCC has ruled that the structure of compensation paid to incumbent LECs
19 for transport and termination should follow the switched access model of separate rate
20 elements for different functions (although the level of those rate elements is not to be
21 based on switched access charges). Thus, it has ruled that incumbent LECs shall be paid
22 for tandem switching, for transport between the tandem and the end office, and for end
23 office switching if any of these elements are used by an entrant. It has required,
24 however, that these payments must be based on the TELRIC costs of supplying them,
25 plus a reasonable share of forward-looking common costs, but no more. It has also

1 ruled on when and how bill-and-keep can be used.

2

3 Q. WHAT SHOULD STATE REGULATORS USE TO SET TELRIC-BASED RATES
4 FOR COMPENSATION?

5

6 A. I urge that the state regulators use the Hatfield Model to establish prices in conformance
7 with TELRIC principles, under the presumption of symmetry in rates (unless the entrant
8 proves it is entitled to be paid a higher rate). As was discussed in the section above on
9 unbundled network elements, the Hatfield model produces reasonable estimates of
10 TELRIC costs, and estimates more consistent with the FCC's required TELRIC
11 methodology than cost estimates derived from incumbent LEC cost studies with which I
12 am familiar.

13

14 Q. HOW SHOULD LOCAL EXCHANGE TERMINATING TRAFFIC BE MEASURED?

15

16 A. I urge that only the most efficient measurement and billing procedures be used to
17 implement compensation, and that the incumbent LECs be allowed to recover in any
18 rates charged to compensate for transport and termination only the forward-looking costs
19 of the most efficient measurement and billing procedures. Specifically, I urge that
20 auditable Percent Local Usage reports be used to determine the portion of traffic for
21 which local interconnection compensation is due, rather than new measurement systems
22 married to the billing system for switched access that would have to be developed and
23 implemented at substantial cost. To do otherwise would prevent consumers from gaining
24 the benefits sought from the 1996 Act.

25

1 Q. WHY DO YOU RECOMMEND THE USE OF A PERCENT LOCAL USAGE
2 FACTOR, RATHER THAN THE DEVELOPMENT OF A NEW SYSTEM FOR
3 MEASUREMENT AND BILLING OF TERMINATING LOCAL EXCHANGE
4 TRAFFIC?

5
6 A. Just as the incumbents have the incentive and the ability to try to prevent genuine
7 competition using unbundled network elements by imposing excessively high
8 non-recurring costs, the incumbents have the same incentives and ability to try to thwart
9 the development of effective competition by imposing excessive and disproportionate
10 costs for measurement and billing on entrants.

11 Many incumbent local exchange carriers do not now have a means to determine
12 whether terminating traffic is local or intraLATA without imposing inefficiencies on the
13 carrier delivering that traffic by requiring them to send it on separate trunk groups,
14 which forces them to lose some of the economies of scale available in trunking.
15 Developing and implementing a new system to do this will be costly. While it is the
16 case that incumbent local exchange carriers can and do measure and bill for at least
17 some of their local exchange traffic, the systems they use for that purpose exist mainly
18 in the originating switch and cannot be used to determine whether a terminating call is a
19 local or intraLATA toll call. Moreover, the measurement system that does exist for
20 measuring some terminating traffic, switched access, cannot handle calls that are not
21 preceded by a "1." Thus, any arrangement for terminating local exchange traffic that
22 would have a charge per minute could force incumbents and entrants to develop new
23 systems to sort out different kinds of traffic. Costs associated with the creation of
24 systems for measuring and billing terminating local exchange calls will fall
25 disproportionately on new entrants.

1

2 Q. IS THIS JUST A THEORETICAL CONCERN?

3

4 A. No. The development of measurement and billing systems for switched access shows
5 that this concern is not an idle one. AT&T prior to divestiture wanted a new
6 measurement and billing system for interconnection for what were then called Other
7 Common Carriers—the first ones being MCI and Sprint—in order to be able to charge
8 them for all of the so-called non-conversation time: the time spent setting up calls that
9 occurs in addition to the time when conversations actually occur. Until the advent of the
10 Other Common Carriers, all that the switches were designed to measure was
11 conversation time, as that was all that was billed to end users. AT&T knew the average
12 non-conversation time of a call, and could have factored the costs of that into rates based
13 on conversation time, but it chose not to take that approach.

14 Because switched access was to be measured and billed differently from how end
15 user calls were measured and billed, the incumbent LECs needed new measurement and
16 billing systems. The new systems turned out to be much more costly than the systems
17 used for end user measurement and billing. According to data supplied in Massachusetts
18 in 1995, it costs NYNEX only \$0.000007 per message to bill a local exchange call, but
19 \$0.000215 per minute to bill a carrier access call. (Attachment 3 to the testimony of
20 Ms. Paula Brown, in D.P.U. 94-185) According to Page 2 of 9 of Ms. Brown's
21 Attachment 3, the average duration of a call is 3.16 minutes. Multiplying that times her
22 carrier access billing cost shows a cost almost 100 times greater to bill a single call
23 using the billing system for carrier access than the cost to bill an end user.

24 The incumbent local exchange carriers are indeed working on developing a new
25 system to measure terminating local exchange traffic coming from other carriers that

1 uses Signaling System 7 (SS7) data. If implemented, this would have several bad effects
2 on entrants. First, it is going to add significant costs to the cost of terminating local
3 exchange traffic. I understand that, based on data provided under proprietary
4 agreements in at least two U S West states, Washington and Oregon, developing such a
5 measurement and billing system could more than double the forward-looking economic
6 cost of the end office switching function for terminating traffic from the cost without
7 measurement and billing. This is a significant cost burden to add to local exchange
8 service. Second, it will penalize entrants because they will not be able to use it for all
9 of the traffic that incumbent LECs terminate to them, as not all LEC switches are yet
10 equipped to use SS7. Thus, although all of the traffic going from an entrant to an
11 incumbent could be sorted and measured in this manner, the converse would not be true.

12 Moreover, I understand that the same cost data showed that the measurement
13 function would be even more costly than the measurement function now performed for
14 switched access. U S West proposed to use the same billing system it uses for
15 interexchange carriers, with billing costs that are higher than the costs to bill measured
16 local exchange traffic. In summary, the proposal is a way to increase the already
17 inefficiently high costs of measuring and billing regular switched access, and impose
18 those costs on entrants.

19 In order to be able to participate in a measured approach to compensation, the
20 entrants would also have to incur the costs to install measurement equipment in their
21 networks. The entrants cannot opt out of this requirement because to do so would put
22 them at an even bigger disadvantage than if they installed the equipment. If
23 compensation were to be on a measured use basis and the entrants did not install
24 measurement equipment, they would not only pay the incumbent to terminate their
25 traffic, but would also pay to terminate the incumbent's traffic. Thus, they would be

1 forced to install measurement equipment themselves. As noted above, however, not all
2 traffic from incumbent LECs uses SS7 signaling.

3 Additionally, based on the experiences to date with the billing for carrier access
4 charges, the use of a bad measurement and billing system will pose additional costs in
5 the form of auditing and verification costs. Carrier access bills have been sufficiently in
6 error that it has been cost effective for interexchange carriers to hire people full time to
7 audit and try to get corrections made in these bills. These auditing costs have not been
8 *one-time costs, but continue to be incurred today.* The costs to the interexchange
9 carriers are less than the savings from what they otherwise would have been required to
10 pay, but these additional expenditures on auditing due to the use of a bad measurement
11 and billing system bring with them no social benefits whatsoever. In other words, these
12 additional costs are a total dead weight loss to society.

13 Increases in these costs would fall disproportionately on entrants. The
14 incumbent LEC would experience at least some of the same costs for each minute or
15 message delivered to an entrant for termination, but those minutes -- while most likely
16 equal to the number received from the entrants -- would constitute a much smaller
17 percentage of the incumbent LEC's total traffic, at least for some time to come. The
18 result is that the impact is much less on the incumbent than on the entrants of being
19 faced with unnecessary and, from the point of view of society, wasteful costs than it is
20 on the entrants.

21

22 Q. IS THERE ANY EVIDENCE THAT THE INCUMBENT LECS WANT TO IMPOSE
23 DISPROPORTIONATE COSTS FOR MEASUREMENT AND BILLING ON
24 ENTRANTS?

25

1 A. Yes. That incumbent LECs see an opportunity to impose *disproportionate costs* on
2 entrants is supported by the nature of the agreement that BellSouth negotiated with
3 entrants. The BellSouth agreement requires both the incumbent and the entrant to
4 measure traffic. There are a number of fixed costs incurred for measurement and billing
5 even if measurement and billing is based on exchanging Percent Local Usage
6 information. The entrant must spread the fixed costs of installation and use over a much
7 smaller total base of operations. The result is that average cost per unit of traffic is
8 raised more for the entrant than for the incumbent.

9 That the average cost per unit of traffic is raised more for the entrant than for
10 the incumbent is a feature of the interplay between the cost structure of the billing
11 system and the *vastly different proportions* of total traffic that is interconnected for the
12 incumbent and the entrant. It has been argued that measurement costs nonetheless may
13 be worth incurring so that, among other reasons, the payments a carrier receives for
14 terminating interconnected traffic can vary with the volume of that traffic. The usual
15 claim is that this is particularly important because of the possibility that the flow of
16 traffic between two carriers might be substantially unbalanced.

17 The billing and measuring system required by the BellSouth agreement,
18 however, would not serve this function. It would not allow a carrier to receive larger
19 net payments if it terminated substantially more interconnected traffic than it originated
20 because the agreement requires that bill-and-keep take over if traffic is *out* of balance by
21 more than 105 percent. Thus bill-and-keep is used when traffic is out of balance and
22 explicit payment is used when traffic is roughly in balance -- the exact opposite of the
23 FCC requirement for use of bill-and-keep. It is difficult to make much sense of this
24 arrangement, but it is easy to see that it does ensure that entrants' costs of serving a
25 customer will be disproportionately increased by the requirement that they install

1 measurement equipment that may not even be used.

2

3 Q. WHAT SHOULD STATE REGULATORS ORDER FOR DETERMINING THE
4 AMOUNT OF LOCAL EXCHANGE TRAFFIC PASSING FROM ONE NETWORK
5 TO ANOTHER?

6

7 A. To avoid the imposition of disparate and inefficient administrative costs, state regulators
8 should require all carriers—incumbents and entrants alike—to report a percentage local
9 traffic amount subject to an auditing requirement as the basis for compensation payments
10 for transport and termination. This would mirror the current practice for jurisdictional
11 reporting of terminating switched access.

12 Carriers can count minutes of use coming into their switches over a trunk group.
13 Taking that count, plus the percentage of local traffic would enable the receiving carrier
14 to bill for transport and termination without having to invent a whole new measurement
15 and billing system. This would be far more efficient than allowing the incumbent LECs
16 to act on their incentives to impose unnecessary and disparate cost burdens on entrants in
17 an attempt to impede the development of local exchange competition.

18

19 B. Compensation to the Entrant

20

21 Q. WHAT ARE THE REQUIREMENTS GOVERNING COMPENSATION TO THE
22 ENTRANT FOR TERMINATING LOCAL EXCHANGE TRAFFIC?

23

24 A. The 1996 Act addresses compensation to be paid to entrants when they complete local
25 calls that originate on the network of the incumbent. The 1996 Act calls for such

1 compensation to be reciprocal.

2

3 Q. WHAT HAS THE FCC RULED CONSTITUTES RECIPROCAL COMPENSATION?

4

5 A. The FCC has ruled that reciprocal compensation should be symmetrical compensation,
6 unless an entrant can prove through the use of economic cost studies that the entrant
7 should be paid a higher rate. As the FCC stated:

8 Symmetrical compensation arrangements are those in which the
9 rate paid by an incumbent LEC to another telecommunications
10 carrier for transport and termination of traffic originated by the
11 incumbent LEC is the same as the rate the incumbent LEC
12 charges to transport and terminate traffic originated by the other
13 telecommunications carrier. (Paragraph 1069)

14 Given the advantages of symmetrical rates, we direct states to
15 establish presumptive symmetrical rates based on the incumbent
16 LEC's costs for transport and terminating of traffic when
17 arbitrating disputes under section 252(d)(2) and in reviewing
18 BOC statements of generally available terms and conditions. If
19 a competing local service provider believes that its cost will be
20 greater than that of the incumbent LEC for transport and
21 termination, then it must submit a forward-looking economic
22 cost study to rebut this presumptive symmetrical rate.

23 (Paragraph 1089)

24 In considering how entrants should be compensated, the FCC specifically
25 addressed tandem switching functionality. The C.F.R. in section 51.709(a)(3) states:

1 Where the switch of a carrier other than an incumbent LEC
2 serves a geographic area comparable to the area served by the
3 incumbent LEC's tandem switch, the appropriate rate for the
4 carrier other than an incumbent LEC is the incumbent LEC's
5 tandem interconnection rate.

6 In the text of its Order, the FCC made clear that by the use of the "tandem
7 interconnection rate," the FCC meant the sum of the tandem charge, the transport
8 charge, and the end office termination charge. As the FCC stated:

9 We, therefore, conclude that states may establish transport and
10 termination rates in the arbitration process that vary according to
11 whether the traffic is routed through a tandem switch or directly
12 to the end-office switch. In such event, states shall also
13 consider whether new technologies (*e.g.*, fiber ring or wireless
14 networks) perform functions similar to those performed by an
15 incumbent LEC's tandem switch and thus, whether some or all
16 calls terminating on the new entrant's network should be priced
17 the same as the sum of transport and termination via the
18 incumbent LEC's tandem switch. (Paragraph 1090)

19 The network implementation white paper describes the ways in which the physical
20 networks can be interconnected for traffic delivery between the entrant and incumbent
21 LEC networks. It describes the charges that apply based on the rules the FCC has
22 prescribed.

23

24 C. Why the FCC Rules Reduce the Benefits From Bill-and-Keep

25

1 Q. YOU SAID THE FCC RULES PREVENT BILL-AND-KEEP FROM BRINGING ITS
2 GREATEST BENEFITS TO CONSUMERS. WHY?

3
4 A. The FCC provides for three approaches to compensation. One of these is bill-and-keep,
5 which could in principle be implemented without an examination of cost studies. A
6 careful reading of the Order, however, suggests that the FCC intends to limit
7 bill-and-keep to apply only to termination, not transport. Although section 51.701(e)
8 includes both transport and termination in its definition of reciprocal compensation
9 arrangements, succeeding sections narrow the applicability of bill-and-keep. Section
10 51.713, in particular, limits the definition of bill-and-keep arrangements for reciprocal
11 compensation to "those in which neither of the two interconnecting carriers charges the
12 other for the termination of local telecommunications traffic that originates on the other
13 carrier's network."

14 As a result, the FCC approach would not end the need to measure terminating
15 traffic, one of the important benefits of bill-and-keep. Measurement would still be
16 needed for transport. The failure of the FCC to include transport in a bill-and-keep
17 approach makes it less beneficial for competition than it would otherwise be.

18

19 V. INTRASTATE ACCESS CHARGE REFORM

20

21 Q. WHY ARE YOU ADDRESSING SWITCHED ACCESS CHARGES IN THIS
22 ARBITRATION?

23

24 A. With every decision prying open local exchange markets to competition, the need to
25 eliminate above cost prices for access becomes more immediate. New entrants are

1 making decisions affecting local competition which are distorted whenever prices for
2 access exceed cost. (Even the temporary "surcharge" placed by the FCC on unbundled
3 local switching can be expected to distort decisionmaking.) For this period of
4 arbitrations, while business decisions about whether, how, and which local markets to
5 enter are being made at a rapid pace, it is vitally important that any state that has not
6 already done so initiate intrastate access reform. Otherwise, emerging competition will
7 be damaged, new competitors will gravitate toward more favorable procompetitive
8 environments, and competition will be plagued by inefficient choices that raise
9 interexchange carriers costs and so limit price reductions in intrastate toll charges.

10 This arbitration proceeding provides the state commission with the opportunity
11 to price intrastate access charges at economic cost. The Hatfield Model provides the
12 means to identify the appropriate cost and prices. *I urge the state commission to initiate*
13 *intrastate access reform now.*

14
15 Q. ARE THERE SPECIFIC EVENTS DRIVING THE NEED TO INITIATE ACCESS
16 CHARGE REFORM NOW?

17
18 A. Yes. Two events drive the need to initiate access charge reform now: (1) the
19 announcement in the Order that the FCC will be addressing access charge reform
20 concurrent with its adoption of a competitively-neutral universal service mechanism, and
21 (2) the section 271 public interest test that requires elimination of the artificial advantage
22 conferred on BOCs by above-cost access charges. In the first case, alignment of
23 intrastate access rates to cost must occur in tandem with the federal reforms to ensure
24 that ratepayers are not paying twice for universal service support. In the second case,
25 above-cost access confers an ability to discriminate that distorts and disrupts the

1 competitiveness of both the local and long distance markets. In at least MCI's view,
2 until access charges, both interstate and intrastate, are reduced to forward looking,
3 economic cost, regulators may not legally allow BOC entry into in-region long distance
4 under the 1996 Act.

5 I urge each state to initiate a proceeding now, if it has not already done so, in
6 which the requisite record can be developed to eliminate completely prices for access
7 that exceed forward-looking economic cost. Taking charge of intrastate access reform
8 now not only gives the state control over the date when the temporary "surcharge" on
9 the unbundled local switching element introduced by the FCC is eliminated but also
10 allows the state to coordinate its access charge reform with its creation of a
11 competitively-neutral universal service support mechanism.

12

13 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

14

15 A. Yes.

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1 REBUTTAL TESTIMONY OF NINA W. CORNELL

2 ON BEHALF OF MCI

3 DOCKET NO. 960846-TP

4 September 16, 1996

5

6 Q. WHAT IS YOUR NAME AND ADDRESS?

7

8 A. My name is Nina W. Cornell. My address is 1290 Wood River Road, Meeteetse,
9 Wyoming 82433.

10

11 Q. HAVE YOU FILED DIRECT TESTIMONY IN THIS PROCEEDING?

12

13 A. Yes.

14

15 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

16

17 A. My rebuttal testimony responds to the direct testimony of Dr. Emmerson and Mr.
18 Milner, filed on behalf of BellSouth Telecommunications, Inc. ("BellSouth").

19

20 Q. WOULD YOU PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY?

21

22 A. Yes. Dr. Emmerson is incorrect to claim that MCI has asked for unbundled network
23 element and interconnection prices at total service long run incremental costs, so all
24 of his arguments about the possible inefficiencies of doing so should be ignored. Dr.
25 Emmerson has also argued that incumbent local exchange carriers have higher relative

1 shared costs than entrants. These arguments are both untrue, and irrelevant to pricing
2 unbundled network elements and interconnection. Dr. Emmerson implies that the
3 additional costs BellSouth should be able to recover in the prices for unbundled
4 network elements and interconnection should be based on its revenue requirement.
5 This should be rejected because it would prevent consumers from getting the greatest
6 possible benefits from entry and competition. Dr. Emmerson also asks that the markup
7 over direct economic cost to recover any shared costs that should be recovered from
8 unbundled network elements and interconnection should be done based on demand
9 conditions. This would be entry-impeding, and should be denied.

10 Mr. Milner claims that a number of unbundled network elements are not
11 technically feasible to provide. Mr. Milner has redefined technical feasibility to
12 include both considerations of cost and to omit any possible changes to the current
13 BellSouth network. This is contrary to the decision of the Federal Communications
14 Commission (FCC), and would allow BellSouth to deny entrants the ability to use
15 unbundled network elements, contrary to the Telecommunications Act of 1996 (the
16 Act). He also claims that BellSouth cannot provide the unbundled switching element
17 as defined by the FCC. As a result, he would impose dialing disparities on entrants,
18 contrary to the Act. The Commission should reject Mr. Milner's claims of technical
19 infeasibility, and order BellSouth to provide all of the requested unbundled network
20 elements.

21
22 Q. DR. EMMERSON DISCUSSES TOTAL SERVICE LONG RUN INCREMENTAL
23 COSTS (TSLRIC) AT THE BEGINNING OF HIS TESTIMONY. IS MCI ASKING
24 FOR RATES FOR UNBUNDLED NETWORK ELEMENTS TO BE SET AT
25 TSLRIC?

1

2 A. No. MCI is asking that rates be set using the results of the Hatfield model, which
3 produces estimates of the total element long run incremental cost (TELRIC) and also
4 include shared costs and some of the costs frequently categorized as common costs for
5 a wholesale-only firm. As Dr. Emmerson notes later in his testimony, TELRIC costs
6 are estimated using different cost objects than services. TELRIC costs are, however,
7 a form of TSLRIC costs, simply with the total quantity of *network elements* as the cost
8 object, rather than the various *services* provided using those network elements.

9 Because MCI is not asking that rates for unbundled network elements be set
10 just at TSLRIC or TELRIC, my testimony does not respond to those points in Dr.
11 Emmerson's testimony that flow from his erroneous claim that MCI has asked for
12 prices to be set equal to TSLRIC or TELRIC.

13

14 Q. DR. EMMERSON OFFERS A NUMBER OF REASONS WHY HE BELIEVES
15 INCUMBENT LOCAL EXCHANGE CARRIERS WILL HAVE A HIGHER
16 PROPORTION OF SHARED COSTS THAN ENTRANTS. DO YOU AGREE WITH
17 HIS ARGUMENTS?

18

19 A. No. According to Dr. Emmerson:

20 There are several factors which I believe will cause a LEC, like
21 BellSouth, to tend to have a higher proportion of shared costs than
22 other competing firms. These factors include: 1) a large number of
23 services offered; 2) network-based provider; 3) a franchise obligation
24 to provide ubiquitous service over broad geographic areas; 4) large
25 scale and lumpy investment characteristics; 5) predominantly producing

1 services rather than products; and 6) "leasing" virtually no unbundled
2 components from other providers. (Emmerson Direct, page 5, lines
3 18-24)

4 With one possible—but not certain—exception, none of his claims are valid. His first
5 and fifth claims apply equally to incumbents and entrants alike. His second and fourth
6 claims apply equally to all entrants that build at least part of their own networks. His
7 third claim may be the exception, but it can only be valid if Dr. Emmerson believes
8 the loop is a shared cost, and even then it may not be accurate. His sixth claim is
9 simply untrue. Moreover, his discussion is largely irrelevant to a wholesale-only firm
10 providing unbundled network elements, which is the correct standard to apply.

11

12 Q. WHY DO HIS FIRST AND FIFTH CLAIMS APPLY EQUALLY TO ENTRANTS
13 AND INCUMBENTS ALIKE?

14

15 A. Entrants will be forced to offer a large number of services if they want to win
16 customers. Many of the services offered by an incumbent local exchange carrier are
17 taken by a given customer. Thus, many local exchange customers also subscribe to
18 call-waiting, or call-forwarding services, to intraLATA toll service, perhaps even to
19 a discount intraLATA toll offering, and the like. Entrants will have to match the array
20 of services to be able to win customers. Thus, not only will entrants be offering a
21 similarly large number of services, but they will be producing primarily services, not
22 products.

23

24 Q. WHY DO DR. EMMERSON'S SECOND AND FOURTH CLAIMS APPLY
25 EQUALLY TO ENTRANTS THAT BUILD AT LEAST SOME NETWORK OF

1 **THEIR OWN?**

2

3 **A. An entrant that builds at least part of its own network, for example, a fiber-ring**
4 **provider, will also be a network-based provider. That provider will have “lumpy”**
5 **investment characteristics like those facing the incumbent local exchange provider.**
6 **“Lumpy” investments are investments that cannot be made necessarily in just the**
7 **desired size, or be added to with just the amount of additional capacity needed. If**
8 **there is a minimum size, or if expansion units come only in a few sizes, the investment**
9 **is “lumpy.”**

10 **A carrier builds a local network using equipment that is available from**
11 **equipment suppliers. The same equipment suppliers are providing equipment to**
12 **entrants and incumbents alike. Thus, the equipment available to entrants is just as**
13 **“lumpy” as the equipment incumbents can buy.**

14

15 **Q. WHY DO YOU SAY THAT THE FRANCHISE OBLIGATION DOES NOT MEAN**
16 **A HIGHER PROPORTION OF SHARED COSTS UNLESS DR. EMMERSON**
17 **AGREES THAT THE LOCAL LOOP IS A SHARED COST AND EVEN THEN**
18 **MAY NOT BE VALID?**

19

20 **A. To understand the potential fallacy in this claim, it is necessary to look at how local**
21 **networks are constructed. A carrier will place a switch and loop plant to connect its**
22 **customers to the switch. Once there are sufficient customers in a local area, the**
23 **carrier will place a second switch, and interoffice plant to connect the two. In essence,**
24 **each separate switch starts all over again the process of accumulating shared plant.**
25 **The only way in which adding a second switch increases the proportional amount of**

1 shared costs is when the interoffice trunks share structure costs with loop plant.

2 Thus, the fact that incumbent local exchange carriers serve broad geographic
3 areas is irrelevant to the relative proportions of shared plant because different
4 communities are separate local exchanges with their own switches and loop plant. The
5 major distinction is that in some exchanges, loops are longer because the community
6 is less dense, needing only a single switch. Thus, the only way that serving a broader
7 geographic area may—but is not certain to—lead to any significant increase in the
8 relative proportion of shared costs is if the local loop is a shared cost.

9 Whether the local loop is a shared cost depends upon what are the cost objects
10 of the firm. When the total costs of the network of the firm are determined on the
11 basis of unbundled network elements, the local loop is not a shared cost. When the
12 cost objects are services such as local exchange service, toll service, switched access
13 services, and the like, the loop is a shared cost.

14 If the cost objects are traditional services, in which case the local loop is a
15 shared cost, serving rural areas *might* mean higher proportional shared costs for
16 incumbents than for entrants. This is only a possibility, however, because entrants
17 with their own facilities have longer loops in the urban areas than do the incumbents.
18 As a result, this claim *might* be valid, but only if the cost objects of the firm are
19 traditional services, in which case local loops should be considered part of shared costs
20 *and* only if the rural loops of the incumbents are longer than the loops of the entrants
21 in urban areas.

22

23 Q. WHY IS DR. EMMERSON WRONG WHEN HE CLAIMS THAT WHEN A
24 CARRIER LEASES COMPONENTS, THE PRICES PAID BECOME DIRECT
25 INCREMENTAL COSTS OF SERVICES WRONG?

1

2 A. This claim is wrong because the choice between "leasing" an input and building it does
3 not change whether the cost of the input is a shared cost or a direct incremental cost.
4 If an entrant leases loops, but offers its customers a substitute for traditional local
5 exchange service and intraLATA toll service, and offers interexchange carriers
6 switched access service, the loop will continue to be a shared cost of all of those
7 services despite its being "leased" and not built by the entrant. The question of what
8 is a shared cost and what is not does not depend primarily on whether inputs are built
9 or leased, but on what are the cost objects of the firm when categorizing costs as direct
10 or shared.

11

12 Q. IS DR. EMMERSON'S EXAMPLE OF SWITCHED ACCESS BEING 60% OF
13 AT&T'S TOLL REVENUES RELEVANT TO WHETHER LEASING OR
14 BUILDING ALTERS THE NATURE OF THE COST?

15

16 A. No. AT&T's experience with switched access as a proportion of its total revenues is
17 not relevant to whether leasing facilities changes shared costs into direct costs.
18 Switched access is charged on a per minute basis. Because it is charged on a per
19 minute basis, it becomes a direct cost for each toll service that uses switched access.
20 Moreover, if AT&T had built the facilities to provide switched access for itself,
21 assuming that were possible, most of the cost of the switching and transport would
22 continue to be direct costs, as they are caused by minutes of use, or minutes of use at
23 peak. Only the loop plant would be a shared cost unless AT&T had only used the
24 loops for switched access purposes. The loops provided by the incumbent local
25 exchange providers are shared costs of the various services that use them, just as they

1 would have been for AT&T.

2

3 Q. YOU SAID EARLIER THAT DR. EMMERSON'S CLAIMS ABOUT SHARED
4 COSTS OF INCUMBENT LOCAL EXCHANGE CARRIERS BEING HIGHER
5 THAN THE SHARED COSTS OF ITS COMPETITORS IS IRRELEVANT TO A
6 WHOLESALE-ONLY FIRM PROVIDING UNBUNDLED NETWORK ELEMENTS.
7 WHY IS THIS THE CORRECT STARTING POINT FOR AN ANALYSIS OF
8 SHARED COSTS TO BE RECOVERED IN THE RATES FOR UNBUNDLED
9 NETWORK ELEMENTS?

10

11 A. It is very important that any costs that are shared be collected in the rates from the
12 items that share those costs, and *only* those items. Otherwise, the items that share the
13 costs will be receiving a cross subsidy, which is both inefficient and bad for
14 consumers.

15 Unbundled network elements are wholesale offerings. They should pay no
16 more than the costs of a wholesale-only firm, because they are not part of retail
17 offerings. If the costs of a wholesale-only firm are calculated, they may include costs
18 that would be shared between both retail and wholesale services, but should not include
19 any costs that are shared only among retail services. Including costs that would be
20 shared between retail and wholesale services in essence turns the costing exercise into
21 an attempt to estimate the stand-alone costs of a wholesale-only firm. The test for
22 whether a price provides a cross subsidy is whether it is above the stand-alone cost of
23 the item. So long as prices for unbundled network elements recover no more than the
24 per-unit stand-alone costs of a wholesale-only firm, unbundled network elements will
25 not be providing a cross subsidy.

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Q. DR. EMMERSON CLAIMS THAT THE GREATER THE EFFICIENCIES OF SHARING FACILITIES AND COSTS, THE GREATER WILL BE THE NEED TO SET PRICES ABOVE TELRIC. DO YOU AGREE?

A. Not necessarily. Shared costs and shared facilities are not the same concepts, but can easily be confused.

“Shared plant” refers to specific items of equipment that are used to provide more than one service. Plant may be shared among services, but have all of its costs *caused* by each of those services individually, if additional units of any one of the services cause the shared plant to be larger than it would otherwise be or in some other manner cost more than it otherwise would. Take the example of a tandem switch. Much of the cost of the switch is determined by—and varies with—the peak period calls of different kinds that the tandem processes. Thus, although the tandem switch is an example of a piece of shared *plant*, most of its cost is *not* a shared *cost*. The same is true of almost all other elements of a local exchange network. Different usage services share interoffice trunking plant, but a significant amount of the cost of that plant varies depending upon the total peak period usage of it, and so that cost is not a shared cost.

Q. DOES DR. EMMERSON DISCUSS WHAT KINDS OF SHARED AND COMMON COSTS SHOULD BE RECOVERED IN THE PRICES OF UNBUNDLED NETWORK ELEMENTS AND INTERCONNECTION?

A. No, not directly. In his discussion of interconnection, however, he implies that prices

1 should be set in such a way as to ensure that BellSouth recovers some version of a
2 revenue requirement. (See, Emmerson Direct, page 25, lines 4-17)

3
4 Q. DO YOU AGREE WITH HAVING PRICES FOR UNBUNDLED NETWORK
5 ELEMENTS AND INTERCONNECTION BE SET IN A WAY THAT WOULD
6 ENSURE THAT BELL SOUTH RECOVERS A REVENUE REQUIREMENT?

7
8 A. No. Allowing BellSouth to recover any more than its forward-looking economic costs
9 based on being a wholesale-only firm in the prices for unbundled network elements and
10 interconnection would prevent the market from driving local exchange rates to
11 economic costs. This would deprive consumers in Florida of the full benefits of
12 competition.

13 Allowing BellSouth to recover based on a revenue requirement would also be
14 inconsistent with the Act. Section 252(d)(1)(A)(i) states:

15 (1) INTERCONNECTION AND NETWORK ELEMENT
16 CHARGES.—Determinations by a State commission of the just and
17 reasonable rate for the interconnection of facilities and equipment for
18 purposes of subsection (c)(2) of section 251, and the just and
19 reasonable rate for network elements for purposes of subsection (c)(3)
20 of such section—

21 (A) shall be—

22 (i) based on the cost (determined without reference to a rate-of-return
23 or other rate-based proceeding) of providing the interconnection or
24 network element (whichever is applicable),

25

1 Q. DR. EMMERSON ALSO CALLS FOR PRICES TO BE SET ABOVE TELRIC
2 BASED ON THE VALUE OF THE SERVICE TO THE CUSTOMER AND THE
3 MARKET CONDITIONS. DO YOU AGREE WITH THIS APPROACH TO
4 SETTING PRICES ABOVE TELRIC FOR UNBUNDLED NETWORK ELEMENTS
5 AND INTERCONNECTION?

6
7 A. No. Allowing BellSouth to charge for unbundled network elements and
8 interconnection would allow it to use its market power to deter entry, contrary to the
9 goals of the Telecommunications Act of 1996.

10 The value of a service to a customer depends in part on the substitutes that are
11 available in the marketplace. Where there are no substitutes, all other factors equal,
12 a service will have a higher value to a customer than if there are substitutes. In
13 economic terms, the fewer the substitutes, the more likely it is that the service will
14 face inelastic demand. Thus, Dr. Emmerson's proposal is just a proposal to allow
15 BellSouth to take a higher markup on unbundled network elements where it possesses
16 the greatest market power, and a lower one where it does not. This would deter entry
17 by putting an undue recovery of common costs on those elements entrants need the
18 most. This is bad for consumers.

19
20 Q. MR. MILNER SAYS THAT THE UNBUNDLED NETWORK ELEMENTS THAT
21 MCI HAS REQUESTED EITHER ARE NOT TECHNICALLY FEASIBLE TO
22 PROVIDE OR ARE ALREADY AVAILABLE UNDER EXISTING TARIFFS. HAS
23 HE CORRECTLY DEFINED "TECHNICALLY FEASIBLE?"

24
25 A. No. Mr. Milner, in his rebuttal testimony in Docket No. 960833-TP, which he

1 incorporates by reference in this Docket, adds a number of criteria to those put forth
2 by the Federal Communications Commission to define what is "technically feasible."
3 The effect of his additions is to allow BellSouth to use a claim that a requested
4 unbundled network element is not technically feasible to both subvert the clear intent
5 of the Telecommunications Act of 1996 (the Act) and to create a large barrier to entry.

6 BellSouth is required to provide access to unbundled network elements at "any
7 technically feasible point" under Section 251(c)(3) of the Act. The FCC defined
8 technical feasibility, and did not adopt the approach that Mr. Milner takes. Mr.
9 Milner, in discussing each of the network elements that has been requested that he
10 claims BellSouth cannot technically provide, argues that it cannot do so today with no
11 change to its network. This may be true, but is irrelevant. The BellSouth network
12 was not built with the idea of providing unbundled network elements to competitors.

13 As the FCC noted:

14 [U]se of the term "feasible" implies that interconnecting or providing
15 access to a LEC network element may be feasible at a particular point
16 even if such interconnection or access requires a novel use of, or some
17 modification to, incumbent LEC equipment. This interpretation is
18 consistent with the fact that incumbent LEC networks were not
19 designed to accommodate third-party interconnection or use of network
20 elements at all or even most points within the network. If incumbent
21 LECs were not required, at least to some extent, to adapt their
22 facilities to interconnection or use by other carriers, the purposes of
23 sections 251(c)(2) and 251(c)(3) would often be frustrated. For
24 example, Congress intended to obligate the incumbent to accommodate
25 the new entrant's network architecture by requiring the incumbent to

1 provide interconnection "for the facilities and equipment" of the new
2 entrant. Consistent with that intent, the incumbent must accept the
3 novel use of, and modification to, its network facilities to accommodate
4 the interconnector or to provide access to unbundled elements.
5 (Paragraph 202)

6 Mr. Milner's refusal to provide Loop Distribution Media and Loop
7 Concentrator/Multiplexer based on a claim of technical infeasibility relies mainly on
8 the fact that today BellSouth has no automated ordering and inventory systems for
9 these elements and because providing access to these unbundled network elements
10 might prevent BellSouth from converting to a different loop technology in the future.
11 The first the FCC explicitly rejected as part of technical infeasibility. The second is
12 a near-textbook illustration of the desire of BellSouth to try almost any argument to
13 avoid providing technically feasible unbundled network elements.

14 Although the FCC declined to order subloop element unbundling, leaving that
15 question for the states to decide, it did note:

16 The record presents evidence primarily of logistical, rather than
17 technical, impediments to subloop unbundling. Several LECs and
18 USTA, for example, assert that incumbent LECs would need to create
19 databases for identifying, provisioning, and billing for subloop
20 elements. Further, incumbent LECs argue that there is insufficient
21 space at certain possible subloop interconnection points. We note that
22 these concerns do not represent "technical" considerations under our
23 interpretation of the term "technically feasible." (Paragraph 390,
24 footnotes omitted)

25 Thus, the FCC explicitly ruled out claiming lack of ordering and tracking systems as

1 a component of technical feasibility. Yet that is the first "minimum" criterion Mr.
2 Milner would have taken into account in determining technical feasibility.

3 Mr. Milner's arguments against providing these unbundled network elements
4 because doing so might in the future hinder a change of technology by BellSouth is
5 clearly designed to avoid providing unbundled network elements in order to delay or
6 impede entry. As the FCC noted:

7 As discussed above at sections II.A, II.B and V.B, we believe that
8 incumbent LECs have little incentive to facilitate the ability of new
9 entrants, including small entities, to compete against them and, thus,
10 have little incentive to provision unbundled elements in a manner that
11 would provide efficient competitors with a meaningful opportunity to
12 compete. We are also cognizant of the fact that incumbent LECs have
13 the incentive and the ability to engage in many kinds of discrimination.
14 For example, incumbent LECs could potentially delay providing access
15 to unbundled network elements, or they could provide them to new
16 entrants at a degraded level of quality. (Paragraph 307)

17 Neither of Mr. Milner's additions to the notion of technical feasibility as spelled out
18 in the FCC's Order should be accepted by the Commission. To do so would be to
19 allow BellSouth to create a very large barrier to entry.

20

21 Q. MR. MILNER ALSO SAID THAT BELLSOUTH COULD NOT PROVIDE
22 UNBUNDLED LOOPS WHERE BELLSOUTH USES INTEGRATED DIGITAL
23 LOOP CARRIER SYSTEMS. DID THE FCC ORDER UNBUNDLING IN THESE
24 CIRCUMSTANCES?

25

1 A. Yes. As the FCC said:

2 We further conclude that incumbent LECs must provide competitors
3 with access to unbundled loops regardless of whether the incumbent
4 LEC uses integrated digital loop carrier technology, or similar remote
5 concentration devices, for the particular loop sought by the competitor.
6 IDLC technology allows a carrier to aggregate and multiplex loop
7 traffic at a remote concentration point and to deliver that multiplexed
8 traffic directly into the switch without first demultiplexing the
9 individual loops. If we did not require incumbent LECs to unbundle
10 IDLC-delivered loops, end users served by such technologies would
11 not have the same choice of competing providers as end users served
12 by other loop types. Further, such an exception would encourage
13 incumbent LECs to "hide" loops from competitors through the use of
14 IDLC technology. (Paragraph 383)

15

16 Mr. Milner says that providing such unbundled loops is not technically feasible.

17 He claims that to unbundle such loops would have costs.

18 The FCC has stated that the methods of unbundling such loops that Mr. Milner
19 claims are not technically feasible are, in fact, technically feasible. Moreover, the
20 FCC explicitly rejected an argument that because an unbundling request would impose
21 costs, it should be considered to be technically infeasible. The Commission should
22 reject Mr. Milner's claim and require BellSouth to provide unbundled loops even when
23 they are provisioned using integrated digital loop carrier systems.

24

25 Q. FOR TWO OF THE REQUESTED UNBUNDLED NETWORK ELEMENTS, MR.

1 MILNER ALSO CLAIMS THAT BELLSOUTH ALREADY PROVIDES THEM
2 UNDER A DIFFERENT TARIFF SO THERE IS NO NEED FOR THEM TO BE
3 PROVIDED AS UNBUNDLED NETWORK ELEMENTS. IS THIS CONSISTENT
4 WITH THE FCC'S ORDER?

5
6 A. No. Entrants are entitled to have unbundled network elements priced to recover the
7 TELRIC of that element plus a reasonable share of the common costs of a
8 wholesale-only firm, as discussed above. Entrants are also allowed to use those
9 elements in any manner they desire to provide local exchange or exchange access
10 services. If the existing tariffed rates are above the FCC's cost standard, or if there
11 are any restrictions on how the services from the other tariff can be used, these tariffed
12 services are not a substitute for the right to have a facility provided as an unbundled
13 network element.

14
15 Q. MR. MILNER ALSO CLAIMS THAT IT IS NOT FEASIBLE TO PROVIDE
16 CUSTOMIZED ROUTING AS PART OF UNBUNDLED LOCAL SWITCHING.
17 DOES THIS COMPORT WITH THE ACT AND THE FCC'S ORDER?

18
19 A. No. Mr. Milner claims that there is not sufficient Line Class Code capacity on all of
20 BellSouth's switches to accommodate all potential entrants, so BellSouth should not be
21 required to provide it to any entrant. The FCC has included customized routing as
22 part of the unbundled switching element, noting only that it may not be feasible on
23 1AESS switches. The problem with Mr. Milner's position is that this violates the
24 requirement for nondiscrimination and the statutory requirement for dialing parity. It
25 also creates a barrier to entry.

1 The customized routing issue involves the ability to route operator, directory
2 assistance, 411, and 611 calls to either BellSouth's operator and repair services or to
3 an entrant's. If an entrant already provides its own operator services, for example, it
4 will want to package those with use of the unbundled local switching element when
5 providing services to its local exchange customers. If it cannot have those calls routed
6 to its own operators, it is forced to choose between having its customers dial many
7 more digits to be able to get to those same functions, or to use the operator services
8 of BellSouth. Both of these options are bad, the first because the lack of dialing parity
9 is itself a barrier to entry, and the second because it is more costly for the entrant.

10 Mr. Milner's solution is to keep all the Line Class Codes for BellSouth's use,
11 which discriminates in favor of BellSouth. This is wrong. Mr. Milner's approach also
12 is another example of his refusal to consider that changes may have to be made to the
13 existing network in order to accommodate entrants. Bell Atlantic-Pennsylvania has
14 reached an agreement with AT&T to provide customized routing using AIN starting
15 in April and completely by the end of June, 1997. If another incumbent local
16 exchange provider can provide this capability, then it is technically feasible for
17 BellSouth to do so also, at least within the same time frame as agreed to by Bell
18 Atlantic-Pennsylvania.

19
20 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

21
22 A. Yes.

1 Q (By Mr. Melson) Dr. Cornell, could you give a
2 brief summary of your direct and rebuttal testimony?

3 A Yes.

4 Q My direct testimony lays out six principles
5 that are in the FCC's order in implementing -- I'm
6 sorry, I've forgotten the docket number implementing, or
7 attempting to implement, Section 252. And to me they're
8 very important principles because they're ones I believe
9 quite strongly in, that the testimony goes on to suggest
10 should be applied in determining the outcome of
11 arbitrations.

12 The six principles are that: First, the
13 incumbents should share with entrants their economies of
14 density, connectivity and scale. This is important
15 because it will give you efficient investment by
16 alternative carriers, where that investment is
17 efficient, and will give you shared use of the
18 incumbent's network where that's the most efficient
19 outcome.

20 Second is strict non-discrimination between
21 incumbent and entrants, both in pricing and in quality,
22 not just among entrants, in terms of prices and quality
23 of unbundled network elements in interconnection. And
24 again, this is important, incredibly important, if you
25 are going to have a competitive market. If there's

1 discrimination between entrants, entry will be less,
2 will be less efficient, and you'll have less benefits of
3 competition for consumers in Florida.

4 The third principle is that the decisions that
5 you make as a commission should not handicap any
6 particular technology or architecture. Again, I want to
7 stress, this may be the most important of all, that and
8 the non-discrimination requirement, because the biggest
9 benefits to consumers will come from dynamic
10 competition, as new technologies and different
11 architectures compete against what the incumbents have.
12 That is, and has been in other industries, the sources
13 of the largest gains to consumers.

14 The fourth is that economic costs, not
15 embedded costs, should be used for pricing. This,
16 again, goes to the question of efficiency. Anything
17 above economic cost simply keeps making the floor price
18 that the market can ever achieve higher than would be
19 the case if you used economic costs.

20 Fifth, rates should reflect how costs are
21 incurred. This is perhaps a more technical aspect of
22 achieving efficiency, but it is one that is important.

23 And sixth, you do have to keep in mind that
24 the incumbent does not really have any incentive facing
25 it to arrive at agreements that are truly

1 pro-competition. It may have -- it does have incentives
2 to arrive at agreements. But just as a monopoly is
3 still a market, all agreements do not promote
4 competition.

5 And my direct goes on to say these should be
6 applied to eight issues in the list of items at the top
7 of Page 12. It applies them to: The need for
8 additional unbundled elements; the need to prevent
9 discriminatory non-price terms and conditions for
10 acquiring unbundled network elements; the need to
11 identify the costs and cost structures of unbundled
12 elements and efficient unbundling; the recurring rates
13 to be charged for unbundled elements; the non-recurring
14 rates to be charged for unbundled network elements,
15 including, in particular, the costs of unbundling that
16 the incumbent local exchange carriers should be allowed
17 to charge entrants; the costs and cost structure of
18 transport and termination of local exchange traffic; the
19 compensation rates for transport and termination; and
20 finally, the desirability of initiating state access
21 reform as soon as possible, now preferably.

22 My rebuttal testimony, basically, as it is
23 rebuttal, is opposing a series of arguments that have
24 been made by -- in testimony on behalf of BellSouth, and
25 probably the foremost important are I oppose just

1 leaving you with the impression that an incumbent will
2 have higher relative shared costs than an entrant.
3 There's no ground for that statement. I oppose the
4 notion of setting prices for network elements in
5 interconnection where termination and transport of
6 traffic on the basis of prices that reflect the revenue
7 requirement rather than economic cost. I would urge you
8 very strongly to recommend allowing BellSouth to mark up
9 the prices of unbundled network elements, or transport
10 and termination, to recover whatever they're allowed to
11 recover in terms of shared or common costs. Based on
12 demand conditions for those elements, that's a sure fire
13 guarantee of a way to create a barrier to entry.

14 And finally, I would strongly urge you to
15 reject the notion that technical feasibility includes
16 consideration of costs; that if something is technically
17 feasible to offer, it should be offered. Then the
18 entrants can decide, or it should be at least
19 presumptively offered and entrants can then decide if
20 the actual unbundling takes place based on the efficient
21 cost of actually unbundling those elements.

22 That concludes my brief summary. I apologize,
23 I forgot to begin by saying good afternoon, ladies and
24 gentlemen.

25 MR. MELSON: Chairman Clark, I've got the same

1 request that Mr. Hatch had yesterday. There was a
2 late-filed -- or a TELRIC study from BellSouth that was
3 submitted last Friday, and the prehearing officer had
4 indicated that we would be given a slight degree of
5 latitude to respond to that through our existing
6 witnesses. I've got a series of about three or four
7 short questions for Dr. Cornell on that topic.

8 CHAIRMAN CLARK: Go ahead, Mr. Melson.

9 Q (By Mr. Melson) Dr. Cornell, have you
10 reviewed the TELRIC study submitted by BellSouth that
11 covers, I believe, 2- and 4-wire analog loops and 2-wire
12 ISDN loops?

13 A Yes, although I a little object to calling it
14 a TELRIC study. It's an alleged TELRIC study.

15 Q In your opinion as an economist, did BellSouth
16 appropriately implement TELRIC costing principles in the
17 preparation of that study?

18 A No.

19 Q And could you tell me what the major reasons
20 for that opinion are?

21 A My major reasons for that opinion are that it
22 represented, if you'll pardon my putting it, at least a
23 significant size step backwards from forward-looking
24 economic costing principles. They had a total service
25 long run incremental service cost study for unbundled

1 loops. They took that study, they made some corrections
2 to it, as they put it, in a TSLRIC mode, and then they
3 proceeded to bring in a whole -- maybe a whole is the
4 wrong way to put it, but to bring in significant changes
5 that make it much more like an embedded cost study than
6 a forward-looking economic cost study.

7 There are probably two ways to say this that
8 are readily understandable. An incremental cost study
9 is something that is described usually as bottoms up.
10 And you can see that in how the investment is done in
11 both the alleged TELRIC and the TSLRIC study. Namely,
12 they figured out what is the service they're going to
13 provide, what facilities would they have to install if
14 they were installing it today, to provide it, what do
15 those facilities cost; that's bottoms up. But when they
16 came to the expenses, they looked at their ARMIS-type
17 data, their historic books of account, and did a tops
18 down overlay. That's embedded. That's not
19 forward-looking.

20 The second thing that they did is that they
21 said, we're going to use actual fill factors, which
22 represents an embedded reflection of all that investment
23 and its utilization out there in the network, whether
24 that investment is efficient, whether it's there for
25 voice grade, as opposed to, say, moving in video dial

1 tone, or any other feature or factor, they threw it all
2 in by using actual fill rates. And the result is you
3 get something that's much more like -- it's really
4 neither fish nor fowl. It's much more embedded-like
5 than a genuine incremental cost study of any kind should
6 be. And it has the effect of sort of trying to come
7 closer to something that safeguards their revenue
8 requirement. And that's an incredibly embedded
9 regulatory kind of concept of costing, rather than
10 forward-looking, long run incremental economic cost type
11 costing.

12 And I really believe that's a misapplication
13 of what the FCC called TELRIC. But even more
14 fundamentally, it's a misapplication of forward-looking,
15 long run incremental costing principles.

16 MR. MELSON: Thank you, Dr. Cornell.

17 Dr. Cornell is available for cross.

18 CHAIRMAN CLARK: Ms. Dunson?

19 MS. DUNSON: No questions.

20 MR. SELF: No questions.

21 CHAIRMAN CLARK: Mr. Lackey?

22 MR. LACKEY: Yes, ma'am. Against everybody
23 else's better judgment, I've got a few questions.

24 CROSS EXAMINATION

25 BY MR. LACKEY:

1 Q Dr. Cornell, if I understand your testimony
2 correctly, from Page 3, a group of seven economists got
3 together and prepared a white paper; is that correct?

4 A That's correct.

5 Q And those economists are listed at the top of
6 Page 3. I recognize Dr. Ankum as being a fellow who
7 testifies for MCI; is that correct? He does testify for
8 MCI?

9 A I believe he does testify for MCI and some
10 other clients as well.

11 Q And I know I recognize Sarah Goodfriend, and
12 she testified for MCI just last week in North Carolina;
13 is that correct?

14 A That's correct.

15 Q And I recognize Terry Murray. She
16 testifies -- last time I saw her was for MCI in South
17 Carolina. Does she testify for MCI?

18 A Yes, and she testifies for a number of other
19 clients as well.

20 Q I don't recognize Richard Cabe. Who is
21 Richard Cabe?

22 A Richard Cabe is a -- and I don't know whether
23 it's assistant or associate professor of economics at
24 New Mexico State, has been involved in their
25 telecommunications program at New Mexico for several

1 years now, used to be a member of the staff of
2 Washington State's Public -- the Washington Utilities
3 and Transportation Commission is its formal title -- has
4 a Ph.D., I believe, from the University of Wyoming, but
5 I could be wrong about that one.

6 Q Does he testify on behalf of MCI; do you know?

7 A He is testifying on behalf of MCI right now.
8 He has testified on behalf of other clients. When he
9 was previously in consulting he has testified on behalf
10 of the Washington staff while he was on the Washington
11 staff. He's also not been doing much consulting, or
12 much domestic, let me put it that way, U.S. consulting,
13 to the best of my knowledge, until we got into this
14 incredible round of arbitrations.

15 Q How about Daniel, A. Daniel Kelly, I don't
16 recognize that name either. Who is he?

17 A Dan Kelly is an economist with Hatfield &
18 Associates. He's done a fair amount of testifying on
19 behalf of cable companies. I think in the past he's
20 been -- and I know consulting, I think on their behalf.
21 He was at the FCC when I was. In fact he worked for me
22 when I was chief of the Office of Plans and Policy, and
23 subsequently went to work, I believe, in the chairman's
24 office, has worked at MCI and has worked, as I say,
25 probably, oh, eight years or more at Hatfield. I can't

1 tell you all the details of his practice.

2 Q So he's currently with Hatfield & Associates?

3 A Yes.

4 Q Now, Steven R. Brenner, is that the same
5 Brenner that was with Cornell, Pelcovits & Brenner
6 Economists? I'm sorry if I mispronounce that name.

7 A No, you did pretty well. Yes, that's the same
8 Brenner.

9 Q Who is he with?

10 A He's with Charles River & Associates.

11 Q Is he testifying for MCI?

12 A I believe he is now. He hasn't been,
13 essentially, since Cornell, Pelcovits & Brenner was
14 disbanded. He --

15 Q I'm sorry?

16 A I'm sorry. My belief is he's been working on
17 antitrust matters with Charles River & Associates.

18 Q Now if I understand correctly, the seven of
19 you produced a jointly authorized white paper. That's
20 what the testimony says; is that correct?

21 A That's correct.

22 Q And you converted that into testimony?

23 A That's correct.

24 Q Now, I may be mistaken, but I don't believe
25 so. I've looked at Dr. Goodfriend's testimony that was

1 given last week in North Carolina, and I believe that
2 from Page 3, Line 9 of your testimony, through the end
3 of your direct testimony, it appears to be word for word
4 the same; is that correct?

5 A I would expect so.

6 Q So can we agree that we have proven once and
7 for all that economists are fungible?

8 A Mr. Lackey, that's not a fair question to ask
9 of me.

10 Q But according to the prehearing order, I'm
11 entitled to a yes-or-no answer.

12 A I mean, I have always felt that I was not
13 indispensable, so I suppose my answer would have to be
14 yes. Other people would probably object to my saying
15 that.

16 Q On Page 14 of your testimony you make
17 reference to an additional network element and discuss
18 that it's in the network implementation white paper
19 that's on Page 14, Line 9 and 10. Was there supposed to
20 be a white paper attached to your testimony, or a
21 network implementation white paper attached to your
22 testimony?

23 A I'm sorry, I probably should have said the
24 network implementation testimony. It was presented by
25 Mr. Caplan this morning -- this morning and afternoon.

1 Q Thank you.

2 A It's the same subelement or loop distribution,
3 unbundled distribution, that he had the photograph of
4 how it was already being provided, has been for years,
5 in Iowa.

6 Q On Page 25 of your testimony, you talk about
7 the Hatfield Model. I understand, obviously -- well,
8 no, maybe I don't understand. Do you hold yourself out
9 as an expert on the Hatfield Model?

10 A I don't hold myself out as having the level of
11 knowledge about it that Mr. Wood does. I have had it
12 explained to me. I've seen runs of it. I've had --
13 been present as various people talk about the inputs,
14 but I couldn't tell you how it computes anything, or I
15 couldn't recite to you the input page, although I have
16 seen it.

17 Q Well, in that case let me move on to something
18 else. Did anyone discuss with you a little hypothetical
19 that I gave Dr. Kaserman yesterday regarding a 5,000
20 foot copper loop?

21 A No.

22 Q You weren't here yesterday, were you?

23 A No, I was not here in the hearing room.

24 Q And weren't in a place where you could hear
25 what was going on here?

1 A No, I have not heard this.

2 Q Well, let me lay out the hypothetical then.

3 It's a very brief one. The forward-looking incremental
4 cost model is supposed to determine the incremental cost
5 that an efficient firm, using the most modern and
6 least-cost technology would incur in constructing a
7 network element; is that correct?

8 A That's my understanding.

9 Q Okay. Now, what I proposed yesterday was a
10 hypothetical that went something like this -- and I may
11 not have it exactly right, but bear with me for a
12 minute. I'm going to pick on Ms. White again. I
13 assumed that she had a new house, she wanted a telephone
14 line, there was no telephone line, she lived 5,000 feet
15 from the central office, and that the cost of copper
16 installed was \$3 a foot, so that it would cost \$15,000
17 to build the loop to it. Does all of that sound
18 reasonably plausible to you?

19 A No. Here's my problem. You are treating this
20 as a single loop as opposed to looking at a total
21 element kind of approach. If you're telling me that
22 this is the part of a feeder cable and she's in a
23 certain density zone or density of dwellings, I assume
24 this is a residential loop, or a business if it's an
25 urban -- or sorry, if it's a business loop. If you want

1 me to take as your hypothetical that that would be the
2 cost of a circuit out of a cable that is shared with
3 many other participants, so to speak, I can do that.

4 But --

5 Q No.

6 A But to talk about building a single loop all
7 the way from the central office is not the way an
8 efficient firm today would build.

9 Q Well, I don't want any of those other
10 assumptions, so maybe we can't talk about this. Are you
11 taking the position, then, that there's no circumstance
12 under which a person might be located 5,000 feet from a
13 central office and that the most direct and efficient
14 way to get a telephone line to them would be to run a
15 distribution cable from the central office to their
16 house, or by their house?

17 A Not based on any conversation I've had with an
18 engineer who works either for a local exchange company
19 or an entrant. You would have to make a new hole in the
20 wall of the central office, if you weren't going to go
21 in and out with the normal feeder route that comes out.
22 You would be doing something in an incredibly expensive
23 way to do a single pair all the way back to the central
24 office using no shared plant and equipment.

25 Q Well, that's fine.

1 CHAIRMAN CLARK: Mr. Lackey, let me ask you a
2 question. It seems to me that when you went through
3 this yesterday, the whole point of it was a difference
4 in cost today and two weeks from today. Can't we do
5 that and just not deal with whether or not we agree this
6 is the efficient way to do it? Let's assume that the
7 company is doing it the most efficient way; that today
8 it's one cost and two weeks later it's the next cost.
9 Isn't that the point you were trying to make?

10 MR. LACKEY: Yes, but I'm afraid to -- I'll
11 never get to that point if I get into her assumptions,
12 Madam Chairman. Let me ask her another question and see
13 if we can get it a different way.

14 CHAIRMAN CLARK: I just don't want to spend a
15 lot of time debating --

16 MR. LACKEY: If she won't accept my
17 assumptions, I'm quitting now. So it wasn't going
18 anywhere. I was getting ready to stop.

19 CHAIRMAN CLARK: I'm sorry I said anything.

20 MR. LACKEY: But you've given me an idea now.
21 I really was going to quit, but you've given me an idea.

22 COMMISSIONER GARCIA: That will teach you,
23 Madam Chairman.

24 CHAIRMAN CLARK: Slit my wrists.

25 Q (By Mr. Lackey) Can you assume with me that

1 if I told you that the most efficient, least-cost way of
2 getting a telephone -- getting service to Ms. White's
3 house from the central office that serves her, to her
4 location 5,000 feet away, costs \$15,000 today, could you
5 accept that without going into a bunch of assumptions?

6 A Yes. This is a hypothetical. Yes, I'll
7 accept that.

8 MR. LACKEY: Thank you, Madam Chairman.

9 Q (By Mr. Lackey) Now, if the forward-looking
10 incremental cost of that loop was \$15,000, and AT&T or
11 MCI came to BellSouth and wanted to purchase that
12 unbundled element, you would expect them to pay \$15,000,
13 or the amortized equivalent of it for that loop, using
14 your forward-looking, incremental cost analysis,
15 correct?

16 A That's an investment cost. I assume they
17 would pay a monthly rate derived from that with some
18 addition for forward-looking efficient overhead -- well,
19 common costs, shared costs.

20 Q Okay. Now let's assume that instead of MCI
21 coming and buying that today, that BellSouth built
22 facilities and delivered dial tone to her, and it cost
23 \$15,000. And six months from now Ms. White decided to
24 change to MCI, and at that time, because of the change
25 in the price of copper, the cost of building that loop

1 would have dropped to \$10,000; if it were to be built
2 again it would only cost 10,000. Under your approach,
3 your theory of pricing here, would MCI be expected to
4 pay \$10,000 for that loop?

5 A Under the theory of pricing, if that was when
6 MCI came into the market, and it was the fact that the
7 cost of copper had fallen, and the long run projection
8 was for it to stay fallen, if I can put it in that
9 ungrammatical way, yes, just as it would be in a
10 competitive market, if that happened. If you enter and
11 you buy when prices are high, and prices then deflate,
12 competitive firms all over the country have to cope with
13 that deflation.

14 Q But in a competitive market, BellSouth
15 wouldn't have been required as the carrier of last
16 resort to provide telephone service to Ms. White, would
17 it?

18 A I don't know, as you've now thrown something
19 that wasn't in your hypothetical. 5,000 feet from the
20 central office, I sincerely doubt that any
21 carrier-of-last-resort thoughts would have entered your
22 head. My house, you might have lots of questions about
23 it, because I live 20 miles from the central office.
24 But 5,000 feet, I doubt that you would have any problem
25 with wanting to serve Ms. White.

1 Q But BellSouth, in that circumstance, would
2 have had an obligation as a carrier of last resort to
3 provide that facility, even though it cost \$15,000;
4 wouldn't it?

5 A I have no idea what the laws are in the state
6 of Florida about carrier of last resort, Mr. Lackey. I
7 don't think this is a relevant topic until you tell me
8 that but for that you would not have provided service to
9 Ms. White.

10 Q And under your pricing theory, six months
11 later, if the forward-looking incremental cost of that
12 loop had dropped to \$10,000, that's what you would
13 expect your client to pay, correct?

14 A Again, it would be a monthly rate based on the
15 10,000, plus some overhead or shared and common costs.
16 If you read my testimony, it talks about the FCC's
17 concept that in shorthand I refer to, in my
18 conversations at least, as TELRIC plus, not just plain
19 the \$10,000.

20 MR. LACKEY: That's all I have, Madam
21 Chairman. Thank you for your assistance.

22 MS. BARONE: And Staff has no questions.

23 CHAIRMAN CLARK: Commissioners?

24 Dr. Cornell, let me ask you a follow-up
25 question. Let's assume that the company had to make the

1 investment. If it were left up to them, they would not
2 have. And to me that's the concept of universal
3 service.

4 WITNESS CORNELL: That is correct. And there
5 are two things that I want to say. The first is,
6 universal service, it really isn't at 5,000 feet from
7 the central office, but that's okay.

8 CHAIRMAN CLARK: I understand that, but I
9 think that's just his example.

10 WITNESS CORNELL: The first is that, in the
11 universal service context, we really should be ensuring
12 that we implement the part of the new act that calls for
13 explicit, you know, targeted -- when I say targeted, I'm
14 not talking income targeted, but that the universal
15 service fund genuinely ensures that the forward-looking
16 costs or the efficient costs of serving customers that
17 carriers otherwise might not want to build that plant to
18 are covered through that universal service fund.

19 At that point, I'm back to where I was
20 before. Every time you look at the reality of the
21 business, as opposed to the way we artificially
22 segregate and categorize things, carriers want to serve
23 customers because that gives them the ability to start
24 serving them not just with basic exchange service, but
25 with various other services. They make money at it.

1 These are not eleemosynary institutions, and neither is
2 BellSouth. It's making profits for it's stockholders.

3 I do agree there needs to be a universal
4 service fund. But after that, I am very dubious that
5 there are these problems of carrier of last resort that
6 are any different than ordinary businesses face in
7 taking risks that I will invest today, and tomorrow the
8 price of copper could fall. It also could rise, in
9 which case I make a huge windfall. Firms take those
10 chances all the time. This is nothing new. It's just
11 that the local exchange companies have lived in a world
12 that is different from those that apply to competitive
13 market forces. But what's going to happen to them is
14 going to be what happens to all firms. MCI takes that
15 chance every time it puts fiber in the ground.

16 CHAIRMAN CLARK: Thank you. Redirect?

17 MR. MELSON: Just one question.

18 REDIRECT EXAMINATION

19 BY MR. MELSON:

20 Q And Dr. Cornell, this may get more to
21 Mr. Lackey's particular example than to any great
22 underlying principle, but do you know whether the
23 Florida rules for local telephone companies allow them,
24 in certain circumstances, to charge contributions in aid
25 of construction when extension for particular facilities

1 would otherwise be uneconomic?

2 A I would imagine they do, because most states
3 do.

4 MR. MELSON: No further questions. And I
5 would move Exhibit 39, and ask that Dr. Cornell be
6 excused.

7 CHAIRMAN CLARK: Exhibit 39 will be admitted
8 in the record, and Dr. Cornell, you are excused.

9 WITNESS CORNELL: Thank you.

10 (Exhibit No. 39 received into evidence.)

11 (Witness Cornell excused.)

12 * * *

13 CHAIRMAN CLARK: Mr. Richardson?

14 WITNESS ROBERTSON: Robertson.

15 CHAIRMAN CLARK: Dr. Richardson?

16 WITNESS ROBERTSON: No, Richard Robertson.

17 MR. HORTON: Mr. Robertson.

18 CHAIRMAN CLARK: Thanks. It's getting late.

19 MR. HORTON: Madam Chairman, before we start,
20 ACSI filed our testimony with our position, and we
21 resubmitted the testimony at a later date in a different
22 format, just simply to comply with Commission rules. So
23 you should be looking at testimony that's indicated
24 reformatted September 6th, 1996.

25 CHAIRMAN CLARK: I do have that testimony.

1 MR. HORTON: If anybody does not have that, I
2 have extra copies. And the only difference between that
3 and the original is the margins.

4 RICHARD ROBERTSON
5 was called as a witness on behalf of ACSI, and having
6 been duly sworn, testified as follows:

7 DIRECT EXAMINATION

8 BY MR. HORTON:

9 Q Would you state your name and address, please,
10 sir?

11 A Richard Robertson. And address, 131 National
12 Business Parkway, Suite 100, Annapolis Junction,
13 Maryland 20701.

14 Q And by whom are you employed and in what
15 capacity?

16 A American Communications Services,
17 Incorporated. I'm the executive vice president,
18 switched services.

19 Q Did you prepare and prefile in this docket
20 direct testimony consisting of 28 pages?

21 A I did.

22 Q And do you have any changes or corrections to
23 make to this testimony at this time?

24 A I do. On Page 4, Line 10, since the time this
25 was filed, I've testified before the Texas and Arkansas

1 Public Service Commissions, and on Page 5, Line 8, I
2 think we need to change the C there to B.

3 Q With those changes, if I were to ask you the
4 questions contained in your direct testimony, would your
5 answers be the same?

6 A They would.

7 MR. HORTON: Madam Chairman, I would request
8 that his direct testimony be inserted into the record as
9 though read.

10 CHAIRMAN CLARK: The direct testimony of
11 Mr. Robertson will be inserted into the record as though
12 read.

13 Q (By Mr. Horton) And Mr. Robertson, did you
14 have attached to your direct testimony one exhibit?

15 A I did.

16 Q That's been identified as RR-1. Do you have
17 any changes or corrections to make to that exhibit?

18 A I do not.

19 MR. HORTON: Madam Chairman, we would request
20 that that exhibit be marked No. 40.

21 CHAIRMAN CLARK: That's the number I have. It
22 will be marked as Exhibit 40.

23 (Exhibit No. 40 marked for identification.)

24

25

1 **I. BACKGROUND AND QUALIFICATIONS**

2

3 **Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS**
4 **ADDRESS.**

5 **A. My name is Richard Robertson. I am the Executive Vice**
6 **President/General Manager -Switched Services of American**
7 **Communications Services, Inc. ("ACSI"). My business address is 131**
8 **National Business Parkway, Suite 100, Annapolis Junction, Maryland**
9 **20701.**

10

11 **Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE AND**
12 **BACKGROUND.**

13 **A. I joined ACSI in April 1996 and serve as Executive Vice**
14 **President/General Manager - Switched Services. Prior to joining ACSI,**
15 **I worked for BellSouth for 16 years and, since from 1991 to 1996, I**
16 **directed marketing activities for its \$4.0 billion network interconnection**
17 **business. In that role, my responsibilities included negotiating**
18 **interconnection agreements with competitive local exchange carriers**
19 **("CLECs"). I was responsible for development and implementation of**
20 **BellSouth's advanced intelligent network (AIN) services for the**
21 **interconnection market and also formulated the company's plan for and**

1 entry into the customer premise equipment (CPE) market in the mid-
2 1980s, leading that unit to achieve over \$100 million in sales in its first
3 year of operation. In other assignments during these 28 years, my
4 experience included outside plant, manufacturing, finance, purchasing,
5 strategy development and R&D positions with Western Electric,
6 Bellcore, and the U.S. Army. I have a bachelor's degree in electrical
7 engineering from Virginia Tech and an MBA from the University of
8 Virginia.

9
10 Q. PLEASE BRIEFLY DESCRIBE THE OPERATIONS OF ACSI AND
11 ITS OPERATING SUBSIDIARIES.

12 A. ACSI is a competitive local exchange carrier focusing primarily on
13 markets in the South and Southwest. ACSI is a publicly-traded
14 Delaware corporation, traded on the NASDAQ Market under the symbol
15 "ACNS". ACSI, through its operating subsidiaries, has already
16 constructed and is successfully operating digital fiber optic networks and
17 offering dedicated services in several states. ACSI has eighteen

1 operational networks¹ and an additional six networks under
2 construction.² ACSI affiliates are currently certificated to provide local
3 exchange telecommunications services in Alabama, Georgia, Maryland,
4 Nevada, Tennessee and Texas, and dedicated telecommunications
5 services in Alabama, Arkansas, Georgia, Kentucky, Maryland, Nevada,
6 New Mexico, South Carolina, Tennessee and Texas. ACSI subsidiaries
7 have also applied for authority to provide switched and/or dedicated
8 local exchange telecommunications services³ in Arizona, Arkansas,
9 Colorado, Florida, Kansas, Louisiana, Mississippi, Missouri, Nevada,
10 New Mexico, Oklahoma, South Carolina, and Virginia.

11

12 Q. WILL ACSI INVEST SIGNIFICANTLY IN THIS STATE?

13 Yes.

14 ¹ ACSI's operational networks are located in the following cities:
15 Columbus, Georgia; Louisville and Lexington, Kentucky; Jackson, Mississippi;
16 Little Rock, Arkansas; Fort Worth, Irving and El Paso, Texas; Tucson,
17 Arizona; Greenville, Columbia, Spartanburg and Charleston, South Carolina;
18 Albuquerque, New Mexico; Birmingham, Mobile and Montgomery, Alabama;
19 and Las Vegas, Nevada.

20 ² In addition, ACSI expects the following networks to be operational by
21 October 1996: Baton Rouge, Louisiana; Amarillo and Corpus Christi, Texas;
22 Chattanooga, Tennessee; Colorado Springs, Colorado; and Central Maryland
23 (Washington-Baltimore Corridor).

24 ³In those states in which ACSI affiliates have not yet sought dedicated
25 private line services, those services have additionally been requested.

1 Q. CAN YOU PROVIDE AN ESTIMATE OF ACSI'S PROPOSED
2 INVESTMENT IN THIS STATE?

3 As a facilities-based carrier, ACSI will spend tens of millions of dollars
4 in implementing our business plan in-state. In addition, we will be
5 adding a significant number of employees in this state in order to begin
6 offering switched services.

7

8 Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE
9 PUBLIC UTILITY COMMISSION?

10 A. Yes. I testified before the Alabama PSC on April 10, 1996 in
11 connection with ACSI's application for switched services authority there.

12

13 II. PURPOSE OF TESTIMONY

14

15 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

16 A. The purpose of my testimony is to explain:

- 17 1) why unbundled loops are critical to the
18 development of local competition;
19 2) why this Commission must price local loops based
20 on Total Element Long Run Incremental Cost
21 ("TELRIC"), not only to comply with applicable

1 federal law, but also in order to maximize
2 economic efficiency and promote local
3 competition; and
4 3) how proposed pricing for BellSouth's simple
5 unbundled loops is: a) anticompetitive, in that it
6 will artificially drive up CLEC costs and could
7 eliminate the development of facilities-based
8 competition; and b) represents pricing for a
9 *service*, as opposed to an *unbundled element*, and
10 one which provides significantly more capability
11 than ACSI needs in a simple unbundled loop.

12

13 Q. AS A THRESHOLD MATTER, WHAT INCREMENTAL COST
14 STANDARD MUST THE COMMISSION APPLY?

15 A. As Dr. Kahn will discuss at greater length in his testimony, Total
16 Element Long Run Incremental Cost ("TELRIC") is the standard
17 adopted by the FCC in implementing the Telecommunications Act of
18 1996 ("1996 Act"). As noted in the FCC's August 1, 1996, news
19 release, TELRIC costs are the same as Total Service Long Run
20 Incremental Costs ("TSLRIC").

21

1 **III. BRIEF HISTORY OF NEGOTIATIONS WITH BELLSOUTH**

2

3 **Q. PLEASE BRIEFLY DESCRIBE YOUR NEGOTIATIONS WITH**
4 **BELLSOUTH.**

5 **A. ACSI's initial request for interconnection negotiations was received by**
6 **BellSouth on March 7, 1996. On July 25, 1996, ACSI signed an**
7 **interconnection agreement with BellSouth covering almost all of the key**
8 **interconnection issues.**

9

10 **Q. WHAT ISSUES BETWEEN ACSI AND BELLSOUTH HAVE BEEN**
11 **LEFT UNRESOLVED?**

12 **A. The critical issue of the pricing of unbundled loops. ACSI requested**
13 **incremental cost-based pricing of unbundled loops, relying upon publicly**
14 **available information gleaned from the Hatfield Study discussed in Dr.**
15 **Kahn's testimony. While the parties agreed that unbundled loops should**
16 **be made available, and on the general terms and conditions which should**
17 **apply to them, BellSouth would not agree to TELRIC-based pricing.**

18

19 **Q. PLEASE DESCRIBE THE UNBUNDLED LOOPS YOU REQUIRE**
20 **AT THIS TIME.**

1 A. The access line portion of local exchange service is comprised of two
2 key components: the *loop*, providing transmission between the customer
3 and the LEC central office, and to the *port*, the interface to the switch
4 which provides the capability to originate and terminate calls. ACSI is
5 requesting only the loop element at this time. Unbundled loops are
6 critical to ensuring that ACSI and other CLECs can serve a
7 geographically dispersed customer base. *Physically* unbundled loops are
8 worthless to ACSI and other CLECs if the *pricing* is not also unbundled,
9 and prices are set on an economically viable basis based on the direct
10 forward-looking costs of providing the loop.

11 Specifically, ACSI requests in this arbitration that the
12 Commission require BellSouth to make available at TELRIC-based
13 pricing (further discussed below and in Dr. Marvin Kahn's testimony) 2-
14 wire analog voice grade loops ("simple loops"), as well as the additional
15 classes of loops discussed below. These and other requested loops are
16 defined in further detail in ACSI's interconnection agreement with
17 BellSouth.⁴ ACSI specifically requested that unbundled loops be made
18 available at prices, including both recurring and nonrecurring charges,
19 based on TSLRIC cost. BellSouth responded by offering pricing at
20 levels set for special access which, as discussed below, ACSI considers

21 ⁴ *Interconnection Agreement Between ACSI and BellSouth*, Attachment C-2.

1 to be categorically unacceptable. Certainly, as the FCC's recent
2 decision on interconnection makes plain, such pricing is inconsistent
3 with the 1996 Act. Although ACSI was able to come to terms with
4 BellSouth, through good faith negotiations, on most interconnection
5 issues, it became clear that BellSouth's insistence on inflated special
6 access pricing for the loop element would require arbitration by the
7 Commission.

8

9 **IV. TELRIC-BASED UNBUNDLED LOOPS ARE CRITICAL TO THE**
10 **DEVELOPMENT OF LOCAL COMPETITION**

11

12 **Q. WHY ARE UNBUNDLED LOOPS PRICED AT TELRIC-BASED**
13 **RATES CRITICAL TO THE DEVELOPMENT OF LOCAL**
14 **COMPETITION?**

15 **A. The ubiquitous local network in place today is a national asset developed**
16 **over the course of a century by incumbent LECs ("ILECs") with**
17 **ratepayer dollars. This national asset was developed by ILECs with the**
18 **myriad benefits of their government-sanctioned monopoly franchises,**
19 **including access to rights-of-way, building access, a guaranteed revenue**
20 **stream, and, most fundamentally, protection from all competition. This**
21 **monopoly franchise system made sense at a time when technology**
22 **limited the number of participants in the local exchange marketplace.**

1 With the development of advanced switching technology, however, we
2 can now introduce competition -- the preferred American market
3 structure paradigm -- into the local exchange market. While CLECs are
4 rapidly building networks in dense, urban areas where it currently makes
5 economic sense to do so (just as the current incumbents initiated their
6 networks in urban areas, and eventually forfeited the less profitable
7 outlying areas to the independents), it may never make economic sense
8 to overbuild the entire ubiquitous ILEC network. Moreover, the
9 availability of unbundled loops where CLECs may eventually build is
10 critical to ensuring the CLECs' ability to compete immediately while
11 their networks are only partially completed.

12 Accordingly, the U.S. Congress and the FCC, in order to ensure
13 that the benefits of competition spread beyond large customers and
14 business centers, have mandated the unbundling of the "local loop,"
15 often referred to as the "last mile" from the LEC central office to the
16 customer premises. Even in urban areas, CLEC networks do not pass
17 by every building, and unbundled loops are therefore required to expand
18 CLECs' urban customer base, as well.

19
20 Q. DOES BELLSOUTH CURRENTLY HAVE A MONOPOLY OVER
21 THIS "LAST MILE" OF THE LOCAL NETWORK?

1 A. Yes. As further discussed in Dr. Kahn's testimony, the reason the U.S.
2 Congress and the FCC have required incremental cost-based pricing is
3 because the "local loop" is a monopoly bottleneck element. BellSouth
4 continues to have monopoly control over the "last mile" of the
5 telecommunications network. Facilities-based local connections between
6 most end-users and the BellSouth central offices will for some time to
7 come remain the exclusive province of BellSouth. This monopoly
8 results from the fact that this loop network consists mostly of
9 transmission facilities carrying small volumes of traffic, spread over
10 wide geographic areas. The "last mile" loop network, therefore, is an
11 essential bottleneck facility for any potential provider of competitive
12 local exchange service.

13

14 Q. WHY WILL IT BE IMPOSSIBLE FOR ANY COMPANY TO
15 REPLICATE THE LOCAL LOOP IN THE NEAR TERM?

16 A. As a threshold matter, the reason Congress and the FCC have mandated
17 TELRIC-based unbundled loops is because there is no alternative to the
18 ILEC local loop available *today*. Because Congress has determined that
19 local competition should be implemented now, the question of whether
20 the local loop can be duplicated five, ten, or twenty-five years from now
21 is not relevant. Nonetheless, the reason it is unlikely that the local loop

1 will be replicated even in the foreseeable future is that CLECs do not
2 share the incumbents' advantages. Not only is it currently infeasible,
3 but it is economically inefficient for CLECs to duplicate the ubiquitous
4 network built over the course of the entire century by incumbents. New
5 entrants would find it prohibitively expensive to recreate the ubiquitous
6 local loop. This is true whether new entrants use current technology or
7 alternative -- and as yet not widely deployed -- telephone technology
8 such as wireless loops or cable television plant. This is in part because
9 new entrants have difficulty obtaining public and private rights-of-way,
10 franchises, and building access on the same terms as incumbent LECs
11 enjoy. Accordingly, if the local loop is not unbundled at TELRIC-based
12 rates, customers will be denied the benefits of local competition.

13

14 Q. HOW WILL UNBUNDLED LOOPS PRICED AT TELRIC-BASED
15 RATES OPEN UP THIS FINAL BOTTLENECK?

16 A. Unbundled loops, if appropriately priced based on TELRIC in
17 accordance with federal statutory and regulatory guidelines, will provide
18 access to an essential bottleneck facility controlled by BellSouth.
19 TELRIC-based rates are not only federally mandated, but are the only
20 rates that will permit economically viable competition to spread to *all*

1 customers, regardless of whether they live in the city, the suburbs, or
2 the country.

3

4 Q. WHY IS IT IMPORTANT THAT NEW ENTRANTS BE PERMITTED
5 TO COMPETE BEYOND THE RANGE OF THEIR CURRENT
6 NETWORKS?

7 A. There are a number of reasons why competition should not remain
8 limited. First, the benefits of competition should be permitted to spread
9 to all customers throughout BellSouth operating territory. Second, ACSI
10 and other new entrants are facing a daunting competitor in BellSouth,
11 which already has dramatic competitive advantages: a nearly 100%
12 market share in switched services, a customer relationship with every
13 customer in their market, extensive marketing data on those customers, a
14 ubiquitous network, the benefits of its historical monopoly franchise, and
15 widespread name recognition.

16 The Commission is charged under the 1996 Act with ensuring
17 that BellSouth cannot perpetuate its overwhelming competitive advantage
18 by drastically limiting the potential serving area of CLECs to a discrete
19 geographic area. Part of ACSI's interest in unbundled loops stems from
20 the fact that many customers have multiple locations. In order for
21 CLECs to compete for these dispersed customers, unbundled loops will

1 be required to complement CLEC facilities. (Ironically, CLECs will be
2 forced to become "cream-skimmers" of more lucrative, lower service
3 cost areas and customers, a pejorative label often pinned on CLECs by
4 LECs, if unbundled loops are not available at economically viable
5 prices.) In short, if ACSI and other CLECs are not permitted to
6 compete *everywhere* through TELRIC-based loops, they may not, as a
7 practical matter, be able to compete *anywhere*.

8

9 **V. UNBUNDLED LOOPS MUST BE PRICED AT TELRIC-BASED**
10 **RATES UNDER THE TELECOMMUNICATIONS ACT OF 1996**

11

12 **Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE**
13 **UNBUNDLED ELEMENT PRICING REQUIREMENTS OF THE**
14 **TELECOMMUNICATIONS ACT OF 1996.**

15 **A. The Telecommunications Act of 1996 and the rules issued in Docket 96-**
16 **98 at the FCC greatly simplify this Commission's task in the arbitration**
17 **of pricing unbundled loops. Although I am not a lawyer, the plain**
18 **meaning of Section 252(d)(1) of the Telecommunications Act of 1996**
19 **requires that pricing for unbundled elements should be based on the cost,**
20 **without reference to rate-of-return regulation, of the unbundled network**
21 **element, must be nondiscriminatory, and *may* include a reasonable**
22 **profit. At its recent meeting on August 1, 1996, the FCC correctly**

1 interpreted this language to require that unbundled element rates *must*
2 not only be nondiscriminatory, but must also be based on Total Element
3 Long Run Incremental Cost ("TELRIC"). Dr. Kahn's testimony will go
4 into greater detail as to the appropriate economic analysis to arrive at the
5 appropriate rates for unbundled elements. Dr. Kahn will also explain
6 why the FCC's pricing standard is *not only the law of the land, but the*
7 only economically efficient means to determine the costs of unbundled
8 elements.

9
10 Q. AS A BUSINESSMAN, WHY DO YOU BELIEVE IT IS NECESSARY
11 FOR THE COMMISSION TO ENSURE THAT UNBUNDLED
12 ELEMENT PRICES ARE NOT EXCESSIVE?

13 A. In the simplest terms, if the Commission were to allow BellSouth to
14 charge non-TELRIC based rates for unbundled loops, new entrants such
15 as ACSI would not be able to compete. Local competition promises to
16 bring -- and in many ways already has succeeded in bringing -- lower
17 prices, higher quality service, and increased innovation statewide. If the
18 Commission overestimates the appropriate price of unbundled loops,
19 new facilities-based entrants will not succeed in entering the market, the
20 BellSouth monopoly will remain intact, and the benefits of competition
21 will not be realized.

1 VI. BELLSOUTH HAS INAPPROPRIATELY PRICED UNBUNDLED
2 LOOPS AS SPECIAL ACCESS SERVICES

3

4 Q. HOW HAS BELLSOUTH ESTABLISHED ITS PROPOSED
5 UNBUNDLED LOOP RATES?

6 A. Since a full explanation was never given by BellSouth, I cannot be
7 certain. However, it appears that BellSouth treated the unbundled loop
8 *facility* much the same as it would a special access *service*, and then
9 *incorrectly priced them in a similar fashion.*

10

11 Q. WHY DOES THE SPECIAL ACCESS PRICING OFFERED BY
12 BELLSOUTH SUGGEST A FUNDAMENTAL
13 MISUNDERSTANDING BY BELLSOUTH OF THE ENTIRE
14 CONCEPT OF UNBUNDLING?

15 A. Special access-like pricing is wrongheaded in several respects. Simple
16 unbundled loops are technically very different from the more
17 sophisticated special access service. Because of these technical
18 differences, ACSI has asked to buy, in effect, the chassis for a Chevy
19 Cavalier and BellSouth offered us a fully assembled Cadillac, at Cadillac
20 prices. In other words, ACSI asked for an *element* of a relatively simple
21 service. While BellSouth will provide this simple service element, it

1 quoted a price for a complete *service*, and a relatively sophisticated
2 service at that.

3

4 Q. HOW IS SPECIAL ACCESS SERVICE DIFFERENT THAN A
5 SIMPLE UNBUNDLED LOOP?

6 A. For the time being, I would like to focus on the difference between
7 special access *service* and a simple unbundled loop *element*. Special
8 access entails a number of sophisticated specifications that a simple
9 unbundled loop does not meet, and that ACSI does not require. Special
10 access is a digital service; the requested simple loops are analog.
11 Moreover, when ACSI requests simple unbundled copper loops, it does
12 not need several elements included in the digital special access service.
13 Instead, ACSI needs only the copper loop element, not the entire
14 service.

15

16 Q. WHAT DO YOU MEAN WHEN YOU SAY THAT BELL SOUTH
17 MISUNDERSTANDS THE ENTIRE CONCEPT OF UNBUNDLING?

18 A. ACSI, as a facilities-based provider of switched services, can provide
19 many basic network elements without BellSouth. Accordingly, when it
20 orders an "*unbundled*" element of the kind that BellSouth must provide
21 under the Telecommunications Act of 1996, it is ordering an *element* of

1 BellSouth's network—the simple unbundled loop—and not a BellSouth
2 *service*, such as the special access service offered by BellSouth. Exhibit
3 A to my testimony is a chart demonstrating several BellSouth bundled
4 network *services* with their associated basic network *elements*. This
5 chart demonstrates the distinction between a *service* and an *unbundled*
6 *element* and makes it clear that what BellSouth is offering, both
7 physically and from a pricing perspective, is a service and not an
8 unbundled element. The chart at Exhibit A lists on the left-hand side
9 BellSouth's services and under "Unbundled Basic Network Elements,"
10 the elements that constitute each service. BellSouth proposes to provide
11 ACSI with the Digital Private Line (56 Ub/s) bundled network service.
12 ACSI, however, only required the cooper loop element for most of its
13 applications, with few exceptions. BellSouth is attempting to add in loop
14 conditioning, A/D conversion and multiplexing elements that ACSI does
15 not need.

16
17 Q. CAN YOU PROVIDE FURTHER DETAIL AS TO HOW THE
18 SERVICE OFFERED BY BELLSOUTH DIFFERS FROM THE
19 UNBUNDLED ELEMENT REQUESTED BY ACSI?

20 A. Yes. BellSouth proposes to provide 56 kb/s digital special access as its
21 "unbundled loop." This is certainly not what BellSouth uses to reach its

1 typical business customers. This service is different from simple
2 unbundled loops in terms of capability, in terms of the provisioning
3 required, and, not surprisingly, in terms of price. BellSouth's pricing
4 suggests that it is offering to provision a whole new end-to-end special
5 access line; all that ACSI requests is, in its simplest terms, moving
6 BellSouth's existing copper loop facility from its current connection to
7 BellSouth's switch to its new connection to ACSI's node. Because this
8 is a key distinction, ACSI also offers the testimony of Mr. William Stipe
9 to expand on this distinction and to provide further background on key
10 technical points.

11

12 **VII. UNBUNDLED LOOPS PRICED AT BELLSOUTH'S PROPOSED**
13 **SPECIAL ACCESS RATES, OR ANY OTHER RATE NOT BASED**
14 **ON TELRIC, WOULD MAKE IT IMPOSSIBLE FOR ACSI TO**
15 **COMPETE**

16

17 **Q. AS A BUSINESSMAN WITH ALMOST THIRTY YEARS**
18 **EXPERIENCE IN THE INDUSTRY, IS IT CLEAR TO YOU THAT**
19 **BELLSOUTH'S SPECIAL ACCESS PRICING IS GROSSLY**
20 **INFLATED?**

21 **A. Yes. Although ACSI witness Dr. Kahn discusses the appropriate basis**
22 **for setting unbundled element rates, the excessiveness of BellSouth's**
23 **proposed rates can be quickly surmised from a comparison with existing**

1 BellSouth and other rates, including existing BellSouth tariffed rates for
2 comparable services or facilities, and unbundled loop rates from other
3 states. This is true of both the nonrecurring and recurring charges for
4 BellSouth special access rates.

5

6 Q. ARE OTHER PROXIES AVAILABLE TO SUGGEST THAT
7 BELLSOUTH'S RECURRING UNBUNDLED LOOP RATES ARE
8 ALSO OUT-OF-LINE?

9 A. Yes. In fact, unbundled loop rates are already in place in several states
10 which demonstrate that BellSouth's special access recurring charges are
11 substantially out-of-line with TELRIC-based rates. In Michigan, for
12 example, the Commission set an interim rate for a simple business loop
13 of \$8.00 based on an incremental cost study in that range.⁵ In
14 Connecticut, Southern New England Telephone was ordered to provide a
15 range of business unbundled loop rates beginning at \$10.18 for "metro"
16 business loops. (These and other rates are grouped in four geographic
17 zones, as they should be, as I will discuss at greater length below.)⁶ In

18 ⁵ *In re Application of City Signal*, Case No. U-10647, Opinion and Order at
19 35, 103 (Feb. 23, 1995).

20 ⁶ *Application of the Southern New England Telephone Company for*
21 *Approval to Offer Unbundled Loops, Ports and Associated Interconnection*
22 *Arrangements*, Docket No. 95-06-17, Decision at 84 (Dec. 20, 1995).

1 Illinois, Ameritech agreed with MFS to the following schedule of
 2 unbundled loop rates:⁷

3

4 **Monthly Rates**

Loop Type	Access Areas ⁸		
	A	B	C
Analog 2W	\$6.95	\$11.10	\$13.60
Analog 4W	\$13.90	\$22.20	\$27.20
ADSL 2W/HDSL 2W	\$6.95	\$11.10	\$13.60
ADSL 4W/HDSL 4W	\$13.90	\$22.20	\$27.20
BRI ISDN	\$6.95	\$11.10	\$13.60
PBX Ground Start Coin	\$6.95	\$11.60	\$14.10
Coin	\$6.95	\$11.60	\$14.10
Electronic Key Line	\$6.95	\$11.60	\$14.10

18

19 In California, Pacific Bell agreed to a basic business loop (including the
 20 EUCL) of \$12.50 for Zone 1 of three rate zones.⁹ These rates from

21 ⁷ *Interconnection Agreement Under Sections 251 and 252 of the*
 22 *Telecommunications Act of 1996 by and between Ameritech Information Industry*
 23 *Services and MFS Intelnet of Illinois (May 17, 1996).*

24 ⁸ "Access Area" is as defined in Ameritech's applicable tariffs for business
 25 and residential Exchange Line Services.

26 ⁹ *Co-Carrier Interconnection Agreement between Pacific Bell and MFS,*
 27 *filed by Advice Letter No. 17879, at 42 (Nov. 20, 1995).*

1 other states provide a series of proxies for recurring unbundled loop
2 charges that the Commission might consider while state-specific
3 TELRIC-based prices are being developed.

4

5 Q. IS IT POSSIBLE THAT THE TELRIC OF UNBUNDLED LOOPS
6 WILL PROVE TO BE LOWER THAN THE RATES ESTABLISHED
7 IN THESE OTHER STATES?

8 A. Yes. Under the Telecommunications Act of 1996 and the FCC's rules,
9 the Commission must adopt TELRIC-based rates. Once these rates are
10 adopted, they should be available to ACSI. These should be completed
11 swiftly because otherwise the market signals will continue to be distorted
12 and competition could be harmed.

13

14 Q. IS IT POSSIBLE THAT BELLSOUTH'S SPECIAL ACCESS PRICING
15 COULD LEAD TO A COST-PRICE SQUEEZE?

16 A. Yes. Although Dr. Kahn will be more prepared to describe this in
17 economic terms, what this means to me as a businessman is that I have
18 to buy a number of bottleneck services from BellSouth at the wholesale
19 level, such as number portability, intermediate transit, directory
20 services, unbundled loops, cross-connects, and in the future, other
21 unbundled elements. I then must turn around and compete with

1 BellSouth at the retail level. By pricing its wholesale services, and
2 particularly unbundled loops, at an exorbitant rate -- and one which
3 greatly exceeds the cost-based rate which BellSouth effectively charges
4 itself -- and then lowering its retail rates, BellSouth could easily
5 "squeeze" any profit margin that ACSI might have hoped to obtain. To
6 the same end, BellSouth has begun to request additional pricing
7 flexibility and off-tariff contracting authority for switched services in
8 certain states to permit it to lower its rates to end users, perhaps to fully
9 effect this squeeze.

10 While a price squeeze might involve a number of bottleneck
11 elements that CLECs must purchase from BellSouth, the unbundled loop
12 is a critical element in this potential price squeeze. To protect against
13 such a price squeeze, the Commission should adhere to the TELRIC-
14 based rates required by Congress and the FCC, and supported in this
15 proceeding by the testimony of Dr. Kahn.

16

17 Q. ARE THERE OTHER PROBLEMS WITH THE UNBUNDLED LOOP
18 PRICING PROPOSED BY BELLSOUTH?

19 A. Yes. BellSouth offered ACSI a single geographically-averaged rate for
20 all unbundled loops, whereas the cost of such facilities can vary greatly
21 depending upon population density and other factors. Generally

1 speaking, loop costs go down as the population density of a service area
2 increases. ACSI should only be charged the TELRIC cost to BellSouth
3 of providing loops in discrete service areas. This is the only way ACSI
4 can hope to have a reasonably level playing field with BellSouth in
5 competing for customers in the particular market areas in which we will
6 compete with each other.

7 Moreover, this is the only way the Commission can comply with
8 the FCC's requirement of TELRIC-based rates. Accordingly, the
9 Commission should order BellSouth to conduct TELRIC cost studies that
10 take into account density and distance. (As noted below, different
11 categories of loops will likewise reflect unique cost characteristics.
12 BellSouth TELRIC cost studies, in addition to including density and
13 distance sensitive rate categories, should provide separate rates for
14 different categories of loops.)

15

16 Q. IS THERE ANY PRECEDENT FOR THIS TYPE OF PRICING
17 STRUCTURE?

18 A. Yes. In fact, many of the rates I quoted above, including those of
19 Ameritech, SNET, and Pacific Bell, are broken out in three or four
20 density and/or distance-based categories. The FCC has also recognized
21 this phenomenon when it permitted ILECs to adopt zone density pricing

1 for special access services.¹⁰ The FCC has required TELRIC-based
2 pricing for unbundled elements. If the Commission fails to break
3 unbundled loop rates into density-based categories, rates will be
4 significantly below cost for loops in certain areas (most likely the
5 sparsely populated areas where BellSouth does not face competition),
6 and well above cost in other areas (namely, the urban centers where
7 competition will develop first).

8
9 **VIII. BELLSOUTH'S PROPOSED NONRECURRING CHARGES FOR**
10 **AN UNBUNDLED LOOP PRESENT AN INSURMOUNTABLE**
11 **BARRIER TO ENTRY.**

12
13 Q. DOES ACSI ALSO OBJECT TO BELLSOUTH'S PROPOSED
14 NONRECURRING CHARGES FOR UNBUNDLED LOOPS?

15 A. Absolutely. BellSouth has proposed a nonrecurring charge for simple
16 unbundled loops of approximately \$140, which again is similar to the
17 charge imposed for special access services. This rate is excessive in
18 light of the technical differences between provisioning special access
19 loops and unbundled loops as described by ACSI witness Mr. William
20 Stipe. But it is also excessive when compared, for example, to the

21 ¹⁰ *Expanded Interconnection with Local Telephone Company Facilities,*
22 *Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd 7369, 7454*
23 *(1992).*

1 nonrecurring charge for services, such as Centrex-type services or basic
2 business lines, currently tariffed by BellSouth. The basic business line
3 offered by BellSouth, for example, is by definition a combination of
4 unbundled loops and other unbundled elements, yet basic business line
5 nonrecurring charges are drastically lower (less than one third of the
6 BellSouth recommended charge in most states) than the nonrecurring
7 unbundled loop rates proposed by BellSouth. This makes BellSouth's
8 nonrecurring charge pricing proposal blatantly discriminatory.

9

10 Q. WOULD SUCH INFLATED NONRECURRING CHARGES FOR
11 INSTALLATION OF UNBUNDLED LOOPS IMPAIR ACSI'S
12 ABILITY TO COMPETE?

13 A. ACSI would have to pass such costs along to its customers. If
14 installation charges are unreasonably high -- as proposed by BellSouth --
15 then end users will not be inclined to switch from their existing
16 BellSouth service to ACSI's local services. Thus, such unreasonably
17 high up-front charges are inherently anti-competitive. It was for just this
18 reason that regulators set PIC change charges in the long distance
19 business in the low \$5 range years ago. The same considerations apply
20 here.

21

1 Q. HOW THEN SHOULD NONRECURRING CHARGES BE
2 ESTABLISHED?

3 A. The Commission should, at a minimum, set a ceiling on unbundled loop
4 nonrecurring charges at the current tariffed rate applicable to basic
5 business lines. This is not to say that the TELRIC-based price might not
6 turn out to be still lower, as discussed in Dr. Kahn's testimony.
7 BellSouth's inflated pricing proposal for nonrecurring costs is *nothing*
8 *more than a transparent attempt to increase costs for its CLEC*
9 *competitors in order to thwart the development of completion.*

10

11

12 **IX. ACSI REQUESTS INCREMENTAL COST-BASED UNBUNDLED**
13 **2- AND 4- WIRE ANALOG AND DIGITAL LOOPS**

14

15 Q. PLEASE DESCRIBE THE ADDITIONAL LOOPS ACSI REQUESTS,
16 IN ADDITION TO SIMPLE UNBUNDLED LOOPS.

17 A. While much of my testimony has focused on 2-wire analog loops, the
18 simple loops required for competition for less sophisticated end users,
19 ACSI also is requesting additional loop types be priced based on the
20 same TELRIC standard required by the FCC. These additional loop
21 types are as follows: (1) 4-wire analog voice grade loops; (2) 2-wire
22 ISDN digital grade links; (3) 2-wire ADSL-compatible loop; (4) 2-wire

1 HDSL-compatible loop; and (5) 4-wire HDSL-compatible loop. These
2 loops will enable ACSI to meet the needs of more sophisticated end
3 users that require advanced digital technology.

4

5 Q. WHY ARE THESE ADDITIONAL LOOPS CRITICAL TO ACSI AND
6 TO THE DEVELOPMENT OF COMPETITION?

7 A. If ACSI is limited to simple loops, its ability to serve sophisticated end
8 users will be limited. For example, sophisticated business customers
9 increasingly demand services such as ISDN. In order to provide ISDN
10 to customers located off of ACSI's network, ACSI must have access to
11 ISDN digital loops. ISDN simply cannot be offered using two-wire
12 analog loops. Moreover, PBX and key systems require 4-wire loops.
13 ACSI must not be precluded from offering service to customers
14 demanding these types of services. Accordingly, the Commission
15 should require BellSouth to provide these as separate unbundled loops at
16 TELRIC pricing in order to permit ACSI to compete and to encourage
17 the development of local competition.

18

19 Q. DO THE SAME PRICING REQUIREMENTS APPLY FOR THESE
20 LOOPS?

1 A. Yes. While the TELRIC of providing these loops may be incrementally
2 higher than that of the simple 2-wire analog loop, the same arguments
3 apply with respect to how these types of loops should be priced as I have
4 discussed with respect to the simple unbundled loops: the 1996 Act and
5 the FCC have required pricing based on TELRIC; ACSI will be caught
6 in a price squeeze without TELRIC-based pricing; ACSI will not be able
7 to compete for these customers without such pricing; and withholding
8 such pricing will only delay the advent of widespread local competition
9 and the attendant benefits of lower prices, increased quality services, and
10 increased innovation.

11

12 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

13 A. Yes.

1 Q (By Mr. Horton) And do you have a summary of
2 your testimony?

3 A I do. I'll be very brief. Good afternoon.
4 We've reached many agreements with BellSouth on many
5 different issues, but one remains troublesome for us,
6 and that is the price for the unbundled loop. ACSI is a
7 small company that is trying to be an ALEC in Florida,
8 offering dedicated, switched and data services similar
9 to BellSouth. To accomplish this, we will need to offer
10 a large number of customers an opportunity to purchase
11 our services. The only way we can achieve this is to
12 have access to a reasonably priced unbundled loop. The
13 price we have received from BellSouth for us to connect
14 an unbundled loop to our network in Florida is \$300 in
15 nonrecurring charges and \$18.10 per month. This is
16 contrast to their provisioning of a 1-FRB, or 1 flat
17 rate business, to a customer, including the unbundled
18 loop and the switching, for \$56 in nonrecurring
19 damages. That's compared to the \$300 that I would have
20 to pay, and \$29 per month compared to the \$18.10.

21 The price to ACSI seems out of line with their
22 retail offering and seems excessive when we think that
23 most of the lines will be transferred in place. They'll
24 be committing customers and won't be new installations,
25 and merely will be a transfer on the main distribution

1 frame.

2 Because they've decided to offer us a special
3 access circuit, they have introduced work and work
4 centers that they are not used when they install a
5 1 flat rate business.

6 If prices like these are sustained, then it is
7 highly likely that facilities-based competition will not
8 occur, except on a very limited basis, this century,
9 thus denying the consumers in Florida a real choice in
10 their local service provider.

11 We would request that the Commission establish
12 a reasonable price for the unbundled loop so that the
13 consumer in Florida will have a true choice. Thank
14 you.

15 MR. HORTON: Madam Chairman, I have the same
16 request with respect to the TELRIC study that was
17 recently filed. I just have a couple quick questions to
18 ask of Mr. Robertson if I may.

19 CHAIRMAN CLARK: Go ahead, Mr. Horton.

20 Q (By Mr. Horton) Mr. Robertson, have you had
21 an opportunity to review the TELRIC study that was
22 recently filed by BellSouth, specifically as to the
23 nonrecurring charges?

24 A Yes, I have. Very briefly, I might add.

25 Q And did you have a comment you would like to

1 make on that?

2 A Well, I pretty much made that comment in the
3 earlier piece because it's a special access circuit that
4 they've added work and work functions -- or work centers
5 that normally we would not need and wouldn't be used if
6 they were installing their own circuit to that same
7 consumer.

8 MR. HORTON: Thank you. Mr. Robertson is
9 available for questions.

10 MR. MELSON: No questions.

11 MR. HATCH: No questions.

12 CHAIRMAN CLARK: Mr. Carver?

13 MR. CARVER: No questions.

14 CHAIRMAN CLARK: Staff?

15 CROSS EXAMINATION

16 BY MS. CANZANO:

17 Q Good afternoon, Mr. Robertson.

18 A Good afternoon.

19 Q We just have a few questions for you. On
20 Pages 24 and 25 of your direct testimony, you state that
21 BellSouth's NRCs, or nonrecurring charges, are excessive
22 and discriminatory. Why do you believe the NRCs are
23 excessive and discriminatory?

24 A Well, what I was suggesting in the beginning,
25 when I had my summary, is the \$140 they're charging --

1 this has \$140 in it. There's an additional charge of
2 \$160 to connect from the main distribution frame to my
3 subscriber line carrier, which carries it back to my
4 switch. But the \$140 that they have is for an unbundled
5 loop, when they charge on a retail basis only \$56. And
6 that \$56 includes the switching service, as well, to
7 install that, to provision the switch. So that's why I
8 would think that they seemed to be out of line, \$140 and
9 56 don't seem quite to be the same.

10 Q Have you reviewed any of BellSouth's NRC cost
11 studies?

12 A Well, I've looked at the TELRIC cost studies
13 that we saw just very briefly before we came in here.

14 Q Is it your position that the Commission should
15 set a ceiling for NRCs at the currently tariffed rate
16 for basic business lines?

17 A Well, I would think that that would probably
18 be high as well. If you take the \$56, that's involved
19 in not only establishing the circuit, or the unbundled
20 loop, if you will, but it also establishes the services
21 on the switch. So I think that the \$56, if you used
22 that as a ceiling, would probably be too high. I think
23 you would want to take out whatever work and effort is
24 required to do the switch, or perform, to enable the
25 switch.

1 Q In your opinion, then, should that be interim?

2 A You mean the rates should be interim or --

3 Q Yes.

4 A As opposed to what? I'm sorry.

5 Q Until BellSouth can produce appropriate TELRIC
6 cost studies, in your opinion, for those NRC charges?

7 A Well, I'm not sure that it should be interim.
8 It seems like that there ought to be some relationship
9 of the charge that they have on a retail basis to the
10 charge that they have for me. I'm competing with them
11 on a retail basis, and if those are way out of line and
12 I get charged two or three times what they charge on a
13 retail basis, it seems like it's going to be very
14 difficult for me to make a business out of it.

15 Q What if the TELRIC shows that it's lower than
16 that?

17 A Well, I would think that I ought to get that.
18 As I understand it from the FCC order, they're supposed
19 to use TELRIC, and I think that we're supposed to get
20 that.

21 Q Throughout your direct testimony, you discuss
22 TSLRIC and TELRIC. Can you compare and contrast for us
23 the differences between TSLRIC and TELRIC?

24 A Probably not. I would not be a good person.
25 You might ask Dr. Kahn if he can do that, but I'm not

1 a -- I can say no -- how about that? -- to that
2 answer.

3 Q That's fine. You state on Page 14, Lines 10
4 through 21 of your direct testimony, that if the
5 Commission allows BellSouth to charge non-TELRIC-based
6 rates, ACSI will not be able to successfully compete.
7 Do you recall that?

8 A Yes.

9 Q Please explain your statement.

10 A Well, basically the statement is back to what
11 I said before. If I'm charged \$300 to install the
12 circuit, if that's my starting off cost, and I get a
13 choice. If I go to the market, I can't charge any more
14 than \$56 on that nonrecurring charge, because that's
15 what my competition is doing. I certainly wouldn't get
16 much business charging 300. So if I tried to charge any
17 more than 56, so now I've got -- what is that? -- \$244
18 that I have to eat some way, I have to make up before I
19 can make any profit. And then I also have to carry it
20 back to my switch, I have to provision the switch and
21 have all the costs incurred in that, have to provide the
22 interoffice facilities and what have you. So when I've
23 done all that, it doesn't seem like there's much of a
24 way for me to make a business out of this. So I end up
25 not having a viable business, so I end up not being in

1 business, and therefore there's no competition, on a
2 facilities basis.

3 Q It's your testimony that the loop rate must be
4 geographically deaveraged; is that correct?

5 A That's correct.

6 Q Does ACSI have a proposal for a geographic
7 deaveraging of loop rates?

8 A Yes, we do. I think Dr. Kahn will discuss
9 that.

10 MS. CANZANO: Thank you. Staff has no further
11 questions.

12 CHAIRMAN CLARK: Commissioners? Redirect?

13 MR. HORTON: No redirect.

14 CHAIRMAN CLARK: Thank you, Mr. Robertson.

15 MR. HORTON: And I would move Exhibit 40.

16 CHAIRMAN CLARK: Exhibit 40 will be admitted
17 in the record.

18 (Exhibit No. 40 received into evidence.)

19 MR. HORTON: And may Mr. Robertson be
20 excused?

21 CHAIRMAN CLARK: You may be excused.

22 WITNESS ROBERTSON: Thank you.

23 (Witness Robertson excused.)

24 * * *

25 MR. HORTON: Call Mr. Stipe.

1 Commissioners, the same comment with respect
2 to Mr. Stipe's testimony as with Mr. Robertson's, you
3 should be looking at testimony that says reformatted
4 September 6th.

5 C. WILLIAM STIPE, III
6 was called as a witness on behalf of ACSI, and having
7 been duly sworn, testified as follows:

8 DIRECT EXAMINATION

9 BY MR. HORTON:

10 Q Mr. Stipe, you were sworn earlier, were you
11 not?

12 A Yes, I was.

13 Q Would you please state your name and address
14 for the record?

15 A C. William Stipe, III, 131 National Business
16 Parkway, Suite 100, Annapolis Junction, Maryland.

17 Q By whom are you employed and in what
18 capacity?

19 A I'm employed by American Communications
20 Services, Incorporated. I'm the vice president for
21 switched operations and engineering.

22 Q Did you prepare and prefile in this docket
23 direct testimony consisting of seven pages and rebuttal
24 testimony consisting of four pages?

25 A Yes, I did.

1 Q Do you have any changes or corrections to make
2 to that testimony at this time?

3 A Yes, I have a couple of minor changes in the
4 direct. Page 2, Line 1, the word "customer" should
5 actually be "custom." On Page 4, Line 12 --

6 COMMISSIONER KIESLING: I'm sorry, could you
7 repeat the first one? I couldn't find of page in time.

8 WITNESS STIPE: Page 2, Line 1, last word on
9 the line. "I was director," it should be "custom
10 business services" rather than "customer business
11 services."

12 COMMISSIONER KIESLING: Thank you.

13 WITNESS STIPE: On Page 4, on Line 12, in the
14 middle of that line it says "loop coils." Those should
15 be "load," L-O-A-D, coils.

16 And on Page 6, Line 19, the word
17 "specifically" should be "specially."

18 Q (By Mr. Horton) That's the only changes?

19 A That's it.

20 Q With those changes, if I were to ask you the
21 questions contained in your direct and rebuttal
22 testimony, would your answers be the same?

23 A Yes, they would.

24 MR. HORTON: Madam Chairman, I would request
25 that his direct and rebuttal testimony be inserted into

1 the record as though read.

2 CHAIRMAN CLARK: It will be inserted into the
3 record as though read.

4 Q (By Mr. Horton) And you did not have any
5 exhibits; did you?

6 A No, I did not.

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DIRECT TESTIMONY OF**C. WILLIAM STIPE, III**

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I. BACKGROUND AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A. My name is C. William Stipe III and I am Vice President – Switched Engineering and Operations. My business address is 131 National Business Parkway, Suite 100, Annapolis Junction, Maryland 20701.

Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE AND BACKGROUND.

A. I joined ACSI in 1996 and serve as Vice President – Switched Engineering and Operations. Prior to joining ACSI, I had twenty-four years of experience in the telecommunications industry working for Bell Atlantic Corporation. I have held a number of positions with Bell Atlantic, and most recently, since 1994, as Director – Financial Systems. From 1991 to 1994, I served as Director – Product Profitability and Transfer Pricing and operated and enhanced a Product Profitability reporting system. I also developed and implemented a Transfer Pricing process for Line of Business

1 financial reporting. From 1987 to 1991, I was the Director - Customer
2 Business Services, responsible for pricing and costing multi-year service
3 contracts in competitive proposals to Bell Atlantic's largest commercial and
4 government customers. From 1972 to 1987, I held a variety of engineering
5 and management positions of increasing responsibility. I received my
6 Bachelor of Science in Electrical Engineering from Virginia Tech in 1972,
7 and my M.B.A. from Virginia Commonwealth University in 1984.

8

9 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

10 A. No.

11

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

13 A. The purpose of my testimony is to provide technical background to the
14 testimony filed by other ACSI witnesses. Specifically, I will describe: a)
15 from a technical standpoint, what is (and is not) required to unbundle a
16 local loop; and, b) the technical differences between the simple unbundled
17 loop requested by ACSI and the special access type services upon which
18 many ILECs seem to be basing their proposed unbundled loop pricing.

19 Q. DO BELLSOUTH'S NON-RECURRING CHARGES FOR THE
20 UNBUNDLED LOOP SEEM REASONABLE FOR THE WORK
21 REQUIRED?

1 A. They may be reasonable if the expectation is that a new facility must be
2 designed and built for each request for service of that type of facility. They
3 are very unreasonable when all ACSI desires is that the customer's existing
4 service just be unbundled and the existing copper loop be connected to
5 ACSI.

6

7 Q. WHAT IS THE PHYSICAL WORK REQUIRED TO ACHIEVE THE
8 UNBUNDLING YOU DESIRE?

9 A. The physical work required to achieve the unbundling of the local loop
10 should be clearly understood and should not be exaggerated. It is merely
11 removing the wire cross-connect in the BellSouth office which connects the
12 loop facility to the central office and replacing it with one to ACSI's
13 collocated equipment interface. In other words, unbundling the local loop
14 does not require the installation of an entirely new loop.

15

16 Q. HOW DOES THIS COMPARE TO THE SPECIAL ACCESS SERVICE
17 UPON WHICH BELLSOUTH APPEARS TO HAVE BASED ITS
18 UNBUNDLED LOOP PRICING?

19 A. BellSouth's special access service is not an unbundled loop at all.
20 BellSouth has offered an existing tariff for a special access service instead
21 of unbundling its loop plant as required by the FCC.

1 Q. WHAT ARE THE PHYSICAL CHARACTERISTICS OF SPECIAL
2 ACCESS SERVICE?

3 A. It is a digital 64 kilobit channel, capable of transmitting voice or data or a
4 combination of the two with the appropriate customer-provided terminal
5 equipment.

6
7 Q. IS THIS THE FACILITY BELLSOUTH USES TO PROVIDE LOCAL
8 EXCHANGE SERVICE TO ITS CUSTOMERS?

9 A. Not at all. The vast majority of BellSouth's network access lines use
10 ordinary two wire cable facilities. Most of those have no active or passive
11 electrical endorsement at all. Some (probably less than 20%) require
12 passive induction coils, commonly called ^{load} ~~loop~~ coils, for customers beyond
13 18 kft from BellSouth's switching office and an even smaller percentage
14 (probably less than 5%) require electronics to extend the switches signaling
15 capability for loops whose resistance exceed 1300 or 1500 ohms. I can
16 only estimate these percentages at this time because only BellSouth has the
17 information that would be required to calculate precise percentages.

18
19 Q. DOES BELLSOUTH SERVE ALL OF ITS NETWORK ACCESS LINES
20 SERVICE VIA THE COPPER LOOP FACILITIES YOU HAVE
21 DESCRIBED?

1 A. No. Some percentage is served via pair gain devices such as digital
2 subscriber loop carrier ("DLC"). Again, I do not have access to BellSouth
3 data on the amount of such facilities in its plant, but I would be surprised
4 if it is more than 15 percent of the total.

5
6 Q. CAN YOU DESCRIBE THIS DIGITAL LOOP CARRIER?

7 A. Yes. It is digital multiplexing equipment which creates voice grade
8 equivalent facilities in multiples of 24 channel DS-1 facilities which can
9 ride over either optical or conditioned copper facilities and is returned to
10 an analog state in the BellSouth loop plant near (typically less than 12KF
11 or 900 ohms) the BellSouth network access line customer.

12

13 Q. HOW IS THE BELLSOUTH NETWORK ACCESS LINE SERVICE
14 CONNECTED TO ITS CUSTOMER FROM THE REMOTE DLC
15 TERMINAL EQUIPMENT?

16 A. It is connected to a copper facility just like the one I described earlier. I
17 should explain that the use of DLC is not driven by the need to provide a
18 digital capability to the customer, but by the economic trade offs of
19 expanding copper loop facilities and its supporting conduit and pole line
20 structures versus the cost of the DLC. The customer receives the same
21 3KHz voice compatible service either way.

1 Q. YOU MEAN THAT BELLSOUTH HAS PRICED THE UNBUNDLED
2 LOOP AS A DIGITAL SERVICE THAT PROVIDES 64 KBITS OF
3 CAPACITY WHILE IT USES ANALOG COPPER VOICE GRADE
4 PAIRS TO PROVIDE ITS OWN LOOP SERVICES?

5 A. Exactly.

6

7 Q. WHAT SORT OF PROBLEMS DOES THIS CREATE FOR ACSI IN
8 ATTEMPTING TO COMPETE WITH BELLSOUTH FOR
9 CUSTOMERS?

10 A. It causes ACSI multiple problems. The most obvious problem is cost,
11 which Mr. Richard Robertson has addressed in his Testimony.

12 Both the recurring and non-recurring charges are set to recover
13 costs which ACSI will not cause BellSouth to incur. This in turn, will
14 artificially increase ACSI's rates for both installation and service, making
15 it exceedingly difficult to compete effectively.

16 Q. DOES ACSI HAVE ANY NEED FOR THE TYPE OF FACILITY
17 BELLSOUTH OFFERED AS AN "UNBUNDLED LOOP"?

18 A. Yes, but only in instances where it desires to provide data and other
19 ~~specifically~~ ^{specially} designed services to its customers. It does not need this
20 sophisticated facility to provide most basic local exchange services, which

1 it expects to be the majority of its service over BellSouth's bottleneck
2 facilities.

3

4 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

5 A. Yes.

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **REBUTTAL TESTIMONY OF C. WILLIAM STIPE, III**

3 Q. PLEASE STATE YOUR NAME.

4 A. My name is C. William Stipe III.

5 Q. ARE YOU THE SAME C. WILLIAM STIPE III THAT EARLIER
6 PREPARED DIRECT TESTIMONY THAT WAS FILED ON BEHALF
7 OF AMERICAN COMMUNICATIONS SERVICES, INC?

8 A. Yes.

9 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

10 A. In this rebuttal testimony, I am responding to the issues raised in the Direct
11 Testimony of Robert C. Scheye on behalf of BellSouth
12 Telecommunications, Inc. Mr. Scheye addresses various technical aspects
13 regarding loop unbundling in which he strives to equate or compare
14 existing services with the unbundled loop element. As I discuss below,
15 such a comparison is inappropriate. If such comparisons with existing
16 services are relied upon when pricing the unbundled loop, then the rate will
17 necessarily be set above the element-based cost standard of the
18 Telecommunications Act of 1996.

19 Q. MR. SCHEYE STATES THAT IT IS NOT TECHNICALLY FEASIBLE
20 TO UNBUNDLE AN INTEGRATED DIGITAL LOOP CARRIER
21 (IDLC). DO YOU AGREE?

1 A. It is technically feasible to allow access to some of the loops being served
2 through an integrated digital loop carrier (IDLC). I agree that it would be
3 preferable in most instances to "roll the service" to available copper pairs
4 as BellSouth suggests in its alternative 1 on page 5 of his testimony, but if
5 no other facilities are available, then it is necessary to unbundle. Otherwise
6 ACSI and all other competitors will be denied access to those customers.

7 Q. CAN YOU EXPLAIN HOW AN IDLC MAY BE UNBUNDLED?

8 A. IDLC unbundling would require a reconfiguring of the way such systems
9 are currently deployed and will require some additional equipment to be
10 used. IDLC can be done with equipment BellSouth commonly installs in
11 its offices. In the commonly used IDLC, one of the DS-1 facilities serving
12 the IDLC could be connected through a digital facility cross connect
13 system, usually referred to as a DACS. In the DACS, the desired
14 unbundled loop can be groomed out and sent to a channel bank to be
15 reconverted to an analog voice grade signal and then cross connected to
16 ACSI's collocated facilities. BellSouth may be using this configuration to
17 serve non-integratable services through its own IDLCs.

18 Q. HAS ACSI ASKED FOR A DETAILED RECORD OF EVERY CIRCUIT
19 USED AS AN UNBUNDLED LOOP AS DESCRIBED IN MR.
20 SCHEYE'S TESTIMONY ON PAGE 7?

21 A. Not at all. ACSI does not need a "design layout record." We only want

1 to know the cable and pair designation so we can intelligently handle
2 restoration of our customer's service should that facility fail.

3 Q. WHAT IS YOUR REACTION TO BELLSOUTH DESCRIBING AN
4 UNBUNDLED LOOP AS A CIRCUIT AS MR. SCHEYE DOES ON
5 LINE 6, PAGE 7 AND AGAIN ON LINE 2, PAGE 10 OF HIS
6 TESTIMONY?

7 A. My reaction is that I can only assume that BellSouth does not comprehend
8 the concept of an unbundled loop as requested by ACSI and demanded by
9 the FCC. An unbundled loop is clearly not a circuit until it has been
10 connected to other equipment and made part of a service. It is ACSI's
11 contention that BellSouth has been pricing services under the guise of
12 offering the unbundled components which ACSI requires to provide
13 telecommunications services to its customers. We only want the pair of
14 wires currently used by BellSouth to provide its services, not the services
15 themselves.

16 Q. DO YOU AGREE WITH BELLSOUTH'S STATEMENT THAT THEY
17 DO NOT CURRENTLY OFFER A SERVICE COMPARABLE TO THE
18 2-WIRE UNBUNDLED ISDN LOOP REQUESTED BY ACSI?

19 A. Yes. Of course they do not. They do not offer a service comparable to the
20 2-wire unbundled analog voice grade loop requested either because an
21 unbundled loop is not a service! That is the point here and the root of our

1 disagreement. An unbundled network element would a misnomer if it was
2 the sale of existing services. ACSI only wants the bare bottleneck facility
3 of the local cable pair (and pricing based thereon) and does not desire the
4 offered special access facility, which contains features it does not need.

5 Q. IS THE RATE PROPOSED FOR THE 2-WIRE ISDN LOOP
6 REASONABLE?

7 A. No. As a matter of fact, I believe it is higher than BellSouth charges for
8 the entire ISDN service, let alone what is reasonable for the loop alone.

9 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

10 A. Yes.

1 Q (By Mr. Horton) Do you have a summary of your
2 testimony?

3 A Yes, I do. Good afternoon. Really, two
4 items, in my testimony, and my rebuttal, and those
5 involve the unbundled loop and the technical feasibility
6 of unbundling integrated digital loop carrier. My
7 testimony is really fairly simple and straightforward.
8 ACSI has requested BellSouth to provide it with the use
9 of local loop facility unbundled from its access line
10 service. BellSouth has chosen not to do that and has
11 instead substituted one of its existing special access
12 services in lieu of the unbundled loop.

13 BellSouth repeatedly refers to its offerings
14 to ACSI as circuits and services, and an unbundled
15 elementary facility is neither a circuit nor a service.
16 It takes ACSI adding additional equipment to it to make
17 it so. ACSI has asked that the existing loop facility,
18 which the typical customer that ACSI would be signing
19 up, is already using today as part of their existing
20 dial tone line service, merely be unconnected from the
21 BellSouth switch and reconnected to ACSI's equipment so
22 that we can provide them service.

23 That sounds like a fairly simple work
24 operation to me. BellSouth has proposed that that
25 service be more sophisticated than it uses to provide

1 that dial tone itself, and adds work functions and
2 equipment that ACSI does not require or need.

3 BellSouth has said that it's not technically
4 feasible to directly unbundle an integrated loop
5 carrier. I submit that there is a way to do it that is
6 technically feasible. It involves taking some of the
7 T-carrier equipment that feeds that integrated remote
8 unit and routing it through a central office device
9 called a digital cross-connect that can unbundle that
10 loop element that ACSI desires.

11 I suggest that that's not a way they may
12 commonly be providing that today. So there may be
13 additional equipment involved, which of course would be
14 a reasonable cost to include. But that does not make it
15 nontechnically feasible.

16 I also agree that the best way to provide
17 access to that customer, when that circumstance exists,
18 is if there is an existing wire facility that the
19 customer can be moved to, that that would be a better
20 alternative. And that really summarizes my testimony.

21 MR. HORTON: Mr. Stipe is available for
22 questions.

23 MR. MELSON: No questions.

24 MS. DUNSON: No questions.

25 CHAIRMAN CLARK: Ms. White?

1 MS. WHITE: Yes, I do have a few questions.

2 CROSS EXAMINATION

3 BY MS. WHITE:

4 Q Good afternoon, Mr. Stipe.

5 A Good afternoon.

6 Q I'm Nancy White representing BellSouth
7 Telecommunications, and I have a few questions of you
8 today. Would it be fair to say that BellSouth's loops
9 in Florida are served over copper pairs and digital loop
10 carrier?

11 A I would imagine that to be the case.

12 Q Can you give me a very simplistic explanation
13 of what digital loop carrier is?

14 A It's basically -- takes the analog voice
15 signal of the customer, converts it at a site near the
16 customer, usually within a couple of miles, to a digital
17 signal, which is typically carried over a T-carrier
18 line, back to the central office, where it can either be
19 reconverted to analog by a central office terminal, or
20 directly connected into the switch on the T-1 level, in
21 which the switch directly handles it as a time slot.

22 Q Do you know what portion of BellSouth's loops
23 in Florida are served over copper pairs and what portion
24 are served on digital loop carrier?

25 A No, I do not.

1 Q Would you accept, subject to check, that
2 67 percent of BellSouth's loops in Florida are served
3 over copper pairs?

4 A I would be surprised if it was that low, but,
5 yes.

6 Q Now, the loops that are served over copper
7 pairs can be unbundled. There's no problem with that,
8 is there?

9 A I don't believe so.

10 Q Now, if you've accepted that 67 percent is
11 served over copper pairs, that would leave 33 percent of
12 BellSouth's loops that are served over digital loop
13 carrier. Would you accept that subject to check?

14 A If that's the way the math works, yes.

15 Q Now, of the loops that are served over digital
16 loop carrier, some of those loops are served by
17 integrated digital loop carrier and some are served by
18 non-integrated digital loop carrier; is that correct?

19 A You would have to tell me. It would be one or
20 the other, obviously.

21 Q I mean there are 33 percent of the loops in
22 Florida are served by digital loop carrier. And digital
23 loop carrier can be further divided into integrated and
24 non-integrated; is that correct?

25 A That's true, usually referred to as integrated

1 and universal.

2 Q Integrated and universal?

3 A That's correct.

4 Q And the universal is the non-integrated?

5 A That's correct.

6 Q Just to keep me straight. Can you explain
7 integrated and universal digital loop carrier?

8 A Sure. I tried to a minute ago. The
9 integrated loop carrier does not have the central office
10 terminal. I was hoping maybe the diagram had something
11 that would help. But the integrated loop carrier just
12 has the remote end of the digital loop carrier, which
13 converts the analog signal from the customer into a
14 digital signal, which is then taken directly into the
15 switch and switched as a digital signal. The universal
16 digital carrier has a central office terminal where the
17 signal is then converted back to the analog signal and
18 then connected to the switch, or wherever else it should
19 be going.

20 Q And there's no problem with unbundling the
21 universal digital loop carrier; is that correct?

22 A That's correct.

23 Q So what we're talking about here is the
24 subpiece of integrated digital loop carrier?

25 A That's right.

1 Q And would you agree that there are -- that
2 BellSouth has offered two methods, excuse me, to
3 unbundle integrated digital loop carrier? One is moving
4 the loops from the digital loop carrier on to available
5 copper pairs?

6 A That's right.

7 Q And would you agree that the other one is the
8 use of next generation digital loop carrier?

9 A Yes.

10 Q Does ACSI have any problems with those two
11 alternatives?

12 A No, we do not.

13 Q Do you know what percentage of the integrated
14 digital loop carrier delivered loops in Florida are --
15 can be unbundled using those two methods?

16 A No, I do not.

17 Q Now, the other way that you talked about
18 unbundling integrated digital loop carrier delivered
19 loops was through a digital cross-connect process?

20 A That's correct.

21 Q And does that essentially make the loops that
22 are delivered via integrated digital loop carrier
23 non-integrated?

24 A No, it does not.

25 Q Why is that not correct?

1 A The BellSouth customers who would still be
2 receiving service from the BellSouth switch would still
3 be directed to that switch on a digital level T-1. We
4 would only be grooming off the competitive provider
5 customers on a line at a time basis. It would not
6 deintegrate SLC. It does not require a central office
7 terminal, which it does not convert the non-unbundled
8 customers' loops into universal loops. It leaves them
9 the way they were.

10 Q Okay, and I don't know if this is a true word
11 or not, but you used it and I liked it -- it would
12 deintegrate that loop delivered over integrated digital
13 loop carrier for the ACSI customer?

14 A That's correct.

15 Q And are companies steadily replacing universal
16 or non-integrated digital loop carrier with integrated
17 digital loop carrier?

18 A I would if I was doing it, but --

19 Q And is that because it improves the quality of
20 the loop transmission? Is that one of the reasons?

21 A I think the major reason is probably to
22 eliminate the maintenance and expense of the central
23 office terminal.

24 MS. WHITE: Thank you. I have nothing
25 further.

1 CHAIRMAN CLARK: Staff?

2 MS. CANZANO: Staff has no questions.

3 CHAIRMAN CLARK: Commissioners? Redirect?

4 MR. HORTON: No redirect. And there were no
5 exhibits, so may Mr. Stipe be excused?

6 CHAIRMAN CLARK: Mr. Stipe may be excused.

7 (Witness Stipe excused.)

8 * * *

9 (Transcript continues in sequence in
10 Volume 9.)

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