	4
1	ა შემ
BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO	1 INDEX
	2
In the Matter of the Petition of Communication	3 WITNESSES PAGE 4 STEPHENK, VOGELMEIER Direct Examination by Ms. Bloomfield 8 5 Cross-Examination by Ms. Stewart Redirect Examination by Ms. Bloomfield 38 6 Recross-Examination by Ms. Bloomfield 38 7 Examination by Ms. Bloomfield 63 8 Examination by Ms. Bloomfield 63 9 Examination by Ms. Russell 65
Options, Inc., for Arbitration:	Direct Examination by Ms. Bloomfield 8 5 Cross-Examination by Mr. Stewart 9
of Interconnection Rates, Terms, and Conditions and : Case No. 08-45-TP-ARB	5 Cross-Examination by Mr. Stewart 9 5 0 0 0 0 0
Related Arrangements with	6 Recross-Examination by Mr. Stewart 54 () () Redirect Examination by Ms. Bloomfield 63 (44 () (7)
United Telephone Company of : Ohio d/b/a Embarq Pursuant to :	Redirect Examination by Ms. Bloomfield 63
Section 252(b) of The Telecommunications Act of 1996.	
rejecommunications Act or 1990.;	Examination by Examiner Lynn 85
•••	9 Reexamination by Examiner Agranoff 92 Reexamination by Ms. Green 93
PROCEEDINGS	
Before James M. Lynn and Jay S. Agranoff, Hearing	Recross-Examination by Mr. Stewart 98 5 0 11 5 0 11 11 11 11 11 11 11 11 11 11 11 11 1
	AUGUST H. ANKUM, Ph.D. (Confidential)
Examiners, and Panel Members, Ms. Robbin R. Russell,	12 Direct Examination by Ms. Bloometer 114 Cross-Examination by Ms. Stewart 116 13 Redirect Examination by Ms. Bloomfield 181 Remove Examination by Ms. Stewart 184
Ms. Michelle A. Green, at the Public Utilities	10201039-EAGIILLIANON 69 1011. DOCUMENT 104 [24 [3]
Commission of Ohio, 180 East Broad Street, Room 11-G,	14 Examination by Ms. Green 186
Columbus, Ohio, called at 9:05 a.m. on Tuesday,	16 COI EXHIBITS IDD RECD 17 1-Prefiled Testimony of 9 113 Steve Vogelmeier 18
October 28, 2008.	[[[[[[[[[[[[[[[[[[[
	2 - Prefiled Testimony of August H. 114 197 19 Ankum, Ph.D., Confidential Version
	20 2A - Prefiled Testimony of August H. 115 197
	21
	3 - Prefiled Supplemental Testimony of 116 197 22 August H. Ankum, Ph.D.
ARMSTRONG & OKEY, INC.	Confidential Version 5
185 South Fifth Street, Suite 101 Columbus, Ohio 43215-5201	23 3A - Prefiled Supplemental Testimony of 116 197
(614) 224-9481 - (800) 223-9481	3A - Prefiled Supplemental Testimony of 116 197 5 5 5 5 2 4 August H. Ankum, Ph.D., C 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Fax - (614) 224-5724	Lifting Activities
···· ′	25
2	4
1 APPEARANCES:	
1 APPEARANCES: 2 Bricker & Eckler, LLP	4
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq.	1 Tuesday Morning Session,
1 APPEARANCES: 2 Bricker & Eckler, LLP	Tuesday Morning Session, October 28, 2008.
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq.	Tuesday Morning Session, October 28, 2008.
2 1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc.	Tuesday Morning Session, Cottober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has
2 1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation	Tuesday Morning Session, Cotober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No.
2 1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq.	Tuesday Morning Session, Cotober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options,
2 1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600	Tuesday Morning Session, Cotober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section
2 1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq.	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Incorporated, for arbitration pursuant to Section Section 1996. Fm Jim
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation.	Tuesday Morning Session, Coctober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section The Public Utilities Communication Options, Incorporated, for arbitration pursuant to Section The Telecommunications Act of 1996. Fin Jim Lynn, one the Attorney Examiners assigned to hear this
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation.	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Cynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. 8 Assigned for hearing at this time and place Case No. Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9	Tuesday Morning Session, Coctober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. 8 Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there.
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9	Tuesday Morning Session, Coctober 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this Case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options,
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated.
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated.
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section Section Section Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of Communication Options, Your Honor, the law firm of
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 24 14	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of Communication Options, Your Honor, the law firm of Bricker & Eckler, Salley W. Bloomfield and Matthew Warnock, W-a-r-n-o-c-k, 100 South Third Street,
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 5	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. 08-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of Communication Options, Your Honor, the law firm of Bricker & Eckler, Salley W. Bloomfield and Matthew Warnock, W-a-r-n-o-c-k, 100 South Third Street, Columbus, Ohio 43215.
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 11 22 13 14 15 16 17 18 19 19 19 10 20 21 20 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 21 20 20 21 20	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. O8-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of Communication Options, Your Honor, the law firm of Bricker & Eckler, Salley W. Bloomfield and Matthew Warnock, W-a-r-n-o-c-k, 100 South Third Street, Columbus, Ohio 43215. EXAMINER LYNN: Thank you. And counsel
1 APPEARANCES: 2 Bricker & Eckler, LLP By Sally W. Bloomfield, Esq. 3 Matthew W. Warnock, Esq. 100 South Third Street 4 Columbus, Ohio 43215-4291 5 On behalf of Communication Options, Inc. 6 Embarq Corporation By Joseph R. Stewart, Esq. 7 50 West Broad Street, Suite 3600 Columbus, Ohio 43215 8 On behalf of Embarq Corporation. 9 10 5 11 and 11 12 and 11 13 and 14 15 and 15 16 and 17 17 and 18 19 and 19 20 21 23 88 21 22 23 88	Tuesday Morning Session, October 28, 2008. EXAMINER LYNN: Let's go on the record at this time. The Public Utilities Commission of Ohio has assigned for hearing at this time and place Case No. 08-45-TP-ARP in the Matter of Communication Options, Incorporated, for arbitration pursuant to Section 252(b) of The Telecommunications Act of 1996. I'm Jim Lynn, one the Attorney Examiners assigned to hear this case, and with me on my left is Jay Agranoff, another one of the Attorney Examiners. We have two Staff members of the Commission present, Michelle Green and Robbin Russell over there. At this time, I'll ask for the appearance on counsel on behalf of Communication Options, Incorporated. MS. BLOOMFIELD: On behalf of Communication Options, Your Honor, the law firm of Bricker & Eckler, Salley W. Bloomfield and Matthew Warnock, W-a-r-n-o-c-k, 100 South Third Street, Columbus, Ohio 43215.

MR. STEWART: Joseph R. Stewart, 50 West

Broad Street, Columbus 43215. EXAMINER LYNN: Thank you, Mr. Stewart.

4 The hearing is scheduled for two days. There had been 5 some discussion before we went on the record about

6 being able to wrap it up in one day, and we'll keep all 7 options open. Hopefully, we can, and, let's see,

8 regarding the order of witnesses, too, based on

1

2

3

1

9 discussions we had had prior to our hearing today, COI

10 had indicated that Mr. Vogelmeier will go first and 11 then Dr. Ankum, and Embarg is informing that Mr. Hart

will speak first and then Ms. Londerholm will be 12

13 adopting Mr. Maple's testimony. Am I correct on that? 14

MR. STEWART: Yes.

15 EXAMINER LYNN: Okay. I'm sure you've 16 been through all these proceedings before, but just to

run it by you again, as far as the order of things, 17

18 we'll have the prefiled direct testimony and will be

19 later moving it into admission on the record. We'll

20 have cross-examination, redirect, and recross, and then

21 the Panel will have the opportunity to ask questions,

22 and after the Panel's questions, if counsel for either

party believe it's necessary to have some additional

24 questions, that's fine, as long as it's limited in

scope to what the Panel's questions were. Let's see.

5

arbitration cases which would delineate the issues as well as the parties' position and then the record

citation supported positions that particular parties 3

advocated, and that would assist the Panel for purposes of going back in analyzing the record and rendering a 5

б decision.

7 EXAMINER LYNN: Thank you, Mr. Agranoff. 8 If there is nothing else, no other issues to be brought up at this point in time, we can begin with our 9

witness. 10

14

15

11 **EXAMINER AGRANOFF:** Is there anything else, any motions that counsel is aware of that has not 12 been ruled on as of yet? 13

MR. STEWART: No.

MS. BLOOMFIELD: No, Your Honor.

EXAMINER LYNN: I wasn't aware of any, and 16

that's why I didn't bring it up. Also, based on 17

discussion we already had, there was no preference 18

between the two parties as to who would go first. 19 Customarily in arbitrations whoever files the 20

arbitration will go first, so we'll start with COI and 21

22 their witness, Mr. Vogelmeier.

23

MS. BLOOMFIELD: Mr. Vogelmeier will be 24 the first one. Your Honor.

25

EXAMINER LYNN: Mr. Vogelmeier, if you

8

2

3

7

8

9

17

18

19

20

24

25

We've discussed when the briefs will be due. That will

will come up to the witness stand, please. If you would raise your right hand.

STEPHEN K. VOGELMEIER,

being by Examiner Lynn first duly sworn, as hereinafter 4

certified, testifies and says as follows: EXAMINER LYNN: Please have a seat. 6

DIRECT EXAMINATION By Ms. Bloomfield:

O. Mr. Vogelmeier, would you state your name again and spell your last name for the record. 10

 A. Stephen K. Vogelmeier. It's V, as in 11

Victor, o-g-e-l-m-e-i-e-r. 12

13 Q. And what is your position with 14

Communication Options? Which I'm going to start referring to as COI because it's easier. 15 16

A. I'm the president of the company.

O. And did you have prepared under your direction the prefiled testimony that was previously submitted in this case on June 24th?

Α.

21 Q. And if I would ask you the questions in 22 that prefiled testimony today, would your answers be 23 the same?

A. Yes.

Do you have any corrections, additions, or

be December 3rd and reply briefs December 17th, and we've also had the discussion about what will be a 3 4 closed record; so I think we covered everything that we 5 need to cover at this point. 6 Does anybody else have any questions? MS. BLOOMFIELD: Yes, Your Honor. We have one matter to take care of, and that is the Confidentiality Agreement that was tendered by Embarq has been signed by Dr. Ankum and me. We have not yet had Mr. Vogelmeier or Miss Engle -- or possibly one of

7 8 9 10 the principals will be here whose name is Steve 12

13 Halliday, but Embarq has agreed that, with my affirmation, that they will sign the protective agreement and they will keep any protective materials 15

confidential. He's agreed that would suffice for now, 16

17 and we will get the actual documents signed forthwith. 18 EXAMINER LYNN: That is fine. Thank you

for mentioning that. I believe, in that case --19 20 anything else, Jay?

21 EXAMINER AGRANOFF: With respect to the 22 briefing schedule that we discussed previously, we

would also ask that at the time the briefs are 23

24 submitted, that the parties could prepare an issues

matrix similar to that which has been done in prior

11 9 deletions to your testimony? discussion. Q. Well, by "similarity," I mean the 2 A. No. 2 MS. BLOOMFIELD: Your Honor, I have customers of COI to whom the bills pertain have great 3 4 nothing further. overlap from month to month; is that correct? 4 5 **EXAMINER LYNN: No further questions?** 5 A. Yes. 6 MS. BLOOMFIELD: Pardon me? 6 Q. Now, who reviews the bills on behalf of 7 EXAMINER LYNN: Sorry, I didn't hear you. 7 COI? 8 We have two people, one primary person MS. BLOOMFIELD: I don't have any further 8 that goes through the bill. I look at every one that questions, and Mr. Vogelmeier is ready for 9 9 10 cross-examination. comes to begin with just to see the overall amounts, EXAMINER LYNN: Thank you. what's been charged, credits, and the accounts payable 11 11 person looks at that, and then we have a staff person 12 Mr. Stewart. 12 13 MR. STEWART: Thank you, Your Honor. 13 that reviews the individual items on every bill. CROSS-EXAMINATION O. What is the name of that staff person? 14 14 Bonnie McCracken. By Mr. Stewart: 15 15 Q. And what is her background and experience 16 Q. Good morning, Mr. Vogelmeier. My name is 16 Joe Stewart. Good to see you again. If you would 17 17 with respect to billing? A. She's -- we've taught her how to look at please turn to Page 3 of your direct testimony? 18 18 the bills and see what's -- compare them to the months 19 A. Okay. 19 20 MR. STEWART: Before I proceed, would it before, compare the features that the customer is being be appropriate to have this marked as COI Exhibit 1 in billed versus what we say they should be billed, that 21 21 case we're making reference to it? 22 22 type. 23 MS. BLOOMFIELD: Is that what you would 23 O. And you mentioned, I think, an accounts 24 like to do. Your Honor? payable person who looks at the bill. Who is that? 24 EXAMINER LYNN: Yes. That's Jenny Dickson. 25 25 10 12 MS. BLOOMFIELD: That's fine, May we call 1 1 O. And what does her review consist of? 2 that COI Exhibit 1? 2 A. General review of basically what the 3 EXAMINER LYNN: Okay. That will be Mr. 3 amounts are, what the charges and credits are and the 4 Vogelmeier's testimony, then. other charges and credits paid, that type of - a 5 EXAMINER AGRANOFF: Let's go off the 5 general review of the amounts. 6 record for a minute. б Q. Now, you estimated 126 man hours or woman 7 (Discussion off the record.) 7 hours, as apparently is the case here? 8 EXAMINER LYNN: Back on the record. A. Right. 8 9 please. 9 Q. How does that break down between the 10 MR. STEWART: Thank you. accounts payable individual and the other person? 10 11 By Mr. Stewart: A. I'd say it's probably 98 percent for the 11 12 Q. Mr. Vogelmeier, is it correct that the 12 other person and 2 percent for me and the accounts payment terms for invoices COI receives from Embarq are 13 13 payable person. that payments are due 30 days after the invoice date? 14 Q. Physically, how does COI receive its bill 14 15 A. Yes. 15 from Embarq? 16 Q. So under the proposed new ICA, Embarg is A. Some of the bills come paper, some of them 16 17 offering slightly over two weeks as a grace period for 17 come on CD. COI to make its payments; is that correct? 18 O. What sort of mail delivery does COI 18 19 A. That's correct. receive, in other words, regular mail, overnight mail, 19 20 Q. From month to month is there considerable 20 or something else? 21 similarity between the bills that COI receives from A. The bill -- the paper comes regular mail. 21 22 Embarq? 22 The CDs come DHL. 23 A. Well, I guess similarly they come in the O. Overnight delivery? 23 same box or they're on the same CD. Whether they're --24 24 A. I don't know. I didn't check to see if it all the same amounts are correct is left open for 25 was overnight or two-day or whatever it was, but --

16

13

2

10

11

12

14

15

17

18

20

21

2

3

4

5

7

9

14

16

Q. Does the CD contain the same information that the paper bill contains?

A. I believe for the most part. The paper bill is still the CABS side of the IXC billing.

EXAMINER AGRANOFF: Just so that the record is clear, when you use those acronyms, do you know --

8 THE WITNESS: IXC is for the long distance 9 side. We have two entities, long distance company and 10 local companies.

EXAMINER AGRANOFF: IXC stands for? 11 12

THE WITNESS: Interexchange Carrier. 13 EXAMINER AGRANOFF: And CABS?

THE WITNESS: And CABS is the billing that 14

15 pertains to that IXC billing or usage billing.

EXAMINER AGRANOFF: Do you know the 16 17 acronym?

18 THE WITNESS: No, not today.

MR. STEWART: I think it's Carrier Access

20 Bill.

19

25

2

3

5

6

7 8

9

17

19

23

1

2

3

4

5

6

7

21 THE WITNESS: Yes,

22 MR. STEWART: Carrier Access Billing

23 System, CABS.

By Mr. Stewart: 24

Q. Are you saying that the paper bill

those invoice dates on the same date, roughly eight days after the 8th?

3 A. Right. We did get two. They've consolidated them to one, so -- they put everything on 4 one CD, which no matter what the invoice date is, it comes on that CD, which is about the 16th or 17th. 6 7 I've got a sheet over there that I had them make up all the dates that we received them; so I have them if you 8 9 want them specifically.

O. Now, is it correct that Embarg has offered COI the opportunity to receive its bills in an electronic format?

A. Yes. 13

O. Do you recall the name of that format?

A. FTP.

16 Q. Has COI elected to do that?

A. At this point we have, yes.

Q. Does that mean COI has begun to receive its bills in electronic format or will that occur in 19 the future?

A. We're supposed to have a test file that we 22 can test our software this week. We received some of the CABS billing and usage billing that way, and we've 23 24 tested those files, but the - the local bill I

25 requested last week and they thought they'd be able to

14

contains billing information that the CD does not?

A. No. I believe - now, it's been changing around the last two or three months because of the different formats everybody wants to send them in, but I believe the CD has everything on it today.

Q. On average, how many days after the invoice date does COI receive the CD format of the hill?

A. Well, that's relative to what invoice 10 we're talking about. We have invoice dates the 3rd of 11 the month. We used to have, like, three or four 12 invoice dates. Now we have 3rd of the month, the 8th 13 of the month, and I believe it comes in about eight or 14 nine days after the 8th of the month billing, because they consolidated the 3rd month billing on the CD. 15 also. 16

Q. So for a bill with an invoice date on the 18 3rd of the month, you're saying that you receive the CD for that invoice on what day of the month?

20 A. It's about the 15th or the 18th. I think 21 last month we got it on the 19th. This month we got on 22 the 16th or 17th, something like that.

Q. So are you saying that invoices, two 24 separate invoices, one dated the 3rd of the month, one 25 dated the 8th of the month, you get the CD for both

1 get me a test on the local bill this week.

O. Do you know how close to the invoice date COI will receive the billing information once the FTP process is implemented?

A. No. I know what I've been told, but I

don't -- I haven't seen one yet, so --6

Q. What have you been told?

8 A. Five days.

O. Does COI utilize any software or other systems to verify the bills it receives from Embarg? 10

11 A. Our programmer is developing a program for 12 the FTP file. Once we receive that, then it will all be automated. 13

Q. And do you expect that to lessen the time that it takes COI to verify an Embarq bill? 15

A. Sure.

Q. Is the system that you plan to use one 17 that you're developing in-house or have you consulted 18 with other CLECs or some other party -- or entity, I 20 should say, for developing this electronic system to 21 review the bills?

22 A. Well, when we first started having this 23 conversation about the FTP billing -- or the transfer, 24 I asked Pam Zeigler if she knew anybody who had this software or how I could do that. She checked around

4 (Pages 13 to 16)

17

4

5

6

7

14

15

- 1 and said I had to go to Telcordia, so I went to
- 2 Telcordia, and Telcordia said they don't sell the
- software. They gave me some names of some people that 3
- did sell the software, and that ranged anywhere from 30 4
- to \$150,000, and so we decided to develop it in-house. 5
- 6 Sometime around the mediations that we had in this case
- 7 I bought -- the only thing Telcordia would do is sell
- you the Call Record Layout. They wouldn't sell you the 8
- program, so I bought the Call Record Layout, and our 9
- developers started working on the software. 10
- Q. Pam Zeigler is an Embarq employee? 11
 - Yeah. She's our account manager.
- Q. What's the name of the programmer who is 13 developing your electronic system? 14
- A. Brad Inniger, I-n-n-i-g-e-r. 15
- Q. Is he a COI employee? 16
- 17 No. He's contract.

12

- 18 Q. Now, on occasion has Embarq advised COI 19 that a payment is late and that IRES, I-R-E-S, and I'll
- 20 have to check with someone regarding the meaning of
- 21 that acronym, is subject to suspension?
- A. I've had that conversation a couple of 22 23 times in the ten years, yes.
- Q. Let me go off the record for a second. 24
- 25 (Discussion off the record.)

18

3

4

- MR. STEWART: Back on the record. IRES 1 2 means Integrated Response Entry System.
- 3 By Mr. Stewart:

4

5

6

9

- Q. How does COI currently make payments to Embarg?
 - Primarily on a weekly basis. Α.
- Q. And what medium does COI use to make its 7 8 payments?
 - A. It's overnight mail to a lockbox.
- O. And is that -- does that use a check drawn 10 11 on your bank?
- 12 A. Uh-huh.
- Q. Are you aware of other mechanisms that are 13 14 available for paying Embarq bills, for example, wire transfer? 15
- 16 A. Yes. I'm -- I am aware of that.
- 17 Q. Is there also a mechanism called ACH?
- 18 Α. Well, that's basically what you're doing.
- 19 Q. That's, in your mind, the same as a wire transfer? 20
- A. No. ACH, you're scanning the check and 21 sending it to our bank in an ACH transaction. That's 22
- 23 what you're doing there. Q. Off the record again for a moment. 24
- 25 (Discussion off the record.)

MR. STEWART: ACH stands for Automated 1

- 2 Clearinghouse.
- By Mr. Stewart: 3
 - Q. If you would please turn to Page 5, has COI explored obtaining a Letter of Credit to give Embarq in lieu of a deposit?
 - A. No.
- Q. And you wouldn't be aware of what that 8 might cost COI to obtain? 9
- 10 A. Relatively. You know, we've talked about 11 it, but I have not gotten any specific information.
- O. Please look at Line 29 on Page 5. There 12 you say, "There is no risk"? 13
 - Right. A.
 - What do you mean by "no risk"?
- Well, we pay weekly. We requested that in 16 the bankruptcy in 2000, that we be able to pay weekly. 17
- When we came out of the bankruptcy in December of '03, 18
- I contacted Pam Zeigler and asked her if it would be 19
- okay if we continued to pay weekly. She indicated Tom 20
- Grinaldi said that that would be fine, so we continued 21
- 22 to pay weekly. It lowers the risk.
- 23 O. When a weekly payment is made, that 24 payment applies to an invoice that COI has received
- 25 roughly 45 days ago?

20

- A. Well, it's relative to when we receive the 1 disks, yeah. 2
 - O. So is 45 days a fair approximation?
 - A. I I have no idea at this point. I'd
- have to check on that. 5
- 6 Well, is it your belief that COI typically 7 pays an invoice in fewer than 30 days after the invoice 8 date?
- 9 Oh, no. I mean, we have to go through the bills. Historically, you have to understand that I've
- 10
- received about \$2 million in credits for bad billing in 11
- ten years, so we look at every item on the bill and we
- 13 look at everything that comes in.
- MR. STEWART: Your Honor, I'd move to 14 15 strike that portion of the answer following the first
- sentence. I can't repeat it. We could have it read 16
- back, but the question had nothing to do with credits 17 and COI's receipt of credits.
- 18
- 19 EXAMINER LYNN: If you could read that 20 back, Valerie.
 - (Question and answer read back.)
- 22 EXAMINER LYNN: Your objection was to the
- 23 second sentence?
 - MR. STEWART: Everything following, "Oh,
- 25 no."

21

24

EXAMINER LYNN: I'm sorry. Could you read that back one more time, please?

(Answer read back.)

1

2

3

10

25

5

6

7

8

9

16

25

EXAMINER LYNN: Your objection is after 4 5 the "oh, no"?

6 MR. STEWART: Right. The question was 7 directed to the timing of the payments. The "oh, no" 8 answered that question. Everything after that was nonresponsive. 9

MS. BLOOMFIELD: Your Honor, I would disagree. Mr. Vogelmeier was just asked how long it 11 12 took to review the bills, and his testimony had said 13 and he confirmed here it was 126 hours. He was 14 explaining that it takes a long time to review the 15 billing. He was explaining his answer no, why they

16 couldn't meet the 30 day on the bill date, because it

17 takes three weeks plus just to review it, and he

18 mentioned that he had to take that level of review each

19 time because over the last several years he's had as

20 many as \$2 million worth of credits, which, of course.

21 would not have gone to COI unless COI uncovered the 22 errors and brought them to Embarq's attention; so it

really is an explanation of his answer and I think it's 23

24 a proper explanation.

EXAMINER LYNN: We'll grant the motion to

21

2

3

4

5

6

7

18

19

20

21

22

23

24

25

2

3

5

6

16

17

19

roughly \$400,000 per month?

A. Pretty much, yeah. It's going down, but it's ---

Q. And if most bills aren't paid in less than 30 days, I conclude that at any particular time there is at least roughly \$400,000 outstanding. Is that a fair conclusion?

8 MS. BLOOMFIELD: Your Honor, I have -- I'd 9 like to make it clear what the 30 days refers to. Mr. 10 Stewart, are you talking about 30 days from the bill date or 30 days from the time it's actually received by 11 COI? 12

13 MR. STEWART: I was referring to 30 days 14 after the invoice date, which is --

15 MS. BLOOMFIELD: The invoice date and the bill date are the same, correct, according to the 16 17 contract, the proposed ICA?

MR. STEWART: That's my belief.

MS. BLOOMFIELD: Thank you. I just think we needed that straightened out.

EXAMINER LYNN: Thank you.

MR. STEWART: You probably have forgotten the question, as probably have I.

MS. BLOOMFIELD: Sorry.

MR. STEWART: That's all right.

22

strike, if you can clear that up on redirect. Thank 1 2 you.

3 MR. STEWART: Thank you, Your Honor.

4 By Mr. Stewart:

> Q. Mr. Vogelmeier, let's say that COI makes a weekly payment today to Embarq. That payment is for services that Embarq has previously rendered to COI; is that correct?

A. Right.

10 Q. And if we assume that COI makes one of its 11 weekly payments to Embarq today, roughly how many 12 dollars then remain outstanding for services that

Embarq has already provided to COI but for which COI 13 14

has not yet paid? 15

A. Okay. Ask that question again.

MR. STEWART: Could you read that back,

17 please?

18 (Question read back.)

THE WITNESS: Could be 200,000, I guess. 19

20 By Mr. Stewart:

21 And it could be even more than that,

couldn't it? 22

23 A. I -- I don't know. I'd have to look at

24 the timing and all those issues.

Q. Embarq bills COI, I think you indicated,

1 By Mr. Stewart:

> O. I think you indicated that on average a monthly bill from Embarq to COI is roughly \$400,000?

A. Yes.

Q. So if COI typically pays more than 30 days after the invoice date, by that time another month's worth of services will have been provided, again roughly \$400,000; so my conclusion, which I'm asking you whether it's reasonable, is that at any time there is probably a minimum of \$400,000 worth of services 11 that Embarg has provided but that haven't yet been paid

12 for? 13

A. I -- I guess. I -- I don't have any 14 numbers in front of me to even look at to validate 15 that. It's a possibility.

Q. Well, the --

A. It's relative to when we receive the bill 18 and all those things.

O. Well, is there something in the logic of 20 my question that you take issue with?

A. Well, it's relative to how much the weekly 21 22 check is. Some checks are -- I've signed checks for 23 \$185,000, which would lower that amount that you're

24 talking about. So it's - you know, like I said, it's

in the two fifty, three range somewhere, maybe. It's

6 (Pages 21 to 24)

28

25

9

10

17

19

20

4

5

26

all relative to what's been paid at what period of time, that type of thing.

- Q. Would you agree with me that whenever services have been rendered and in advance of having been paid for, there is some risk that those services won't be paid for?
- A. Well, I guess to a certain extent, but you're billing a month in advance anyway, so what's the risk to something you haven't provided yet?
- Q. What portion of COI's bills from Embarq is for services they're being billed in advance as compared to those that are being billed in arrears?
- A. All the local. Usage type services are 13 billed in arrears, and the CABS bills are billed in 14 arrears; so you're probably looking at about, as I 15 remember my sheet, two eighty-five, three hundred is billed in advance, and maybe three sixty-seven the last 17 18 month, I think.
- Q. Are you saying that on the average 20 month, then, how much is billed in arrears?
 - Forty thousand.
- 22 Q. And for services billed in advance, am I right in thinking they're billed for 30 days in 23 24 advance?
- 25 Α. Yes.

1

2

3

4

5

6

7

8

9

10

11

12

19

21

6

9

16

25

1 Q. So with respect to a service that's billed 30 days in advance, if the bill for that is not paid 2 within 30 days, then the service will have been 3 provided in its entirety prior to payments having been 4 5 made?

- Α.
- 7 Q. So there again, until payment has been 8 made, there's a risk that it won't be?
 - A. Sure.
- 10 Q. In fact, these days, that's true even if you were a bank? 11
- 12 A. Well, with Embarg, I'm wondering about CenturyTel, so it goes both ways. 13
- Q. You haven't had any problems with Embarq 14 or CenturyTel paying bills, have you? 15
 - A. Embarq paying bills? Yes.
- 17 Q. Has Embarq defaulted on any bills? Are we 18 owing you any money now?
- 19 A. No, but they're outside the terms of the 20 contract.
- 21 Q. So there's always a risk that Embarq might 22 not pay either?
- 23 A. Yeah. I think that is a bigger risk than 24 me not paying Embarq.
 - Q. What's your basis for concluding that?

ıl A. Because they go outside the contract no 2 matter what they do. I don't have any leverage. I have to pay the bill every month because, as you 3 stated, they'll send me one of those nice little letters, but if they go outside of the terms of the 5 6 contract, I have no recourse except to be at the Public 7 Utilities Commission, which I've been here multiple 8 times with Embarq.

Q. You're not suggesting that Embarq has less financial ability to pay than does COI, are you?

A. No. It's just their -- what do I want to 11 say -- their mentality towards adhering to the 12 13 contracts.

- 14 Q. Please turn to Page 8. You make reference to an FCC order in Footnote 1. Have you read that 15 16 order?
 - A. Yes.
- 18 Q. When did you read it?
 - Oh, sometime during our contract A. negotiations.
 - Q. What inspired you to read that?
- 21 22 The problem I have with the fact that Embarg's allowing only 10 DS1s, and my perception of 23 24 what that rule says is that to go to a DS3, I ought to

25 average about 11 DS1s. With Embarq that's not the

case. It's 20 DS1s to get to a rate of a DS3. 2 O. You're not suggesting that the FCC ruled that the crossover point must be determined based on 3

multiplying the cost of the DS1 and seeing whether that equaled the cost of the DS3, multiplying it by 10? A. No. It's actually 11. Somewhere there

6 there's a breakpoint that it makes sense that you 7 8 would -- you would buy a DS3 versus continuing to buy 9 DS1s. 10

O. But the FCC, in your view, did not say if you multiply the DS1 rate by 11, and if that product is 11 not equal to or greater than the rate for a DS3, then the FCC rule doesn't apply? 13

14 A. No. I think they -- my interpretation of 15 what that says is that they use that as a measure to 16 see what the breakpoint would be between DS1s and 17 utilizing a DS3.

18 O. You're aware that some years back COI 19 filed bankruptcy?

- A. Oh, yeah, I'm aware of that.
- 21 Q. And Embarq was a substantial unsecured 22 creditor in that bankruptcy?
- A. Well, that's what they portrayed, yes. 23
- Did you contest Embarq's Proof of Claim in 24 25 the bankruptcy proceeding?

29

A. No. We had a proceeding going on at the PUCO at the time. We went into bankruptcy because of a

letter we received from Scott Nolan, and six months

prior to that I would argue with him and his people at

the billing group that they couldn't bill a UNE-P. He

6 said it was billed properly. He sent me a letter. I

filed Chapter 11. We went into bankruptcy. I came to

the PUCO for discussion of the overbilling of UNE-P by 8

Embarg. 9

10 Q. Embarq ended up writing off a substantial - well, let me state this another way. 11

The bankruptcy resulted in the discharge of a 12

substantial unsecured debt that COI admittedly owed to

Embarq; is that correct? 14

15 A. I never admitted to that. In fact, it

16 depends on how you consider them writing off the debt,

17 because we had a settlement in the latter part of

18 2001. They credited my account for \$1.1 million, and

19 three months kept my account at \$118,000 a month

20 because they couldn't bill the UNE-P; so it's kind of

21 relative to how you determine what's being written off

22 and for what reason.

23 Q. Well, let's back up, then. Do you recall

24 whether Embarq filed a Proof of Claim in the bankruptcy

25 case?

1

2

6

7

8

9

17

18

19

1 it. 2

3

4

5

6

7

8

9

10

11

12

14

15

17

19

O. Are you saying that COI paid Embarg in full for all services properly billed by Embarg prior to the bankruptcy?

A. Yes. We paid what we believed was undisputed amounts.

Q. Did you have any discussions with Embarq regarding the cost study that was the basis for the rates contained in the interconnection agreement, the most recent one between Embarq and COI that is now expired?

A. During the negotiation of the contract?

13 Q. Ever.

> We talked about it, yeah. Α.

Q. Who did you talk with?

16 A. Linda Cleveland.

Q. Did you talk to anybody else, Ms.

Londerholm, for example? 18

A. I think she was on one of the calls with

20 Linda Cleveland, yes.

25 error in that?

21 O. And Embarq told you, did they not, that 22 the cost study that was the basis for the rates in the 23 expired COI had an error in it?

 She told us on that call that there was an 24

30

32

1 O. Well, I don't want to limit it to any 2 particular call. At one point or another you were told 3 by Embarq that the cost study had an error in it.

MS. BLOOMFIELD: Can I get a

clarification? I think there's been several cost

6 studies. Are you talking about -- which cost study are 7 you talking about?

8

MR. STEWART: Still the one that was the 9 basis for the rates in the interconnection agreement

10 that is now expired.

11 MS. BLOOMFIELD: You mean the current ICA,

12 the old - let's call it the old and the proposed. Is

13 that -- do you mean the old one?

14 MR. STEWART: The last one that was signed

15 which is now expired.

16 MS. BLOOMFIELD: Except that it goes on.

17 It's the 2005 ICA?

18 EXAMINER AGRANOFF: It's the one that

they're currently operating under? 19

MS. BLOOMFIELD: That's what I was trying 20

21 to get to.

22 MR. STEWART: Yes.

23 MS. BLOOMFIELD: The one that they're

24 currently operating under? 25

MR. STEWART: Yes.

They did file one? Α.

3

4 Q. Do you recall roughly how much that was

5 for?

A. \$448,000.

Yes.

Q. Did Embarq - I'm sorry. Did COI dispute that Proof of Claim in the bankruptcy proceeding?

10 Q. Did the bankruptcy court rule on what

11 Embarg properly owed -- did the bankruptcy court rule on the amount that COI owed Embarq?

12 A. I don't remember that. I know there was a

13 lot of discussions between the attorneys for Embarg and 14 15 my attorney and the discussions happening at the PUCO 16 during that period of time.

Q. I take it you admit that as a result of the bankruptcy, COI ended up not paying Embarq a substantial number of dollars that it owed Embarg?

20 A. No. The only thing I'll admit to is I agreed to pay them 68,500 over 5 years. The amount 21 that Embarg said we owed I think was pretty well 22

documented that -- in the settlement agreement that 23 they didn't -- we weren't -- Embarg wasn't owed all

that money. You gotta bill it right before you're owed

35 33 1 MS. BLOOMFIELD: Which I think has a date MS. BLOOMFIELD: I don't need the answer. 1 2 of 2005. Is that the one? but I'm still not sure what the question was. MR. STEWART: I believe it is 2005. MR. STEWART: I had asked Mr. Vogelmeier 3 3 MS. BLOOMFIELD: Thank you. whether he recalled what he told the -- I think as yet 4 4 5 THE WITNESS: I don't remember that unnamed person in Dr. Ankum's group regarding any 5 errors that Embarq had told COI existed in the cost 6 conversation. I remember talking about the fact that 6 7 they had bought new software, new TELRIC software, it study that was the basis for the rates in the 2005 7 was state of the art, and that's the reason there was a interconnection agreement. The initial part of his 8 9 difference between the 2005 agreement and the new 9 answer was no, I don't recall. That was, in my view, 10 rates. 10 the complete answer to the question. By Mr. Stewart: EXAMINER LYNN: Miss Bloomfield, do you 11 11 12 Q. So are you saying you might have been told 12 have any thoughts? 13 that and don't recall or do you specifically recall 13 MS. BLOOMFIELD: I think he was explaining that you were not told that? 14 his answer "no," because he felt that it wasn't 14 A. Oh, I could have been told that and not 15 necessary to ask that question because he had been told that because Embarq did not have approved TELRIC 16 recall it, sure. 16 17 Q. Did you have any discussions with Dr. pricing, he was not obliged to look at or spend money 17 Ankum or one of his colleagues with respect to any on TELRIC pricing, basically, in a nutshell. That's --18 18 errors that Embarq mentioned to you regarding the cost 19 again, he was explaining his answer. 19 20 study that served as the basis for the rates in the 20 EXAMINER LYNN: I'll grant the motion to 21 2005 ICA? 21 strike. A. You're back to anytime or prior to filing 22 22 MR. STEWART: I-the arbitration or during negotiation or you're 23 23 EXAMINER LYNN: I'll grant the motion to 24 anytime? 24 strike. Thank you. 25 Q. Anytime. 25 MR. STEWART: Thank you, Your Honor. 36 1 A. Yes, we talked about it. By Mr. Stewart: 2 Q. Did you talk to Dr. Ankum? 2 O. When COI bills its customers, how long 3 A. I don't know that I talked to him. There 3 after the bill date are payments due? 4 was some other people from his organization on the A. Fifteen days. 4 5 phone one day. 5 EXAMINER AGRANOFF: Is that invoice date 6 or date of receipt? Q. Do you recall what you told them or him or 6 7 her? 7 THE WITNESS: It's - we factor in a 8 delivery time for mail or that type of thing, so A. (Witness shakes head.) 8 9 Q. No? You have to say, so she can it's -- if it was an invoice date, it would be 30 9 A. No. No. I don't recall what I told him. days. We have multiple invoice dates through the 10 10 My -- my whole issue with the TELRIC pricing was the 11 month, so it's -- we factor in 2 or 3 days for mail 11 fact that when we did research, there was no 12 delivery and then 15 days after that. TELRIC-approved pricing in Ohio. I came to the PUCO By Mr. Stewart: 13 13 Staff and asked them about it. They said there was no 14 14 Q. Does COI obtain security deposits from any 15 TELRIC-approved pricing in Ohio for Embarg, and so then 15 of its customers? we proceeded on from there. 16 16 Don't know that. MR. STEWART: I move to strike the entire 17 17 Q. I couldn't hear. I'm sorry. portion of the answer following -- I believe he said 18 18 I do not know of any. no, I don't recall. I didn't ask him about all that 19 Thank you. Do you recall when you 20 other stuff. 20 retained QSI Consulting to review Embarq's cost study? A. Well, roughly. I don't remember the exact 21 EXAMINER LYNN: Valerie, can you read that 21 22 back again, please, with the question? 22 date. 23 (Question and answer read back,) 23 Q. Okay. Roughly, then. 24 EXAMINER LYNN: Miss Bloomfield, do you 24 After we had one of the negotiation calls. have any thoughts on --25 And Embarq had previously urged COI to

1 review the Embarq cost study; is that true? 2 A. Yes. 3 Q. And COI had graciously declined to do so? 4 A. Again, there was no point. 5 Q. So that's a yes? 6 A. Sure. Yeah. I didn't see any any 7 reason to waste our time having somebody look at 8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 16 make its cost study available to COI? 1 A. Yes. 2 Q. Of one month's bills? 3 A. Yes. 4 Q. And are they sitting here on the table? 5 A. Yes. 6 Q. Would you just direct - 7 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you 10 get for a single month; is that correct? 11 A. Yes. 12 Q. And are they sitting here on the table? 15 A. Yes. 16 Q. Would you just direct - 17 A. It's the white boxes there that have the 18 Embarq symbol on the top. 19 Q. That represents all the billings that you 10 get for a single month; is that correct? 11 A. Yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side. 16 Q. So	39
2 A. Yes. 3 Q. And COI had graciously declined to do so? 4 A. Again, there was no point. 5 Q. So that's a yes? 6 A. Sure. Yeah. I didn't see any any 7 reason to waste our time having somebody look at 8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 2 Q. Of one month's bills? 3 A. Yes. 4 Q. And are they sitting here on the table? 6 A. Yes. 6 Q. Would you just direct — 7 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC	
2 Q. Of one month's bills? Q. And COI had graciously declined to do so? A. Again, there was no point. Q. So that's a yes? A. Sure. Yeah. I didn't see any any reason to waste our time having somebody look at something that was not approved. MR. STEWART: May I have three minutes? MR. STEWART: May I have three minutes? EXAMINER LYNN: Yes. Off the record for a few minutes. (Discussion off the record.) By Mr. Stewart: Q. Mr. Vogelmeier, do you recall roughly how many months before you retained QSI Embarq offered to 2 Q. Of one month's bills? A. Yes. Q. And are they sitting here on the table? A. It's the white boxes there that have the Embarq symbol on the top. Q. That represents all the billings that you get for a single month; is that correct? A. That's all the local bills, yes. Q. So that doesn't represent absolutely A. No. I think that's CABS and the IXC	
Q. And COI had graciously declined to do so? A. Again, there was no point. Q. So that's a yes? A. Sure. Yeah. I didn't see any any reason to waste our time having somebody look at something that was not approved. MR. STEWART: May I have three minutes? MR. STEWART: May I have three minutes? EXAMINER LYNN: Yes. Off the record for a few minutes. CDiscussion off the record.) By Mr. Stewart: Q. Mr. Vogelmeier, do you recall roughly how MR. Ves. A. Yes. Q. Would you just direct — A. It's the white boxes there that have the Embarq symbol on the top. Q. That represents all the billings that you get for a single month; is that correct? A. That's all the local bills, yes. Q. So that doesn't represent absolutely A. No. I think that's CABS and the IXC 15 side.	
4 A. Again, there was no point. 5 Q. So that's a yes? 6 A. Sure. Yeah. I didn't see any any 7 reason to waste our time having somebody look at 8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 4 Q. And are they sitting here on the table? 5 A. Yes. 6 Q. Would you just direct — 7 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
5 Q. So that's a yes? 6 A. Sure. Yeah. I didn't see any any 7 reason to waste our time having somebody look at 8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 16 A. Yes. 6 Q. Would you just direct — 7 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC	
6 A. Sure. Yeah. I didn't see any any 7 reason to waste our time having somebody look at 8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
7 reason to waste our time having somebody look at 8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 7 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you get for a single month; is that correct? 11 A. It's the white boxes there that have the 8 Embarq symbol on the top. 9 Q. That represents all the billings that you get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC	
8 something that was not approved. 9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 8 Embarq symbol on the top. 9 Q. That represents all the billings that you get for a single month; is that correct? 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC	
9 MR. STEWART: May I have three minutes? 10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
10 EXAMINER LYNN: Yes. Off the record for a 11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 10 get for a single month; is that correct? 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
11 few minutes. 12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 11 A. That's all the local bills, yes. 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
12 (Discussion off the record.) 13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 12 Q. So that doesn't represent absolutely 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
13 By Mr. Stewart: 14 Q. Mr. Vogelmeier, do you recall roughly how 15 many months before you retained QSI Embarq offered to 13 everything or not? 14 A. No. I think that's CABS and the IXC 15 side.	
Q. Mr. Vogelmeier, do you recall roughly how 14 A. No. I think that's CABS and the IXC 15 many months before you retained QSI Embarq offered to 15 side.	
15 many months before you retained QSI Embarq offered to 15 side.	
; =	
17 A. How many months before? 17 A. There's an equal amount IXC.	
18 Q. Before COI retained Dr. Ankum's group. 18 Q. So would you estimate that's about 12 to	,
MS. BLOOMFIELD: I'm sorry, between what 19 14 inches each, so it would be 28 inches worth of	
20 and what? I'm losing the question. 20 paper?	
21 EXAMINER LYNN: If you could repeat your 21 A. Uh-huh.	
22 question, Mr. Stewart. 22 Q. And you were also asked questions abo	t
23 MR. STEWART: Sure. 23 the FTP process; correct?	
24 EXAMINER LYNN: Thank you. 24 A. Yes.	
25 Q. Which is the File	
38	40
1 By Mr. Stewart: 1 A. Transfer Protocol.	
2 Q. Roughly how many months before COI 2 Q. Transfer Protocol. And what is the File	
3 retained QSI had Embarq offered to make its cost study 3 Transfer Protocol?	
4 available for COI to review? 4 A. It's basically what it says. It's a	
5 A. A month, maybe a month and a half, 5 protocol that allows you to transfer files between	
6 something like that, I think. I don't know. I 6 servers.	
7 could well, yeah. Some I don't know what the 7 Q. So you need that protocol in order to get	
8 time frame is, a month and a half, two months, 8 material from Embarg to COI and vice versa; correct	?
9 something like that maybe. 9 A. Yes. Electronically, yes.	
10 Q. That's all I have. 10 Q. Has Embarq told you that if you use that	
EXAMINER LYNN: Thank you. At this point, 11 protocol, what format they would be providing the b	ls
12 I think we'll take a break, maybe a ten-minute break or 12 in?	
13 so before we do our further examination. Thank you. 13 A. It comes in a BOS-45 format.	
14 (Recess taken.) 14 Q. Is that B-O-S, all in caps, 45?	
15 EXAMINER LYNN: Miss Bloomfield, 15 A. Yes.	
16 redirect? 16 Q. And that is a special kind of format, is	
17 MS. BLOOMFIELD: Yes, Your Honor. 17 it not?	
18 REDIRECT EXAMINATION 18 A. It's a Telcore standard for ILECs. It's	
19 By Ms. Bloomfield: 19 been around for a hundred years.	
Q. Mr. Vogelmeier, you were asked a number of 20 Q. As you indicated, you have to have special	
21 questions about the bills that you received from 21 software programs to read that; is that correct?	
22 Embarq; is that correct? 22 A. Yes.	
23 A. Yes. 23 Q. And you also indicated that in order to	
Q. And did you bring paper copies of those 24 read that, when you did your investigation, that	
25 bills with you today? 25 started with advice from Embarq to go to Telcordia,	ou

44

41

5

6

found that the prices for software in order for COI to read the BOS-45 format was on the range of between, what was it, 30 and \$150,000?

A. Yes.

1

2

3

4

5

6

7

8

9

11

25

1

2

3

4

5

6

7

8

9

10 11

12

13

14

15

16

17

18

19

20

21

22

23

Q. And then knowing that, what you did was you - you went to -- you testified that you went to Telcordia, you bought the -- part of the package, which was the layout portion of the package, and then you hired a programmer to do the rest of the software so you wouldn't have to pay the 30 to \$150,000; is that correct?

12 A. Right.

13 Q. And did you do an estimate of about how 14 much that was going to cost you if you used your 15 programmer?

16 A. What we felt it would take would be 17 something south of \$20,000, probably in the 15,000 range somewhere. 18

Q. And did you ask your programmer to begin 19 20 that process of programming so that you could accept the BOS-45 format? 21

22 A. I did that. It took me about three weeks to get the Call Record Layout from Telcordia, but once 23 24 I received that, then he started on the process.

Has it taken several months for him to get

1 adversarial proceedings.

2 Q. And then once you filed the Chapter 11, 3 did you ask for mediation of that -- of the Sprint portion of the billing dispute before the PUCO? 4

A. Yes.

And, ultimately, did you have a mediation?

7 We had several conference calls. There was a person, Becky Donahue, was here for Sprint at 8 that time. She was at the meeting, and several Staff 9 people from the PUCO. It wasn't a -- it wasn't a real

mediation, I guess. It wasn't a formal mediation. It 11

was a -- tried to discuss it before we get there. 12

13 Q. And as far as you know, there was no case 14 number assigned? It was an informal mediation process; 15 correct?

16 A. I think so.

17 EXAMINER AGRANOFF: So the record is clear, if you can just establish the nexus between 18

Sprint and Embarg? 19

MS. BLOOMFIELD: Yes. 20

21 By Ms. Bloomfield:

22 Q. Is it your understanding, Mr. Vogelmeier, 23 that Sprint is the predecessor company or the name of 24 the company before Embarg?

A. Right.

42

25

3

4

5

6

12

17

to the point where he's ready to test programs?

A. Yes. It's a little more intricate than a lot of other billing types.

Q. So, basically, in order to have the bills come more quickly and electronically, you had to make -- a customer, in order to accept the BOS-45 format, has to make a substantial investment?

A. Right.

Q. You were also asked a number of questions about bankruptcy, and I'd like to ask you questions to sort of clarify timingwise what happened. Is it the case that you filed the bankruptcy in approximately the year 2000?

A. August 23rd, 2000.

Q. And is it your view that you filed the case in part because Sprint, at the time, was claiming some large amounts from COI which COI disputed?

A. Yes.

Q. And did I understand your testimony to say that you tried to -- you went back and forth with the then person at Sprint about how -- about the dispute and the -- Sprint was adamant, so that's what impelled you to file the Chapter 11?

24 A. Yes. I think everybody at Embarq knows me. I try to do everything I can to stay away from

1 O. So if I use Sprint, I'm really talking the predecessor of Embarg? 2

A. Right I agree.

O. Okay. At the conclusion of the informal mediation was there a written settlement?

A. Yes.

7 O. And did the written settlement provide 8 that Sprint was going to credit, Sprint/Embarq was 9 going to credit COI for more than a million dollars? 10

It was 1.102, I think was the number.

11 О. Right.

> 1,102,000. Α.

13 Q. All right. Then returning to the bankruptcy part, the part that was in the bankruptcy 14 15 court at that time, was there not a settlement reached 16 in the bankruptcy as well?

> Yes. A.

18 Q. Okay. And did you have conversations with 19 your bankruptcy attorney concerning how that - the background for that settlement? 20

21 A. Weil, yeah. He was - he wasn't involved 22 specifically with the PUCO, but that was - it was all 23 intertwined, and we had conversations with our outside 24 counsel. Sprint had outside counsel handling that, 25 so -

11 (Pages 41 to 44)

48

45

4

5

6

7

8

9

20

24

25

3

4

6

7

9

18

19

Q. And was it your understanding that ultimately in the bankruptcy portion of the proceeding there was an agreement reached as to a dollar amount that COI would pay to Sprint/Embarg over a five-year period?

- A. Yes.
- 7 Q. And that dollar amount was on the order of \$68.000; correct? 8
 - A. Yes.

1

2

6

9

- 10 Q. And is it also your understanding that 11 because of the negotiated settlement, the \$68,000 was not based on a claim, a specific claim number that 13 Sprint put in, but rather they agreed on the rate, the 14 \$68,000, and then knowing what the percentage was going 15 to be, they - they backed up to a \$680,000 plus 16 number?
- 17 A. Right. It was pretty much all convoluted 18 with the hearing -- or not the hearing, the discussions 19 with the PUCO and the bankruptcy, and they worked it 20 around to make everybody warm and fuzzy.
- Q. So you would take issue with anybody who 21 22 said that originally in the bankruptcy proceeding COI 23 owed Sprint/Embarg on the order of \$680,000; is that 24 correct?
- 25 A. Oh, I – yes. I said that.

1 A. Right. I didn't see any point in spending 2 the money to disprove something that hadn't been 3 approved to begin with.

O. And are you aware that there was more than one cost study proffered to COI during the - during the entire negotiation period?

- A. Well, I don't know during the negotiation ---
 - Q. Starting go ahead.

10 I know there was two, because they sent one and then we spent money having that analyzed, and 11 12 then they decided that that really wasn't the one. 13 They sent me another one, so I had to pay to have that 14 analyzed; so I know it's been at least two.

15 Q. So if you had - the initial time that 16 they had first proffered you a cost study, had you 17 gotten a consultant at that point, you would have had 18 the consultant -- you would have spent money on the 19 consultant to look at that cost study; correct?

A. Oh, yeah.

21 Q. And then it would have been replaced by another cost study, and you would have had the 23 consultant paid to look at that; right?

A. Right.

And then for the last one, which is the Q.

46

Q. Okay. You were also asked some questions 1 about the cost studies that were -- that were proffered 3 to you by Embarq during the negotiations. Is it not 4 the case that during the - during the negotiations and 5 through the time to the present, Embarq proffered three 6 different cost studies?

7 A. I don't remember that, but they could have. We had a lot of discussions about TELRIC, and 9 like I previously testified, I didn't see that it was 10 pertinent to the conversations.

11 Q. When you were first offered the 12 opportunity to look at a cost study that was based on TELRIC pricing, what did you do?

13 14 A. They sent me a nondisclosure. That's when 15 I came to the -- well, Pam and I looked for TELRIC-approved rates at the PUCO, and we couldn't find 16 17 that; so I asked the Staff, you know, is there approved 18 rates out there, and they said no.

19 Q. The Staff told you no, that Embarg had not 20 had TELRIC-approved rates; correct?

21 A. They didn't have TELRIC-approved rates in 22 Ohio and everything is negotiated.

23 Q. Okay. So, at that point, did you conclude 24 that it was not your responsibility to disprove a cost study based on TELRIC rates?

one we're looking at now, you had the consultant for that as well; correct?

A. Right.

Q. So, currently, just so far, you have had your cost consultant look at two different cost studies; correct?

A. Right.

8 0. You had to pay for that; correct?

A. Right.

10 Q. And is it still your position that you are 11 not obliged to disprove the TELRIC cost study of 12 Embarq?

13

That's my position for sure.

14 Q. And that is because they don't have a

Commission-approved TELRIC cost study from which to 15 begin the negotiations -16

17

A. Right.

Q. - is that correct?

A. Right.

20 Q. Let's return to the bills and payments.

21 You were asked questions about being more than --

22 paying bills more than 30 days from the due date on the

23 bill. Is it not the case that the due date is printed

24 on the bill sometime before the bill is actually pushed

25 out of Embarq to the customer?

52

A. There is a predetermined bill date printed on the bill for that cycle.

Q. But when you -- and you discussed, for example, that currently, although in the past - I guess it's -- well, let me ask you. In the past would Embarq send you more than one CD each month?

7 A. Well, in the past it was all paper. In the past it was all paper, and then we moved to --8

O. CD?

1

2

3

4

5

6

9

10

25

1

2

3

4

5

6

7

8

9

10

24

25

A. Get the CD.

11 Q. And then when the CDs were first sent, when they began sending the CDs to you, in the 12 13 beginning was there more than one CD that Embarq sent to you each month? 14 15

I believe there was two.

16 Q. Was there ever a case when they sent the 17 first CD, that you couldn't read it, so you had to ask 18 for a second CD?

A. It came in a format that we couldn't open, 19 so they redid the CD and put it into a different 20

format, a PDF format, and today they send them that way 21

now. For a period of time they were sending both, and 22

we couldn't read the one, but they kept sending it, and 23 24

then they would send the PDF format, which we used.

Q. So that would be why Embarq would say that

50

49

5

6

7

8

9

10

12

19

6

7

8

over a five-month period you received sixteen CDs, but really - I mean, because there was more than one sent each month: correct?

A. For many months there was more than one sent, yeah.

Q. So after you couldn't read the first one -- did this happen more than once that you would get a CD, you couldn't read it, so you had to ask for the CD to be given to you again in PDF form so you could read it?

11 A. Right. 12

Q. Did that happen more than one month?

13 A. Yes.

14 Q. Approximately how many months did that 15 happen?

16 A. Three or four. I wasn't totally involved 17 in -- I got the one I could read.

18 O. So is this the correct sequence of events. 19 you would get -- finally you would get a CD, and you 20 testified that recently, for example, this past month, 21 you got the CD on the -- last month you said you got --22 you received the CD on the 19th?

23 A. Yes.

Was that the 19th of September or October?

That was September.

1 O. Okay. So you received it on - September, 2 and is it not -- isn't it the case from your testimony that the bill date - well, first of all, the bill date 3 4 is on the invoice; correct?

A. Right.

Q. And according to your contract, the due date that you are supposed to pay is computed from the bill date?

A. Right.

And you have 30 days from that bill date?

11 Right.

Q. So even if you don't -- and if the bill 13 date is on the 3rd, as you -- and you testified that some of the bills were dated the 3rd, that was the bill 14 date, but you received them on the 18th or the 19th. 15 Then already, by the time you received them, 16 days of 17 your -- of the 30-day due date was already past; 18 correct?

A. Right, yeah.

20 You were asked a bunch of questions about 21 whether or not you paid within the 30 days of the bill date; correct? 22

23 A. Right.

24 O. Okay. If we computed the time from the --25 if we computed the 30 days from the time that you

actually received the invoices, would there have been many or any times that you would have -- that Embarq -or, excuse me, that COI would have paid -- would have 3 taken longer than 30 days to actually pay the bill that 4 5 they actually got?

A. Yeah. I think there still would have been times where there would have been more than 30 days, but it wouldn't have been many days, I wouldn't think.

9 It's -- well --

10 O. But it would have been less than - it would have been less than the time if -- you would have 11 paid more times within 30 days if the 30 days were computed from the time you actually received the bill; 13

14 is that correct?

15 A. Right.

16 Q. Okay.

A. We've had this conversation with them 17 probably for eight years. 18

Q. You were asked questions about whether or 19 20 not Embarq was - owed COI money; right?

A. Yes.

22 Q. And you testified that yes, they did, and 23 they were late, also; correct?

A. That's right.

25 And is it not the case that you've had

21

56

53

several settlements, say, since 2000 through 2008 that settled late - or settled payments that Embarq owed to COI, but that had not been paid timely?

- I've had one, yes.
- Q. And during the -- in addition to the \$1.1 million that was agreed to in the mediation settlement before the PUCO, from that time to this time. approximately how much credit in -- how much credit has Embarq agreed to pay COI for erroneous bills?
- 10 A. 900,000, roughly.
- 11 Q. So altogether --
 - A. 260,000 came in June of '06.
- 13 Q. So altogether, during this period that 14 we're talking about from 2000 to the present, there 15 have been, in terms of errors and so forth that 16 ultimately COI prevailed on, there's been on the order 17 of \$2 million worth of credits that have been finally
- 18 agreed to by Embarq to be credited to COI; is that 19 correct?
- 20

4

5

6

9

12

- A. Yes.
- 21 MS. BLOOMFIELD: I don't have any questions, Your Honor. No further questions.
- 23 EXAMINER LYNN: Thank you.
- 24 Mr. Stewart, further questions?
- 25 MR. STEWART: Yes. Thank you, Your

A. Right. 1

2

6

7

8

15

16

17

18

19

20

21

22

23

25

1

2

6

7

13

14

- Q. And --
- 3 A. Let me back up. You can open it, but it's 4 just a mass of records. You can't -- you don't -- you 5 don't know what it means.
 - Q. And what was the charge from Telcordia to be able to understand what the bill said?
- Telcordia wouldn't provide that. They do not provide the software they told me. They provided 9 10 the Call Record Layout, and they gave me names of a couple of companies that have developed software that 11 12 would sell that software to me, and that would be in the range of 30 to \$150,000 when I checked with those 13 companies. 14
 - Q. And are you saying that that software is necessary in order to merely read the bill?
 - That's what they told me, yeah.
 - Q. So without buying special software, your testimony is that the FTP bill can be open, but after you open it, you're unable to interpret it?
 - That would be correct, yeah.
- Q. When COI filed bankruptcy, how many creditors besides Embarq were there listed in the 24 bankruptcy petition?
 - A. Oh, I don't know, 40, 50 maybe.

54

1 Honor.

2

4

5

RECROSS-EXAMINATION

- 3 By Mr. Stewart:
 - Q. Mr. Vogelmeier, you testified regarding this FTP format and your conversations with Telcordia.
- 6 When I was cross-examining you, I understood that what
- 7 Telcordia was going to charge you a lot of money for
- was software that would enable you to analyze the FTP
- bill as opposed to something that would just enable you
- 10 to read it. Did I understand you correctly?
- A. No. The only thing Telcordia would supply 11 12 was the Call Record Layout.
- 13 Q. Let me back up, then. When you get the 14 FTP bill, what do you need in order to be able to read 15 it?
- 16 A. We need software to be able to read the BOS-45 layout. 17
- Q. What is the BOS-45 layout? 18
- 19 A. That's what Telcordia said these records
- 20 are being sent in. It's a protocol -- or a record
- 21 layout or a billing format that ILECs have sent between
- 22 themselves for years.
- 23 O. So are you saying that without purchasing 24 software from Telcordia, COI would not be able to open
- 25 and read the FTP bill?

Q. Did all those other creditors get paid in full?

- 3 A. No. You're not allowed to do that. I 4 wanted to do that, but there was an issue with the
 - Embarq side of it, so --
 - Q. Are you claiming that Embarq somehow prevented you from paying other creditors?
- A. No. You have to treat all creditors
- 9 equally, and because of the PUCO proceeding and credits
- going on and the filings, Proof of Claim filings by 10
- Embarg, it was real tough to tell somebody that we owed 11
- 12 them \$35 that we couldn't pay them in full.
 - Q. So the creditors get about ten cents on the dollar?
- 15 Pretty much, the ones that were there.
- 16 There was a lot of creditors that weren't even
- 17 included. We didn't owe them anything.
- 18 Q. Was it your understanding that if your negotiations with Embarq were unsuccessful and you went 19 to arbitration with Embarq, didn't you expect Embarq to
- 21 introduce a TELRIC cost study?
- 22 A. Well, actually, that -- that's where we
- 23 were in the negotiation process. I mean, that's --
- 24 that's where -- they were going to introduce a TELRIC
- study, and, you know, I'm -- I'm trying to understand

60

57

2

3

4

17

1 why at this point in time, but --

- Q. You understand that in the arbitration the Commission would be setting interim rates based on the best available evidence?
 - A. Sure.

2

3

4

5

6

7

8

25

1

2

3

4

5

6

7

8

9

10

11

13

14

25

- Q. Did you have any reason to believe that Embarq would not submit a TELRIC cost study and argue that's the best available evidence?
- 9 A. Oh, no. That's what they said they were 10 going to do.
- 11 Q. Your counsel asked you to identify a big stack of paper representing one month's bills. When 12 your employees review the Embarq bills, do they look at 13 14 the CD or the paper?
- 15 A. Today they're looking at the CD because we don't receive that paper, I don't believe, of a local 16 17 bill. We've been changing our profile to get where we 18 need to be, and the discussion we're having over FTP was discussed in a mediation call, and I pretty much 19 20 thought we knew where we were going here, but -
- 21 Q. Is it your testimony that once your people 22 get this software developed to analyze the FTP bill, 23 that will enable COI to review the bills for accuracy 24 more quickly?
 - A. Well, that's generally what their

1 O. On September 3 of '08.

- We get it on CD right now, today.
- O. So are you saying COI doesn't receive paper anymore at all?
- A. CABS bills come on paper. We are also 5 getting CABS -- CABS and usage are coming on paper. 6 7 CABS and usage are being sent on an FTP basis. The

local bills aren't being sent that way today because I 8

- have to change my profile, and so we're getting CABS 9
- and usage paper and well, actually, we're getting
- CABS, usage on paper, CD, and FTP. 11 12
- Q. The invoice dated September 3, '08, to 13 which you refer, what was that invoice for?
- A. It's a local bill. It's either resale 14 UNE-P or UNE. 15

16 (Discussion off the record.)

THE WITNESS: UNE-P or UNE, U-N-E,

Unbundled Network Elements, and UNE-P is Unbundled 18

Network Elements Platform. 19

20 By Mr. Stewart:

- 21 O. In what format did you receive the bill with the September 3, 2008, invoice date? 22
- A. CD. 23
- 24 So the only medium on which you received О.

25 that September 3, '08, bill was the CD that you

58

conclusion was the whole conversation, yeah,

- Q. That's your hope and belief right now?
- A. I'm hoping I can send disputes within two hours of receiving bills.
- O. Are you also hoping to be able to pay the bills within 30 days of the invoice date?
- A. That was the -- well, we have an adjusted time period in there, but that was -- I'm told I'm not supposed to talk about the mediation, so --
- O. Now, on redirect you were asked regarding a situation in September of this year where an invoice date was September 3 or 4, I believe, but the actual receipt of the CD was September 18th. Do I have that right?
- 15 A. On that CD we have invoice cycles that are the 3rd of the month and the 8th of the month. Now, 16 they consolidated some of them. There's some in 17 between, and I think we had some dates past the 8th. 18 but they consolidated a bunch of them into the 8th, and 19 20 I think they left one bill on the 3rd, if I remember 21 what they told me is correct, yes.
- 22 O. For the invoice dated September 3, when, 23 if ever, did COI receive the paper copy of that 24 invoice?
 - In the past or this month?

received about September 18?

- 2 A. Right. You've got to put this in context. We have had multiple conversations over the 3 last five months about doing away with the paper, we're 5 trying to make Embarg more efficient and cost effective
- here, so we're getting rid of the paper and getting to 6 CDs or FTP, and so a lot of the paper has gone away,
- but not all of the paper has gone away. We're moving 8 9
 - to try to get everything to FTP, is the bottom line.
- 10 O. Historically, and if you want to answer this differently based on the different types of 11 12 services, that's fine, what's the average number of days between an invoice date and the date that you 13 receive either a paper or CD bill? 14
- 15 A. It's basically been about the same, 13 to 16 15 days after the first of the month. Most of the billing is on the 3rd, so on the 15th, 13th, the 15th,
- 18 and the CDs are coming the 15th to the 18th, something
- like that. Last month was kind of strange. I don't 20 know why it was so late last month. So the paper and
- 21 the CD are basically coming on the same same time
- 22 frame. You'd think the CD, once they ran the program.
- 23 the CD could be developed and shot out, but I don't 24 know what they have to do to get to the CD process.
- 25 Q. Had you stated previously that the time

15 (Pages 57 to 60)

61 63 between the invoice date and the date upon which COI bill review processes? 2 received a bill was four to five days? A. Yes. 3 A. Just now or some other time? 3 What have you been able to learn in terms 4 Q. Anytime. Not today. of how they do it which might be an improvement over 4 5 A. No. We - again, there was a prior how COI does it? discussion about the FTP, and we talked about once that 6 6 A. Well, most of them are moving to an 7 was established, it would be four or five days. 7 FTP-type process. 8 (Discussion off the record.) EXAMINER LYNN: Mr. Stewart, that would be 8 9 By Mr. Stewart: 9 CLEC as in Competitive Local Exchange Carrier, for the 10 Q. I think you testified that you've been 10 reporter? having conversations with Embarq for a number of years MR. STEWART: Yes. Thank you, Your 11 11 regarding their billing processes? 12 12 Honor. That's correct. I have no further questions. A. (Witness nods head.) 13 13 MS. BLOOMFIELD: Your Honor, I just have a Q. When did Embarq propose to you the FTP 14 14 clarification question here. 15 15 electronic billing? REDIRECT EXAMINATION We started talking about it, I don't know, 16 16 By Ms. Bloomfield: 17 either during the negotiation or during one of those 17 Q. Mr. Vogelmeier, we've been talking discussions after the negotiations. 18 about - is it your understanding that FTP or the File 18 Q. Spring of this year sound right? 19 19 Transfer Protocol is really a pipe between the server of COI and the server of Embarq; correct? 20 A. Yeah. 20 21 21 Q. Now, I think you said that over maybe the A. Right. It's an IP tunnel. last ten years you've received about \$2 million worth 22 22 Q. Right. So the pipe, the FTP, would not have to be used exclusively for BOS-45 protocol, of credits from Embara for bills? 23 23 24 A. Right. 24 correct, or format; right? 25 We have companies that send PDF files FTP. 25 0. And I think you've also testified that on 62 64 a monthly basis Embarg bills COI \$400,000? 1 But currently do you have a pipe in place? 2 A. Yeah, and in the past it's been higher, 2 A. Yes. 3 but it's -- totally for CABS and everything, it's about 3 Q. Okay. In the past have you asked Embarq 4 400. 4 to send you PDF versions of the bills through the FTP? 5 5 Yeah. I asked that initially, yeah. Q. So, historically, would an approximate 6 Q. And currently has Embarq told you the only yearly average of billing from Embarq to COI be in the 6 7 neighborhood of 5 to 6 million? 7 thing they would send through this pipe is the BOS-45 8 A. I think it would be closer to 4 1/2 or 5, 8 format? 9 but -- 400,000 a month gets you to 4.8. 9 A. Right. That's what they said. 10 Q. Well, the reason I used a higher number O. So, theoretically, you could have gotten 10 was I think you said that in the past it was more than everything you got on your CDs that took so long, you 11 11 12 400,000 a month. could have gotten those on the FTP; correct? That's A. I think it was about 750,000. The bill 13 the pipe? 13 14 has dropped about \$75,000 a month since June of '06. 14 A. Yeah. And how long has your FTP been in place? 15 Q. Okay. So during those years when the 15 16 monthly billing was 750,000, the annual billing --16 A. Oh, I don't know. Probably two months, something like that, by the time we got through the 17 A. No. The yearly amount was \$750,000 17 testing and making sure the pipe worked and all those 18 higher. The monthly never got to 750. It was 440, 18 19 kind of things. 19 450, whatever it worked out, something, Q. So a fair approximation would be \$5 20 Q. And it is your testimony that while you 20 21 21 requested PDF format to go through that pipe, they million a year? 22 wouldn't give it to you? 22 A. Right. 23 Q. Over 10 years, that's \$50 million? 23 A. I suggested that if they were in a hurry 24 for me to get my bill, that would be an alternative. 24 A. Right. Thank you. No further questions. 25 Have you discussed with other CLECs their 25

65 1 EXAMINER LYNN: We'll take questions from 2 the Panel. Miss Russell, do you have any questions for the witness? 3 4 **EXAMINATION** 5 By Ms. Russell: 6 Q. Mr. Vogelmeier, I'm going to go to the 7 issues list just to get some questions out of the way 8 that you probably have an answer to for me. A. Okay. 9 10 Q. I'm going to Issue 8, talking about the definition of DS1. 11 12 A. Okav. 13 MS. BLOOMFIELD: Your Honor, may I give 14 him an issues list? I'm not sure he's got it. 15 MS. RUSSELL: Sure. 16 MS. BLOOMFIELD: Are you looking at the 17 one from the 28th, the May 28th issues list? 18 MS. RUSSELL: We have the 28th issues 19 list. 20 MS. BLOOMFIELD: That's the one I have. I want to make sure we're looking at the same one. 21 22 (Discussion off the record.) 23 EXAMINER LYNN: We have a May 30th. Mr. 24 Vogelmeier, on the bottom of your sheet does it say May 28 or May 30th?

67 record is clear, what you're asking the witness 1 questions about is contained in the issues list that 2 was included as part of the arbitration packet that was 4 filed with the Commission? 5 MS, RUSSELL: Correct. 6 EXAMINER AGRANOFF: Okay. 7 By Ms. Russell: O. Okay. Let's move - I'm going to ask you 8 a few questions about line conditioning. 9 10 A. Okay. 11 Q. Is COI aware that the FCC has held that an 12 ILEC, or Incumbent Local Exchange Carrier, can recover the cost of line conditioning from the 13 telecommunication carrier requesting the line 14 15 conditioning? I've been told that, yes. 16 17 O. Are you aware that on the -- in the 2005 18 agreement that you're currently working out of that there is a charge for line conditioning on that price 20 list? 21 A. Yes. 22 Q. Has COI ever been charged a line 23 conditioning charge?

66

24

2

3

7

8

9

10

THE WITNESS: It says June 23rd -- oh, it 1 2 has May 28th on the top. 3

EXAMINER LYNN: On the top, okay. I think we're all looking at the same thing, then.

5 MS. BLOOMFIELD: Yes, I think that's when б it was printed.

EXAMINER LYNN: It says "last updated." MS. BLOOMFIELD: Let me look on his and see if that's got the same thing.

(Discussion off the record.)

11 By Ms. Russell:

4

7

8

9

10

15

16

17

18

19

25

- 12 Q. I'm going to ask you about Issue 1 and Issue 8 together. They're both definitions of DS1. 13 14
 - A. Okav.
 - Q. Would you be opposed to taking the definition out of Section 45.61 which is Issue 8, taking that definition out of that section since it's already in Issue 1 in the definitions section of the agreement?
- 20 A. I'd have to look at it based upon the 21 entire -- I'm not -- right today I don't know for sure what's all contained in that section, but -- I can sure 22 23 look at that.
- 24 Q. Okay.

EXAMINER AGRANOFF: Miss Russell, so the

ADSL circuit.

O. Do you know how much COI was charged? A. I think we're in the range of right now 22 to \$25,000. We're charged to have all the load coils

which have to come off, but all the bridge taps, they 5 take all the bridge taps off of the circuit for a DS1. 6

A. It started in October of '07. Prior to

25 that there was no conditioning charges for DS1s, only

O. Okay. What is COI's position on line conditioning assuming from this hearing that we find that Embarq's proposed rates do not include line conditioning?

A. Well, I guess my struggle here is that 11 we've gone so many years that the interpretation of the 12

contract was one way and today it changed. So the 13 arguments in the -- if you read those sections of the 14

15 DS1, sections of the -- the contract is not specific to

16 circuits that are under 18,000 feet. It is very

specific to circuits over 18,000 feet, so my -- my 17 original contention is that in the pricing that they're 18

charging and the installation they're charging for a 19

20 DS1, that the conditioning is included.

21 Q. Okay. If it's found that the condition is not included, what will COI's position be then with 22 regard to the charge for line conditioning? 23

A. Well, we've had multiple conversations 25 about the fact that they delivered the T1s on HDSL

71 69 technology, and that technology was developed for need to be removed to make a line DSL capable? ILECs, so they wouldn't have to take bridge taps off of 2 (Discussion off the record.) 3 all the circuits out there to provide a DS1. So, you 3 THE WITNESS: Was there a question there I know, along with the fact that I think they're already 4 can answer? 5 billing me for the conditioning part of it, they're 5 By Ms. Russell: 6 also using HDSL technology, which they're delivering 6 Q. Does COI believe - I think you answered 7 that T1 and they don't have to totally condition it. it before. You said you don't believe that all bridge 7 8 There might be times they do -- or there might be times taps need to be removed to make a line DSL capable? 8 9 they might have to. There's a lot of times, based on 9 A. Right. We checked with the manufacturer. 10 the information that I've received, that it's not 10 Embarq's using that manufacturer. So, you know, it's required, but I'm still billed for it, and I have no pretty common knowledge at this point in time. 11 11 way to validate whether they do the job or not. So 12 O. Has COI ever ordered loop make-up 12 13 that's - the HDSL technology is - allows you to leave 13 information from Embarg? bridge taps on based upon the number of feet from the 14 A. We're required to do a prequalification on 14 CO and the number of pairs you're using. HDSL can be the -- order a pregual, report on a circuit that we put 15 15 two-wire, four-wire. in. However, that has only been to decide whether it 16 16 17 Q. So based on the length of the line, if it 17 is -- we want to accept the charges or not, when we're talking about DS1 through Embarq. was over 18,000 feet, would COI be opposed to paying a 18 18 line conditioning charge as compared to being under 19 O. Was COI charged for that loop make-up 19 20 18,000 feet? 20 information? 21 21 A. Don't know about that. If it was, it A. Well, the way I read the agreement, it's not specific. It doesn't say anything about line 22 wasn't enough for me to worry about, considering the 22 conditioning was anywhere from \$100 to \$1,000 at times. conditioning under 18,000 feet. It does say -- it is 23 23 specific over 18,000. We don't put in -- I would say 24 O. Thank you. I have no further questions. 24 there's one percent of the circuits we put in that are 25 EXAMINER LYNN: Miss Green. 72 70 MS. GREEN: Yes. 1 over 18,000 feet. 1 2 2 **EXAMINATION** O. Okay. Do you disagree with the rates that you're being charged for line conditioning? 3 3 By Ms. Green: A. Well, I don't know about the rate. I Q. Mr. Vogelmeier, does COI purchase 4 4 5 can't validate it. The prequalification that I get 5 four-wire loops from Embarq? A. Well -- UNE loops or UNE-P loops? 6 back from Embarg says HDSL technology on the bottom. I 6 7 7 know that they don't have to take all the line O. Yes, four-wire ones. conditioning off. Mr. Maples, in his testimony, said 8 A. Four-wire UNE loops? 8 9 that, and so, you know, I know they don't have to do 9 Yes. 0. 10 Not today, no. that. Are they doing it to provide my circuit? I have 10 Q. Okay. Does COI purchase DS1 loops from 11 no way of validating that at all. 11 12 Q. Okay. Issue 11 proposing to strike the 12 Embarq? 13 A. Yes. word excessive out of the - let me see exactly. 13 Q. Yes. Okay. In the current "Conditioned loops are loops from which excessive 14 14 interconnection agreement that is now expired, which bridge taps" - are removed, I'm just saying you want 15 to remove the word "excessive." Are you implying that 16 bands, rate bands, does COI purchase the DS1 loops out 16

> 17 of? A. It was normally in Bands 2 and 3. O. Can you estimate a percentage of the DS1 loops that are purchased out of Bands 2 or 3? Say, for 20 example, you have 10 percent you purchase in Band 2, 20 21 percent you purchase in Band 3, just a rough estimate. 22 A. I don't know. There would be more in Band 24 2 than Band 3. Q. Okay. 25

> > (Pages 69 to 72)

18

19

23

Embarq should remove all bridge taps or that they

been billed for all the bridge taps being removed even

though it's HDSL technology. I think the change in

that language was because we know that all of them

Q. COI does not believe that all bridge taps

currently are removing all bridge taps?

don't have to be taken off.

A. I've been told that that's a policy of

20 Embarq to remove all bridge taps, and we've, in fact,

17

18

19

22

23

24

76

Band 2 is the most cost effective.

Q. In the interconnection agreement that's being proposed in this arbitration, which bands would that correspond to currently, in this new interconnection agreement? As far as in your old interconnection agreement, you purchased out of Bands 2 and 3. Would that still be Bands 2 and 3 in this current interconnection agreement that's in this arbitration?

10 A. I've had a tough time interpreting it. We started out with four bands, and now they're talking 11 about three bands, so it's -- it's -- it's always going to be Band 2, I think, because Band 1 is Cincinnati 13 Bell. Band 2 is us, and then whatever lies in those 14 other areas. 15

16 O. So, from your interpretation, it would be at least in Band 2 in the proposed interconnection 17 18 agreement; correct?

A. Yes. 19

1

2

3

4

5

6

7

8

9

1

2

18

20 Q. Your Issue No. 10 in regards to the DS1 21 transport loop cap, based off of your testimony on Pages 8 and 9, what exactly are you asking the 22 arbitration Panel to modify? 23

 Well, I think that -- that transition from 24 a DS1 to a DS3 has to be more cost effective. On the is cost effective. Historically, I've done business

with United Telephone and Sprint and then Embarq. On

the access side, break even on DS3s are 11 to 13. 3

That's just the way it always normally is. Now that

it's a CLEC issue, the cost of that fiber going between Lima and Delphos has gotten very expensive.

Q. So you're asking us to modify that cap point, then?

9 A. Right. I mean, it helps both sides,

because I'm going to find some other way to get there. 10

11 They lose the revenue and - but that's --

12 Q. Just a couple of more questions. In Miss 13 Londerholm's testimony, she states on Page 47, Line 13,

14 that COI's current interconnection agreement with Verizon, that COI pays a rate of \$160, I think it's 53 15

cents -- sorry. I've got it here. It's \$160.31, Does

17 Verizon utilize a rate band system, also?

18 A. To some extent, not as -- as extensive 19 than what Embarq does.

20 Q. Okay. So this rate that Miss Londerholm 21 quotes in her testimony, is that a correct rate?

22 A. That's the rate that's contained in that 23 interconnect agreement that we've had just as long as

24 Embarg. However, we don't use that product, and we've

25 never negotiated that rate.

74

1

8

13

15

21

73

5

6

7

8

other side - I'll give you an example. DS1 transport from Lima to Delphos is \$132. DS3 transport on the

CLEC side is \$5,200. It's about 20 T1s. Now --3 EXAMINER LYNN: You said 20 TYs? 4

5 THE WITNESS: T1s. 6

EXAMINER LYNN: T1s?

THE WITNESS: Yes. DSI and T1, I'll use that term kind of interchangeably, but the breakpoint is about 20. For me, it doesn't make sense to do that, 9 because I'm looking for an alternative carrier to do 10

that. For Embarq, they're going to lose the revenue. 11

so it kind of doesn't make sense for them, but their 12 13 pricing is kind of in their own world today, so --

By Ms. Green: 14

Q. Okay. So just for clarification, the 15 FCC's breakpoint, we'll say, is 10. More than 10 DS1, 16 a CLEC should be able to purchase a DS3? 17

A. Right.

19 Q. But you are under the belief that it should be 20 DSIs to purchase before you move over to a 21 DS3; is that correct?

22 A. Well, I put that number in there because 23 the rationale that I was being told from the Embara people was just as extreme the other direction. I think it ought to be in the 11 to 13 range that a DS3 O. Okav.

2 A. It's kind of like Cincinnati Bell not 3 negotiating the DSI rates in the current agreement. 4 They don't use it.

5 Q. Okay. So the rate that's in her 6 testimony, COI does not purchase those loops from Verizon? 7

A. Right.

9 Q. That's all the questions that I have. 10 EXAMINER LYNN: Thank you, Miss Green.

11 Mr. Agranoff, if you're ready, you can

proceed with your questions.

EXAMINATION

14 By Examiner Agranoff:

Good morning, Mr. Vogelmeier.

16 Good morning.

17 My questions are going to predominately focus on Issue 2. The first thing I just want to clarify is with respect to your customer base. Are you 19 20 dealing strictly with business customers?

A. It's about 95 percent business and 5

22 percent residential. 23 Q. But the billing issue that we've been discussing this morning is inclusive of both the

residential as well as the business customer base?

80

A. Oh, sure. There's some of the residential 1 2 that fall in that category, too. 3

- Q. Earlier, I think it was with respect to questions that Mr. Stewart had asked, you were talking about billing in arrears versus billing in advance?
 - A. Yes.

4

5

6

7

8

9

16

17

18

21

22

5

6

7

8

9

10

11

12

25

- Q. Can you just clarify for me again what category of services are being billed in advance versus those that are being billed in arrears?
- 10 A. Any usage-based billing is billed in arrears, and local line costs, features, all those 11 kinds of things are billed in advance. 12
- 13 Q. And if I understand your testimony with respect to the issue of billing, COI is advocating 14 status quo? 15
 - A. Yes, uh-huh.
 - Q. Now, I was a little confused after reading your testimony that you prefiled in this case and then listening to your answers that you gave this morning. If I read correctly, in your prefiled testimony you discussed the fact that COI receives 10 bills from Embarq on a monthly basis?
- A. There's close to 14 invoices that come on 23 the CDs or -- there's -- in that box over there, one of 24 the boxes, there's multiple invoices in that box.

1 Q. Okay. But when you say you receive 2 multiple invoices, you don't receive 10 separate bills, 3 though, on 10 separate days? 4

A. No. They used to be, like, four different days, and there would be multiple bills come on that billing date. They've consolidated this in the last three months, for whatever reason they were doing it.

Q. And your prefiled testimony was premised off of what was being done previously or what was done subsequent to the change that you're discussing?

What we've done previously.

Q. Okay.

A. We're still in that process, and they're 13 moving things around; so, you know, it's tough to 14 15 figure out for sure what it's going to end up, but -

16 Q. Can you turn to Page 3 of your prefiled testimony? Are you there? 17

A. Yes.

18 19 Q. If you go to Line 7, the middle of the line where you discuss, "Each month Embarg renders to 20 COI ten bills" --21

22 EXAMINER LYNN: Are you there?

23 THE WITNESS: On Line 7?

24 By Examiner Agranoff:

Q. It begins on Line 7, in the middle.

1 A. Page 3?

77

2

3

4

5

6

9

10

Page 3.

"Some background for our position" -

MR. STEWART: The next sentence.

THE WITNESS: Each month Embarg renders

7 ten COI bills?

8 By Examiner Agranoff:

Q. Correct.

Part of seven, most of eight. Okay.

11 What I'm trying to do is somehow reconcile 12 what your prefiled testimony says and give context to 13 that somehow in relationship to what is actually occurring today. Is this - was this written based on 15 what was happening or is this based on what is 16 happening?

17 A. Well, we've been in a transition, so when this was written, it was based upon what had happened 18 19 and what was -- what was going on at that point in 20 time. We've been moving to -- and they've been moving 21 billing dates around. I think the last month was the 22 first month that we had just to January 3rd and they -not January. A 3rd bill date and an 8th of the month 23

24 bill date. I think last month was the first month they finally moved all that around to get there. 25

1 Q. So today, currently, if you were to 2 explain in your testimony as to what Embarq renders to

13

14

15

78

3 COI, it would be two bills? A. Well, on a CD there's -- they have 4

5 multiple invoices, one box of bills, so there's still -- there's still the same bands, billing account 6

7 numbers. They've just changed the bill date they're

due. So we still have the same amount of billing

account numbers, but they've moved around the date that

they print them and send them out, so we're still 10

11 getting the same amount of invoices or billing account 12 numbers.

Q. So you're still getting ten?

Roughly, yeah.

Q. But you're getting them on two CDs?

16 A. Well, today -- last month we got them on

one CD, so we're getting there. We're getting 17

consolidated, but --18

19 Q. And these ten bills, can you explain the manner in which they are configured, based on time 20 21. period, customers?

22 A. Well, there's three distinct local bills. 23 There's a UNE-P bill. There's a resale bill, and

there's a UNE bill, but there's more bills that they've

put in other bands for some reason. I don't -- I don't

84

81

8

9

10

11

12

know the logic of why we have bands that -- and I have a sheet that pretty much shows all that. The primary 2 bills are UNE-P, resale, and UNE, but there must be 3

seven or eight other bills that are smaller that come 4 that are on different bands. I don't know why -- I 5

think the resale, they put some of the resale on 6

another band because they had too many to go on and so they start another band. I don't know the logic of why we get little pieces and parts on other bands. We just

try to keep track of them. 10

7

8

9

11

12

13

14

15

16

17

18

19

20

1 2

3

4

5

б

7

8

9

10

11

12

13

14

15

16

Q. Now, you indicated that you are currently engaged in the testing for the electronic billing?

A. Right. I requested a test file last week, and Pam Zeigler said that she talked to her people and they'd be sending me a test file this week.

- Okay. And you indicated that the electronic billing was going to accelerate the time frame or shorten the time frame from the invoice date to the receipt date?
- A. Right.
- 21 Q. And if I heard you correctly, I think you said that would bring it down to approximately a 22 23 five-day interval?
- 24 A. That's what Embarq has stated is kind of the outside date. It ought to be only five days or

A. For the most part, we pay all the bills. 1 2 We get them back as credits. Now, with the exception

3 of the conditioning, we haven't done that. But with

the exception of the period of time the bankruptcy when 4 the bill was so dramatic, that's -- June of '06, we 5

disputed the bill. We got roughly \$300,000 in credits, 6 7

because we went ahead and paid the bill.

Q. Would COI be agreeable to utilizing that exact type of an approach to paying the bills in their entirety on an ongoing basis with the expectation that you would receive credits for those issues that you raise as being possible errors?

A. It becomes an economic question. If you 13 14 get a bill for \$177,000 for a resale bill and \$50,000 15 of it's wrong, I'm not going to pay the \$50,000. If you get a bill for \$177,000 and you got \$4,000 wrong, 17 I'll pay it and get the credit back so I don't have to have a conversation; so it becomes an economic thing, 18 you know, and for the most part, we've always gotten 19 credits for the billing, billing issues. Now, like I 20 said, we haven't paid some of the conditioning charges, 21 because I think that is --

22 23 Q. But that's more of a philosophical issue 24 rather than a billing error issue?

Well, it appears to be, but the testimony

82

25

2

3

4

16

17

less to get that, is my understanding, so --

Q. And that is in comparison to what is currently occurring, which, if I understood your testimony correctly, is approximately a 15-day interval?

A. Right.

Q. Is COI committed to using the electronic billing assuming the technical testing was successful?

A. Oh, sure. I've -- in another discussion I think I agreed to that.

Q. Can you give me some sense on a percentage basis what percentage of the bills that you're receiving you have found discrepancies in that have required remediation from Embarg?

A. Required mediation?

O. Remediation.

A. Remediation. Well, we send disputes every 17 month. June, June '06, one of the vice-presidents at 18 19 Embarq got involved in it. He actually, from what he told me, had somebody go through and check every item 20 on all of our bills, and from that point the problems 21 haven't been as dramatic. 22

23 Q. Okay. But can you give me some sense of what percentage of a bill you had within the last month 24 25 that you didn't pay?

on their side kind of backs up my philosophical point of view, so --

Q. What other ILECs does COI deal with?

A. AT&T, Verizon, a ton of the little ILECs. I mean, most of that is on the IXC side. Like I said,

5 we started doing business with United Telephone in 6

7 somewhere around late '91 or early '92. So there's all

8 kinds of companies out there that from the

9 Interexchange Carrier side we do business with. We

have three negotiated agreements, one with Verizon, one 10

with Embarg, and one with -- now I think it's --11

12 Ameritech is on the agreement, but it's AT&T.

13 Q. And what type of billing arrangements do you have with them with respect to the issue of bill 14 15 payment?

A. Same thing.

Same parameters?

18 Uh-huh. Yeah, we haven't -- we've had the 19 discussion with Embarq for years, but we've never had 20 the real issue until the last -- this contract came up. Everybody understood the time frames and everybody 21

22 worked within it, and it didn't seem to be a big issue. 23 Q. You had some discussion with Mr. Stewart

24 with respect to Embarq's payments to COI. To your knowledge, that is not a matter currently before the

88

85

Commission in this proceeding?

A. No. We resolved that. We have a settlement agreement for that.

O. That's all I have.

EXAMINER LYNN: Thank you, Mr. Agranoff. **EXAMINATION**

By Examiner Lynn:

2

3

4

5

6

7

8

9

11

4

6

7

25

- O. Mr. Vogelmeier, I'll have some questions, and then we'll be able to wrap things up and you can 10 actually take a seat somewhere else.
 - A. Okay.
- 12 O. I'll be focusing on the issues list. 13 indicating Issue 7 about the security deposits and your testimony concerning those. On Page 5 of your 14 15 testimony, and it's Line 10, you're mentioning that COI has made what you call "steady substantial weekly 17 payments" to Embarq. Is it typically the case that COI 18 is making some sort of payments weekly? 19
 - A. For the most part, yes.
- O. Okay. And when you do so, are you how 20 21 often are you paying a bill in part because you're disputing part of it versus how often are you able to 22 23 pay it in full?
- 24 A. Well, like I said, the only thing that I 25 know lately that we have not paid are the conditioning

- the bankruptcy attorney, I explained the whole scenario
- to him, and he said, well, you know, if they're not
- going to talk to you, they're not going to hold off
- until they look at the bill, see if it's right, then
- 5 that's you're only choice. Then you can use your
- regulatory past to work on the billing issues and the 6
- 7 bankruptcy helps that process.
- 8 O. All right. Thank you. Let's see. Page 7 9 of your testimony, this would be on Lines 19 and 20,
- you stated that Embarg -- you had indicated on Lines 19 11 and 20, "Embarg withheld payment of invoices from COI
- 12 for four months without issuing a dispute of any
- 13 type." When did that occur? You didn't really
- elaborate there. 14
- 15 A. That was in March - April or - April, 16 May, or June. I think it's May of this past year, of 17 2007.
- 18 Q. I see. Thank you. Has that kind of issue 19 come up frequently with Embarq, where they wouldn't end 20 up paying invoices from COI?
- 21 A. Well, my biggest struggle was the fact 22 that -- I had two issues with that. Number one, they
- 23 didn't notify me, and, number two, when they did, they
- 24 operated outside the terms of the contract, and that
- 25
- seems to be something that happens quite regularly,

86

7

charges. We -- we normally pay the bill, send the 1

2 thing, the paperwork to the dispute people, and then we

3 get, you know, a credit basically.

Q. Thank you. If you go to Page 6 of your testimony, let's see, Line 19, 18 and 19, you were mentioning that, "There is no need for a security deposit from COI because COI has proven its financial

- 8 responsibility for ten years." Now, earlier in your testimony today and also when I was reading the
- 10 testimony of Embarq's witness, Mr. Hart, there was some
- 11 reference made to the time when COI had to file for
- 12 bankruptcy, and I was trying to reconcile your
- statement about how COI proved its financial 13 14 responsibilities for ten years with the fact that you
- 15 had to file for bankruptcy. Could you help me
- 16 reconcile those two things again?
- A. Well, in my mind the only reason I was 17 18 into bankruptcy is because they, Embarq, wouldn't
- discuss the billing issues. That's -- there was no 19
- other need to be there other than that. We were paying
- 21 everybody else. There wasn't any need to be in the 22 bankruptcy other than that.
- 23 O. The bankruptcy, then, was filed to resolve
- 24 some of those billing issues you're saying?
 - Well, when I talked to our -- when I hired

- that the contract is good for me, but it's not 2 necessarily good for them.
- 3 O. When you say "operated outside the terms 4 of the contract," can you explain what you meant by 5 that?
- 6 A. Well, in that specific instance, you're supposed to pay any undisputed charges. They said they
- were all disputed. I'm saying it can't be all
- 9 disputed. You know, there's got to be something there
- 10 that's good, so --
- Q. All right. Thank you for those comments. 11
- 12 Let's see. This would also be on Page 7 of your
- 13 testimony. I can't find the line number right now, but
- you were referring to the amount of the -- in deposits
- that Embarq was seeking from COI and you were referred 15
- 16 to the amount as "staggering" being asked for. When I
- looked at the proposed language from both parties in
- the issues list, though, you were both saying that 18
- 19 security deposits would be subject to a minimum level
- 20 of \$10.000. In other words, you were -- you were going
- 21 to require the same thing of Embarq as they were
- requiring of you. 22
- 23 A. Right.
 - O. Again, if you felt whatever Embarq was
- 25 seeking as a security deposit was unreasonable, what do

92

1

6

7

8

9

15

16

24

25

1

2

3

4

5

б

19

25

you feel is reasonable and how to approach that matter?

1 2 A. I have a real struggle with the whole security deposit concept because -- like I said, I went 3 into business November 15th of 1990. We started 4 5 service with United Telephone in late '91, early '92, no security deposit was required. It became a CLEC in 6 7 1998. No security deposit was required. We went through two and a half years of bankruptcy, came out of 8 bankruptcy, no security deposits required. That would 9 10 have been a big area that you would have thought something would have showed up. And now we're 11 12 negotiating a new contract, and all of a sudden after ten years they're at risk. I have a real struggle with 13 that, because I paid -- the only thing -- ultimately, 14 all I want them to do is send me a good bill, send it on time, and I'll pay it. That's all I've ever asked.

- 15
- 17 I've had all kinds of conversations with people. 18 That's all I want. It's a real simple process. They
- 19 can send it to me overnight. They can FTP it. I don't
- 20 care how I got it as long as I have time to review it. and I'll pay the bill. 21
- 22 Q. My impression based on what you said there 23 is that COI is proposing security deposit language 24 because -- primary because Embarq is requiring it of
 - COI? You want it to be reciprocal?

1

2

5

16

17

18

19

A. Right.

2 Q. Did I understand you correctly that you had not given much consideration to the Letter of 3 Credit or you didn't really understand what it involved 4 5 or -- what was your answer on that again?

A. It relates back to the same -- when you're looking at a deposit, and I provided -- they've provided me service for ten years. I have no other carrier that I have a Letter of Credit with, and most of the issues that we've been sitting at the PUCO over 10 the last years is because they've billed me improperly; 11 so I'm having a little struggle with me giving them 12 anything to pay on time. I do it. All they have to do is send me a bill. It's real simple. 14

O. So whether it be a security deposit, Letter of Credit, anything of that nature, you're -you would object because you feel COI has paid in a timely manner and so forth?

18 A. Right. I try to work with those people 19 any time I can to resolve whatever the issues are. 20 That's --21

22 Thank you. Believe it or not, I have no Q. 23 further questions.

A. Okay.

90

A. Well -- right. And when you take the issue in June, they were outside the terms of the

contract. They didn't send me a dispute. When they 3 did send it, they said well, we've overpaid you, so we 4

don't have to pay what's good. Well, the contract

6 doesn't say that. It says you pay what's undisputed. 7 It doesn't matter if they made a mistake and overpaid

8 me, because you don't know that's the case; so that's

9 the -- that's the point, you know, and every day

Embarg's outside the contract at some level. Monday 10

they were outside the terms of the contract, and it 11 12 doesn't seem to be an issue with them. There's no --

there's no recourse that COI has against Embarg for 13 14

being outside the terms of the contract. Live by the 15 contract. I live by it. It works out pretty well.

Q. So you're thinking that -- you referred to Embarq being outside of the contract periodically, so you're thinking, therefore, COI better require a security deposit of Embarg as well?

20 Well, sure. I wanted some compensation 21 for their -- for their inability to work within the 22 terms of the contract.

23 Q. All right. Finally, and this came up 24 earlier in some of your testimony, too, the issue about 25 the Letter of Credit.

REEXAMINATION

By Examiner Agranoff:

O. I did have one further question, Mr. Vogelmeier, getting back to the testing of the electronic billing. What is your projected timetable for having that completed?

7 A. Once I get that file this week and if the 8 software works, we're probably looking at the next 9 month bill dates as being ready to implement that. I'm -- you know how software is and developing it, so 10

11 I'm saying we're probably a month out. It won't take

12 that long to fix whatever we have to fix to be able to read it, but -- and then there's -- I got to change the 13

profile and then the Embarg people have to start 14

15 sending it that way, so I don't know whether that fits

in their time frame or not, but I'm thinking a month or 16 a month and a half at the latest we ought to be able to 17 do that. 18

Assuming that all works as expected, would you be able then to live with the expedited time frames that are being proposed by Embarq? 21

22 A. Yeah, I -- yes. We've had this 23 discussion in another venue, and we kind of already 24 said that that's where we'd be, so --

Thank you.

(Pages 89 to 92)

96

93

2

3

5

6

7

8

9

13

EXAMINER LYNN: Miss Green, you had one additional question?

MS. GREEN: Yes, a clarifying question.

REEXAMINATION

By Ms. Green:

1

2

3

4

5

6

7

8

9

25

5

13

- Q. I believe I had asked you earlier a question and you had stated that COI mostly purchased their DS1 loops from Band 2 out of Embarq.
 - A. (Witness nods head.)
- 10 Q. And I believe you had said, I'm just 11 clarifying, I believe you had said that you are unable 12 to determine which band you would still be purchasing 13 out of in their proposed interconnection agreement, you're not sure if that's still Band 2? 14
- 15 A. Well, I think it still remains Band 2. I 16 just don't know whether it's going to be Band 3 or -17 like I said, they changed it from Band 3s -- or changed 19 from a four-band schedule to a three-band schedule, and I'm -- I haven't done the research to see totally where 19 20 we will be buying those.
- 21 Q. Okay. When COI purchases DS1 loops, do you know prior to actually placing the order which band 22 23 it would fall into?
- A. Oh, yes. 24
 - Q. Okay. And in the current interconnection

effective anymore.

- Q. So the basis is the wire centers have been moved around from the current bands that were in your current interconnection agreement?
 - A. Right.
- Q. They're now in different bands in the proposed agreement?
- A. Right.
 - Q. That's all I have.

10 EXAMINER LYNN: Any need for clarifying questions from either party? Miss Bloomfield first. 11 12

MS. BLOOMFIELD: Yes.

REDIRECT EXAMINATION

14 By Ms. Bloomfield:

- 15 Q. I do have a couple clarifying questions for you. Isn't it the case, Mr. Vogelmeier, that COI 16 17 is not disputing that the FCC says that a carrier can 18 recover for conditioning, merely that it is COI's
- 19 position that Embarq has already recovered for
- 20 conditioning in certain circumstances?
- 21 A. Right, right.
- 22 And you were asked a number of questions 23 about the number of bills. I just want to clarify. Currently, today, when you got your CD, it contained
- 25 PDF files; correct?

- agreement that you have with Embarq that's now expired, are you able to explain how that rate band system was 3 structured?
- 4 A. Oh, sure.
 - Q. Could you tell me that, please?
- 6 A. Well, it's based upon wire centers, so we 7 look at the wire center, and if it's cost effective, 8 then we buy in that wire center; if it's not, you 9 don't.
- 10 Q. And as far as the rate bands, are they 11 grouped by a certain area in the current interconnection agreement that's expired or --12
 - A. It's wire centers.
- 14 Q. Are they, like, wire centers that are in a 15 certain area that are grouped together or are -
- 16 A. No, not really. It's all over the Embarq 17 area. They group certain cities based upon whatever 18 they do with their pricing or whatever, so --
- 19 Q. And how does that rate band system in the 20 current interconnection agreement differ from what's in 21 the proposed? In your mind, how is that different?
- 22 A. It brings -- well, if you have four bands, 23 four or five bands in some cases and you go to a
- 24 three-band system, it moves people around that might
- have been cost effective in the bands that aren't cost

1 A. Yes.

- And there were a number of bills, there 3 were a number of documents that were in PDF form; 4 correct?
 - A. Right.

5

6

7

9

10

17

- O. And each of the -- and a number of those, there were - these documents represented separate bills? There might have been multiple pages, but you had a number of separate bills in that PDF?
 - A. Right.
- 11 O. Is it the case that there is a separate
- 12 bill for each rate band for some services?
- 13 A. No, they're not -- they're not based on rate bands. Like I said, on the local side, there's 14
- three major bills, and about seven or eight others that 15
- 16 I'm not sure why they got started, but --
 - O. But they are listed as a separate invoice?
- 18 A. Yeah, separate band, yes.
- Q. And you were asked a question about the 19 interval, the interval that will occur once the BOS
- 21 format is pushed through from Embarq to COI on the FTP
- 22 pipe; correct?
- 23 A. Uh-huh.
 - Q. And is it the case, then -- so the
- 25 interval we're talking about, are we not, or that you

100

97

2

7

9

10

12

responded to has to do with the fact that in that case, the bill date that you will receive in BOS-45 format through the FTP pipe will be approximately five days prior to the time that you receive BOS format through the FTP pipe; correct?

- A. Ask that again.
- 7 O. There's the five-day period that we're 8 talking about?
 - A. Right.
- You are still going to have the invoices 10 in whatever format -- in the format that they are 11 received, which is the BOS-45? 12
- 13 A. Right.

1

2

4

5

б

9

24

1

2

3

4

5

6

7

8

9

10

11

12

13

- 14 Q. They are still going to be -- that bill date is still going to be five days before you actually 15 get the BOS-45 format through the File Transfer Protocol; is that correct? 17
- 18 A. Yes.
- 19 Q. So that's the five-day interval you were 20 talking about?
- 21 A. That's right. Mr. Hart and I talked about that in different conversations. 22
- 23 Q. That's it.
 - EXAMINER LYNN: All right, Mr. Stewart.
- 25 MR. STEWART: Thank you, Your Honor.

- though we can probably agree he's disputed the overall cost analysis?
- A. What I do agree is he is the cost-study 3 4 person, so he -- he appears to know what he's talking about based on other issues or other areas that he's 6 testified.
- O. Well, I'm sure he appreciates that answer. My question, though, was do you understand that Dr. Ankum has taken issue with the rate banding concept and whether certain exchanges -- or certain wire centers should be in different rate bands? He 11 hasn't done that, has he?
- A. I've read a lot of the documents 13 MS. BLOOMFIELD: Your Honor, may I insert 14 15 an objection here? Mr. Stewart is asking Mr. 16 Vogelmeier questions about what our expert has testified to. He's supposed to limit his direct -- or 17 18 cross rather to what was asked by the Panel members. I
- don't think we're even close. I don't think it's appropriate that Mr. Vogelmeier is supposed to
- 21 interpret what Dr. Ankum has said. I think this is
- totally inappropriate, and I move to strike the 22
- 23 question.

MR. STEWART: Well, if I may be heard? 24 **EXAMINER LYNN: Please.** 25

98

RECROSS-EXAMINATION

By Mr. Stewart:

- Q. Mr. Vogelmeier, is it your understanding that different rate bands are based on Embarq's cost to provide the service in the various rate bands and that's the basis for dividing them up?
 - A. Well, that's what I've been told, yeah.
- Q. Do you have any basis for thinking differently?
- A. You know, when you look at wire center density on some of the ones that are included in higher bands, I don't know how they got there, but I'm not an inside-Embarq person.
- Q. And you're not a cost-study person either; 14 15 right?
- 16 A. No, no. I just look at Lima and the mall area that's close to Lima is a \$500 loop under the 17 new - under the new category, and it's fed fiber ring 18 from the Lima main, and, you know, Lima is in a Band 2 19 area; so we have a real struggle getting there, but I 20 21 understand that fiber is just as expensive as copper, 22 so --
- Q. You don't understand that your expert, Dr. 23 24 Ankum, has taken issue with the appropriateness of putting certain areas in particular rate bands even

MR. STEWART: Mr. Vogelmeier certainly 1

testified in response to questions from the Panel or

- the Attorney Examiners taking issue with the
- appropriateness of having wire centers in certain rate
- bands, and that was within the last five minutes. So
- based on that. I think it's fair for me to ask him why 6
- 7 he takes issue with that. He said he's not a
- cost-study person. So if he doesn't take issue with it
- 9 based on something he knows, then presumably he takes
- issue with it based on something else, and the only 10
- something else that it could be, to my knowledge, is 11
- Dr. Ankum's testimony, so it's a fair area of inquiry
- to ask him about that; otherwise, then his testimony
- 13
- should come out on this whole rate band appropriateness 14 15 issue.
- 16 MS. BLOOMFIELD: May I respond, Your
- Honor? I don't think the question had to do with
- appropriateness. The questions that were asked was,
- 19 was there a change in rate bands. He answers yes.
- 20 That's about all he got. Then he was asked for some
- examples, which he did his best to recall, period. I 21
- don't think the word appropriate was mentioned anywhere 22
- 23 in his answers, and Mr. Stewart has taken those
- 24 questions and tried to put a value on them, quote,
- appropriate, an appropriate overlay, which was never

101

7

9

part of the questions and never part of his answer, and I think that -- I think he's loading the question that has nothing to do with anything that the witness was asked by the Panel members.

MR. STEWART: Well, my recollection is that Mr. Vogelmeier mentioned a wire center near Lima. the name of which I couldn't quite understand, but he was saying that he didn't understand why that wire center which is close to Lima, which is Rate Band 2, I 10 believe, should have a \$500 loop rate; so he certainly 11 was arguing that a particular wire center was in the wrong rate band.

MS. BLOOMFIELD: He said he didn't understand it.

EXAMINER AGRANOFF: Why don't we do it this way, Mr. Vogelmeier, what is the basis on which you stated your opposition to some of the rate band structure?

19 THE WITNESS: Well, from my perspective, 20 it boils down to the facilities, fiber connectivity 21 much more efficient than copper, those types of things, 22 and when you have a city - well, an entity that's 23 close to a large metropolitan area, it doesn't make 24 sense to me that that cost would now increase five

25 times. Having other discussions with Embarq over the

thing. I have no idea how he's getting the way he's

getting to it. I'm just telling you that there's

certain areas that, well, it was \$97 in the old 3

contract and now it's 500 for a loop. I can understand that if there's two houses in the area and they gotta go ten miles to get there, but --

Q. But you haven't reviewed any empirical data to support your intuitive belief that the rate banding doesn't make sense to you?

10 A. No, no. I've looked at, what, eight years of contracts, and basically the contracts have been 11 12 pretty much the same up to this one, and most of the 13 people that are testifying have been in those positions over the eight years, so you kind of wonder why the price went up now. Couldn't figure it out eight years 16 ago.

17 Q. On Page 7 you were asked some questions 18 regarding a contract between Embarq and COI, and you 19 were stating that Embarq was operating outside the contract. That contract to which you were referring is 20 a contract separate from the interconnection agreement 22 that we're arbitrating here today?

23 A. No.

24 O. It's not?

25 A. No.

102

1

2

5

6

7

14

16

17

18

19

20

104

years, they seem to move these cities around kind of

- wherever they want to move them, and it doesn't
- 3 necessarily relate to any cost factor; so that's the
- struggle I have with it. Now, if this was Huntsville,
- which probably has 600 homes and one grain elevator, I
- б could understand that, but Elida, where you have the
- Lima mall, all kinds of businesses, it doesn't seem to
- 8 fit in my mind that all of a sudden that cost goes up
- 9 five times.

10

12

15

16

4

5

6

7

8

9

12

13

14 15

16

17

18

EXAMINER AGRANOFF: Mr. Stewart.

11 By Mr. Stewart:

Q. Your answer to Mr. Agranoff suggests that your disagreement with the banding of a particular wire center is based on a lack of understanding and a feeling rather than your having reviewed any hard evidence that might actually bear on the actual costs.

Is that a fair characterization? 17

18 A. No. I think it probably is a fact that I 19 haven't reviewed any of the Embarg costing mechanism, 20 but like I said, rationally it just doesn't make sense to me. I can't imagine that copper in Elida, with the mall, is that expensive. 22

23 Q. Well -

24 A. Now, the first question you asked me was 25 about his reviewing the cost study and that kind of

Q. I thought you answered a question of Mr. Agranoff's that was --

3 A. Reciprocal comp is part of the 4 interconnection agreement.

Q. Okay. Then what was the contract that is separate from the interconnection agreement that was the basis for your answer to Mr. Agranoff that --

8 A. I have not talked about any other 9 contract.

10 Q. Well, perhaps you and I both misunderstood 11 Mr. Agranoff. I thought he asked you whether that was the agreement we're arbitrating here today, and I 12 13 understood you to say no.

A. He asked me about other issues of -- he 15 asked me about that reciprocal comp for that settlement agreement. That settlement agreement in that part of the dispute is not part of the arbitration. It is part of the ICA agreement.

O. Okav.

EXAMINER AGRANOFF: Just so that I can now 21 get some understanding, since I was the one that 22 generated the question, the question I had asked of you 23 was whether or not issues that you were alleging that Embarg is in violation of, whether or not those issues are to be addressed in the context of this proceeding.

108

105

5

6

7

Я

15

THE WITNESS: No, no. They're part of the 1 interconnection agreement, but they're not part of this 2 3 proceeding.

By Mr. Stewart: 4

5

6

7

8

9

- O. You made reference to interconnection agreements with Verizon, AT&T. Starting with Verizon, how many days after the invoice date is COI's payment due to Verizon?
 - A. I think it's 30 days.
- 10 Q. What, if any, consequence is there for 11 going beyond the 30 days with respect to Verizon?
- 12 A. Haven't been.
- 13 Q. Does their interconnection agreement give them the right to charge COI interest? 14
- A. Late charges. 15
- O. One and a half percent? 16
- A. I don't know. 17
- 18 Q. Is the same true for AT&T, 30 days beyond which COI incurs a late charge? 19
- 20 A. Could be. I haven't looked at those
- 21 specific sections of the agreement,
- Q. Has either Verizon or AT&T sought a 22 23
- security deposit?
- A. No. 24

1

4

5

6

7

8

9

10

11

15

25

25 Q. Do you know roughly what the average

merits of the dispute. I'm just asking you whether 2 that's what Embarq said.

- 3 A. Embarq said they should have been billing, that's right. 4
 - Q. Now, given your testimony about how often Embarq makes a mistake in billing, why is it so hard for you to accept they made that mistake?
 - A. It's not tough. It's not tough to
- accept. I mean, you have all the same people in place 9 doing both the jobs, and Embarq might want to look at 10 11 that.
- 12 Q. You mentioned -- again, I couldn't understand the name of one of the exchanges, but I 13 think you talked about a route from Lima to Delphos? 14
 - A. Right.
- 16 O. Then you were comparing a transport rate 17 in two different situations. Did I hear that right?
- 18 A. Lima to Delphos was the TRRO conversation 19 about transport.

20 EXAMINER AGRANOFF: Just so that the record is clear as to what the acronym TRRO stands for? 21

22 THE WITNESS: I don't know that one.

23 MR. STEWART: Let's try Triennial Review

24 Remand Order. 25

106

monthly billing is for each of them to COI?

- 2 A. No. AT&T is 40,000. Verizon is maybe a 3 hundred.
 - Q. A lot smaller than Embarq?

conditioning; is that right?

- A. Well, I'm trying to get Embarq there.
- O. I think it was Ms. Green's question, but in any event, it had to do with Embarq's billing of line conditioning under the current, most recent, now expired interconnection agreement. For a certain period of time Embarq did not bill COI for certain line
- A. Yes. 12
- 13 Q. And then Embarq started billing COI for line conditioning? 14
 - A, Right.
- 16 Q. And Embarq -- didn't Embarq tell COI that they made a mistake and failed to bill it before? 17
- A. Well, they started billing it. Then I 18
- disputed it. That -- that was -- that's what they 19 20 said, right.
- 21
- Q. So Embarq was admitting to a mistake in billing, namely failure to bill something that they 22 23 claimed they had the right to bill?
- A. It depends on how you read the contract. 24
 - Q. Well, I'm not asking you to rule on the

By Mr. Stewart:

4

5

17

- 2 Q. Okay. What two rates were you comparing, 3 if you recall, in that part of your testimony?
 - A. On the Lima/Delphos?
 - Yes. Q.
- That was a discussion about what the б A.
- breakpoint was for DS3 based upon 10 or 11 T1s. 7 8 Q. And I thought you said that one particular
- 9 transport rate was X, but another one was multiples of 10 that?
- A. Right. The DS1 transport from Lima to 11
 - Delphos is \$132 a month. The price I got for a DS3 was
- 13 \$5,200 a month on the CLEC side. Now, I can go on the
- access side and buy that same DS3 for \$2,600 a month. 14 15
 - O. From Embarg?
- 16 A. From Embarg.
 - Q. So you're saying that Embarq -
- 18 A. The cost is higher. Their cost is higher
- 19 if it comes to my fill load by way of the CLEC Tariff
- instead of the Access Tariff. 20
- 21 Q. You talked a bit about bridge taps and the 22 need for their removal. Do you recall that?
 - A. Yes.
- 24 Q. Were you saying that in a number of 25 situations it's not necessary for Embarq to remove all

112

109

1 the bridge taps?

2

3

4

5

6

7

8

9

10

11

20

2

3

4

5

6

7

8

9

10

11

24

25

- A. That's correct.
- Q. Is it your testimony that Embarq takes the position that Embarq needs to remove all the bridge taps in every situation?
- A. That's correct. I have an e-mail from my account manager. They discussed it with Judy Crowe, and Judy Crowe says they take them all off, and they even take them all off for Embarq when Embarq does a T1.

Q. I'm sorry, when --

- 12 A. When Embard does a T1 for their customer, 13 they take all the bridge taps off.
- Q. So then your argument is Embarq is removing bridge taps that it might not need to and charging COI for that activity?
- A. Right. There are two issues. They're taking off ones they don't need to, and I have no way to validate whether they do the work at all.
 - Q. Did you read Mr. Maples' testimony?
- A. I read a long time ago I read it. I read through some of it yesterday in regard to the conditioning.
- Q. Do you recall that Mr. Maples was taking the position that Embarq does not believe all bridge

inconsistently with what Mr. Maples has suggested is the proper way to do this -- or you're not -- you can't validate it, so you're not sure?

- A. Well, I mean, he's testifying under oath,
 so I'm taking him for what he's saying. The other side
 of it, I can't validate if I -- if they're going to
 take them all off, that they don't go out and take off
 the ones they have to provide the service and bill me
 for the rest.
- Q. Well, in fact, don't you have to take
 pretty much everything on faith? You don't even have a
 way to validate there's a bridge tap on the circuit, do
 you?
- 14 A. Not today. We will in about another week.
- 15 Q. How will you do that?
- 16 A. Test equipment.
- Q. You're going to go out and test the circuits?
 - A. Uh-huh.
- 20 Q. So then this -- I'm sorry. Go ahead.
- A. We'll be able to test every circuit that
- 22 comes in to us for length, bridge taps, load coils.
- Q. And will that enable COI to determine which ones absolutely have to be removed?
 - A. That will validate whether the prequal. is

110

19

25

1 taps need to be removed?

- A. Yeah, that's kind of what I got from his testimony.
- Q. Doesn't that agree with what you're saying now, that not all bridge taps need to be removed?
- A. It's agreeing with what I'm saying. It's not agreeing with the way you bill me.
- Q. So, then, you're agreeable -- and not only agreeable, but you would prefer that Embarq not remove excessive bridge taps?
 - A. You based the --

have them all taken off or not.

- 12 Q. Or only remove excessive bridge taps. I 13 misspoke.
- A. You remove the bridge taps based upon the line length and the length of the bridge tap and how far it is from the CO.
- Q. COI does not want Embarq to remove all bridge taps if that's not necessary?
- A. Right. We -- we buy UNE loops, and we're allowed to tell them what bridge taps to take off and which ones to not. We buy DS1 loops. We're not allowed to tell them that. The only thing we're allowed to do is say do you want to go for the \$600 to
 - Q. So you're claiming that Embarq acts

1 correct or not. See, you have two issues here. In my

- 2 mind, you have two issues. You have conditioning
- 3 that's being taken off because that's the way Judy
- 4 Crowe said that they were supposed to be done. She's
- 5 the guru, and so -- and Mr. Maples said technology --
- 6 it doesn't have to be that way with that technology.
- 7 Well, I agree with that, with that technology. So you
- B have the issue of should they be taken off or shouldn't
- 9 they and which ones after that should be taken off, and
- 10 the ones after you decide whether there's some to be
- 11 taken off are based upon length, length of the bridge
- 12 tap, and what the distance is from the CO for those
- 13 bridge taps.
- Q. So if your testing demonstrates that, let's say, two of the four bridge taps properly should be removed, then COI is okay with paying for that?
 - A. Well, I guess.
 - O. Is that a yes?
 - A. Sure.
- O. Okay.
 - A. I'll go with that one. I'll give you one
- 22 there.

17

18

19

21

- Q. Well, thank you. That's all I have.
- 24 (Witness excused.)25 EXAMINER LYNN
 - EXAMINER LYNN: All right. Thank you.

28 (Pages 109 to 112)

115 113 We'll go off the record now -- I'm sorry. We need a 1 A. Yes, it is. 2 Q. And if I would ask you the same questions 2 motion for Exhibit 1. 3 MS. BLOOMFIELD: Right. Your Honor, I 3 today, would your answers be the same? would move that Mr. Vogelmeier's prefiled testimony 4 A. Yes, they would be. 4 which I believe was made on June 24th be marked as - I 5 Do you have any additions, deletions, or 5 think it's already been marked as COI Exhibit 1, and I б corrections to this testimony? 6 7 move that it be admitted into the record. 7 A. No. I don't. MR. STEWART: Excuse me. 8 8 EXAMINER LYNN: Mr. Stewart, any 9 objections? 9 EXAMINER LYNN: What about the 10 MR. STEWART: No objection. 10 supplemental? MR. STEWART: Well, no. I was going to EXAMINER LYNN: All right. That will be 11 11 admitted into evidence, then. Thank you. Now we'll go ask there's a confidential and then a public version, 12 12 13 off the record. 13 and I wasn't sure which one to mark as Exhibit 2. MS. BLOOMFIELD: May I make a suggestion 14 (EXHIBIT ADMITTED INTO EVIDENCE.) 14 15 that we mark the -- first of all, to make it clear for (Lunch recess taken.) 15 the record, we're only talking about his confidential 16 EXAMINER LYNN: Back on the record, then. 16 17 Everyone welcome back. We'll be proceeding to COI's 17 version at this point. I am assuming that the public version would, what, also be marked Exhibit 2, the one next witness, Dr. Ankum, and I'll swear him in and then 18 18 that was filed on June 24th? I'll make a comment about confidential parts of his 19 19 testimony and how we will be handling that. Dr. Ankum, 20 EXAMINER AGRANOFF: Actually, it would be 20 if you would raise your right hand, please. 21 my preference that we would mark the public as Exhibit 21 22 AUGUST H. ANKUM, Ph.D., 22 MS. BLOOMFIELD: 2A. Then we have 23 being by Examiner Lynn duly sworn, as hereinafter 23 supplemental testimony that was filed later on August certified, testifies and says as follows: 24 24 20th, and how would you like that marked, Your Honor? 25 EXAMINER LYNN: Thank you. We'll now be 114 116 entering a closed part of the record, so anyone who has 1 EXAMINER LYNN: Exhibit 3, then. not signed or otherwise verbally agreed to the 2 MS. BLOOMFIELD: Exhibit 3 and 3A? 2 3 confidential parts of the agreement would be asked to 3 EXAMINER LYNN: Yes. MS. BLOOMFIELD: The 3 will be the leave the room at this point in time. 4 4 5 Having said that, are you ready to go 5 confidential, and 3A will be the public version. 6 б By Ms. Bloomfield: ahead with your questions? 7 MS. BLOOMFIELD: Yes, Your Honor. We have 7 O. Is the prefiled supplemental testimony 8 already called to the stand Dr. August Ankum. 8 that was filed August the 20th, 2008, is that also your 9 DIRECT EXAMINATION 9 testimony Dr. Ankum? 10 A. Yes. 10 By Ms. Bloomfield: 11 Q. I wonder if you would state again your 11 Q. Likewise, if I would ask you the questions name and spell your last name for the record, please. from the supplemental today, would your answers be the 12 12 13 A. August H. Ankum, and Ankum is spelled 13 same? 14 Yes, they would be. 14 A-n-k-u-m. A. 15 Q. By whom are you employed and in what 15 Q. And do you have any corrections, capacity? 16 additions, or deletions to this? 16 17 A. OSI Consulting. I'm Senior 17 A. No, I don't. MS. BLOOMFIELD: That's it. Dr. Ankum is 18 Vice-President. 18 ready for cross-examination. 19 Q. Were you engaged by COI for purposes of 19 20 this arbitration? 20 EXAMINER LYNN: Mr. Stewart, you may 21 A. Yes. 21 proceed. 22 Q. And did you -- is this testimony, which we 22 MR. STEWART: Thank you, Your Honor. 23 CROSS-EXAMINATION 23 can now mark as COI Exhibit 2 which states Prefiled 24 Testimony of August H. Ankum, Ph.D., is this your 24 By Mr. Stewart: testimony? 25 25 Good afternoon, Dr. Ankum.

120

1 A. Same to you.

2 Q. Let's start with COI Exhibit 2, the confidential version of your testimony of June 24th.

Directing your attention to Page 4, Lines 4 to 5, being

Table 1, is it correct that all the information in

6 Table 1 was reproduced in your supplemental testimony?

A. Yes.

7

10

13

14

17

18

19

21

22

23

24

1

4

5

6

7

8

9

10

11

13

14

16

17

19 20

21

23

8 Q. Okay. May we agree to delete Table 1 on 9 Page 4, then, from the direct testimony?

A. Are you asking me or --

EXAMINER LYNN: Because it's duplicated in 11 the supplemental? 12

(Discussion off the record.)

EXAMINER AGRANOFF: What's the harm, Mr.

Stewart, in leaving it in for purposes of the context 15

of Exhibit 2? 16

> MR. STEWART: Well, perhaps none. If we can agree that if I ask a question about something that, say, appears in the direct and also appears in the supplemental, that I don't have to refer to both testimonies in connection with the question.

EXAMINER AGRANOFF: I don't see why there would be a problem with the understanding that when you're asking the question, it applies to any location

in which such information would be contained.

1 A. Yes.

6

10

11

12

117

2 O. Directing your attention to the AT&T in Ohio rate bands, have you done any comparison between the AT&T rate bands and the Embarg rate bands with 5

respect to customer density?

A. Yes. And you want me to explain?

7 Q. Well, let me ask another question or two 8 and then perhaps. Now, Rate Band 3 for AT&T Ohio is 9 their most rural rate band; is that correct?

A. That's correct.

Q. And I think on Lines 3 through 6 you compare Embarg's rates in Band 1, which you say are

13 Embarq's lowest, for the denser rate band, noting that those are higher than AT&T's rate in rural areas. So I

take it, then, the comparison is between Embarg Rate 15

16 Band 1 and AT&T Ohio Rate Band 3?

17 A. The comparison is more general. Given that we don't have approved TELRICs for Embarq, we need 18

to do some red-face tests to see are the rates that

Embarg or the costs that Embarg has proposed, do they

21 fall within a ballpark of what is reasonable, and one

22 of the things that I'm proposing that the Commission

does is to look at rates for companies that do have 23

24 proposed TELRICs, and I am offering to give to the

Commission the AT&T rates, which, of course, are the

118

MR. STEWART: Okay. Is that fair --2 okay. Then we need to go through that exercise. 3 By Mr. Stewart:

Q. Please look at Page 6, Line 16 -- or, I'm sorry, 13 through 16 of the direct. There you suggest that possibly having a small company engage in a TELRIC proceeding would be a barrier to entry. Do you see that section?

A. Yes.

Q. All right. Are you aware of any court or commission having so held that -- requiring a CLEC to participate in a TELRIC proceeding would be a barrier to entry?

A. Not in this specific language, but the intent, I would say yes, and I think I'd refer back to - actually, I'm not referring to this necessarily, but I've been advised by counsel that this Commission has expressed in some form that a small company like 18 COI is not required to engage in a full-fledged TELRIC proceeding with a company such as Embarq.

Q. Please look at Page 8 of your direct. Now, the table at the top of that page contains rates from -- for both Embarg and AT&T in various states for 24 each of those companies, Embarq and AT&T, and various bands? 25

old SBC rates, and as the Commission and the judges

know, we've spent many, many months going through those

cost studies, and while nobody would claim that they're

perfect, at least they have been subject to a

5 Commission review many times, and so I think they can

serve as a reasonable standard. Now, the question is 6

7 can you do a direct apples-for-apples comparison, and I

think what you're asking me about is the differences in 8

9 the two companies.

Q. Well --

11 A. What I am proposing to you is not just --12 EXAMINER AGRANOFF: Doctor --

13 By Mr. Stewart:

10

14

Q. Let me just try to make this a little more 15 specific and perhaps briefer. Comparing AT&T Ohio Rate 16 Band 3 to Embarg Rate Band 1, do you know what the customer densities are for each of those, how they 17 18 compare?

19 A. I can look those up. I don't have the 20 numeric numbers off top of my head for any of those 21 companies. If you ask me qualitatively, the rural areas for AT&T are the standard rural areas which are 22

low density, and the Embarg Band 1 are more the centers 23

24 of the cities and, therefore, urban.

Q. So is it your belief that AT&T Ohio Rate 25

124

121

```
Band 3 is denser than Embarq Rate Band 1?
```

1

2

3

4

6

7

8

9

10

11

12

13

14

17

18

19

20

22

23

24

25

2

3

4

5

6

7

8

9

10

12

13

14

15

16

17

18

test.

A. No. The other way around. The AT&T Rate Band 3 would be fairly sparse, i.e., high cost, and so I'm doing the most conservative comparison. I'm comparing the highest cost situation of AT&T, and then I'm telling the Commission, look, even the highest cost areas of AT&T are lower than the cheapest facilities in Embard's studies; therefore, that tells me that something is wrong. That doesn't pass the red-face

- Q. Is it your testimony that the average loop blank in AT&T Ohio Rate Band 3 is greater than the average loop blank in Embarq Rate Band 1?
 - A. I would expect, yes.
- 15 Q. Do you know for sure or is that something 16 you -
 - A. Well, that's in the nature of the way that these rate bands are constructed. For AT&T, which operates in the rural parts of Ohio, the Rate Band 3 is supposed to capture those rural areas, and rural areas are characterized by low density and long loop blanks, and the metro area for Embarq is not supposed to be the pure rural areas, but are supposed to be closer in areas in the cities.
 - Q. I understand the general principle, but

1 average loop blank is longer in AT&T Rate Band 3 than

- 2 Embarg Rate Band 1, and the very first sentence, I
- 3 think was just one sentence of the answer, Dr. Ankum
- 4 said he didn't have access to the AT&T data so from
- 5 that -- well, that answered the question. The
- 6 inferential answer is he cannot know. The rest of it7 is just speculation and not responsive.

8 MS. BLOOMFIELD: Your Honor, I don't 9 think -- I think Mr. Stewart mischaracterized the

- 10 question. The question was did you review, and he said
- 11 no, but. He's explaining his answer, and he is
- 12 explaining why he believed, given all the constraints,
- 13 it wasn't even necessary for him to review it because
- he was very familiar with it in the past. I think thatis a legitimate explanation of his answer, and the
- 16 answer should stand. It was not the question that Mr.
- 17 Stewart said it was. He was -- I believe he should be
- 18 allowed to explain his answer.
 - (Discussion off the record.)

20 EXAMINER LYNN: I'll let the answer stand

21 as is. Thank you.

MR. STEWART: Thank you, Your Honor.

23 By Mr. Stewart:

Q. Dr. Ankum, what was your source for the rates you show in Table 3 for AT&T Ohio?

122

19

22

did you compare and confirm that, in fact, the average loop blank for AT&T Ohio Rate Band 3 is greater than the average loop blank for Embarg Rate Band 1?

A. I can't qualify it for you, but my answer is the same as I just stated.

Q. Well, but the question was at some point did you check and compare?

A. I did not have the proprietary studies of AT&T available to me, but this is based on my 15 years of expertise and particular expertise with the SBC studies that the Staff and MCI and AT&T, prior to having merged with SBC, having spent many months reviewing those studies, and I think I have a decent feel for the AT&T studies.

MR. STEWART: I'm going to move to strike everything after that portion of the answer that said he was not able to compare the actual quantitative data.

EXAMINER LYNN: I'd ask that the question and answer be read back.

21 (Question and answer read back.)

EXAMINER LYNN: Mr. Stewart, what part was it you wanted to strike again?

MR. STEWART: Well, the question had to do with whether Dr. Ankum knows for a fact that the

A. Those were constructed under my supervision. I believe they came out of existing UNE

3 tariffs.

4

5

7

8

9

12

13

Q. One of your colleagues did that, then?

A. Yes.

6 Q. Who was that?

A. Dr. Denney.

Q. I'm sorry, what was the last name?

A. Dr. Denney, D-e-n-n-e-y.

Q. Did you look at any interconnection agreements between COI and Ameritech?

A. No. I have not.

MR. STEWART: Off the record for a second.

14 (Discussion off the record.)

MR. STEWART: Back on the record. I think to expedite some matters, we may be able to stipulate

17 to some rates that are in the currently effective

18 interconnection agreement between Ameritech Ohio and

19 COI.

MS. ENGLE: I need to see the front of

21 it.

22 MR. STEWART: (Indicating.)

23 (Discussion off the record.)

24 EXAMINER LYNN: Are you ready to go back

25 on the record, Mr. Stewart?

125 127 1 MR. STEWART: Yes. visible. 1 2 By Mr. Stewart: 2 O. Are you familiar with Microsoft Access? 3 3 Q. On Line 4 of Page 8 you use the word A. Yes. 4 "essentially." How are they different? 4 Q. What is that? 5 A. Line 4? 5 A. It's a Microsoft product that deals with 6 6 data management on a larger scale than the ordinary O. Yes, Page 8, Line 4. 7 7 Excel. A. Of the direct? 8 Q. Yes, confidential version of the direct. 8 Q. And is that part of the Embarq cost study? 9 It says, starting at the start of Line 4, "Higher rates 9 A. for essentially the same facilities." 10 O. And were you able to access any -- or all 10 parts of the cost study that were in Microsoft Access? 11 A. That's on my Line 3. I might have printed 11 12 off my testimony from a different copy, but for future 12 A. No. We were able to access the portions reference, our lines, our spacing is slightly off, but, 13 that were in the ordinary Microsoft Excel. 13 14 yes, I do use the term "essentially." 14 Q. So are you saying that there was nothing 15 Q. How did you -- how do the facilities 15 in the Embarg cost study in Microsoft Access or that 16 differ? 16 you weren't able to determine that? That information was not accessible. 17 A. I would think they're very much the same 17 in terms of their functionality. A DS1 would be a DS1. 18 O. Were you able to open all the workbooks in 19 O. Would you agree with me that AT&T has 19 the Embarg cost study? A. In the Excel component of it, yes. 20 greater scale economies than does Embarg? 20 21 A. Yes. 21 Q. Does that mean that you were not able to 22 22 open workbooks that were in the Microsoft Access O. Wouldn't those scale economies serve to 23 lower AT&T's costs even in AT&T's rural areas? 23 portion of it? A. It's not a matter of opening them up. 24 Yes, generally they would. 24 25 25 but -- like the model -- the way that the model was Q. If you would please turn to Page 14. 128 126 provided to us, as I explain in my supplemental 1 A. Yes. 2 testimony, it was not an executable model that you Q. Now, telecommunication companies' costs 3 3 could run. It came, in fact, with files that listed, vary over time, do they not? 4 A. Yes. as I indicate in my -- as you review my supplemental testimony, because I explained there were log files 5 5 O. Might go up, might be going down? 6 A. 6 that had hundreds of error messages in there. 7 7 O. Did you alone undertake the analysis and Q. Do you know the vintage of the cost study 8 review of the Embarq cost study or were you assisted by 8 that was done that produced the costs shown in your 9 9 one or more of your colleagues? Table 5, which is back, I'm sorry, on Page 13? A. I was assisted by Dr. Denney that I 10 A. Not off the top of my head, if you have 10 11 the information, which I presume you do. It's 11 mentioned earlier and very early on by Mr. James somewhere in my testimony. 12 Webber, W-e-b-b-e-r. 12 O. Please turn to Page 18. You make a Q. What functions did Mr. Webber perform? 13 13 A. Inside QSI or with respect to this 14 reference there to "invisible programming" on Line 16. 14 15 What do you mean by that? 15 proceeding? O. With respect to the Embarq cost study. 16 A. What I mean by that is that the -- that 16 17 A. He generally looked at the model outputs 17 there is a set of algorithms in calculations that lie and results early on. The larger share of the analysis 18 at the core of the model that you can't inspect. You 18 was done by Dr. Denney and myself. 19 can't see exactly what is happening. By contrast -- to 19 20 illuminate the answer, by contrast, if you use Excel, 20 O. What did Dr. Denney do with respect to the analysis of the Embarq cost study as contrasted with you can see in Excel -- if the formulas are in Excel, 21 21 22 22 you can see exactly what is being calculated by what what you did? 23 and what is being computed, so that you can follow the 23 A. It was a joint product, so I'm not sure that we can separate out what she did and what I did. logic of the model, and "invisible" means that part of 24

The way that typically these type of analyses take

the logic that lies at the core of the model is not

132

129

3

4

6

7

9

13

14

15

16

17

3

8

9

place is that you deal with a large model and a complex 1 issue, and you work through it together and you use 3 each other as a sounding board as you're working 4 through the analysis; so I'm not sure I can parse that 5 out for you.

Q. Do you know whether the amount of time each of you, you and Dr. Denney spent working on the Embarq Cost Model, how that amount of time compared?

A. She's so much more diligent than I am. I think the intention was 50/50, but I wouldn't be surprised if it was 60/40, with her spending 60 percent and me spending 40, much like the stock market that we were talking about earlier, getting distracted, but I think the intention was 50/50.

Q. Please turn to Page 24. Do you know when Embarq first offered to make its cost study available 17 to COI?

18 A. I don't. And let me ask you which cost 19 study, the one that was filed or the one that OSI 20 reviewed first?

Q. Well, let's start with the one that QSI 22 reviewed first.

23 A. My answer is as I stated, I don't really know. The second one, of course, that was actually filed, the first time we saw that was when it was

in methodology to the cost study that QSI first reviewed?

A. In some regards yes, and in some significant regards no. Of course, in the regard that matters most to the client, which is ultimately the prices that come rolling out of those models, the results, of course, are very different, and so while in some sense certain components of the model are the same, the ultimate outcome was so significantly different that it warranted basically extending the 10 11 contract and reengaging in Sherlock Holmes type of activities of seeing where the bodies were buried. 12

The price differences that resulted from the newer model were primarily driven by changes in inputs, were they not? Perhaps I should say different inputs.

Well, I can't really say that since in

18 both filings there are underlying studies that are simply not there, like studies relating to the annual charge factors, studies relating to labor expenses, and 20 21 so there's a limited extent to which you can ascertain 22 the differences between models in that regard.

23 Further, there are, of course, significant

24 reclassifications in terms of the rate bands that make

a huge impact, so that's an additional change in the

130

filed. 1

6

7

8

9

10

11

13

14

15

16

21

2

3

4

5

6

7

8

9

10

11

12

13

Were you told that COI had declined to sign a nondisclosure agreement in order to receive the cost study that QSI first reviewed?

 A. I have no knowledge beyond what was discussed this morning on the witness stand with the COI witness, and I understand that COI didn't think that they needed to engage in an expensive undertaking of reviewing studies that weren't TELRIC studies.

Q. Speaking of expense, I take it OSI is being paid for their endeavors on behalf of COI here?

A. Yes, we are.

Q. How much are they being paid?

14 A. We have two contracts. The first contract, I believe, was for 24,000, which pertained to 15 16 the preparation of my direct testimony which was

expanded on the Cost Model that was provided to us, but 17

substantially discarded by Embarq. Then when Embarq 18

presented an entirely new cost study, we had to engage 19

in a new contract that was for 16,000 given the

21 compressed time period, but nevertheless a significant new review was needed for that supplemental contract; 22

23 so in total 40,000, in two phases.

24 Q. Would you agree that the cost study filed 25 with Ms. Londerholm's direct testimony was very similar model that is not related to inputs; so I can't say that those are the only differences, as you presented it to me.

Q. Well, I didn't say they were the only differences. I was just suggesting that the change in the inputs was the primary cause for the different 6 7 prices.

How do you qualify "primary"?

Greater than half.

10 A. I don't think so, by that -- judged by

11 that criterion.

12 O. You said that it's difficult to know 13 because some of the aspects of the new model and some 14 of the aspects of the first model you couldn't gain visibility to. Is that a fair characterization of what 16 you said? 17

A. Yes. Among other reasons, yes.

18 O. For those things, those areas that were 19 invisible, did you make any inquiry of Embarq to ask 20 Embarq what underlaid - underlay those areas that you 21 couldn't see?

A. It was my understanding that when we received the testimony and the new study, that we received permission to do supplemental testimony, but I don't think that we could do additional discovery, so

22

133

1 the answer is -- well, it's neither a no or a yes. I never thought we had a possibility of doing discovery

in -- the time frame in which we used to turn around the supplemental testimony, I don't think would have 5

allowed for much discovery regardless.

6

7

8

9

10

1

2

3

4

5

6

7

8

9

- O. For the Cost Model OSI first reviewed, I think you indicated there were parts of it that were invisible, did you try to discover what was not visible to you either formally or informally, formally through discovery or informally by seeing if you could talk to 11 the Embarg cost people?
- 12 A. I have participated in many cost 13 proceedings, and I -- I don't recall any situation where you can just pick up the phone and talk to the other party's cost analyst and say let's have a cup of 15 16 coffee and work this out. So I don't know exactly what we did ask. I didn't review the discovery that was 17 exchanged, but it didn't even occur to me to do the 18 19 reasonable thing in a way, but it just -- it just never happens, and I think the reason it never happens is because there is never a two-way street there 21 22 unfortunately.
- 23 Q. Please look at Page 27 of your direct. What are the differences between a four-wire loop and a 24 two-wire loop apart from the additional two loops?

134

23

1

2

3

4

5

6

7

8

9

18

19

20

That's basically it.

- Aren't there some other, I'll call them, facilities used to provision the two-wire loop and a four-wire loop?
 - A. What are you thinking of?
 - O. Well, can you think of anything?
- A. Well, the when you used the phrase loop, do you mean a couple wires or the loop as a configured circuit?
- 10 Q. I'll use your definition. I'm not trying 11 to trick you. Let's go back. What makes up the 12 two-wire loop?

Depending on how it is provided, there are 13 14 many different ways in which you can provide it, but it 15 typically starts in the central office, running off a main distribution frame, running over a feeder facility 16 that may or may not be -- well, let's assume that it's 17 copper and you go through a feeder distribution 18 19 interface. Then the loop extends over the distribution facility, hits the drop -- well, a piece of equipment 20 before that, but then the drop, and then you go into 21 22 the customer premises. That's the general notion. 23 Q. Okay. Is there a line card involved?

24 A. Yes.

25

Q. Where does that fit in?

A. The line card would be on the switch. 1

2 Now, to make a -- to create a functioning circuit, now

the unbundled loop, when it is provided by -- let's say

that Embarg offers the unbundled loop to COI. It would 4

be COI that provides the line card on the switch, so 5

that wouldn't be part of the loop, but would you say is

it part of creating a functioning circuit, the answer 7

8 would be yes. 9

- Q. So, in your view, then, the cost of the line card would not be a proper part of costing out the 10 loop, to sell the loop as an Unbundled Network Element? 11
- A. If you're talking about the line card in 12 13 the switch -- for example, I believe that COI is purchasing UNE-P from you. There the line card would 14 be part of the service that you offer, and, therefore, COI appropriately compensates you for that facility; so 16 it depends on the circumstance. 17
- 18 Q. For the two-wire or four-wire loop is 19 there a different line card than the one you've just been talking about? 20
- 21 A. It depends on how the facility is 22 provided, whether it's over copper or over fiber.
- O. Do you know how the cost of the line card 24 for a two-wire loop compares to the cost of the line 25 card for the four-wire loop?

A. Not off the top of my head.

O. And I don't mean to ask you to give me a number, but is it your belief that the cost of the line card for a four-wire loop is more than twice as much as the cost of the line card for the two-wire loop?

A. Twice would be the upper limit, I would presume, but chances are it would be less, but it could be twice, if you could duplicate it, but I wouldn't think you could duplicate it.

- 10 O. On Page 27, in Table 8 you list a ratio of 11 four-wire and two-wire loop rates for various interconnection agreements. You list the COI current 12 ICA and in parentheses "2/5." Did you review a cost 13 study that purported to be the basis for the rates that 14 15 were in the COI Interconnection Agreement 2/5?
- 16 A. Which column is that? My copy is a little 17 fuzzy.
 - Q. Starting with the band column, fifth column over to the right.
 - A. No, I did not.
- 21 Q. Please turn to Page 28. Do you believe -excuse me. I direct your attention to Lines 3 through 22

7. Are there, to your mind, any legitimate 23

explanations that could produce the result that you 24 25 describe there as rational -- irrational? And let me

34 (Pages 133 to 136)

140

137

11

12

13

14

23

24

25

2

3

5

15

be more specific, because you actually have two situations there.

A. Uh-huh.

2

3

4

5

6

7

8

14

15

16

17

18

19

13

14

15

16

- O. The first one is where the cost of the DS1 is lower than the cost of a four-wire loop. You describe that result as irrational, and my question is can you think of legitimate reasons why such a result could attain and not be irrational?
- 9 A. Yes. It could be on a more limited scale than the 21 wire centers, but, yes, you could have that 10 situation if you're comparing the DS1 loop that is 11 based on fiber versus four-wire loops that are mostly 12 13 copper.
 - Could that anomalous result also be caused by demand differences that result in different scale economies for the two services?
 - A. Yes and no.
 - Q. Let's go with yes.

within your model, and it has to do with the fact that 20 21 you used actual fills, which has to do with the degree of utilization of the facility, and in your model you use the actual level of utilization, which means that 23 the spare capacity that is floating around in the network, the cost of which then in your model falls on

A. First. Then I'll explain the no. Yes.

that you're alluding, but this is the same company

- that's purchasing in bulk, whatever that bulk is, but
- it's purchasing in bulk from its manufacturers, and 3
- whatever its negotiating position is with its
- 5 manufacturers, that's what it is for most of their
- 6 facilities, and there is still a good portion of these
- 7 networks that are jointly maintained through the same
- outside field technicians, et cetera, et cetera; so 8
- 9 within the same company I don't see this difference 10 being possible due to demand differences.
 - O. Greater demands -- or a greater demand for DS1 services and a lesser demand for four-wire loop changes the allocation of certain costs between those two services, does it not?
- 15 A. Probably not in terms of percentage. In real terms it may. For example, the markup for sharing 16 common costs let's say were 20 percent. The 20 percent 17 18 would apply to a four-wire loop, a DS1 loop and still be 20 percent. Now, it's the underlying qualities that 19 20 will then translate into different nominal dollars; so in that sense, yes, but as a percentage, no, and it 21 truly wouldn't explained the price difference. 22
 - O. What shared costs do you see between the DS1 service and the four-wire loop service?
 - The general share in common costs, which

138

in the Embarq model is a percentage markup --

- Q. Let's exclude common costs and just talk about shared - well, do you agree with me that shared costs are a different animal than common costs?
 - A. Conceptually, ves.
- 6 Q. Let's exclude common for the time being 7 anyway. What costs, in your view, are shared between 8 the DS1 and the four-wire loop?
- 9 A. I'd have to review your model to trace that back. 10
- 11 O. Are there certain electronics that are 12 shared?
- 13 A. They wouldn't show up as shared costs that would be directly assigned in the TELRIC study. 14
- Q. Well, putting aside the electronics, then, 16 based on your answer, in talking about a cost, whatever it might be that is shared between the two, if the 17 18 demand for the DS1s was a thousand units and for the 19 four-wire loop two units, in that situation, wouldn't 20 the shared cost allocation be considerably different 21 than if the demand were equal for the two services?
- 22 A. I think my answer is the same as I previously gave, that percentagewise chances are they 23 would stay the same, but in nominal dollars, they would 25 obviously differ since the underlying quality is

the facility that actually is being used, so the more 1

- 2 spare there is, the more expensive are the units that
- you're actually selling; so that dynamic exists within 3
- your model. And now the no. I don't think it should 4
- 5 exist, but the Commission has found, and you have read
- 6 my testimony where I explained that, but as the
- 7 Commission has found, you should not be using your 8 actual fills. It should be a hypothetical fill,
- forward-looking or a fill consistent with TELRIC, in 9 10 which case that dynamic is -- should be taken out of
- the model. So, yes, it exists in your model, but, no. 11 it shouldn't exist in the TELRIC model. 12
 - Q. Are you saying that if one utilizes the appropriate fill factors, appropriate in your view. this anomalous result could not be produced by differing scale economies based on different demands for the two services?
- 17 A. Not within the range that exist given that 18 you're dealing with a joint network provided by 19 Embarq. If there were two completely distinct 20 companies offering this, operating under different circumstances, each having their own independent 22 network, then those kind of demand qualities or the 23
- differences in how many qualities are demanded would
- have an impact on costs through the economies of scale

144

141

L different.

2

3

4

5

6

7

12

1

2

3

4

5

6

7

8

- Q. Thank you. Please turn to Page 30. Let's look at the column for the residential retail rate in Table 9. Did you include the subscriber line charge in the residential retail rate?
- A. I'm not sure. Again, this was prepared under my supervision, and I would have to check that.
- Q. Do you know whether the -- what Embarqcalled -- do you know what the IAF is for Embarq?
- 10 A. IAF?
- 11 O. IAF, like Indian Africa Frank.
 - A. That's what the acronym stands for?
- Q. No. It's a mnemonic so you can know the letters I'm saying.
- 15 A. No, I don't.
- Q. So I take it, then, you wouldn't know whether that was included in the rate either?
- 18 A. I don't know.
- Q. Now, in providing residential basic local exchange service, there are costs for switching and transport; correct?
- 22 A. Yes.
- Q. And there are also revenues derived from
- 24 those costs?
- 25 A. Yes.

- you previously agreed include switching and transport,
 and the revenues that are derived from the services
 that those costs allow Embaro to provide.
- 4 A. I'm not -- I don't read that in the
- 5 Commission's rule. That may be how the Commission ends
- 6 up interpreting it, and I imagine if you have to
- 7 litigate it, I suppose you will argue it that way.
- 8 What I'm trying to do here is to take one of those cost
- 9 components, not all of them, but just one, and compare
- 10 that one cost component, which is the loop, and say
- 11 this is one of the components of your local service,
- 12 and that one component already gets you into
- 13 difficulties, because that one component is already
- 14 significantly higher than your tariff service; so right
- 15 there you have a problem. Now, the problem can have,
- 16 as I explain, can have two sources. Either you priced
- 17 your retail service too low or, and this is what I
- 18 think, your cost study has produced costs that are too
- 19 high, but either way, there is -- something doesn't fit
- 20 there.

24

2

3

4

5

6

7

8

17

142

- Q. In many places in your testimony you discuss percentage increases.
- 23 A. Yes.
 - O. Now, if a barrel of oil costs \$100 today
- 5 and costs \$110 tomorrow, the price has gone up \$10 and

Q. And it appears to me that you included neither the cost nor any revenues resulting from the switching and transport functions or your colleague, I assume?

A. Well, there's no switched access, if that's what you're talking about. Switch access revenues are not included.

Q. That's what I thought.

A. Right. We're trying to come as close as
we can to an apples-to-apples comparison, that in its
barest form, you want to look at a local exchange
service, that loop facility going out to the central
office and comparing to what COI would be paying if it
were to purchase a two-wire loop. So it's doing again
some sanity check to see are the loop costs produced by
the loop Cost Model, how do they stack up against what
we see Embarq doing in the marketplace.

the loop Cost Model, how do they stack up against what
we see Embarq doing in the marketplace.

Q. But the point I take it you're making here
in alleging that Embarq violates the pricing rule, the
rule that you're addressing there doesn't speak in
terms of pricing residential retail service above the
cost of the two-wire loop, does it? And what I'm
suggesting is that to determine whether this rule is
being violated, one would need to look at the various
costs of providing basic local exchange service, which

the percentage increase in the price of the barrel of oil in that situation is 10 percent.

- A. Yes.
- Q. So the methodology that's appropriate to determine the percentage increase is to look at the two prices, subtract the smaller, which is the earlier, since we're assuming an increase, from the greater, and then divide that difference by the original price?
- 9 A. Within the context of your example, I have 10 no problem with what you're doing.
- Q. Well, just as a general -- methodology may be too fancy a word, but simple math, isn't that the right way to calculate the percentage increase?
- A. To calculate a percentage increase, if that's how you phrase it, yeah, and that's how you present it, yes. That's how you would calculate it --
 - Q. So if someone --
- 18 A. -- within that phraseology.
- Q. Fair enough. So if someone says the price of oil has increased 10 percent, that fits the \$100 to \$110?
- 22 A. Yes.
- Q. Okay. Now, if you would look at Table 10 on Page 32, at the top there, the two-wire loop, the column – there's a column, third one in, I suppose,

36 (Pages 141 to 144)

148

145

8

17

25

4

5

6

price?

A. Yes.

- 1 "COI Current ICA," \$35.69. Then the next column over
- 2 is the Model, \$51.45. Now, the increase between
- those -- or the difference rather between those two 3
- 4 rates is approximately -- well, just under \$16, by my
- math, and using the methodology we just talked about,
- б the percentage increase would be approximately 44
- percent; correct? 7
 - A. Yes.

8

19

ı

7

8

9

10

11

18

- 9 O. And so when you say "increase over" 10 current rates, that's not quite what you really should
- 11 have said, is it?
- A. That's correct. Throughout the testimony 12
- I think we fairly consistently used "increase to," and 13
- you're correct, and I'd like to make this correction in 14
- this table, and it occurs on three lines where it says,
- "Increase over Current COI Rates," and it should be 16
- increase to current COI rates, i.e., it's --17
- 18 Q. Well, I suggest --
 - A. -- 140 percent -- 144 percent --
- (Discussion off the record.) 20
- 21 By Mr. Stewart:
- 22 Q. I apologize. I didn't mean to interrupt.
- 23 Go ahead.
- 24 A. It's 144 percent, the current rate being
- 25 100 percent, and the proposed rate then that you're

- 1 conventions instead of what I would regard as the 2 correct way.
- 3 A. We'll correct those hopefully, because
- it's not my intention to create confusion there. There 4 shouldn't be. 5
- 6 O. I was confident it was not intended to 7 mislead.
 - A. Thank you.
- Q. In fact, if you look at Table 11 on Page 9
- 34, those changes are described using a different 10
- convention, and what I would submit is the clearer way 11
- 12 to say it, if you look at the middle slot there,
- 13 "Weighted Average Rates as Percent of COI's Current
- 14 Rate," the first one there, two-wire, it says 113
- 15 percent, and that would reflect, I hope you would agree
- 16 with me, a 13 percent increase over the current rate?
 - A. Yes. And that table we just corrected is
- 18 interpreted in exactly that same way. 19 Q. Although the language used is different?
- Well, if you want to correct the previous 20
- table to reflect this language, I'm perfectly 21
- comfortable with that, if that clears it up. I'm not
- trying to be unnecessarily difficult. I just want to 23
- 24 make it as clear as possible.
 - Q. Okay. Now, on Page 35, Lines 8 and 9, you

observed increase is not 144 percent, but the new price

is a hundred and - I'm sorry. I said 144. I meant to

say 148. The new price is 148 percent of the earlier

refer to a price increase for copper cable, and the

146

- talking about would be 144 percent.
- 2 Q. I would suggest that even using the word
- 3 increase is still not the best way to say it. What is 4 correct to say is that the increase was 44 percent and
- 5 that the model rate is 144 percent of the COI current 6
 - ICA rate. Isn't that the accurate way to say it?
 - A. No. I'm perfectly comfortable with "to."
 - have that read.
 - A. Increased to current COI rates.
 - O. Equals 144 percent?
- A. Yes. In other words, it increases to 12
- 13 current COI rates at 144 percent. In other words, the
- 14 current rates are 100 percent. Current rates are 100
- percent of the current rates, and your proposal 15 16 increases that to 144 percent of the current rates.
- 17
 - Q. All right. That's a fair statement.
- A. Now, your phraseology would have been fine
- 19 except that it's embedded in my testimony and I used
- 20 the other convention, and once you start mixing
- conventions, you get into trouble; so for consistency 21
- 22 sake, I'd like to stick with what I just suggested as a
- 23 correction, if I may.
- 24 Q. I would suggest that we'll see in other points in your testimony where you did use -- you mixed

- 7 Q. Okay.
- Q. And say it again how you would prefer to 8 A. Per that previous statement.
 - 9 Q. Now, one of your tests to examine or
 - evaluate the validity of the Embarq rates that are 10
 - proposed by the model you were reviewing in your direct 11
 - testimony is to and basically what you did was start
 - with the rates in the current interconnection 13
 - agreements -- agreement and then apply the various 14
 - inputs, these -- and I apologize for not knowing the
 - nomenclature here inflation indices to inflate 16
 - inputs based on the change of the cost of those inputs 17
 - over time? 18 19 A. Generally, yes.
 - 20 O. That's a fair statement?
 - 22 Q. I'm not trying to trick you here. As part
 - 23 of that exercise, it's an implicit assumption that the
 - rates in the current interconnection agreement are
 - correct?

21

149 151 A. Not really. It's a little bit more 1 might have about Exhibit 2A, I believe, the 2 complex. supplemental - 3A. Pardon me. My apologies. 3 Q. If the rates in the current 3 MR. STEWART: I have the confidential 4 interconnection agreement were grossly overstated, then 4 version of the supplemental as COI Exhibit 3. Is that 5 applying these inflation indices would produce another 5 right? 6 rate that was grossly overstated; fair enough? 6 EXAMINER LYNN: You're correct. Thank 7 A. Yes. 7 you. 8 Q. And we could remove grossly from that 8 By Mr. Stewart: 9 example, and it would still be true. By the same 9 Q. Dr. Ankum, do you have COI Exhibit 3 10 token, if the rates in the current ICA were understated 10 before you, your confidential supplemental? 11 applying these inflation indices, and we'll assume 11 A. Yes. 12 these inflation indices are right for purposes of this 12 O. Please turn to Page 5, Table 2, the Embarg 13 discussion, that would produce rates that were 13 new model and proposal for the four-wire loop shows 14 similarly understated? there as (redacted), and that constitutes a (redacted) 14 15 A. Yes, generally speaking. I see you don't percent increase over the current ICA rate of 15 16 like it when I agree with you. 16 (redacted); is that right? 17 Q. If we struck the "generally," I'd be 17 A. Yes. 18 happier, but I'm not going to ask you the question that 18 Q. And, similarly, on the DS1, the (redacted) 19 I'm tempted to ask you. Thanks. Let's turn to Page 19 rate of the EO new model is an increase of (redacted) 20 46. Now, you criticize Embarg's cost study for several percent over the COI current ICA rate of (redacted)? 20 21 reasons here on Page 46, and I take it your answer 21 A. Yes. And the other percentages in that 22 would be the same as when I asked you earlier did you 22 table would be similarly interpreted. 23 make any effort to contact Embarg or ask your attorney 23 MS. BLOOMFIELD: I couldn't hear you. 24 to ask me to contact an Embarg person to try to clear 24 THE WITNESS: I said the other percentages 25 up any of this stuff, and it didn't happen for whatever 25 in that table should be similarly interpreted. 150 152 1 reasons? By Mr. Stewart: 2 A. The answer is slightly different. We 2 Q. Namely by taking out 100 percent and 3 didn't receive a cost study, but then in addition to 3 characterizing the remainder as the increase? 4 that, my answer is the same as previously stated, but I A. Over, yes. 5 think it's important to differentiate in one instance 5 O. On Page 6 of your supplemental testimony we did get it. With respect to the current charges for 6 6 in several points you discuss the sustainability of the the DS1 and four-wire loops, a cost study was CLEC business in certain wire centers; correct? And if you need a reference, Line 13 and also Line 2. 8 produced. I don't think there's a cost study for the 8 9 loop conditioning, the non-recurring charges. 9 A. Yes. 10 10 Q. We can put away the direct for the Q. Would you agree that there's no legal 11 moment. 11 requirement that the prices resulting from a cost study 12 EXAMINER LYNN: Let's go off the record 12 must be prices that enable a CLEC to succeed or, to put 13 it in your terms, sustain its business? 13 for a minute. 14 (Discussion off the record.) 14 A. I don't think that is quite true. If you EXAMINER LYNN: I take it you're finished 15 15 want me to explain. with your questioning for the time being? 16 Q. Well, let me ask it a different way. Can 16 17 MR. STEWART: On direct. 17 you suggest any authority, FCC, state commission, that EXAMINER LYNN: Now you're going to go 18 suggests that cost-based rates must necessarily result 18 in a rate that enables the CLEC to sustain its into the supplemental? 19 19

38 (Pages 149 to 152)

A. I think that the FCC in, for example, its

1996. Now, prices for Unbundled Network Elements

should be set at TELRIC, but given that we don't have

pro-competitive intent of the Telecommunications Act of

local competition order is talking about the

20

21

22

23

24

business?

20

21

23

24

22 break.

MR. STEWART: Yes.

(Recess taken.)

EXAMINER LYNN: Why don't we take a little

EXAMINER LYNN: Let's go back on the

record, please. Mr. Stewart, any questions that you

156

153

7

12

13

14

15

25

2

3

4

6

7

8

9

12

13

19

- 1 TELRIC costs in the record, the Commission will look, I
- 2 would hope, at what is going on in this negotiation in
- 3 a broader context of the Telecommunications Act of
- 4 1996, and within that broader context I think a
- 5 consideration of how rates are evolving over time and
- 6 whether the proposed increases are consistent with the
- 7 sustainability of local exchange competition I think is
- 8 something that should definitely concern the
- 9 Commission, and I think also -- I don't want to call it
- 10 a legal requirement, but of course, I'm not a lawyer
- 11 and I -- that's the main reason, but I think it's

13

14

15

19

20

21

23

24

3

4

5

6

7

8

9

10

- 12 appropriate within the context of the 1996 Act.
 - Q. If the Commission established a rate based on TELRIC principles and that rate, for whatever reason, turned out to be one that CLEC couldn't sustain its business pursuant to, isn't that just unfortunate?
- 17 I mean, the object is to set cost-based rates, and if 18 they don't work, they don't work for the CLEC?
 - A. As long as the Commission is assured that rates are indeed based on valid TELRIC costs, then I think the fact that a particular CLEC may not be able to conduct business is unfortunate, but should not necessarily alter the Commission's decision.
 - Q. Fair enough. In fact, CLECs have been going out of business regularly?

- Q. Have you done dozens, hundreds, or -- how many, roughly?
- 3 A. Reviewed, that would be in the hundreds.
- 4 Build would be in the dozens.
- Q. When you built one, have you ever made a 6 mistake?
 - A. I'm sure we have.
- Q. Are you familiar with CALIX, C-A-L-I-X,Digital Line Card?
- A. I've heard of it, but I couldn't answer any questions about specifics.
 - Q. Now, did both you and your colleague experience the phenomenon you described in certain places as being invisible, where you can't get behind the calculations that the Embarq Cost Model makes?
- A. Yes. Like we couldn't get the new model to model -- for example, we couldn't get the new model to run, and as I've already explained, there were log files that stated -- that gave all the error messages.
- Q. Now, is there a specific type of error
 message that one gets when the model won't run as
 opposed to an error message that one gets that means
 something else? The model runs, but the error message
 refers to something else?
 - A. Well, I would find either one troubling,

154

- A. They go out of business sometimes or come back into business, yes.
 - Q. I take it you've conducted a lot of cost studies yourself?
 - A. Yes.
 - Q. Have you both analyzed other people's and also developed your own?
 - A. Yes.
 - Q. And is there a model you use when you develop your own cost study?
- 11 A. The cost studies that QSI has done and 12 I've been involved in, I believe all of them, they
- 13 typically are ground up cost studies, where we look at
- 14 the specific facilities and services offered by
- whatever the client may be, but by the telephone
- 16 company for whom we're doing the cost study, and so
- 17 there's no generic study that we use. We build them
- 18 custom-made, so to speak.

 19 O. So, then, you do
- Q. So, then, you don't use, for example, the Hatfield Model or one of the other big-name models? You use your own unique model?
- A. Typically not, QSI may have used one of
- those models in some instances, but generally speaking,if we do a cost study, we tailor it to the specific
- 25 network and services of the client.

but since we couldn't run the model, I don't know what variations in error messages there are.

- Q. Well, you refer to a couple of different types. If you look at Page 14, at the top, Lines 1 through 5, you refer to several different error messages, the first one being, "Operation is not supported for this type of object." What does that mean?
 - A. I have no idea.
- Q. So was that an error message your colleague received and told you about?
 - A. No. This is in the log file, and you can read it.
- 14 Q. Okay. So you saw it, but you don't know 15 what it connotes —
- 16 A. Right.
- Q. -- denotes? Is that also true for, "Data type conversion error"?
 - A. Yes.
- Q. And I like this one, "Microsoft Jet Engine could not find the object." Do you know what that means?
- 23 A. I know we chuckled over that.
- Q. Okay. Now, when you got those error messages, did that stop the study from running?

160

157

5

7

8

9

10

11

15

16

17

18

1

2

3

12

15

A. Well, the -- we ran the model, we tried to run it, and it never came to a solution. It didn't solve. We let it run, and it just never really -- it kept running, so we never got a resolution of the model run.

1

2

5

б

7

9

12

13

14

15

18

19

1

2

3

4

5

6

7

8

9

10

11

13

14

15

16

17

18

19

21

22

- Q. I see. Now, is it correct that certain error messages aren't particularly important and could result, for example, when - when a field is left blank and there may be another field for the same cost that's filled in, for example, you might have two different brands of a line card and the line card cost field for 11 one brand is filled in, the other field is left blank. When that field is left blank, that can produce an error message; correct?
- A. Not in the models that I typically look 16 at, but I don't know with respect to this particular model. An error message is disturbing. It tells you that something is in error. That's what the purpose of the error message is.
- 20 Q. Sometimes when you run a cost model, one 21 gets a warning; is that correct?
- 22 A. Most of the cost models that I have 23 analyzed are just Excel based, and you don't get 24 warning messages or error messages in those. You can trace through the model and see where, you know, the

calculations are all the way to the inputs, and there are no warning messages that pop up.

- Q. I apologize if you already answered this, but did you say both you and your colleague had this same experience, not just your colleague?
- A. We worked on it jointly; so, in that sense, yes.
- Q. Did you have any discussions with Mr. Vogelmeier regarding the cost studies?
- A. We've had a number of conference calls generally about the case in which we talked about all aspects of the case, including, you know, the cost that we were reviewing and our preliminary take on those cost studies. I don't recall details of that.
- Q. Did Mr. Vogelmeier ever discuss with you any information he received from Embarq regarding the cost study that underlay the current ICA rates?
 - A. I don't recall.
- Q. Now, with respect to two-wire loops and DS1 loops and shared costs, is construction cost a shared cost for those two services, for example, the cost of burying the loops?
- 23 Could be.
- 24 Q. Is that how the models you design handle 25 the cost of burying the two loops, as a shared cost

1 between them?

2 A. If they share facilities, we would find 3 some way of allocating those costs to the extent they share. 4

- So sometimes construction costs are shared О. 6 between the two-wire and the four-wire?
 - A. Could be.
 - Q. Do you know whether, in the Embarg model that was part of Miss Londerholm's testimony, whether construction costs are shared costs between the two-wire and the DS1 loop?
- A. I don't think it would be readily apparent 12 from the model. I would have to dig in deeper with 13 14 that specific question in mind.
 - Q. Now, if two-wire demand increases and DS1 loop demand increases, then would that result in a greater allocation of the shared construction costs to the DS1?
- 19 A. Probably not within your model, because 20 the model is costing out your network as it exists, and 21 there's so much spare facility in your network, that the increases in demand would just be absorbed by the 22 spare capacity that's available, and I don't see the 23 model picking that up and sharing of facilities or the 24 25 shared costs.

158

Q. In a forward-looking model would you say the same thing? A. It depends on how you -- again, this goes

4 back to the discussion we had this morning about fill factors, how you employ your fill factors, and if you 6 have an appropriate TELRIC model consistent with this 7 Commission's findings where you do not base your fill on your actual fill but on a theoretical fill, then you could get some of that dynamic, but your model follows 9 10 a different convention, where you use actual fill, and

11 so I don't see that dynamic playing out necessarily. Q. Well, what fill percentage did you 13 recommend? I have forgotten. Sixty-some percent? Yes, Page 15, and it appears - there at the bottom of Page 14 you say, "Embarg's New Model uses fill factors

ranging from (redacted) percent and (redacted) 16

17 percent," and then you refer to Commission-approved SBC

fill factors, 61.87 percent and 69.14 percent. Now, 18

let's look at the lower ranges of each, between 19 (redacted) and (redacted), roughly a 9 percent change

21 in fill factor. Why does that percentage change in the

22 fill factor change or, I guess in your view, rebut the

23 proposition that a greater percentage of the shared 24 costs would be allocated to DS1 loops as that demand

increases and the demand for two-wire loops decreases?

40 (Pages 157 to 160)

161

6

7

8

9

10

A. Again, this is – this is in part

1

2

25

1

2

3

4

5

6

7

8

9

10

11

15

16

17

24

25

conjecture because we don't have the model in front of

- 3 us and you're asking me just some general questions
- 4 about what I anticipate may happen in, one, the TELRIC
- 5 model and, two, the Embarq model. Those are two
- 6 distinct cost situations. Now, with respect to the
- 7 Embarq model -- and then you're referring me here to
- 8 the fills, the actual fills that are listed on Page 15,
- 9 as opposed to the fills that the Commission approved
- 10 for SBC, the Commission approved the fills for SBC.
- 11 i.e., those fills are fixed, and so when demand figures
- 12 begin to move around, it drives costs through the model
- 13 because the fill factors don't adjust. With the Embarg
- 14 model, fill factors are an output, and so you begin to
- 15 increase demand on the network, but if that demand is
- 16 just accommodated by the existing spare, it just
- 17 increases the fill, but the allocation between the
- 18 different types of loops is really driven by what your
- 19 existing network is. So if the existing network and
- 20 existing number of loops don't change, the only thing
- 21 you're changing is the utilization of those loops, but
- 22 the number of these loops may be invariant to demand.
- 23 Then there's really no reason in the model to
- 24 necessarily change the allocation.
 - Q. Does your conclusion there depend upon the

1 Verizon for DSI services?

A. My understanding is that they don't really
purchase DS1 from Verizon, but I did not examine those
rates other than through the testimony of Embarq where
those rates, I believe, were tendered.

- Q. Now, you acknowledge that certain rates in the Embarq new model actually went down?
 - A. Yes, I believe so.
- Q. Probably, if you look at Page 9, Table 3, the new model's four-wire rate is roughly ten percent
- 11 lower than the CBT rate. Do you see that?
- A. I'm actually looking at Page 5, which is
- 13 comparing the current rates with Embarq's newly
- 14 proposed rates. Actually, I don't think that those
- 15 rates are going down. I was thinking about some of the
- 16 loop conditioning charges, I believe, went down, but
- 17 those aren't non-recurring charges.
- Q. Well, if you look on Page 5, Table 2, the
- 19 total for four-wire is lower under the Embarq new model
- 20 than it is under the CBT 12/7 Interconnection
- 21 Agreement?
 - A. Yes.
- Q. Turn back to Page 11 if you would,
- 24 please.

22

1

2

7

8

25 A. Yes.

162

164

ability to accommodate the entirety of the increased demand with the existing plant?

- A. In part, ves.
- Q. How much of a part? I mean --
- A. Well, given that again, qualifying my answer here by saying that we don't have the model specifics in front of us, and so I don't want to make absolutist or absolute statements or categorical statements because it's all contingent on it's all contingent on me here on the stand giving my intuition

about the model without having the model in front of

- me.
 Q. Excuse me a second.
 (Discussion off the record.)
 - By Mr. Stewart:
 - Q. Is it correct that four-wire loops are in pretty low demand by COI?
- A. I have no primary knowledge of that. I heard the discussion this morning, and I believe that Mr. Vogelmeier indicated that there were some, but I don't have primary knowledge.
- Q. In general, is a four-wire loop much in demand compared to, say, DS1?
 - A. It depends on the entity. I can't answer.
 - Q. Did you examine the rates that COI pays to

- Q. Now, you theorize on Lines 3 through 8 that certain price increases would occur with certain
- expectations based on copper cables, the price
 increase, the fact that it's a -- you state that it's a
- 5 more prominent input for four-wire loop than it is for
- 6 a DS1 loop. Do you see that?
 - A. Yes.
 - Q. Now, again, if you're comparing price
- 9 increases from an existing interconnection agreement to
- 10 the Embarq current Cost Model, the expectation that you
- express here is dependent upon there being an accurate
 relationship between the cost and the existing current
- 13 interconnection agreement? In other words, if the
- 14 relationship between the four-wire loop costs and the
- 15 DSI loop costs in the existing interconnection
- 16 agreement is out of whack, then what you expect to
- 17 happen here might not happen when an accurate cost
- 18 study is done?
- 19 A. Well, I think ultimately what would shed
- 20 light on all of this would be an approved TELRIC21 study. In the absence of that, all we can look at is
- 22 whether proposed changes make sense in light of the
- 23 changes in the underlying inputs.
- Q. Well, I don't think you really answered the question. If the initial prices and the

165

6

8

9

16

17

18

19

20

25

6

8

9

10

11

13

15

16

17

relationship between them were -- out of whack is not a very good way to say it, is it -- wrong, then the expectation that you express here might well not apply?

1

2

3

4

5

6

7

8

9

10

12

13

14

15

16

17

18

19

20

- A. I think the concern would still apply. I would think that the rates in the current ICA extend in some relationship to the underlying Cost Model that has been maintained by Sprint and now Embarg, that there's a genesis in that model, and even though I imagine the changes could have taken place in that model, I think the movement of proposed prices over time should still be informed by the changes in the underlying input 11 prices, and so the overall concern I think is still valid and is informative. It should inform the Commission's decision-making.
- Q. But if one were to assume that an error was made in an earlier cost study, then, as we talked about before the break and in your direct testimony, using an inflater or inflation indices to get to a new rate really wouldn't work right because it would be the garbage in, garbage out function? I think you said 21 that was generally true earlier.
- 22 A. Give me a second. I think the 23 hypothetical revolves around the notion that somehow 24 that in the current ICA, that this relationship between the four-wire loop and DS1 loop is just grossly

can't look at the exact algorithms that drive the model. There's a black box component.

- 3 O. Does the black box component exist because you can't open the particular workbook or one or more 4 5 workbooks?
- A. I think the well, I mean, of course, 7 there's a limit to which I can answer that question. I mean, I couldn't get the model to run or we couldn't get the model to run, and surely not within the 10 expedited time periods without the benefit of discovery and asking where the problem may be; so, you know, to 11 be honest, I can't really tell you. It's part of the 12 problem of dealing with -- examining this Cost Model in 13 a compressed time period. 14 15
 - Q. From what you're saying, and I've never run a cost model, it sounds as though if you can't make the model run, that prevents one from opening the various workbooks. At least that's what I take you to be saving. Is that right?
 - A. Not really.
- 21 Q. Okay. You said you couldn't get the model to run, and I thought that was the reason for your 22 23 answer you couldn't look at all the workbooks, but I 24 must have misunderstood you.
 - A. Well, I'm not really sure what you're

166

168

- distorted, and if that were so, I think all of us would
- 2 be able to look at these rates and see something very
- disturbing, but I think the relationship between the
- 4 four-wire loop and the DS1 loop in the current ICA,
- 5 that relationship doesn't seem particularly
- 6 disturbing. If you go back to my direct testimony,
- 7 Page 8, where I'm introducing the AT&T rates which
- 8 present the four-wire rates as well as the DS1 rates
- 9 for AT&T, the relationship between the four-wire rates
- 10 and the DS1 rates in COI's current ICA move in the same
- direction as AT&T's. There doesn't seem to be any 11
- 1.2 notion or any reason to believe that the current ICA
- rates, that that relationship you're talking about is 13 14 out of whack, quote-unquote.
 - Q. I want to return for a moment to the invisible programming issue. Now, the Embarq Cost Model has a number of workbooks that are between the beginning and the end. That may not be technical cost-study language, but do you understand what I'm saying?
- 21 A. Yes.

15

16

17

19

20

- 22 Q. Okay. And did you - were you able to 23 open all the workbooks?
- A. I don't know what the full extent of the 24 workbooks are. We never got the model to run, and you

- referring to about "all the workbooks." The model is an executable file and it sets itself up, and then, you
- know, you just hit various buttons to get the model to
- run in different scenarios, and then the model does its 4 5 thing.
 - O. Well, my understanding is that the workbooks contained intermediate steps that get you from -- that ultimately get you to the cost output. Is that a fair characterization?
 - A. Conceptually, yes.
- Q. And so based on that understanding, isn't it correct that in order to get as much information about what the model is actually doing and the 14 assumptions it's making and the algorithms it's using, one must look at the workbooks that constitute these steps getting to the output; is that --
 - Well, conceptually --A.
- 18 - roughly right? Q.
 - A. Yes.
- 19 20 Q. Okay. So, then, it seems to me in order 21 to gain as much visibility to all the assumptions and data a model is using, one would need to look at each 22 23 of the workbooks; is that correct?
- 24 A. The calculations in the algorithm of the 25 model are not readily observable, so to speak. You

171 169 can't just -- if you have an Excel sheet, you can use you or one of your colleagues as opposed to COI? the audit functions in Excel and it will lead you from 2 A. Yes. cell to cell. Like there's a function called Trace MS. BLOOMFIELD: Your Honor, can we ask 3 Precedent, and by using this function, it will tell you that Dr. Ankum have a chance to look at that? We don't 4 have it, and it's a pretty long Interrogatory. each cell is linked to previous cells, and if you 5 6 follow through that, you can trace all the calculations 6 EXAMINER LYNN: It is long. 7 all the way from start to finish - or from finish to 7 MR. STEWART: (Indicating.) start rather. You go backwards. With the model 8 THE WITNESS: Yes, I've read it. 8 9 presented by Embarq, you can do that. There is --9 By Mr. Stewart: there are output workbooks from which you can glean a 10 Q. May I have that for a second? certain amount about the model is -- you know, and what 11 11 Yes. A. we have been able to unravel and presented in our 12 12 Now, in the response to that О. 13 testimony, but it comes a point where you just can't 13 Interrogatory, Embarq states - did you read the 14 look inside the heart of the model, what it's doing. response, also? 14 15 Q. So, then, it sounds as if what you're 15 A. Yes. saving is even if one were able to and did open all the 16 16 Q. Okay. Embarq states this, "Embarq 17 workbooks, you wouldn't be able to accomplish the level 17 confirms that these workbooks are not" -- quote -of analysis that you believe is appropriate? "generated" -- end quote -- "by the model run. Please 18 18 19 A. Not with what we have received, so -refer to file titled Loop Module Methodology.doc 19 20 starting on Page 23 to understand how the module runs Q. And, again, I apologize --20 21 Ultimately, of course, one can. You know, and uses these workbooks." Did you follow that 21 22 given enough time and resources, obviously one can instruction or do you know if your colleague, Dr. 22 23 analyze what's going on, but not within the time frame 23 Denney, did? 24 we have and with what has been presented to us. 24 A. Well, first, that's not the entire Did you say you were able to and did open 25 25 answer. The first part of the answer is an objection 170 172 1 all the workbooks or did you not say that? 1 that the information is not relevant; right? 2 A. Well, we've opened everything that was 2 Q. That is correct. 3 presented to us. 3 A. Okay. Now, secondly, we asked for a full 4 Q. Was there anything you tried to open that explanation, and there was -- is that one or two 5 wouldn't open? sentences? So that's Point 2, and Point 3, yes, and 6 A. Everything that was given to us we could this kind of illuminates my point that the -- well, 6 7 open. 7 yes, we did go through the model documentation and we Q. Thanks. 8 8 read the model documentation. My point is that the 9 (Discussion off the record.) 9 workbooks that were presented to us do not represent 10 By Mr. Stewart: 10 the inherent algorithm of the model, and that's why 11 Q. Did you draft the Interrogatories that --11 we're being referred to the Microsoft Word document 12 or did QSI draft the Interrogatories that COI sent to that is explaining what the model does, but that 1.3 Embarq? 13 explanation is -- will only get you there part of the A. We drafted some. 14 14 way. To see what a model does you need to see the 15 Q. Okay. Interrogatory 12, and I'll read it 15 underlying algorithm, so you can trace that two plus 16 to you, although I'm happy to show it to you, it says, two is indeed four. 16 17 "Regarding the 28 workbooks in folder LMA titled 17 Q. So I take it you're saying that you 18 LMAII 1 through LMAII 28 as they appear after the setup referred to the file titled Loop Module 19 file was run," and the Interrogatory then goes on to Methodology, doc, and even after you did that, that was 20 state, "Please confirm or deny that all or some of 20 insufficient to enable you to understand how the module

21

22

23

runs and uses the workbooks?

A. Yes, and that's my point.

Q. Okay. The proposal that you make for Embarq's rates -- this is Table 1 on Page 3 of your

supplemental direct -- do those proposed monthly

21

22

23

24

these workbooks (the versions contained on the model

CD) are not generated by the model run that produced

the recurring cost estimates for loops in Ohio in this

case. Please fully explain your answer." I take it that that's the Interrogatory that probably came from

176

173

3

4

5

6

7

8

9

recurring charges include loop conditioning costs?

- A. They don't include rates, but the intention is that they do include the -- that they include compensation for loop conditioning, yes, consistent with, I believe, the current ICA.
- Q. I didn't quite hear the first part of your answer. You said they don't include rates?
 - That's right, the compensation for costs.
- 9 Q. Are you meaning to say that they don't 10 include a separate rate for loop conditioning in there, 11 but overall your intent was to cover the cost of loop conditioning? 12
 - A. Yes.

1

2

3

4

5

6

7

8

13

17

2

3

4

5

6

7

8

10

11

13

18

19

20

21

22

23

- 14 Q. Now, my understanding is that QSI did not do its own cost study in order to determine the cost of 15 16 loop conditioning; is that correct?
 - A. That's correct.
- 18 Q. Did your study of the Embarq model reveal 19 to you that Embarg removed over (redacted) from 20 non-recurring rates?
- 21 A. I think I addressed what is being removed on Page 21, and I refer to Miss Londerholm's discussion 22 of that, and it appears to us that the costs that are 23 being removed associated with non-recurring activities 24 pertain to the drop, and I discuss that in the last

3

4

5

6

8

9

10

11

paragraph on Page 21. Given that loop conditioning doesn't pertain to the drop element but to, you know, the non-drop portion of the loop, it seemed to us that the necessary adjustments have not been made, and,

therefore, the costs must still be in the model.

- Q. All right. On Line 17 of 21, in that answer, the only answer in which you talk about loop conditioning, you're careful to use the word "appear." I take it you used "appear" because it wasn't evident in looking at the model whether loop conditioning costs were excluded; is that fair?
- 12 A. Yes. To perfectly ascertain it, you would need discovery or deposition.
- 14 Q. Here again QSI did not make an inquiry to 15 try to clarify that?
- 16 My answer is the same as it was previously 17 to that question.
 - O. Going back to Page 12, Line 5, it's the third line in that paragraph, it indicates -- our pagination is different.
 - A. Excuse me, which page?
 - Q. Twelve. The paragraph starts on my Line 3 with the words, "To summarize," the number there, (redacted) percent, this is another situation where the actual increase is, according to my calculation,

- (redacted). So my question is whether you would agree 1 2 with that change?
 - Yes, I would agree with that.
 - Q. And similarly, below that on Line 11, the DS1 loop counts increased to (redacted), as opposed to "by (redacted)"; is that right?
 - Yes, I would agree.
- Q. If you look please look at Page 14, Line 14 where you state, "The New Model builds (redacted) lines to each housing unit." I don't know 10 whether you can do this now, but if you would refer to the input page definition, the number of lines per each 12 13 housing unit is actually (redacted), is it not?
- 14 A. I can't ascertain that. I give a precise reference, so I think we can both look that up. 15 16 (Discussion off the record.)

17 By Mr. Stewart:

18 Q. Please look at Page 16, your table there 19 looks at economic lives, and this is - well, the 20 general subject of depreciation; correct?

21 A. Yes.

22 Q. Is it fair to say that over time 23 depreciation rates have increased for the accounts that 24 you show here, with the result being that economic lives are shorter now than they used to be?

174

A. I don't think that's true in general. For example. I don't think that buildings is really -- is 2 necessarily changing, where lives become shorter for that category, so it kind of depends.

Q. Okay. Well, let's take buildings out, because they're, at least to my mind, not a particularly telecommunications specific asset. For well, we can go through this one by one. For aerial copper, is it your belief that economic lives have shortened over the past 10 to 15 years?

12 Commission, which is the SBC Approved and the FCC Synthesis Model depreciation rates. To do a review of 13 14 depreciation rates, you need to, you know, do an

A. I provide two benchmarks for the

extensive study with life cycles for the particular 16 facilities or a particular product. I don't want to do

that just on the witness stand here. It's a 17

conjecture. I think the two benchmarks that I'm

comparing to and I think my point is that Embarg did 19 not support its depreciation rates, and if you compare

- 21 them to what the Commission has previously approved is
- 22 shorter, but I haven't done my own depreciation study,
- 23 which is, you know, a specialization I don't have, to 24 do an independent study, depreciation lives.
- Q. Are you generally familiar with 25

44 (Pages 173 to 176)

180

177

3

4

5

6

7

8

9

10

11

12

13

14

depreciation rates as they've been approved by Commissions and the FCC over the last 10 to 20 years?

A. I've looked at them, yes.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

1

2

3

4

5

6

7

8

9

10

11

12

13

- Q. And so are you saying you don't have an opinion about whether over time economic lives for things like copper cable, telephone poles, have generally gotten shorter?
- A. I don't think that you can generally say that. I think there has been a in part a movement due to the introduction of competition that may have, you know, caused regulators to take different dynamics into account that may shorten economic lives, but most of that took place after 1996, and now this new paradigm where there is competition and some of those adjustments that might have caused economic lives to shorten I think would have well played out at this point.
- Q. It's fair to say that as competition increases, that tends to shorten the economic lives?
- A. For some facilities it may. For others it may not.
- Q. Is it fair to say that increased competition in telecommunications doesn't result in longer economic lives for any asset that you could identify?

facilities are being maintained against the will of an
 incumbent and thus lengthen the economic lives.

- Q. Now please turn to Page 18. Look at Lines 5 through 9, and you talk about Account 6613 Product Advertising, and I understand what you say the Commission said to SBC, but is it your belief that there are not wholesale advertising costs?
- A. Well, I'm not saying there are no wholesale advertising costs so much as that they -- they're not costly related to the Unbundled Network Elements, the UNE loops that a company like COI is purchasing from you.
- Q. What facilities or services do you think properly incur wholesale advertising costs?
- A. I think there may be some special access products that possibly you could make an argument for that you're competing against Competitive Access
- 18 Providers and that to be able to compete with those,
- 19 that you want to be out there advertising your
- 20 facilities, but there is no substitute for -- well,
- 21 there -- it is a monopoly element that COI is coming to
- 22 you with a request for these facilities. I think it's
- 23 coming to you not because you advertised for it, but
- 24 COI is coming to you because it needs those facilities,
- 25 and you're required to make them available under the

178

A. Not necessarily. If you have poles, poles are still being used, and the onset of competition, particularly through cable that uses poles to the same extent that a telephone company does, that particular facility — and poles is listed here somewhere —

Q. Third up from the bottom.

- A. Yeah. The introduction of competition or the development of competition doesn't necessarily impact the economic life of that facility because competitors as well as the incumbent use that facility.
- Q. Well, again, let's -- poles aren't a particularly high tech area. But copper, over the years hasn't the useful life of copper declined given the advent of the use of fiber in the network?
- 14 15 A. I think that's probably true to some extent. On the other hand, I think the incumbents have 16 found that competitors still like copper, and where 17 18 companies like Verizon and AT&T, that are overbuilding the networks, their existing networks with fiber, they are actually maintaining copper facilities precisely 20 because this new demand has emerged from competitive 21 carriers; so where Verizon might initially have removed copper facilities, they now leave those facilities in 23 24 place. In fact, there are many proceedings across the country that involve precisely that issue, where copper

1 act, which is widely available to everybody, so it

doesn't need to be advertised that it is available.Everybody knows that it should be available.

4 MR. STEWART: Your Honor, I think I'm

almost done. May I have a few minutes?EXAMINER LYNN: Sure.

EXAMINER LYNN: Sure.EXAMINER AGRANOFF: Yes.

8 (Discussion off the record.)

9 MR. STEWART: I am done.

10 EXAMINER LYNN: Please go ahead.

MR. STEWART: No more questions at this

12 time.

EXAMINER LYNN: What we'll do at this point is take a break, and then you can do your round of questioning; okay?

16 MS. BLOOMFIELD: Yes.

EXAMINER LYNN: Thank you. Ten minutes again, back by four.

(Recess taken.)

20 EXAMINER LYNN: Back on the record,

21 please, and Miss Bloomfield.

MS. BLOOMFIELD: Yes, Your Honor. I just

23 have a few questions.

24 25

19

22

184

181

13

14

22

2

3

4

6

7

₿

9

18

21

REDIRECT EXAMINATION

By Ms. Bloomfield:

1

2

3

4

5

6

7

8

1

2

3

5

6

7

8

9

19

- Q. Dr. Ankum, this is to clarify the record. There was a lot of discussion about CDs, the model CD, workbooks, et cetera, and isn't it the case that you could open the various -- some at least, some of the files on the CD that you received with Miss Londerholm's testimony?
- 9 A. Yes. Actually, more than that. We could 10 open all of the files. It's not the files themselves 11 don't open. It's rather that the files are not the totality of the model. 12
- 13 Q. Fine. Is it true that for those - for 14 those -- some of those files that are called workbooks, those are - those are essentially Word documents, some 15 of them at least; correct?
- 16 17 A. Well, the -- there are Excel-based 18 workbooks that are related to the model, and then there are additional files that are model documentation 19 files, and those are in Microsoft Word. They just give 20 descriptions of what the model does, et cetera, et 21 22 cetera; so of the module -- none of the model logic is 23 explained in the Microsoft Word document. 24 Q. So you were able to open -- as you
- 25 mentioned, you were able to open the files in the CD;

scenarios, et cetera, et cetera, that are almost

- independent off the model, but the discussions about
- the model go back to the worksheets and the workbooks 3
- that we're able to inspect, and so there is a certain
- amount that you can understand about the model and that
- 6 I have discussed in my testimony, but, again, the 7 underlying algorithm you can't see.
- 8 Q. Mr. Stewart gave you some discovery 9 responses that Embarq had given back to COI. Isn't it the case that those discovery responses referred not to the CD that is part of Miss Londerholm's testimony, but 11 12 rather the prior CD of the Cost Model that has now been
 - A. That's correct.

abandoned?

- 15 O. And you testified, did you not, that 16 because of the supplemental testimony time frame and
- the fact that the discovery had closed, you were not 17 18 able to get additional information, additional
- 19 information about the CD that was attached to Miss
- Londerholm's testimony; correct? 20
- 21 A. That's correct.
 - That's all I have.

23 EXAMINER LYNN: Mr. Stewart, do you have

24 any questions? 25

182

you just weren't able to make the program work?

- A. That's right.
- Q. And you also indicated that some of the workbook files didn't appear as complete as you would like to see them - I shouldn't say that, but where the workbook files, particularly the Word-based workbooks, they have sufficient information for you to verify the cost of service study? A. Yes. The Excel-based workbooks do not
- 10 give you access to the underlying algorithms, the 11 calculations that drive the reconstruction, the 12 hypothetical reconstruction of the network that takes place in the model. You can't see that in the 13 Excel-based workbook. The Microsoft Word documents 14 15 will describe the logic of what is going on in the model, but short of seeing the actual equations that 16 are being carried out so that you can trace from Excel 17 workbook to Excel workbook exactly what is taking 18
- 20 Q. Was the information that was in the 21 various files on the CD sufficient for you to support your conclusions in this case?
- 22 23 A. Yes. My testimony is based on what we were able to see, as well as, of course, I have discussions there about comparisons between different

place, you simply can't verify the model.

1 RECROSS-EXAMINATION

By Mr. Stewart:

- Q. The one discovery question and answer that we discussed when I was speaking with you earlier, are you saying that was not applicable to the new model CD?
- A. That guestion pertained to the old model CD, and that answer pertained to the old model CD. We did not have discovery on the new model.

Q. I appreciate that the question was asked

- 10 with respect to the earlier CD and you got it before 11 you got the new model CD, but what I'm asking is whether that question and answer were applicable to the new model CD. In other words, let's say you hadn't received the earlier model and had just received the 14 15 model that was attached to Ms. Londerholm's testimony. 16 Would you have asked that particular question and would 17 the answer have been helpful?
- A. Well, you're asking me would you have 19 answered the question in the same way, and, of course, 20 I don't know what you could have answered.
 - Q. I'm not asking you that.
- 22 A. Part of the answer seemed to be germane --23 if that's what you're asking. The new model CD does have loop - does also have Cost Model documentation in there, so to some extent I imagine there might have

188

185

been an overlap if we asked you for something specific about the old model, and I don't necessarily know what 2 you would have answered. That's up to you. 3

4

5

6

7

12

13

14

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

- Q. No, I don't mean to I didn't mean to ask you to speculate on what we would have answered, but was the answer that we looked at germane to the new
- A. Well, it informed our understanding of the 8 new model, but, again, I think in all fairness, you 9 were asking me to speculate, even though you're saying 10 that you're not asking me to speculate, but -11
 - Q. Well, I don't mean to ask you to speculate. Did you do for the new model what that answer suggested be done for the earlier model?
- 15 A. Well, the -- as I recall the question, it's asking you about certain worksheets and workbooks 16 17 and it's asking whether those are generated by the model run, and it's asking you to explain that, and 18 with respect to the old model, you said that they're 19 not generated by the model run. Now, I used that 20 answer to inform my understanding of the new model. 21 but, of course, on my part that is in part conjecture 22
- since I never got to ask that question of you. 24 O. Well, the answer suggests referring to the file titled Loop Module Methodology in order to 25

1 Q. In regards to your discussion of the fill 2 factors, did you do any fill factor adjustment to the 3 cost study model based upon the concerns you have 4 raised in your testimony?

A. No. I made no adjustments to the model 5 for a number of reasons. First, we were never able to 6 7 run the model. Secondly, I don't really want to make recommendations based on an unexamined model. The 8 model hasn't been approved by the Commission. Within a 9 two-week time frame there's no way that anybody can really verify the functioning of that model. I also 11 believe that the model doesn't really produce rational 12 13 and consistent results; so we never tried to modify the model. Instead, we presented an alternative proposal 14 that simply takes the existing rates in COI's 15 interconnection agreement and then asked the question 17 how much would those rates have gone up in view of increases in input prices, and we went to the Bureau of 18 Labor Statistics and Bureau of Economic Analysis, and 19 they present inflation factors for the various loop components. We used that to estimate by how much the 21 rates in COI's ICA would have gone up, and that's our 22

counterproposal that is before the Commission. O. That's all I have.

A. Thank you.

186

23

24

25

4

6

7

8

9

understand how the module runs and uses the workbooks. Was that reference one that was meaningful for the new model and --

A. That particular component, yes, and that's what I'm trying to differentiate.

O. So for the new model you would have referred to the Loop Module Methodology to gain understanding?

A. Yes, but there's another component to that question and answer.

Q. That's all.

EXAMINER LYNN: Any other questions? Miss Green, do you have any questions?

EXAMINATION

15 By Ms. Green:

- 16 Q. From an engineering perspective, what is the difference between a DS1 loop and a four-wire loop 17 with regard to the provisioning requirements for each?
- 18 19 A. Well, I mean, they may be using different 20 network components, if that's what you're asking

21 about. Like the DS1 loop could be riding over fiber.

The four-wire loop that COI is asking about is going to 22 23 be a copper loop, so the implication is they are both

for how you would cost them out, but also how to

25 provision them.

EXAMINER LYNN: Miss Russell, any 1 questions? 2

3 MS. RUSSELL: No.

EXAMINER LYNN: Mr. Agranoff, any

5 questions on your part?

EXAMINER AGRANOFF: The only question I have is one of clarification, and I'm not sure whether or not the witness would be the individual that would know this information or whether or not counsel would

be best able to provide this, and that's simply with 10

11 respect to the interconnection agreements that Dr.

12 Ankum used for comparison purposes, I would like to

know the case numbers for those interconnection

agreements and the dates on which the Commission 14 15 approved them.

16

MS. BLOOMFIELD: Would we be able to provide those at a later time? I don't have them. 17

EXAMINER AGRANOFF: Sure. 18

MS. BLOOMFIELD: I believe that QSI pulled 19 20 those, so I'm not sure which ones they are, but we can 21 certainly get them for you.

22 EXAMINER AGRANOFF: What I was looking at 23 offhand was the ones referenced in Table 10 of Dr.

24 Ankum's direct testimony. Specifically it was on Page 25 32.

1	189		191
1	MS. BLOOMFIELD: That was the only table,	1	EXAMINER AGRANOFF: Sure.
2	Your Honor? That was the only table where you wanted	2	(Discussion off the record.)
3	to know the	3	EXAMINER LYNN: Then I guess that would be
4	EXAMINER AGRANOFF: Yes.	4	it, and we are closed for today, finally.
5	MS. BLOOMFIELD: Thank you.	5	(Thereupon, the hearing was concluded at
6	EXAMINER LYNN: Any more questions that	6	4:23 p.m.)
7	you have?	7	
8	EXAMINER AGRANOFF: No.	8	-
9	(Discussion off the record.)	وا	
10	EXAMINER LYNN: Then we're close to	10	
11	wrapping things up, but before we do, Ms. Bloomfield	11	
12	and Mr. Stewart, would you have any questions based on	12	
13	what the Panel had asked, any clarification questions?	13	
14	MS. BLOOMFIELD: No, Your Honor.	14	
15	EXAMINER LYNN: Mr. Stewart.	15	
16	MR. STEWART: No.	16	
17	EXAMINER LYNN: No questions.	17	
18	(Witness excused.)	18	
19	EXAMINER LYNN: Thank you, everyone.	19	
20	We'll resume tomorrow at nine. Before we do, we need	20	
21	to have a motion for exhibits.	21	
22	MS. BLOOMFIELD: I would move at this	22	
23	point that COI Exhibits 2, 2A, 3, and 3A, which are the	23	
24	first confidential and then public versions of Dr.	24	
25	Ankum's original direct testimony and then his	25	
	190		192
1			
1	supplemental testimony be admitted.	1	CERTIFICATE
2	EXAMINER LYNN: All right. Mr. Stewart,	2	I do hereby certify that the foregoing is
3	no objections on that?	3 4	a true and correct transcript of the proceedings taken by me in this matter on Tuesday, October 28, 2008, and
4	MR. STEWART: I do not object.	5	carefully compared with my original stenographic notes.
5	EXAMINER LYNN: That means you want to go	6	the state of the s
6	home; right?	7	
7	MR. STEWART: No. It means that I don't	ļ	
8	predict that an objection would be worthwhile.	8	Valerie J. Sloas, Registered
9	EXAMINER LYNN: Not at this time of day.	_	Professional Reporter and Notary
10	Okay. Now we actually can close things for the day,	9	Public in and for the State of Ohio.
11	and we will be back here at 9:00 a.m. tomorrow.	10	Onto.
12	(Discussion off the record.)	11	My commission expires June 8, 2011.
13	EXAMINER LYNN: Exhibits 2A and 3A will be	12	(VJS-517)
14	late filed because we need to determine what will be	13	
15	disclosed to the public and what will not.	14	
16	EXAMINER AGRANOFF: For the	15	
17	MS. BLOOMFIELD: I'm sorry, I'm not	16 17	
18	following that.	18	
19	EXAMINER AGRANOFF: The public versions of	19	
20	Dr. Ankum's two pieces of testimony are going to be	20	
21	basically created after you and Mr. Stewart have the	21	
22	opportunity to go back and see what can be released into the public record.	22	;
23	•	23	į
24	MS. BLOOMFIELD: Can we go off the	24 25	
∠⊅	record?	45	

λ
abandoned 183:13 ability 27:10
162:1
able 5:6 15:25 19:17 54:14,16
54:24 55:7 58:5 63:3
74:17 85:9,22
92:12,17,20 94:2 111:21
122:17 124:16 127:10,12,16
127:10,12,16 127:18,21
153:21 166:2
166:22 169:12 169:16,17,25
179:18 181:24
181:25 182:1 182:24 183:4
183:18 187:6 188:10,16
188:10,16 about 5:5 6:3
14:10,13,20
15:6 16:23 19:10 20:11
23:10 24:24
25:15 26:12 27:25 31:14
32:6,7 33:6
34:1,14,19 38:21 39:18,22
41:13,22 42:10
42:21,21 46:2 46:8 48:21
51:20 52:19 53:14 56:13
58:9 60:1,4,15 61:6,6,16,22
61:6,6,16,22 62:3,13,14
63:18 65:10
66:12 67:2,9 68:25 69:22
70:4 71:18,21
71:22 73:12 74:3,9 76:21
77:5 85:13
86:13 90:24 95:23 96:15,19
96:25 97:8,20
77:5 85:13 86:13 90:24 95:23 96:15,19 96:25 97:8,20 97:21 99:5,16 100:13,20 102:25 104:8
102:25 104:8 104:14,15
107:5,14,19
108:6,21 111:14 113:19
115:9,16
117:18 120:8

129:13 135:12 135:20 140:3 140:16 142:6 145:5 146:1 151:1 152:22 155:11 156:11 158:11,11 160:4 161:4 162:11 163:15 165:17 166:13 168:1,13 169:11 174:7 177:5 179:4 181:4 182:25 183:2,5,19 185:2,16 186:21,22 above 142:21 absence 164:21 absolutely 39:12
absolutely 39:12
111:24 absolutist 162:8
absorbed 159:22
accelerate 81:17 accept 41:20
42:6 71:17
107:7,9 access 13:19,22
75:3 108:14,20 123:4 127:2,10 127:11,12,15 127:22 142:5,6 179:15,17 182:10 accessible 127:17
accommodate
162:1 accommodated
161:16
accomplish 169:17
according 23:16
51:6 174:25 account 17:12
29:18,19 80:6 80:9,11 109:7 177:12 179:4
accounts 11:11 11:23 12:10,12
175:23 accuracy 57:23
accurate 146:6
164:11,17
ACH 18:17,21,22 19:1
acknowledge

163:6

```
acronym 13:17
 17:21 107:21
 141:12
acronyms 13:6
across 178:24
act 1:7 4:9
 152:23 153:3
 153:12 180:1
activities
 131:12 173:24
activity 109:16
acts 110:25
actual 6:17
 58:12 102:16
 122:17 137:21
 137:23 138:8
 160:8,10 161:8
 174:25 182:16
actually 23:11
 28:6 48:24
 52:1,4,5,13
 56:22 59:10
 79:13 82:19
 85:10 93:22
 97:15 102:16
 115:20 118:16
 129:24 137:1
 138:1,3 163:7
 163:12,14
 168:13 175:13
 178:20 181:9
 190:10
adamant 42:22
addition 53:5
 150:3
additional 5:23
 93:2 131:25
 132:25 133:25
 181:19 183:18
 183:18
additions 8:25
 115:5 116:16
addressed 104:25
 173:21
addressing
 142:20
adhering 27:12
adjust 161:13
adjusted 58:7
adjustment 187:2
adjustments
 174:4 177:15
 187:5
admission 5:19
admit 30:17,20
admitted 29:15
 113:7,12,14
 190:1
admittedly 29:13
```

```
admitting 106:21
adopting 5:13
ADSL 68:1
advance 25:4,8
 25:11,17,22,24
 26:2 77:5,8,12
advent 178:14
adversarial 43:1
advertised
 179:23 180:2
advertising
 179:5,7,9,14
 179:19
advice 40:25
advised 17:18
 118:17
advocated 7:4
advocating 77:14
aerial 176:8
affirmation 6:14
Africa 141:11
after 5:22 10:14
 14:6,14 15:2
 20:7 21:4,8
 23:14 24:6
 36:3,12,24
 50:6 55:19
 60:16 61:18
 77:17 89:12
 105:7 112:9.10
 122:16 170:18
 172:19 177:13
 190:21
afternoon 116:25
again 5:17 8:10
 9:17 18:24
 22:15 24:7
 26:7 34:22
 35:19 37:4
 50:9 61:5 77:7
 86:16 88:24
 91:5 97:6
 107:12 114:11
 122:23 141:6
 142:14 146:8
 160:3 161:1
 162:5 164:8
 169:20 174:14
 178:11 180:18
 183:6 185:9
against 90:13
 142:16 179:1
 179:17
ago 19:25 103:16
 109:21
Agranoff 1:10
 3:8,9 4:11
 6:21 7:7,11
 10:5 13:5,11
```

13:13,16 32:18

```
36:5 43:17
 66:25 67:6
 76:11,14 78:24
 79:8 85:5 92:2
 101:15 102:10
 102:12 104:7
 104:11,20
 107:20 115:20
 117:14,22
 120:12 180:7
 188:4,6,18,22
 189:4,8 190:16
 190:19 191:1
Agranoff's 104:2
agree 25:3 44:3
 99:1,3 110:4
 112:7 117:8,18
 125:19 130:24
 140:3 147:15
 149:16 152:10
 175:1,3,7
agreeable 83:8
 110:8,9
agreed 6:13,16
 30:21 45:13
 53:6,9,18
 82:10 114:2
 143:1
agreeing 110:6,7
agreement 6:9,15
 30:23 31:9
 32:9 33:9 35:8
 45:3 66:19
 67:18 69:21
 72:15 73:2,5,6
 73:8,18 75:14
 75:23 76:3
 84:12 85:3
 93:13 94:1,12
 94:20 95:4,7
 103:21 104:4,6
 104:12,16,16
 104:18 105:2
 105:13,21
 105:9 114:3
 124:18 130:3
 136:15 148:14
 148:24 149:4
 163:21 164:9
 164:13,16
 187:16
agreements 84:10
 105:6 124:11
 136:12 148:14
 188:11,14
ahead 47:9 83:7
 111:20 114:6
 145:23 180:10
algorithm 168:24
```

172:10,15

183:7	analyst 133:15	answered 21:8	appropriate 9:21	80:9 84:7
algorithms	analyze 54:8	71:6 104:1	99:20 100:22	94:24 95:3
126:17 167:1	57:22 169:23	123:5 158:3	100:25,25	102:1 121:2
168:14 182:10	analyzed 47:11	164:24 184:19	138:14,14	133:3 137:24
alleging 104:23	47:14 154:6	184:20 185:3,5	144:4 153:12	161:12 165:23
142:19	157:23	answers 8:22	160:6 169:18	arrangements 1:5
allocated 160:24	analyzing 7:5	77:19 100:19	appropriately	84:13
allocating 159:3	animal 140:4	100:23 115:3	135:16	arrears 25:12,14
allocation	Ankum 3:11,19,20	116:12	appropriateness	25:15,20 77:5
139:13 140:20	3:22,24 5:11	anticipate 161:4	98:24 100:4,14	77:9,11
159:17 161:17	6:10 33:18	anybody 6:6	100:18	art 33:8
161:24	34:2 98:24	16:24 31:17	approved 35:16	ascertain 131:21
allow143:3	99:9,21 113:18	45:21 187:10	37:8 46:17	174:12 175:14
allowed 56:3	113:20,22	anymore 59:4	47:3 119:18	aside 140:15
110:20,22,23 123:18 133:5	114:8,13,13,24	95:1	161:9,10 164:20 176:12	asked 16:24 19:19 21:11
allowing 27:23	116:9,18,25 122:25 123:3	anyone 114:1 anything 6:20	176:21 177:1	34:14 35:3
allows 40:5	123:24 151:9	7:11 56:17	187:9 188:15	38:20 39:22
69:13	171:4 181:3	69:22 91:13,16	approximate 62:5	42:9 46:1,17
alluding 139:1	188:12	101:3 134:6	approximately	48:21 51:20
almost 180:5	Ankum's 35:5	170:4	42:12 50:14	52:19 57:11
183:1	37:18 100:12	anytime 33:22,24	53:8 81:22	58:10 64:3,5
alone 128:7	188:24 189:25	33:25 61:4	82:4 97:3	77:4 88:16
along 69:4	190:20	anyway 25:8	145:4,6	89:16 93:6
already 7:18	annual 62:16	140:7	approximation	95:22 96:19
22:13 51:16,17	131:19	anywhere 17:4	20:3 62:20	99:18 100:18
66:18 69:4	anomalous 137:14	71:23 100:22	April 87:15,15	100:20 101:4
92:23 95:19	138:15	apart 133:25	arbitrating	102:24 103:17
113:6 114:8	another 4:11	apologies 151:2	103:22 104:12	104:11,14,15
143:12,13	24:6 29:11	apologize 145:22	arbitration 1:4	104:22 114:3
155:18 158:3 alter153:23	32:2 47:13,22	148:15 158:3 169:20	4:8 7:1,21	149:22 172:3
alternative	81:7,8 82:9 92:23 108:9	apparent 159:12	33:23 56:20 57:2 67:3 73:3	184:9,16 185:1 187:16 189:13
64:24 74:10	111:14 119:7	apparently 12:7	73:9,23 104:17	asking 24:8 67:1
187:14	149:5 157:9	appear 170:18	114:20	73:22 75:7
although 49:4	174:24 186:9	174:8.9 182:4	arbitrations	99:15 106:25
147:19 170:16	answer 20:15,21	appearance 4:15	7:20	107:1 117:10
altogether 53:11	21:3,15,23	APPEARANCES 2:1	area 89:10 94:11	117:24 120:8
53:13	34:18,23 35:1	appears 83:25	94:15,17 98:17	161:3 167:11
always 26:21	35:9,10,14,19	99:4 117:19,19	98:20 100:12	184:11,18,21
73:12 75:4	60:10 65:8	142:1 160:14	101:23 103:5	184:23 185:10
83:19	71:4 91:5 99:8	173:23	121:22 178:12	185:11,16,17
Ameritech 84:12	101:1 102:12	apples-for-ap	areas 73:15	185:18 186:20
124:11,18	104:7 122:4,16	120:7	98:25 99:5	186:22 aspects 132:13
Among 132:17 amount 24:23	122:20,21 123:3,6,11,15	apples-to-apples 142:10	103:3 119:14 120:22,22	132:14 158:12
30:12.21 39:17	123:16,18,20	applicable 184:5	121:7,20,20,23	asset 176:7
45:3,7 62:17	126:20 129:23	184:12	121:24 125:23	177:24
80:8,11 88:14	133:1 135:7	applies 19:24	132:18,20	assigned 4:6,10
88:16 129:6,8	140:16,22	117:24	argue 29:4 57:7	43:14 140:14
169:11 183:5	149:21 150:2,4	apply 28:13	143:7	assist 7:4
amounts 10:25	155:10 162:6	139:18 148:14	arguing 101:11	assisted 128:8
11:10 12:3,5	162:24 167:7	165:3,4	argument 109:14	128:10
31:6 42:17	167:23 170:24	applying 149:5	179:16	associated
analyses 128:25	171:25,25	149:11	arguments 68:14	173:24
analysis 99:2	173:7 174:7,7 174:16 184:3,7	appreciate 184:9	ARMSTRONG 1:22 around 14:3	assume 22:10 134:17 142:4
128:7,18,21 129:4 169:18	184:12,17,22	appreciates 99:7 approach 83:9	16:25 17:6	149:11 165:15
187:19	185:6,14,21,24	89:1	40:19 45:20	assuming 68:8
	186:10		78:14 79:21,25	82:8 92:19
	<u> </u>	<u> </u>	<u> </u>	l

115:17 144:7	away 42:25 60:4	98:4,5,12,25	98:6,8 101:16	believe 5:23
assumption	60:7,8 150:10	99:11 100:5,19	104:7 136:14	6:19 13:3 14:2
148:23	A-n-k-u-m114:14	118:25 119:3,4	bear 102:16	14:5,13 33:3
assumptions	a.m.1:14 190:11	119:4 121:18	became 89:6	34:18 49:15
168:14,21		131:24	Becky 43:8	57:6,16 58:12
assured 153:19	B	bank 18:11,22	become 176:3	70:25 71:6,7
attached 183:19	back 7:5 10:8	26:11	becomes 83:13,18	91:22 93:6,10
184:15	18:1 20:17,20	bankruptcy 19:17	before 1:1,10	93:11 101:10
attain 137:8	20:21 21:2,3	19:18 28:19,22	5:5,16 9:20	109:25 113:5
attention 21:22	22:16,18 28:18	28:25 29:2,7	11:20 30:25	123:17 124:2
117:4 119:2	29:23 33:22	29:12,24 30:8	37:15,17,18	130:15 135:13
136:22	34:22,23 42:20	30:10,11,18	38:2,13 43:4	136:21 151:1
attorney 4:10,12	54:13 55:3	31:4 42:10,12	43:12,24 48:24	154:12 162:19
30:15 44:19	70:6 83:2,17	44:14,14,16,19	53:7 71:7	163:5,8,16
87:1 100:3	91:6 92:4	45:2,19,22	74:20 84:25	166:12 169:18
149:23	113:16,17	55:22,24 83:4	97:15 106:17	173:5 187:12
attorneys 30:14	118:15 122:20	86:12,15,18,22	134:21 151:10	188:19
AT&T 84:4,12	122:21 124:15	86:23 87:1,7	165:17 184:10	believed 31:5
105:6,18,22 106:2 118:23	124:24 126:9	89:8,9	187:23 189:11	123:12 Bell 73:14 76:2
118:24 119:2,4	134:11 140:10	barest 142:11	189:20 hogan 49:12	bell /3:14 /6:2 below 175:4
118:24 119:2,4	150:24 154:2	barrel 143:24	began 49:12	below 1/5:4
120:15,22,25	160:4 163:23 166:6 174:18	144:1 barrier 118:7,12	begin 7:9 11:10 41:19 47:3	176:11,18
120:15,22,25		base 76:19,25	48:16 161:12	benefit 167:10
121:18 122:2,9	180:18,20 183:3,9 190:11	160:7	161:14	besides 55:23
122:11,14	190:22	based5:8 7:17	beginning 49:13	best 57:4,8
123:1,4,25	backed 45:15	28:3 45:12	166:18	100:21 146:3
125:19 166:7,9	background 11:16	46:12,25 57:3	begins 78:25	188:10
178:18	44:20 79:3	60:11 66:20	begun 15:18	better 90:18
AT&T's 119:14	backs 84:1	69:9,14,17	behalf 2:5,8	between 7:19
125:23,23	backwards 169:8	73:21 79:14,15	4:16,18 11:6	10:21 12:9
166:11	bad 20:11	79:18 80:20	130:11	28:16 30:14
audit 169:2	ballpark 119:21	89:22 94:6,17	behind 155:14	31:10 33:9
August 3:11,18	band 72:21,22,23	96:13 98:4	being 5:6 8:4	37:19 40:5
3:20,22,24	72:24 73:1,13	99:5 100:6,9	11:20 25:11,12	41:2 43:18
42:14 113:22	73:13,14,17	100:10 102:14	29:21 48:21	54:21 58:18
114:8,13,24	75:17 81:7,8	108:7 110:11	54:20 59:7,8	60:13 61:1
115:24 116:8	93:8,12,14,15	110:14 112:11	69:19 70:3,21	63:19 75:5
authority 152:17	93:16,17,22	122:9 137:12	73:3 74:23	103:18 119:3
automated 16:13	94:2,19 96:12	138:16 140:16	77:8,9 78:9	119:15 124:11
19:1	96:18 98:19	148:17 153:13	83:12 88:16	124:18 131:22
available 18:14 37:16 38:4	100:14 101:9	153:20 157:23	90:14,17 92:9	133:24 139:13
57:4,8 122:9	101:12,17	164:3 168:11	92:21 112:3	139:23 140:7
129:16 159:23	119:8,9,12,13	182:23 187:3,8 189:12	113:23 117:4 126:22,23	140:17 145:2,3 159:1,6,10
179:25 180:1,2	119:16,16	189:12 basic 141:19	130:11,13	160:19 161:17
180:3	120:16,16,23	142:25	130:11,13	164:12,14
average 14:6	121:1,1,3,12	basically 12:2	140:6 142:24	165:1,24 166:3
24:2 25:19	121:13,19	18:18 35:18	145:8 142:24	166:9,17
27:25 60:12	123:2,3 123:1	40:4 42:4	155:14 156:6	182:25 186:17
62:6 105:25	banding 99:9	60:15,21 86:3	164:11 172:11	beyond 105:11,18
121:11,13	102:13 103:9	103:11 131:10	173:21,24	130:5
122:1,3 123:1	bands 72:16,16	134:1 148:12	175:24 178:2	big 57:11 84:22
147:13	72:18,20 73:3	190:21	179:1 182:17	89:10
aware 7:12,16	73:6,7,11,12	basis 18:6 26:25	belief 20:6	bigger 26:23
18:13,16 19:8	80:6,25 81:1,5	31:8,22 32:9	23:18 58:2	biggest 87:21
28:18,20 47:4	81:9 94:10,22	33:20 35:7	74:19 103:8	big-name 154:20
67:11,17	94:23,25 95:3	59:7 62:1	120:25 136:3	bill 11:9,13,24
118:10	95:6 96:14	77:22 82:12	176:9 179:6	12:14,21 13:2
		83:10 95:2		13:4,20,25
			· · · · · · · · · · · · · · · · · · ·	·

14:8,17 15:24	22:25 23:4	97:16	Bureau 187:18,19	cap 73:21 75:7
16:1,15 20:12	25:10,14 26:15	both 14:25 26:13	buried 131:12	capable 71:1,8
21:16 23:10,16	26:16,17 36:2	49:22 65:13	burying 158:22	capacity 114:16
24:3,17 26:2	38:21,25 39:2	75:9 76:24	158:25	137:24 159:23
27:3 29:5,20	39:11 40:11	88:17,18	business 75:1	caps 40:14
30:25 36:3	42:4 48:20,22	104:10 107:10	76:20,21,25	capture 121:20
48:23,24,24	51:14 53:9	117:20 118:23	84:6,9 89:4	card 134:23
49:1,2 51:3,3	57:12,13,23	131:18 154:6	152:7,13,20	135:1,5,10,12
51:8,10,12,14 51:21 52:4,13	58:4,6 59:5,8 61:23 62:1	155:12 158:4 175:15 186:23	153:16,22,25 154:1,2	135:14,19,23 135:25 136:4,5
54:9,14,25	64:4 77:21	bottom 60:9	businesses 102:7	155:9 157:11
55:7,16,19	78:2,5,21 79:7	65:24 70:6	buttons 168:3	157:11
57:17,22 58:20	80:3,5,19,22	160:14 178:6	buy 28:8,8 94:8	care 6:8 89:20
59:14,21,25	80:24 81:3,4	bought 17:7,9	108:14 110:19	careful 174:8
60:14 61:2	82:12,21 83:1	33:7 41:7	110:21	carefully 192:5
62:13 63:1	83:9 95:23	box 10:24 77:24	buying 55:18	carried 182:17
64:24 79:23,24	96:2,8,9,15	77:25 80:5	93:20	carrier 13:12,19
80:7,23,23,24	bit 108:21 149:1	167:2,3	B-0-S40:14	13:22 63:9
82:24 83:5,6,7	black 167:2,3	boxes 39:7 77:25		67:12,14 74:10
83:14,14,16	blank 121:12,13	Brad 17:15	<u> </u>	84:9 91:9
84:14 85:21	122:2,3 123:1	brand 157:12	cable 148:1	95:17 carriers 178:22
86:1 87:4 89:15,21 91:14	157:8,12,13 blanks 121:21	brands 157:11 break 12:9 38:12	177:6 178:3	case 1:5 4:6,11
92:9 96:12	Bloomfield 2:2	38:12 75:3	Cables 164:3 CABS 13:4,13,14	6:19 8:19 9:22
97:2,14 106:10	3:4,5,6,10,12	150:22 165:17	13:23 15:23	12:7 17:6 28:1
106:17,22,23	3:13 4:18,20	180:14	25:14 39:14	29:25 42:12,16
110:7 111:8	6:7 7:15,23	breakpoint 28:7	59:5,6,6,7,9	43:13 46:4
billed11:21,21	8:8 9:3,6,8,23	28:16 74:8,16	59:11 62:3	48:23 49:16
25:11,12,14,14	10:1 21:10	108:7	calculate 144:13	51:2 52:25
25:17,20,22,23	23:8,15,19,24	Bricker 2:2 4:20	144:14,16	77:18 85:17
26:1 29:6 31:3	32:4,11,16,20	bridge 68:5,6	calculated	90:8 95:16
69:11 70:21	32:23 33:1,4	69:2,14 70:15	126:22	96:11,24 97:1
77:8,9,10,12 91:11	34:24 35:1,11	70:17,18,20,21	calculation	138:10 158:11
billing 11:17	35:13 37:19 38:15,17,19	70:25 71:7 108:21 109:1,4	174:25	158:12 170:24 181:5 182:22
13:4,14,15,15	43:20,21 53:21	109:13,15,25	calculations 126:17 155:15	183:10 188:13
13:22 14:1,14	63:13,16 65:13	110:5,10,12,14	158:1 168:24	cases 7:1 94:23
14:15 15:23,23	65:16,20 66:5	110:15,18,20	169:6 182:11	categorical
16:3,23 20:11	66:8 95:11,12	111:12,22	CALIX 155:8	162:8
21:15 25:8	95:14 99:14	112:11,13,15	call 10:1 17:8,9	category 77:2,8
29:5 42:3 43:4	100:16 101:13	briefer 120:15	31:24 32:2,12	98:18 176:4
54:21 60:17	113:3 114:7,10	briefing 6:22	41:23 54:12	cause 132:6
61:12,15 62:6	115:14,23	briefs 6:1,2,23	55:10 57:19	caused 137:14
62:16,16 69:5 76:23 77:5,5	116:2,4,6,18 123:8 151:23	bring 7:17 38:24	85:16 134:2	177:11,15 CBT 163:11,20
77:10,14 78:6	171:3 180:16	81:22 brings 94:22	153:9 called1:14	CD 10:24 12:17
79:21 80:6,8	180:21,22	Broad 1:13 2:7	18:17 114:8	13:1 14:1,5,7
80:11 81:12,17	181:2 188:16	5:2	141:9 169:3	14:15,18,25
82:8 83:20,20	188:19 189:1,5	broader 153:3,4	181:14	15:5,6 49:6,9
83:24 84:13	189:11,14,22	brought 7:8	calls 31:19	49:10,13,17,18
86:19,24 87:6	190:17,24	21:22	36:24 43:7	49:20 50:8,9
92:5 106:1,7	board 129:3	build 154:17	158:10	50:19,21,22
105:13,18,22	bodies 131:12	155:4	came 19:18 29:7	57:14,15 58:13
107:3,6	boils 101:20	buildings 176:2	34:13 46:15	58:15 59:2,11
billings 39:9 bills 10:21 11:3	Bos 96:20 97:4	176:5 builds 175:9	49:19 53:12	59:23,25 60:14 60:21,22,23,24
11:6,19 12:16	BOS-45 40:13	built 155:5	84:20 89:8 90:23 124:2	80:4,17 95:24
15:11,19 16:10	41:2,21 42:6	bulk 139:2,2,3	128:3 157:2	170:22 181:4,7
16:21 18:14	54:17,18 63:23	bunch 51:20	170:25	181:25 182:21
20:10 21:12	64:7 97:2,12	58:19		183:11,12,19
	<u> </u>	I	l	<u> </u>

·				
104.5 7 7 10	1 365 0 33	1 .5 10 10 55 10	28:18 29:13	158:4,5 171:22
184:5,7,7,10	165:9,11	45:12,12 56:10		
184:11,13,23	changing 14:2	120:3	30:7,12,18	colleagues 33:18
CDs 12:22 49:11	57:17 161:21	claimed 106:23	31:2,10,23	124:4 128:9
49:12 50:1	176:3	claiming 42:16	35:6 36:2,14	171:1
60:7,18 64:11	Chapter 29:7	56:6 110:25	36:25 37:3,16	Columbus 1:14,23
77:24 80:15	42:23 43:2	clarification	37:18 38:2,4	2:4,7 4:22 5:2
181:4	characterization	32:5 63:14	40:8 41:1	column 136:16,18 136:19 141:3
cell 169:3,3,5 cells 169:5	102:17 132:15 168:9	74:15 188:7 189:13	42:17,17 44:9 45:4,22 47:5	
center 94:7,8	characterized	clarify 42:11	52:3,20 53:3,9	144:25,25 145:1
98:10 101:6,9	121:21	76:19 77:7	53:16,18 54:24	come 8:1 10:23
101:11 102:14	characterizing	95:23 174:15	55:22 57:23	12:16,17,22
centers 94:6,13	152:3	181:3	58:23 59:3	42:5 59:5 68:5
94:14 95:2	charge 54:7 55:6	clarifying 93:3	61:1 62:1,6	77:23 78:5
99:11 100:4	67:19,23 68:23	93:11 95:10,15	63:5,20 67:11	81:4 87:19
120:23 137:10	69:19 105:14	clear 13:6 22:1	67:22 68:2	100:14 131:6
152:7	105:19 131:20	23:9 43:18	69:18 70:25	142:9 154:1
central 134:15	141:4	67:1 107:21	71:6,12,19	comes 11:10
142:12	charged 11:11	115:15 147:24	72:4,11,16	12:21 14:13
cents 56:13	67:22 68:2,4	149:24	75:15 76:6	15:6 20:13
75:16	70:3 71:19	clearer 147:11	77:14,21 78:21	40:13 108:19
CenturyTel 26:13	charges 12:3,4	Clearinghouse	79:7 80:3 82:7	111:22 169:13
26:15	67:25 71:17	19:2	83:8 84:3,24	comfortable
certain 25:7	83:21 86:1	clears 147:22	85:15,17 86:7	146:7 147:22
94:11,15,17	88:7 105:15	CLEC 63:9 74:3	86:7,11,13	coming 59:6
95:20 98:25	150:6,9 163:16	74:17 75:5	87:11,20 88:15	60:18,21
99:10,10 100:4	163:17 173:1	89:6 108:13,19	89:23,25 90:13	179:21,23,24
103:3 106:9,10	charging 68:19	118:11 152:7	90:18 91:17	comment 113:19
131:8 139:13	68:19 109:16	152:12,19	93:7,21 95:16	comments 88:11
140:11 152:7	cheapest 121:7	153:15,18,21	96:21 103:18	commission 1:1
155:13 157:6	check 12:24	CLECs 16:19	105:14,19	1:13 4:5,13
163:6 164:2,2	17:20 18:10,21	62:25 153:24	106:1,10,13,16	27:7 57:3 67:4
169:11 183:4	20:5 24:22	Cleveland 31:16	109:16 110:17	85:1 118:11,17
185:16	82:20 122:7	31:20	111:23 112:16	119:22,25
certainly 100:1	141:7 142:15	client 131:5	113:6 114:19	120:1,5 121:6
101:10 188:21	checked 16:25	154:15,25	114:23 117:2	138:5,7 143:5
CERTIFICATE	55:13 71:9	close 16:2 77:23	118:19 124:11	152:17 153:1,9
192:1	checks 24:22,22	98:17 99:19	124:19 129:17	153:13,19
certified 8:5	choice 87:5	101:9,23 142:9	130:2,7,7,11	161:9,10
113:24	chuckled 156:23	189:10 190:10	135:4,5,13,16	176:12,21
certify 192:2	Cincinnati 73:13	closed 6:4 114:1	136:12,15	179:6 187:9,23
cetera 139:8,8	76:2	183:17 191:4	142:13 145:1	188:14 192:11
181:5,21,22 183:1,1	circuit 68:1,6	closer 62:8	145:16,17	Commissions
chance 171:4	70:10 71:15 111:12,21	121:23 CO 69:15 110:16	146:5,10,13 151:4,9,20	177:2 Commission's
chances 136:7	134:9 135:2,7	112:12	162:17,25	143:5 153:23
140:23	circuits 68:16	coffee 133:16	170:12 171:1	160:7 165:14
change 59:9	68:17 69:3,25	COI 3:16 5:9	179:11,21,24	Commission-ap
70:22 78:10	111:18	7:21 8:15 9:21	183:9 186:22	48:15 160:17
92:13 100:19	circumstance	10:2,13,18,21	189:23	committed 82:7
131:25 132:5	135:17	11:3,7 12:14	coils 68:4	common 71:11
148:17 160:20	circumstances	12:18 14:7	111:22	139:17,25
160:21,22	95:20 138:22	15:11,16,18	COI's 20:18	140:2,4,6
161:20,24	citation 7:3	16:3,9,15	25:10 68:7,22	Communication
175:2	cities 94:17	17:16,18 18:4	75:14 95:18	1:3 2:5 4:7,16
changed 68:13	102:1 120:24	18:7 19:5,9,24	105:7 113:17	4:19 8:14
80:7 93:17,17	121:24	20:6 21:21,21	147:13 166:10	comp 104:3,15
changes 131:14	city 101:22	22:5,7,10,13	187:15,22	companies 13:10
139:13 147:10	claim 28:24	22:13,25 23:12	colleague 142:3	55:11,14 63:25
164:22,23	29:24 30:8	24:3,5 27:10	155:12 156:11	84:8 118:24
				<u> </u>

119:23 120:9	computed 51:7,24	confirmed 21:13	117:25 168:7	177:6 178:12
120:21 126:2	51:25 52:13	confirms 171:17	170:21	178:13,17,20
138:21 178:18	126:23	confused 77:17	contains 13:2	178:23,25
company 1:6 4:24	concept 89:3	confusion 147:4	14:1 118:22	186:23
8:16 13:9	99:10	conjecture 161:2	contention 68:18	copy 58:23
43:23,24 118:6	conceptually	176:18 185:22	contest 28:24	125:12 136:16
118:18,20	140:5 168:10	connection	context 60:3	core 126:18,25
139:1,9 154:16	168:17	117:21	79:12 104:25	Corporation 2:6
178:4 179:11	concern 153:8	connectivity	117:15 144:9	2:8
compare 11:19,20	165:4,12	101:20	153:3,4,12	correct 5:13
119:12 120:18	concerning 44:19	connotes 156:15	contingent 162:9	10:12,18,19,25
122:1,7,17	85:14	consequence	162:10	11:4 15:10
143:9 176:20	concerns 187:3	105:10	continued 19:20	22:8 23:16
compared 25:12	conclude 23:5	conservative	19:21	29:14 38:22
69:19 129:8	46:23	121:4	continuing 28:8	39:10,23 40:8
162:23 192:5	concluded 191:5	consider 29:16	contract 17:17	40:21 41:11
compares 135:24 comparing 107:16	concluding 26:25	considerable	23:17 26:20	43:15 45:8,24
108:2 120:15	24:8 44:4 58:1	considerably	27:1,6,19 31:12 51:6	46:20 47:19
121:5 137:11	161:25	140:20	68:13,15 84:20	48:2,6,8,18 50:3,18 51:4
142:13 163:13	conclusions	consideration	87:24 88:1,4	51:18,22 52:14
164:8 176:19	182:22	91:3 153:5	89:12 90:3,5	52:23 53:19
comparison 82:2	condition 68:21	considering	90:10,11,14,15	55:21 58:21
119:3,15,17	69:7	71:22	90:17,22 103:4	63:12,20,24
120:7 121:4	Conditioned	consist 12:1	103:18,20,20	64:12 67:5
142:10 188:12	70:14	consistency	103:21 104:5,9	73:18 74:21
comparisons	conditioning	146:21	106:24 130:15	75:21 79:9
182:25	67:9,13,15,19	consistent 138:9	130:20,22	95:25 96:4,22
compensates	67:23,25 68:8	153:6 160:6	131:11	97:5,17 109:2
135:16	68:10,20,23	173:5 187:13	contracts 27:13	109:6 112:1
compensation	69:5,19,23	consistently	103:11,11	117:5 119:9,10
90:20 173:4,8	70:3,8 71:23	145:13	130:14	141:21 145:7
compete 179:18 competing 179:17	83:3,21 85:25	consolidated 14:15 15:4	contrast 126:19 126:20	145:12,14 146:4 147:2,3
competition	95:18,20 106:8 106:11,14	58:17,19 78:6	contrasted	145:4 147:2,3
152:22 153:7	109:23 112:2	80:18	128:21	151:6 152:7
177:10,14,18	150:9 163:16	constitute	convention	157:6,14,21
177:23 178:2,7	173:1,4,10,12	168:15	146:20 147:11	162:16 168:12
178:8	173:16 174:1,8	constitutes	160:10	168:23 172:2
competitive 63:9	174:10	151:14	conventions	173:16,17
178:21 179:17	Conditions 1:5	constraints	146:21 147:1	175:20 181:16
competitors	conduct 153:22	123:12	conversation	183:14,20,21
178:10,17	conducted 154:3	constructed	16:23 17:22	192:3
complete 35:10	conference 43:7	121:18 124:1	33:6 52:17	corrected 147:17
182:4	158:10	construction	58:1 83:18	correction
completed 92:6	confident 147:6	158:20 159:5	107:18 conversations	145:14 146:23 corrections 8:25
completely		159:10,17	44:18,23 46:10	115:6 116:15
138:20 complex 129:1	3:11,19,22 6:16 113:19	consultant 47:17 47:18,19,23	54:18,23 46:10	correctly 54:10
149:2	114:3 115:12	48:1,5	61:11 68:24	77:20 81:21
component 127:20	115:16 116:5	consulted 16:18	89:17 97:22	82:4 91:2
143:10,12,13	117:3 125:8	Consulting 36:20	conversion	correspond 73:4
167:2,3 186:4	151:3,10	114:17	156:18	cost 19:9 28:4,5
186:9	189:24	contact 149:23	convoluted 45:17	31:8,22 32:3,5
components 131:8	Confidentiality	149:24	copies 38:24	32:6 33:19
143:9,11	6:9	contacted 19:19	copper 98:21	35:6 36:20
186:20 187:21	configured 80:20	contain 13:1	101:21 102:21	37:1,16 38:3
compressed	134:9	contained 31:9	134:18 135:22	41:14 46:2,6
130:21 167:14	confirm 122:1	66:22 67:2	137:13 148:1	46:12,24 47:5
	170:20	75:22 95:24	164:3 176:9	47:16,19,22
		- · · · · · · · · · · · · · · · · · · ·		. <u> </u>

·				
48:5,5,11,15	164:15 173:1,8	cross-examining	36:9,22 48:22	134:10 175:12
56:21 57:7	173:23 174:5	54:6	48:23 49:1	definitions
60:5 67:13	174:10 179:7,9	Crowe 109:7,8	51:3,3,7,8,10	66:13,18
73:1,25 75:1,5	179:14	112:4	51:13,15,17,22	degree 137:21
94:7,25,25	cost-based	cup 133:15	58:6,12 59:22	delete 117:8
98:4 99:2	152:18 153:17	current 32:11	60:13,13 61:1	deletions 9:1
101:24 102:3,8	cost-study 98:14	72:14 73:8	61:1 78:6	115:5 116:16
102:25 108:18	99:3 100:8	75:14 76:3	79:23,24 80:7	delineate 7:1
108:18 120:3	166:19	93:25 94:11,20	80:9 81:18,19	delivered 68:25
121:3,5,6	counsel 4:16,23	95:3,4 106:8	81:25 97:2,15	delivering 69:6
126:7 127:8,11	5:22 7:12	136:12 145:1	105:7	delivery 12:18
127:15,19	44:24,24 57:11	145:10,16,17	dated 14:24,25	12:23 36:8,12
128:8,16,21	118:17 188:9	145:24 146:5	51:14 58:22	Delphos 74:2
129:8,16,18	counterproposal	146:10,13,14	59:12	75:6 107:14,18
130:4,17,19,24	187:23	146:14,15,16	dates 14:10,12	108:12
131:1 133:6,11	country 178:25	147:13,16	15:1,8 36:10	demand 137:15
133:12,15	counts 175:5	148:13,24	58:18 79:21	138:23 139:10
135:9,23,24	couple 17:22	149:3,10 150:6	92:9 188:14	139:11,12
136:3,5,13	55:11 75:12	151:15,20	day 5:6 14:19	140:18,21
137:4,5,25	95:15 134:8	158:17 163:13	21:16 34:5	159:15,16,22
140:16,20	156:3	164:10,12	90:9 190:9,10	160:24,25
142:2,16,22	course 21:20	165:5,24 166:4	days 5:4 10:14	161:11,15,15
143:8,10,18	119:25 129:24	166:10,12	14:6,14 15:2	161:22 162:2
148:17 149:20	131:4,7,23	173:5	16:8 19:25	162:17,23
150:3,7,8	153:10 167:6	currently 18:4	20:3,7 23:5,9	178:21
152:11 154:3	169:21 182:24	32:19,24 48:4	23:10,11,13	demanded 138:24
154:10,11,13	184:19 185:22	49:4 64:1,6	24:5 25:23	demands 138:16
154:16,24	court 30:10,11	67:18 70:18	26:2,3,10 36:4	139:11
155:15 157:9	44:15 118:10	73:4 80:1	36:10,11,12	demonstrates
157:11,20,22	cover 6:5 173:11	81:11 82:3	48:22 51:10,16	112:14
158:9,12,14,17	covered 6:4	84:25 95:24	51:21,25 52:4	Denney 124:7,9
158:20,21,22	create 135:2	124:17	52:7,8,12,12	128:10,19,20
158:25,25	147:4	Customarily 7:20	58:6 60:13,16	129:7 171:23
161:6 164:10	created 190:21	customer 11:20	61:2,7 78:3,5	denotes 156:17
164:12,17	creating 135:7	42:6 48:25	81:25 97:3,15	denser 119:13
165:6,16 166:16 167:13	credit 19:5 44:8 44:9 53:8,8	76:19,25	105:7,9,11,18	121:1 densities 120:17
167:16 168:8	83:17 86:3	109:12 119:5	deal 84:3 129:1 dealing 76:20	density 98:11
170:23 173:11	90:25 91:4,9	120:17 134:22 customers 11:3	138:19 167:13	119:5 120:23
173:15,15	91:16	36:2,15 76:20	deals 127:5	121:21
182:8 183:12	credited 29:18	80:21	debt 29:13,16	deny 170:20
184:24 186:24	53:18	custom-made	December 6:2,2	depend 161:25
187:3	creditor 28:22	154:18	19:18	dependent 164:11
costing 102:19	creditors 55:23	cycle 49:2	decent 122:13	Depending 134:13
135:10 159:20	56:1,7,8,13,16	cycles 58:15	decide 71:16	depends 29:16
costly 179:10	credits 11:11	176:15	112:10	106:24 135:17
costs 77:11	12:3,4 20:11	C-A-L-I-X 155:8	decided 17:5	135:21 160:3
102:16 119:20	20:17,18 21:20		47:12	162:24 176:4
125:23 126:2,8	53:17 56:9	D	decision 7:6	deposit 19:6
138:25 139:13	61:23 83:2,6	data 103:8	153:23	86:7 88:25
139:17,23,25	83:11,20	122:18 123:4	decision-making	89:3,6,7,23
140:2,4,4,7,13	criterion 132:11	127:6 156:17	165:14	90:19 91:7,15
141:20,24	criticize 149:20	168:22	declined 37:3	105:23
142:15,25	cross 99:18	date 10:14 14:7	130:2 178:13	deposition
143:3,18,24,25	crossover 28:3	14:17 15:1,5	decreases 160:25	174:13
153:1,20	cross-examina	16:2 20:8	deeper 159:13	deposits 36:14
158:20 159:3,5	3:5,12 5:20	21:16 23:11,14	defaulted 26:17	85:13 88:14,19
159:10,10,17	9:10,14 116:19	23:15,16 24:6	definitely 153:8	89:9
159:25 160:24	116:23	33:1 36:3,5,6	definition 65:11	depreciation
161:12 164:14			66:16,17	175:20,23
	·	-		·

	ı	•	1	
176:13,14,20	168:4 174:20	discussion 5:5	documented 30:23	DS1 28:4,11
176:22,24	177:11 182:25	6:3 7:18 10:7	documents 6:17	65:11 66:13
177:1	186:19	11:1 17:25	96:3,7 99:13	68:6,15,20
derived 141:23	differentiate	18:25 29:8	181:15 182:14	69:3 71:18
143:2	150:5 186:5	37:12 57:18	doing 18:18,23	72:11,16,19
describe 136:25	differently	59:16 61:6,8	60:4 70:10	73:20,25 74:1
137:6 182:15	60:11 98:9	65:22 66:10	78:7 84:6	74:7,16 76:3
described 147:10	differing 138:16	71:2 82:9	107:10 121:4	93:8,21 108:11
155:13	difficult 132:12	84:19,23 92:23	133:2 142:14	110:21 125:18
descriptions	147:23	108:6 117:13	142:17 144:10	125:18 137:4
181:21	difficulties	123:19 124:14	154:16 168:13	137:11 139:12
design 158:24	143:13	124:23 145:20	169:14	139:18,24
details 158:14	dig 159:13	149:13 150:14	dollar 45:3,7	140:8 150:7
determine 29:21	Digital 155:9	160:4 162:14	56:14	151:18 158:20
93:12 111:23 127:16 142:23	diligent 129:9 direct 3:4,12	162:19 170:9 173:22 175:16	dollars 22:12 30:19 44:9	159:11,15,18 160:24 162:23
144:5 173:15	5:18 8:7 9:18	180:8 181:4	139:20 140:24	163:1,3 164:6
190:14	39:6 99:17	187:1 189:9	Donahue 43:8	164:15 165:25
determined 28:3	114:9 117:9,19	190:12 191:2	done 6:25 75:1	166:4,8,10
develop 17:5	118:5,21 120:7	discussions 5:9	78:9,9,11 83:3	175:5 186:17
154:10	125:7,8 130:16	30:14,15 31:7	93:19 99:12	186:21
developed 55:11	130:25 133:23	33:17 45:18	112:4 119:3	DS1s 27:23,25
57:22 60:23	136:22 148:11	46:8 61:18	126:8 128:19	28:1,9,16
69:1 154:7	150:10,17	101:25 158:8	154:11 155:1	67:25 74:20
developers 17:10	165:17 166:6	182:25 183:2	164:18 176:22	140:18
developing 16:11	172:25 188:24	disks 20:2	180:5,9 185:14	DS3 27:24 28:1,5
16:18,20 17:14	189:25	disprove 46:24	down 12:9 23:2	28:8,12,17
92:10	directed 21:7	47:2 48:11	81:22 101:20	73:25 74:2,17
development	Directing 117:4	dispute 30:7	126:5 163:7,15	74:21,25 108:7
178:8	119:2	42:21 43:4	163:16	108:12,14
DHL 12:22	direction 8:18	86:2 87:12	dozens 155:1,4	DS3s 75:3
Dickson 11:25 differ 94:20	74:24 166:11 directly 140:14	90:3 104:17 107:1	Dr 5:11 6:10 33:17 34:2	due 6:1 10:14 36:3 48:22,23
125:16 140:25	disagree 21:11	disputed 42:17	35:5 37:18	51:6,17 80:8
difference 33:9	70:2	83:6 88:8,9	98:23 99:9,21	105:8 139:10
139:9,22 144:8	disagreement	99:1 106:19	100:12 113:18	177:10
145:3 186:17	102:13	disputes 58:3	113:20 114:8	duly 8:4 113:23
differences	discarded 130:18	82:17	116:9,18,25	duplicate 136:8
120:8 131:13	discharge 29:12	disputing 85:22	122:25 123:3	136:9
131:22 132:2,5	disclosed 190:15	95:17	123:24 124:7,9	duplicated
133:24 137:15	discover 133:8	distance 13:8,9	128:10,19,20	117:11
138:24 139:10	discovery 132:25	112:12	129:7 151:9	during 27:19
different 14:4	133:2,5,10,17	distinct 80:22	171:4,22 181:3	30:16 31:12
46:6 48:5	167:10 174:13	138:20 161:6	188:11,23	33:23 46:3,4,4
49:20 60:11 78:4 81:5	183:8,10,17 184:3,8	distorted 166:1	189:24 190:20 draft 170:11,12	47:5,5,7 53:5 53:13 61:17,17
94:21 95:6	discrepancies	129:13	drafted 170:14	62:15
97:22 98:4	82:13	distribution	dramatic 82:22	dynamic 138:3,10
99:11 107:17	discuss 43:12	134:16,18,19	83:5	160:9,11
125:4,12 131:7	78:20 86:19	disturbing	drawn 18:10	dynamics 177:11
131:10,15	143:22 152:6	157:17 166:3,6	drive 167:1	D-e-n-n-e-y
132:6 134:14	158:15 173:25	divide 144:8	182:11	124:9
135:19 137:15	discussed 6:1,22	dividing 98:6	driven 131:14	d/b/a1:6 4:24
138:16,21	49:3 57:19	Doctor 120:12	161:18	
139:20 140:4	62:25 77:21	document 172:11	drives 161:12	E
140:20 141:1	109:7 130:6	181:23	drop 134:20,21	each 21:18 39:19
147:10,19	183:6 184:4 discussing 76:24	documentation	173:25 174:2 dropped 62:14	49:6,14 50:3
150:2 152:16 156:3,5 157:10	78:10	172:7,8 181:19 184:24	DSL 71:1.8	78:20 79:6 96:6,12 106:1
160:10 161:18	'0.10	101.21		20.0,12 100:1
	<u> </u>	<u> </u>	1	!

•
118:24 120:17 129:3,7 138:22 160:19 168:22 169:5 175:10 175:12 186:18 earlier 77:3 86:8 90:24 93:6 128:11
129:13 144:6 148:4 149:22 165:16,21 184:4,10,14 185:14
early 84:7 89:5 128:11,18 easier 8:15 East 1:13
Eckler 2: 2 4:20 economic 83:13 83:18 175:19 175:24 176:9
177:5,12,15,19 177:24 178:9 179:2 187:19 economies 125:20
125:22 137:16 138:16,25 effective 60:5 73:1,25 75:1
94:7,25 95:1 124:17 efficient 60:5 101:21
effort 149:23 eight 14:13 15:1 52:18 79:10 81:4 96:15 103:10,14,15
eighty-five 25:16 either 5:22 26:22 59:14 60:14 61:17
60:14 61:17 95:11 98:14 105:22 133:9 141:17 143:16 143:19 155:25 elaborate 87:14
elected 15:16 electronic 15:12 15:19 16:20 17:14 61:15 81:12,17 82:7
92:5 electronically 40:9 42:5
electronics 140:11,15 element 135:11 174:2 179:21

Elements 59:18
59:19 152:24
179:11
elevator 102:5
Elida 102:6,21
Embarq1:6 2:6,8
4.25 5.11 6.0
4:25 5:11 6:9 6:13 10:13,16
6:13 10:13,16
10:22 12:15
15:10 16:10,15 17:11,18 18:5 18:14 19:6
17:11,18 18:5
18:14 19:6
22:6,7,11,13
22:25 24:3,11
25:10 26:12,14 26:16,17,21,24
26:16,17,21,24
27:8,9,25
28:21 29:9,10
29:14,24 30:7
29:14,24 30:7 30:11,12,14,18
30:19,22,24
31:2,3,7,10,21
32:3 33:19
34:15 35:6.16
34:15 35:6,16 36:25 37:1,15
38:3,22 39:8
40:8,10,25
42:24 43:19,24
44:2 46:3,5,19
48:12,25 49:6
49:13,25 52:2
52:20 53:2,9 53:18 55:23
56:5,6,11,19
56:5,6,11,13
56:20,20 57:7
57:13 60:5
61:11,14,23
62:1,6 63:20 64:3,6 70:6,17
64:3,6 70:6,17
70:20 71:13,18
72:5,12 74:11
74:23 75:2,19
75:24 77:22
78:20 79:6
80:2 81:24
82:14,19 84:11
84:19 85:17
86:18 87:10,11
87:19 88:15,21
88:24 89:24
88:24 89:24 90:13,17,19
92:14,21 93:8
94:1,16 95:19
96:21 101:25
102:19 103:18
102:19 103:18 103:19 104:24
106:4,5,10,13
106:16,16,21
107:2,3,6,10
100.15 16 17

108:15,16,17

```
108:25 109:3,4
 109:9,9,12,14
 109:25 110:9
 110:17,25
 118:20,23,24
 119:4,15,18,20
 119:20 120:16
 120:23 121:1
 121:13,22
 122:3 123:2
 125:20 127:8
 127:15,19
 128:8,16,21
 129:8,16
 130:18,18
 132:19,20
 133:11 135:4
 138:20 140:1
 141:8,9 142:17
 142:19 143:3
 148:10 149:23
 149:24 151:12
 155:15 158:16
 159:8 161:5,7
 161:13 163:4,7
 163:19 164:10
 165:7 166:16
 169:9 170:13
 171:13,16,16
 173:18,19
 176:19 183:9
Embarq's 21:22
 27:23 28:24
 36:20 68:9
 71:10 84:24
 86:10 90:10
 98:4 106:7
 119:12,13
 121:8 149:20
 160:15 163:13
 172:24
embedded 146:19
emerged 178:21
empirical 103:7
employ 160:5
employed 114:15
employee 17:11
 17:16
employees 57:13
enable 54:8,9
 57:23 111:23
 152:12 172:20
enables 152:19
end 78:15 87:19
 166:18 171:18
endeavors 130:11
ended 29:10
 30:18
ends 143:5
```

```
engage 118:6,19
 130:8,19
engaged 81:12
 114:19
Engine 156:20
engineering
 186:16
Engle 6:11
 124:20
enough 71:22
 144:19 149:6
 153:24 169:22
entering 114:1
entire 34:17
 47:6 66:21
 171:24
entirely 130:19
entirety 26:4
 83:10 162:1
entities 13:9
entity 16:19
 101:22 162:24
entry 18:2 118:7
 118:13
EQ 151:19
equal 28:12
 39:17 140:21
ecualed 28:5
equally 56:9
Equals 146:11
equations 182:16
equipment 111:16
 134:20
erroneous 53:9
error 31:23,25
 32:3 83:24
 128:6 155:19
 155:20,22,23
 156:2,5,10,18
 156:24 157:7
 157:14,17,18
 157:19,24
 165:15
errors 21:22
 33:19 35:6
 53:15 83:12
Esq 2:2,3,6
essentially
 125:4,10,14
 181:15
establish 43:18
established 61:7
 153:13
estimate 39:18
 41:13 72:19,22
 187:21
estimated 12:6
estimates 170;23
et 139:8,8 181:5
 181:21,21
```

```
183:1,1
evaluate 148:10
even 22:21 24:14
 26:10 51:12
 56:16 70:21
 75:3 98:25
 99:19 109:9
 111:11 121:6
 123:13 125:23
 133:18 146:2
 165:8 169:16
 172:19 185:10
event 106:7
events 50:18
ever 31:13 49:16
 58:23 67:22
 71:12 89:16
 155:5 158:15
every 11:9,13
 20:12 27:3
 82:17,20 90:9
 109:5 111:21
everybody 14:4
 42:24 45:20
 84:21,21 86:21
 180:1,3
everyone 113:17
 189:19
everything 6:4
 14:5 15:4
 20:13.24 21:8
 39:13 42:25
 46:22 60:9
 62:3 64:11
 111:11 122:16
 170:2,6
evidence 57:4,8
 102:16 113:12
 113:14
evident 174:9
evolving 153:5
exact 36:21 83:9
 167:1
exactly 70:13
 73:22 126:19
 126:22 133:16
 147:18 182:18
examination 3:4
 3:5,6,7,7,8,8
 3:10,12,13,14
 8:7 38:13,18
 63:15 65:4
 72:2 76:13
 85:6 95:13
 114:9 181:1
 186:14
examine 148:9
 162:25 163:3
Examiner 3:8,8,9
```

4:4,23 5:3,15

			_	
6:18,21 7:7,11	182:17,18	expected 92:19	125:10,15	Fax 1:24
7:16,25 8:4,6	Excel-based	expedite 124:16	134:3 139:6	FCC 27:15 28:2
9:5,7,11,25	181:17 182:9	expedited 92:20	154:14 159:2	28:10,13 67:11
10:3,5,8 13:5	182:14	167:10	159:24 176:16	95:17 152:17
13:11,13,16	except 27:6	expense 130:10	177:20 178:20	152:21 176:12
20:19,22 21:1	32:16 146:19	expenses 131:20	178:23,23	177:2
21:4,25 23:21	exception 83:2,4	expensive 75:6	179:1,13,20,22	FCC's 74:16
32:18 34:21,24	excessive 70:13	98:21 102:22	179:24	features 11:20
35:11,20,23	70:14,16	130:8 138:2	facility 134:16	77:11
36:5 37:10,21 37:24 38:11,15	110:10,12	experience 11:16	134:20 135:16 135:21 137:22	fed 98:18
43:17 53:23	exchange 63:9 67:12 141:20	155:13 158:5	135:21 137:22	feeder 134:16,18 feel 89:1 91:17
63:8 65:1,23	142:11,25	expert 98:23 99:16	159:21 178:5,9	122:14
66:3,7,25 67:6	153:7	expertise 122:10	178:10	feeling 102:15
71:25 74:4,6	exchanged 133:18	122:10	fact 26:10 27:22	feet 68:16,17
76:10,14 78:22	exchanges 99:10	expired 31:11,23	29:15 33:6	69:14,18,20,23
78:24 79:8	107:13	32:10,15 72:15	34:12 68:25	70:1
85:5,7 92:2	exclude 140:2,6	94:1,12 106:9	69:4 70:20	felt 35:14 41:16
93:1 95:10	excluded 174:11	expires 192:11	77:21 86:14	88:24
97:24 99:25	exclusively	explain 80:2,19	87:21 97:1	few 37:11 67:9
101:15 102:10	63:23	88:4 94:2	102:18 111:10	180:5,23
104:20 107:20	excuse 52:3	119:6 123:18	122:1,25 128:3	fewer 20:7
112:25 113:8	115:8 136:22	128:1 137:19	137:20 147:9	fiber 75:5 98:18
113:11,16,23	162:13 174:21	143:16 152:15	153:21,24	98:21 101:20
113:25 115:9	excused 112:24	170:24 185:18	164:4 178:24	135:22 137:12
115:20 116:1,3	189:18	explained 87:1	183:17	178:14,19
116:20 117:11	executable 128:2	128:5 138:6	factor 36:7,11	186:21
117:14,22	168:2	139:22 155:18	102:3 160:21	field 139:8
120:12 122:19 122:22 123:20	exercise 118:2 148:23	181:23 explaining 21:14	160:22 187:2 factors 131:20	157:8,9,11,12 157:13
124:24 150:12	Exhibit 9:21	21:15 35:13,19	138:14 160:5,5	Fifteen 36:4
150:15,18,21	10:2 113:2,6	123:11,12	160:15,18	fifth 1:22
150:24 151:6	113:14 114:23	172:12	161:13,14	136:18
171:6 180:6,7	115:13,18,21	explanation	187:2,20	fifty 24:25
180:10,13,17	116:1,2 117:2	21:23,24	failed 106:17	figure 78:15
180:20 183:23	117:16 151:1,4	123:15 172:4	failure 106:22	103:15
186:12 189:1,4	151:9	172:13	fair 20:3 23:7	figures 161:11
188:6,18,22	exhibits 3:16	explanations	62:20 100:6,12	file 15:21 16:12
189:4,6,8,10	189:21,23	136:24	102:17 118:1	30:2 39:25
189:15,17,19	190:13	explored 19:5	132:15 144:19	40:2 42:23
190:2,5,9,13	exist 138:5,12	express 164:11	146:17 148:20	63:18 81:13,15
190:16,19	138:18 167:3	165:3	149:6 153:24	86:11,15 92:7
191:1,3	existed 35:6	expressed 118:18	168:9 174:11	97:16 156:12
Examiners 1:11 4:10,12 100:3	existing 124:2 161:16,19,19	extend 165:5 extending 131:10	175:22 177:18 177:22	168:2 170:19 171:19 172:18
examining 167:13	161:20 162:2	extending 131:10	fairly 121:3	185:25
example 18:14	164:9,12,15	extensive 75:18	145:13	filed 28:19 29:7
31:18 49:4	178:19 187:15	176:15	fairness 185:9	29:24 42:12,15
50:20 72:21	exists 138:3,11	extent 25:7	faith 111:11	43:2 55:22
74:1 135:13	159:20	75:18 131:21	fall 77:2 93:23	67:4 86:23
139:16 144:9	expanded 130:17	159:3 166:24	119:21	115:19,24
149:9 152:21	expect 16:14	178:4,16	falls 137:25	116:8 129:19
154:19 155:17	56:20 121:14	184:25	familiar 123:14	129:25 130:1
157:8,10	164:16	extreme 74:24	127:2 155:8	130:24 190:14
158:21 176:2	expectation	e-mail 109:6	176:25	files 7:20 15:24
examples 100:21	83:10 164:10		fancy 144:12	40:5 63:25
Excel 126:20,21	165:3	F	far5:17 43:13	95:25 128:3,5
126:21 127:7 127:13,20	expectations	facilities	48:4 73:5	155:19 181:7 181:10,10,11
157:13,20	164:3	101:20 121:7	94:10 110:16	181:14,19,20
101120 109:1/2			ļ	
				

•				
181:25 182:4,6	five-day 81:23	151:13 159:6	168:8 169:2,7	148:19 149:15
182:21	97:7,19	162:16,22	169:7,10	149:17 154:23
filing 33:22	five-month 50:1	163:10,19	170:25 173:19	158:11 165:21
filings 56:10,10	five-year 45:4	164:5,14	178:6,21	176:25 177:7,8
131:18	fix 92:12,12	165:25 166:4,8	179:12 182:17	generated 104:22
fill 108:19	fixed 161:11	166:9 186:17	186:16	170:22 171:18
138:8,9,14	floating 137:24	186:22	front 24:14	185:17,20
160:4,5,7,8,8	focus 76:18	frame 38:8 60:22	124:20 161:2	generic 154:17
160:10,12,15	focusing 85:12	81:18,18 92:16	162:7,11	genesis 165:8
160:18,21,22	folder 170:17	133:3 134:16	FTP 15:15 16:3	germane 184:22
161:13,14,17	follow 126:23	169:23 183:16	16:12,23 39:23	185:6
187:1,2	169:6 171:21	187:10	54:5,8,14,25	gets 62:9 143:12
filled 157:10,12	following 20:15	frames 84:21	55:19 57:18,22	155:21,22
fills 137:21	20:24 34:18	92:20	59:7,11 60:7,9	157:21
138:8 161:8,8	190:18	Frank 141:11	61:6,14 63:18	getting 59:6,9
161:9,10,11	follows 8:5	frequently 87:19	63:22,25 64:4	59:10 60:6,6
finally 50:19	113:24 160:9	from 10:13,20,21	64:12,15 89:19	80:11,13,15,17
53:17 79:25	Footnote 27:15	11:4 12:15	96:21 97:3,5	80:17 92:4
90:23 191:4 financial 27:10	foregoing 192:2	16:10 17:4	FTP-type 63:7 full 31:3 56:2	98:20 103:1,2
86:7,13	forgotten 23:22 160:13	23:10,11 24:3 25:10 29:3	56:12 85:23	129:13 168:16 give 19:5 64:22
find 46:16 68:8	form 50:9 96:3	34:4,16 36:14	166:24 172:3	65:13 74:1
75:10 88:13	118:18 142:11	38:21 40:8,25	fully 170:24	79:12 82:11,23
155:25 156:21	formal 43:11	41:23 42:17,25	full-fledged	105:13 112:21
159:2	formally 133:9,9	43:10 48:15,22	118:19	119:24 136:2
findings 160:7	format 14:7	51:2,7,10,24	function 165:20	165:22 175:14
fine 5:24 6:18	15:12,14,19	51:25 52:13	169:3,4	181:20 182:10
10:1 19:21	40:11,13,16	53:7,14 54:24	functionality	given 50:9 91:3
60:12 146:18	41:2,21 42:7	55:6 56:7	125:18	107:5 119:17
181:13	49:19,21,21,24	61:23 62:6	functioning	123:12 130:20
finish169:7,7	54:5,21 59:21	65:1,17 67:13	135:2,7 187:11	138:18 152:25
finished 150:15	63:24 64:8,21	68:8 69:14	functions 128:13	162:5 169:22
firm 4:19	96:21 97:2,4	70:6,14 71:13	142:3 169:2	170:6 174:1
first 5:10,12	97:11,11,16	71:23 72:5,11	further 9:4,5,8	178:13 183:9
7:19,21,24 8:4 16:22 20:15	formats 14:4 formulas 126:21	73:16,24 74:2 74:23 76:6	38:13 53:22,24 63:12 64:25	giving 91:12 162:10
46:11 47:16	forth 42:20	77:21 81:18	71:24 91:23	glean 169:10
49:11,17 50:6	53:15 91:18	82:14,19,21	92:3 131:23	go 4:4 5:10 7:19
51:3 60:16	forthwith 6:17	84:8 86:7	future 15:20	7:21 10:5 17:1
76:18 79:22,24	Forty 25:21	87:11,20 88:15	125:12	17:24 20:9
95:11 102:24	forward-looking	88:17 93:8,17	fuzzy 45:20	27:1,5,24
115:15 123:2	138:9 160:1	93:18 94:20	136:17	40:25 47:9
129:16,20,22	found 41:1 68:21	95:3,11 96:21		64:21 65:6
129:25 130:4	82:13 138:5,7	98:19 100:2	G	78:19 81:7
130:14 131:1	178:17	101:19 103:21	gain 132:14	82:20 85:4
132:14 133:6	four 14:11 50:16	104:6 107:14	168:21 186:7	94:23 103:6
137:4,19	61:2,7 73:11	108:11,15,16	garbage 165:20	108:13 110:23
147:14 156:6	78:4 87:12	109:6 110:2,16	165:20	111:7,17,20
171:24,25 173:6 187:6	94:22,23 112:15 172:16	112:12 116:12	gave 17:3 55:10	112:21 113:1 113:12 114:5
189:24	180:18	117:9 118:23 123:4 125:12	77:19 140:23 155:19 183:8	113:12 114:5
fit 102:8 134:25	four-band 93:18	131:13 133:25	general 12:2,5	126:5 134:11
143:19	four-wire 69:16	135:14 139:3	119:17 121:25	134:18,21
fits 92:15	72:5,7,8	141:23 142:2	134:22 139:25	137:18 145:23
144:20	133:24 134:4	143:2 144:7	144:11 161:3	150:12,18,24
five 16:8 60:4	135:18,25	149:8 152:11	162:22 175:20	154:1 166:6
61:2,7 81:25	136:4,11 137:5	156:25 158:16	176:1	169:8 172:7
94:23 97:3,15	137:12 139:12	159:13 160:16	generally 57:25	176:8 180:10
100:5 101:24	139:18,24	163:3 164:9	125:24 128:17	183:3 190:5,22
102:9	140:8,19 150:7	167:15,17		190:24
L				

	Ī	1	1	1
goes 11:9 26:13	Green's 106:6	70:22	115:25 116:22	186:23
32:16 102:8	Grinaldi 19:21	head 34:8 61:13	123:8,22 171:3	implicit 148:23
160:3 170:19	grossly 149:4,6	93:9 120:20	180:4,22 189:2	implying 70:16
going 7:5 8:14	149:8 165:25	126:10 136:1	189:14	important 150:5
23:2 29:1	ground 154:13	hear 4:10 9:7	hope 58:2 147:15	157:7
41:14 44:8,9	group 29:5 35:5	36:17 107:17	153:2	impression 89:22
45:14 54:7	37:18 94:17	151:23 173:6	hopefully 5:7	improperly 91:11
56:10,24 57:10	grouped 94:11,15	heard 81:21	147:3	improvement 63:4
57:20 65:6,10	guess 10:23	99:24 155:10	hoping 58:3,5	inability 90:21
66:12 67:8	22:19 24:13	162:19	hours 12:6,7	inappropriate
73:12 74:11	25:7 43:11	hearing 1:10 4:6	21:13 58:4	99:22
75:5,10 76:17	49:5 68:11	5:4,9 45:18,18	houses 103:5	Inc 1:4,22 2:5
78:15 79:19	112:17 160:22	68:8 191:5	housing 175:10	inches 39:19,19
81:17 83:15	191:3	heart 169:14	175:13	include 68:9
87:3,3 88:20	guru 112:5	held 67:11	huge 131:25	141:4 143:1
93:16 97:10,14		118:11	hundred 25:16	173:1,2,3,4,7
97:15 105:11	<u> </u>	help 86:15	40:19 106:3	173:10
111:6,17	H3:11,18,20,22	helpful 184:17	148:3	included 56:17
115:11 120:2	3:24 113:22	helps 75:9 87:7	hundreds 128:6	67:3 68:20,22
122:15 126:5	114:13,24	her 11:16,18	155:1,3	98:11 141:17
142:12 149:18	half 38:5,8 89:8	12:1 19:19	Huntsville 102:4 hurry 64:23	142:1,7
150:18 153:2	92:17 105:16	34:7 75:21		including 158:12 inclusive 76:24
153:25 163:15 169:23 174:18	132:9	76:5 81:14	hypothetical 138:8 165:23	
182:15 186:22	Halliday 6:13	129:11 hereinafter 8:4	182:12	inconsistently 111:1
190:20	hand 8:2 113:21	113:23	102:12	Incorporated 4:8
gone 21:21 60:7	178:16 handle 158:24	high 121:3	Ī	4:17
60:8 68:12	handling 44:24	143:19 178:12	TAF 141:9,10,11	increase 101:24
143:25 187:17	113:20	higher 62:2,10	ICA 10:16 23:17	144:1,5,7,13
187:22	happen 50:7,12	62:18 98:11	32:11,17 33:21	144:14 145:2,6
good 9:16,17	50:15 149:25	108:18,18	104:18 136:13	145:9,13,16,17
76:15,16 88:1	161:4 164:17	119:14 125:9	145:1 146:6	146:3,4 147:16
88:2,10 89:15	164:17	143:14	149:10 151:15	148:1,2 151:15
90:5 116:25	happened 42:11	highest 121:5,6	151:20 158:17	151:19 152:3
139:6 165:2	79:18	him 29:4 34:3,6	165:5,24 166:4	161:15 164:4
gotta 30:25	happening 30:15	34:10,19 41:25	166:10,12	174:25
103:5	79:15,16	65:14 87:2	173:5 187:22	increased 144:20
gotten 19:11	126:19	100:6,13 111:5	idea 20:4 103:1	146:10 162:1
47:17 64:10,12	happens 87:25	113:18 123:13	156:9	175:5,23
75:6 83:19	133:20,20	hired 41:9 86:25	identify 57:11	177:22
177:7	happier 149:18	historically	177:25	increases 143:22
grace 10:17	happy 170:16	20:10 60:10	ID'D3:16	146:12,16
graciously 37:3	hard 102:15	62:5 75:1	ILEC 67:12	153:6 159:15
grain 102:5 grant 21:25	107:6	hit 168:3 hits 134:20	ILECs 40:18	159:16,22 160:25 161:17
35:20,23	harm 117:14	hold 87:3	54:21 69:2	164:2,9 177:19
great 11:3	Hart 5:11 86:10	Holmes 131:11	84:3,4 illuminate	187:18
greater 28:12	97:21	home 190:6	126:20	incumbent 67:12
121:12 122:2	Hatfield 154:20 having 16:22	homes 102:5	illuminates	178:10 179:2
125:20 132:9	25:4 26:4 37:7	honest 167:12	172:6	incumbents
139:11,11	47:11 57:18	Honor 4:19 6:7	imagine 102:21	178:16
144:7 159:17	61:11 91:12	7:15,24 9:3,13	143:6 165:8	incur 179:14
160:23	92:6 100:4	9:24 20:14	184:25	incurs 105:19
Green 1:12 3:7,9	101:25 102:15	21:10 22:3	impact 131:25	indeed 153:20
3:14 4:13	114:5 118:6,11	23:8 35:25	138:25 178:9	172:16
71:25 72:1,3	122:12,12	38:17 53:22	impelled 42:22	independent
74:14 76:10	138:22 162:11	54:1 63:12,13	implement 92:9	138:22 176:24
93:1,3,5	HDSL 68:25 69:6	65:13 97:25	implemented 15:4	183:2
186:13,15	69:13,15 70:6	99:14 100:17	implication	INDEX 3:1
		113:3 114:7		
	· · · · · · · · · · · · · · · · · · ·		• · · · · · · · · · · · · · · · · · · ·	•

Indian 141:11
indicate 128:4
indicated 5:10
19:20 22:25 24:2 40:20,23
81:11,16 87:10
133:7 162:20
182:3
indicates 174:19 indicating 85:13
124:22 171:7
indices 148:16
149:5,11,12
165:18 individual 11:13
12:10 188:8
inferential
123:6
inflate 148:16 inflater 165:18
inflation 148:16
149:5,11,12
165:18 187:20 inform165:13
185:21
informal 43:14
44:4
informally 133:9 133:10
information 13:1
14:1 16:3
19:11 69:10
71:13,20 117:5
117:25 126:11 127:17 158:16
168:12 172:1
182:7,20 183:18,19
188:9
informative
165:13
informed 165:11 185:8
informing 5:11
inherent 172:10
initial 35:8
47:15 164:25 initially 64:5
178:22
Inniger 17:15
input 164:5 165:11 175:12
187:18
inputs 131:15,16
132:1,6 148:15 148:17,17 158:1 164:23
148:17,17 158:1 164:22
inquiry 100:12
132:19 174:14

<u> </u>

insert 99:14
inside 128:14
169:14 inside-Embarg
98:13
inspect 126:18
183:4
inspired 27:21
installation
68:19 instance88:6
150:5
instances 154:23
instead 108:20
147:1 187:14
instruction
171:22 insufficient
172:20
Integrated 18:2
intended 147:6
intent 118:15
152:23 173:11
intention 129:10 129:14 147:4
173:3
interchangeably
14:0
74:8 interconnect
interconnect 75:23
interconnect 75:23 interconnection
interconnect 75:23 interconnection 1:4 31:9 32:9
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 interim 57:3
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 intermediate
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 intermediate 168:7
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 intermediate
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 intermediate 168:7 interpret 55:20 99:21 interpretation
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 intermediate 168:7 interpret 55:20 99:21 interpretation 28:14 68:12
interconnect 75:23 interconnection 1:4 31:9 32:9 35:8 72:15 73:2,5,6,8,17 75:14 93:13,25 94:12,20 95:4 103:21 104:4,6 105:2,5,13 106:9 124:10 124:18 136:12 136:15 148:13 148:24 149:4 163:20 164:9 164:13,15 187:16 188:11 188:13 interest 105:14 Interexchange 13:12 84:9 interface 134:19 intermediate 168:7 interpret 55:20 99:21 interpretation

147:18 151:22

151:25
interpreting
73:10 143:6
Interrogatories 170:11,12
Interrogatory
170:15,19,25
171:5,13
interrupt 145:22 intertwined
44:23
interval 81:23
82:5 96:20,20
96:25 97:19 intricate 42:2
introduce 56:21
56:24
introducing
166:7
introduction 177:10 178:7
intuition 162:10
intuitive 103:8
invariant 161:22
investigation
40:24 investment 42:7
invisible 126:14
126:24 132:19
133:8 155:14
166:16 invoice 10:14
14:7,9,10,12
14:17,19 15:1
15:5 16:2
19:24 20:7,7 23:14,15 24:6
36:5,9,10 51:4
58:6,11,15,22
58:6,11,15,22 58:24 59:12,13 59:22 60:13
59:22 60:13
61:1 81:18 96:17 105:7
invoices 10:13
14:23,24 52:1
77:23,25 78:2
80:5,11 87:11
87:20 97:10
invalva 179.95
involve 178:25 involved 44:21
involved 44:21
involved 44:21 50:16 82:19 91:4 134:23
involved 44:21 50:16 82:19 91:4 134:23 154:12
involved 44:21 50:16 82:19 91:4 134:23 154:12 in-house 16:18
involved 44:21 50:16 82:19 91:4 134:23 154:12 in-house 16:18 17:5
involved 44:21 50:16 82:19 91:4 134:23 154:12 in-house 16:18 17:5 IP 63:21 IRES 17:19 18:1
involved 44:21 50:16 82:19 91:4 134:23 154:12 in-house 16:18 17:5 IP 63:21

issue 24:20 34:11 45:21 56:4 65:10 66:12,13,16,18 70:12 73:20 75:5 76:18,23 77:14 83:23,24 84:14,20,22 85:13 87:18 90:2,12,24 98:24 99:9 100:3,7,8,10 100:15 112:8 129:2 166:16 178:25 issues 6:24 7:1 7:8 22:24 65:7 65:14,17,18 67:2 83:11,20 85:12 86:19,24 87:6,22 88:18 91:10,20 99:5 104:14,23,24 109:17 112:1,2 issuing 87:12 item 20:12 82:20 items 11:13 IXC 13:4,8,11,15 39:14,17 84:5 I-n-n-i-g-e-r 17:15 I-R-E-S 17:19 i.e121:3 145:17 161:11 J J192:8 James 1:10 128:11 January 79:22,23

Jay 1:10 4:11 6:20 Jenny 11:25 Jet 156:20 Jim 4:9 job 69:12 jobs 107:10 Joe 9:17 joint 128:23 138:19 jointly 139:7 158:6 Joseph 2:6 5:1 judged 132:10 judges 120:1 Judy 109:7,8 112:3 June 8:19 53:12 62:14 66:1

82:18,18 83:5 87:16 90:2 113:5 115:19 117:3 192:11 just 5:16 11:10 13:5 21:11,17 23:19 27:11 39:6 43:18 48:4 54:9 55:4 61:3 63:13 65:7 70:15 72:22 74:15,24 75:4,12,23 76:18 77:7 79:22 80:7 81:9 93:10,16 95:23 98:16,21 102:20 103:2 104:20 107:1 107:20 120:11 120:14 122:5 123:3,7 132:5 133:14,19,19 135:19 140:2 143:9 144:11 145:4,5 146:22 147:17,23 153:16 157:3 157:23 158:5 159:22 161:3 161:16,16 165:25 168:3 169:1,13 176:17 180:22 181:20 182:1 184:14

K K3:4 8:3,11 keep 5:6 6:15 81:10 kept 29:19 49:23 157:4 kind29:20 40:16 60:19 64:19 74:8,12,13 76:2 81:24 84:1 87:18 92:23 102:1,25 103:14 110:2 138:23 172:6 176:4 kinds 77:12 84:8 89:17 102:7 knew 16:24 57:20 know 12:24 13:7 13:16 16:2,5 19:10 22:23 24:24 30:13

34:3 36:16,18	21:19 25:17	152:16 157:3	limit 32:1 99:17	loading 101:2
38:6,7 43:13	32:14 47:25	letter 19:5 29:3	136:6 167:7	local 13:10
46:17 47:7,10	50:21 60:4,19	29:6 90:25	limited 5:24	15:24 16:1
47:14 55:5,25	60:20 61:22	91:3,9,16	131:21 137:9	25:13 39:11
56:25 60:20,24	66:7 78:6	letters 27:5	Linda 31:16,20	57:16 59:8,14
61:16 64:16	79:21,24 80:16	141:14	line 19:12 60:9	63:9 67:12
66:21 68:2	81:13 82:24	let's 4:4 5:7,25	67:9,13,14,19	77:11 80:22
69:4 70:4,7,9	84:20 91:11	10:5 22:5	67:22 68:7,9	96:14 141:19
70:9,23 71:10	100:5 114:12	29:23 32:12	68:23 69:17,19	142:11,25
71:21 72:23	124:8 173:25	48:20 67:8 86:5 87:8	69:22 70:3,7 71:1,8 75:13	143:11 152:22 153:7
78:14 81:1,5,8 83:19 85:25	177:2 late17:19 52:23	88:12 107:23	77:11 78:19,20	location 117:24
86:3 87:2 88:9	53:2 60:20	112:15 117:2	78:23,25 85:15	lockbox 18:9
90:8,9 92:10	84:7 89:5	129:21 133:15	86:5 88:13	log 128:5 155:18
92:15 93:16,22	105:15,19	134:11,17	106:8,10,14	156:12
98:10,12,19	190:14	135:3 137:18	110:15 118:4	logic 24:19 81:1
99:4 105:17,25	lately 85:25	139:17 140:2,6	125:3,5,6,9,11	81:8 126:24,25
107:22 120:2	later 5:19	141:2 149:19	126:14 134:23	181:22 182:15
120:16 121:15	115:24 188:17	150:12,24	135:1,5,10,12	Londerholm 5:12
123:6 126:7	latest 92:17	160:19 176:5	135:14,19,23	31:18 75:20
129:6,15,24	latter 29:17	178:11 184:13	135:24 136:3,5	Londerholm's
132:12 133:16	law 4:19	level 21:18	141:4 152:8,8	75:13 130:25
135:23 141:8,9	lawyer 153:10	88:19 90:10	155:9 157:11	159:9 173:22
141:13,16,18	layout 17:8,9	137:23 169:17	157:11 174:6 174:18,19,22	181:8 183:11 183:20 184:15
156:1,14,21,23 157:16,25	41:8,23 54:12 54:17,18,21	leverage 27:2	174:18,19,22	long 5:24 13:8,9
158:12 159:8	55:10	lies 73:14	lines 87:9,10	21:11,14 36:2
166:24 167:11	lead 169:2	126:25	117:4 119:11	64:11,15 75:23
168:3 169:11	learn 63:3	lieu 19:6	125:13 136:22	89:20 92:12
169:21 171:22	least 23:6 47:14	11fe 176:15	145:15 147:25	109:21 121:21
174:2 175:10	73:17 120:4	178:9,13	156:4 164:1	153:19 171:5,6
176:14,23	167:18 176:6	light 164:20,22	175:10,12	longer 52:4
177:11 184:20	181:6,16	like 9:24 14:11	179:3	123:1 177:24
185:2 188:9,13	leave 69:13	14:22 23:9	linked 169:5	look 11:9,18
189:3	114:4 178:23	24:24 38:6,9	list 65:7,14,17	19:12 20:12,13
knowing 41:5 45:14 148:15	leaving 117:15	42:10 46:9	65:19 67:2,20	22:23 24:14
knowledge 71:11	left 4:11 10:25 58:20 157:8,12	60:19 64:17 76:2 78:4	85:12 88:18 136:10,12	35:17 37:7 46:12 47:19,23
84:25 100:11	157:13	83:20 84:5	listed 55:23	48:5 57:13
130:5 162:18	legal 152:10	85:24 89:3	96:17 128:3	66:8,20,23
162:21	153:10	93:17 94:14	161:8 178:5	87:4 94:7
knows 42:24	legitimate	96:14 102:20	listening 77:19	98:10,16
100:9 122:25	123:15 136:23	115:25 118:18	litigate 143:7	107:10 118:4
180:3	137:7	127:25 129:12	little 27:4 42:2	118:21 119:23
	length 69:17	131:19 141:11	77:17 81:9	120:19 121:6
<u>L</u>	110:15,15	145:14 146:22	84:4 91:12	124:10 133:23
labor 131:20	111:22 112:11	149:16 155:16	120:14 136:16 149:1 150:21	141:3 142:11 142:24 144:5
187:19	112:11 lengthen 179:2	156:20 169:3 177:6 178:17	live 90:14,15	144:23 147:9
lack 102:14 language 70:23	less 23:4 27:9	178:18 179:11	92:20	147:12 153:1
88:17 89:23	52:10,11 82:1	182:5 186:21	lives 175:19,25	154:13 156:4
118:14 147:19	136:7	188:12	176:3,9,24	157:15 160:19
147:21 166:19	lessen 16:14	Likewise 116:11	177:5,12,15,19	163:9,18
large 42:17	lesser 139:12	Lima 74:2 75:6	177:24 179:2	164:21 166:2
101:23 129:1	let 17:24 29:11	98:16,17,19,19	LLP 2:2	167:1,23
larger 127:6	49:5 54:13	101:6,9 102:7	LMA 170:17	168:15,22
128:18	55:3 66:8	107:14,18	LMAII 170:18,18	169:14 171:4
last 8:10 14:3	70:13 119:7	108:11	load 68:4 108:19	175:8,8,15,18
14:21 15:25	120:14 123:20	Lima/Delphos	111:22	179:3
	129:18 136:25	108:4		
L				

looked 46:15	1 55 35 50 7	1		167:6,8 185:4
88:17 103:10	56:16 60:7	12:21 18:9	Maple's 5:13 March 87:15	185:4,12
105:20 128:17	69:9 99:13	36:8,11	march 87:15 mark 114:23	186:19
177:3 185:6	106:4 154:3	main 98:19	mark 114:23 115:13,15,21	meaning 17:20
looking 25:15	181:4 low 120:23	134:16 153:11 maintained139:7	marked 9:21	173:9
48:1 57:15	121:21 143:17	165:7 179:1	113:5,6 115:18	meaningful 186:2
65:16,21 66:4	162:17		115:25	means 18:2 55:5
74:10 91:7	lower 24:23	maintaining 178:20	market 129:12	126:24 137:23
92:8 163:12	121:7 125:23	major 96:15	marketplace	155:22 156:22
174:10 188:22	137:5 160:19	make 10:18 15:7	142:17	190:5,7
looks 11:12,24	163:11,19	18:4,7 23:9	markup 139:16	meant 88:4 148:3
175:19	lowers 19:22	27:14 37:16	140:1	measure 28:15
loop 71:12,19	lowest 119:13	38:3 42:6,7	mass 55:4	mechanism 18:17
73:21 98:17	Lunch 113:15	45:20 60:5	material 40:8	102:19
101:10 103:4	Lynn 1:10 3:8	65:21 71:1,8	materials 6:15	mechanisms 18:13
121:11,13,21	4:4,10,23 5:3	74:9,12 101:23	math 144:12	mediation 43:3,6
122:2,3 123:1	5:15 6:18 7:7	102:20 103:9	145:5	43:11,11,14
133:24,25	7:16,25 8:4,6	113:19 115:14	matrix 6:25	44:5 53:6
134:3,4,8,8,12	9:5,7,11,25	115:15 120:14	matter 1:3 4:7	57:19 58:9
134:19 135:3,4	10:3,8 20:19	126:13 129:16	6:8 15:5 27:2	82:15
135:6,11,11,18	20:22 21:1,4	131:24 132:19	84:25 89:1	mediations 17:6
135:24,25	21:25 23:21	135:2 145:14	90:7 127:24	medium 18:7
136:4,5,11	34:21,24 35:11	147:24 149:23	192:4	59:24
137:5,11	35:20,23 37:10	162:7 164:22	matters 124:16	meet 21:16
139:12,18,18	37:21,24 38:11	167:16 172:23	131:5	meeting 43:9
139:24 140:8	38:15 53:23	174:14 179:16	Matthew 2:3 4:20	members 1:11
140:19 142:12	63:8 65:1,23	179:25 182:1	may 10:1 37:9	4:13 99:18
142:14,15,16	66:3,7 71:25	187:7	65:13,17,23,24	101:4
142:22 143:10	74:4,6 76:10	makes 22:5,10	65:25 66:2	mentality 27:12
144:24 150:9	78:22 85:5, 7	28:7 107:6	87:16,16 99:14	mentioned 11:23
151:13 159:11	93:1 95:10	134:11 155:15	99:24 100:16	21:18 33:19
159:16 162:22	97:24 99:25	make-up 71:12,19	115:14 116:20	100:22 101:6
163:16 164:5,6	112:25 113:8	making 9:22	117:8 124:16	107:12 128:11
164:14,15	113:11,16,23	64:18 85:18	134:17,17	181:25
165:25,25	113:25 115:9	142:18 168:14	139:16 143:5	mentioning 6:19
166:4,4 171:19	116:1,3,20	mall 98:16 102:7	144:11 146:23	85:15 86:6
172:18 173:1,4	117:11 122:19	102:22	153:21 154:15	merely 55:16
173:10,11,16	122:22 123:20	man 12:6	154:22 157:9	95:18
174:1,3,7,10	124:24 150:12	management 127:6	161:4,22	merged 122:12
175:5 184:24 185:25 186:7	150:15,18,21 150:24 151:6	manager 17:12	166:18 167:11 171:10 177:10	merits 107:1 message 155:21
186:17,17,21	171:6 180:6,10	109:7 manner 80:20	171:10 177:10	155:22,23
186:22,23	180:13,17,20	91:18	179:15 180:5	156:10 157:14
187:20	183:23 186:12	manufacturer	186:19	157:17.19
loops 70:14,14	188:1,4 189:6	71:9,10	maybe 24:25	messages 128:6
72:5,6,6,8,11	189:10,15,17	manufacturers	25:17 38:5,9	155:19 156:2,6
72:16,20 76:6	189:19 190:2,5	139:3,5	38:12 55:25	156:25 157:7
93:8,21 110:19	190:9,13 191:3	many 14:6 21:20	61:21 106:2	157:24,24
110:21 133:25		22:11 37:15,17	McCracken 11:15	158:2
137:12 150:7	М	38:2 50:4,14	MCI 122:11	methodology
158:19,20,22	M1:10	52:2,8 55:22	mean 11:2 15:18	131:1 144:4,11
158:25 160:24	made 19:23 26:5	68:12 81:7	19:15 20:9	145:5 185:25
160:25 161:18	26:8 85:16	105:7 120:2,2	32:11,13 50:2	186:7
161:20,21,22	86:11 90:7	120:5 122:12	56:23 75:9	Methodology.doc
162:16 170:23	105:5 106:17	133:12 134:14	84:5 107:9	171:19 172:19
179:11	107:7 113:5	138:24 143:21	111:4 126:15	metro 121:22
lose 74:11 75:11	155:5 165:16	155:2 178:24	126:16 127:21	metropolitan
losing 37:20	174:4 187:5	Maples 70:8	134:8 136:2	101:23
lot 30:14 42:3	mail 12:18,19,19	109:20,24	145:22 153:17	Michelle 1:12
46:8 54:7		111:1 112:5	156:8 162:4	4:13
	•	•	<u> </u>	

,				
Microsoft 127:2	131:14 132:1	Monday 90:10	160:4 162:19	myself 128:19
127:5,11,13,15	132:13.14	money 26:18	most 13:3 23:4	injudeal 120.13
127:22 156:20	133:6 137:20	30:25 35:17	31:10 60:16	N
172:11 181:20	137:22,25	47:2,11,18	63:6 73:1	name 6:12 8:9,10
181:23 182:14	138:4,11,11,12	52:20 54:7	79:10 83:1,19	9:16 11:14
middle 78:19,25	140:1,9 142:16	monopoly 179:21	84:5 85:19	15:14 17:13
147:12	145:2 146:5	month 10:20,20	91:9 103:12	43:23 101:7
might 19:9 26:21	148:11 151:13	11:4,4 14:11	106:8 119:9	107:13 114:12
33:12 63:4	151:19 154:9	14:12,13,14,15	121:4 131:5	114:12 124:8
69:8,8,9 94:24	154:20,21	14:18,19,21,21	139:5 157:22	namely 106:22
96:8 102:16	155:15,17,17	14:24,25 23:1	177:12	152:2
107:10 109:15	155:21,23	25:8,18,20	mostly 93:7	names 17:3 55:10
125:11 126:5,5	156:1 157:1,4	27:3 29:19	137:12	nature 91:16
140:17 151:1	157:17,20,25	36:11 38:5,5,8	motion 21:25	121:17
157:10 164:17	159:8,13,19,20	39:10 49:6,14	35:20,23 113:2	near 101:6
165:3 177:15	159:24 160:1,6	50:3,12,20,21	189:21	necessarily 88:2
178:22 184:25	160:9,15 161:2	58:16,16,25	motions 7:12	102:3 118:16
miles 103:6	161:5,5,7,12	60:16,19,20	move 20:14 34:17	152:18 153:23
million 20:11	161:14,23	62:9,12,14	67:8 74:20	160:11 161:24
21:20 29:18	162:6,11,11	78:20 79:6,21	99:22 102:1,2	176:3 178:1,8
44:9 53:6,17	163:7,19	79:22,23,24,24	113:4,7 122:15	185:2
61:22 62:7,21	164:10 165:6,8	80:16 82:18,24	161:12 166:10	necessary 5:23
62:23	165:9 166:17	92:9,11,16,17	189:22	35:15 55:16
mind18:19 86:17	166:25 167:2,8	108:12,13,14	moved 49:8 79:25	108:25 110:18
94:21 102:8	167:9,13,16,17	monthly 24:3	80:9 95:3	123:13 174:4
112:2 136:23	167:21 168:1,3	62:1,16,18	movement 165:10	need 6:5 35:1
159:14 176:6	168:4,13,22,25	77:22 106:1	177:9	40:7 54:14,16
minimum 24:10	169:8,11,14	172:25	moves 94:24	57:18 71:1,8
88:19	170:21,22	months 11:19	moving 5:19 60:8	86:6,20,21
minute 10:6	171:18 172:7,8	14:3 29:3,19	63:6 78:14	95:10 108:22
150:13	172:10,12,14	37:15,17 38:2	79:20,20	109:15,18
minutes 37:9,11	173:18 174:5	38:8 41:25	much 23:2 24:21	110:1,5 113:1
100:5 180:5,17	174:10 175:9	50:4,14 60:4	25:20 30:4	118:2 119:18
mischaracterized	176:13 181:4	64:16 78:7	41:14 45:17	124:20 142:24
123:9	181:12,18,19	87:12 120:2	53:8,8 56:15	152:8 168:22
mislead 147:7	181:21,22	122:12	57:19 68:2	172:14 174:13
Miss 6:11 34:24	182:13,16,19	month's 24:6	81:2 91:3	176:14 180:2
35:11 38:15	183:2,3,5,12	39:2 57:12	101:21 103:12	189:20 190:14
65:2 66:25	184:5,6,7,8,11	more 21:2 22:21	111:11 125:17	needed 23:20
71:25 75:12,20	184:13,14,15	24:5 42:2,5	129:9,12	130:8,22
76:10 93:1	184:23,24	44:9 47:4	130:13 133:5	needs 109:4
95:11 159:9	185:2,7,9,13	48:21,22 49:6	136:4 159:21 162:4,22	179:24
173:22 180:21 181:7 183:11	185:14,18,19	49:13 50:2,4,7	162:4,22	negotiated 45:11
183:19 186:13	185:20,21 186:3,6 187:3	50:12 52:7,12 57:24 60:5	179:9 187:17	46:22 75:25
188:1	187:5,7,8,9,11	62:11 72:23	187:21	84:10
misspoke 110:13	187:12,14	73:25 74:16	multiple 27:7	negotiating 76:3 89:12 139:4
mistake 90:7	models 131:6,22	75:12 80:24	36:10 60:3	negotiation
106:17,21	154:20,23	83:23 101:21	68:24 77:25	31:12 33:23
107:6,7 155:6	157:15,22	119:17 120:14	78:2,5 80:5	36:24 47:6,8
misunderstood	158:24	120:23 128:9	96:8	56:23 61:17
104:10 167:24	model's 163:10	129:9 136:4	multiples 108:9	153:2
mixed 146:25	modify 73:23	137:1,9 138:1	multiply 28:11	negotiations
mixing 146:20	75:7 187:13	138:2 149:1	multiplying 28:4	27:20 46:3,4
mnemonic 141:13	module 171:19,20	164:5 167:4	28:5	48:16 56:19
model 126:18,24	172:18,20	180:11 181:9	must 28:3 81:3	61:18
126:25 127:25	181:22 185:25	189:6	152:12,18	neighborhood
127:25 128:2	186:1,7	morning 4:1 9:16	167:24 168:15	62:7
128:17 129:1,8	moment 18:24	76:15,16,24	174:5	neither 133:1
130:17 131:8	150:11 166:15	77:19 130:6		
	I	1	l .	1

•				
		1	1	ì
142:2	non-recurring	133:18 164:2	121:12,19	58:20 61:17
network 59:18,19	150:9 163:17	occurring 79:14	122:2 123:25	65:17,20,21
135:11 137:25	173:20,24	82:3	124:18 170:23	68:13 69:25
138:19,23	normally 72:18	occurs 145:15	192:9	77:24 80:5,17
152:24 154:25	75:4 86:1	October 1:15 4:2	oil 143:24 144:2	82:18 84:10,10
159:20,21	Notary 192:8	50:24 67:24	144:20	84:11 87:22
161:15,19,19 178:14 179:10	notes 192:5 nothing 7:8 9:4	192:4 off10:5,7 17:24	okay 5:15 9:19 10:3 19:20	92:3 93:1 102:5 103:12
182:12 186:20	20:17 101:3	17:25 18:24,25	22:15 36:23	104:21 105:16
networks 139:7	127:14	29:10,16,21	44:4,18 46:1	107:13,22
178:19,19	notify 87:23	37:10,12 59:16	46:23 51:1,24	108:8,9 112:21
never 29:15	noting 119:13	61:8 65:22	52:16 62:15	112:21 115:13
62:18 75:25	notion 134:22	66:10 68:5,6	64:3 65:9,12	115:18 119:21
84:19 100:25	165:23 166:12	69:2 70:8,24	66:3,14,24	123:3 124:4
101:1 133:2,19	November 89:4	71:2 73:21	67:6,8,10 68:7	128:9 129:19
133:20,21	number 30:19	78:9 87:3	68:21 70:2,12	129:19,21,24
157:2,3,4	38:20 42:9	109:8,9,13,18	72:11,14,25	135:19 137:4
166:25 167:15	43:14 44:10	110:20,24	74:15 75:20	138:13 142:24
185:23 187:6	45:12,16 60:12	111:7,7 112:3	76:1,5 78:1,12	143:8,9,10,11
187:13	61:11 62:10 69:14,15 74:22	112:8,9,11	79:10 81:16 82:23 85:11,20	143:12,13 144:25 147:14
nevertheless	•	113:1,13	91:24 93:21,25	144:25 147:14
new10:16 33:7,7	87:22,23 88:13 95:22,23 96:2	117:13 120:20 123:19 124:13	104:5,19 108:2	153:15 154:20
33:9 73:4	96:3,6,9	124:14,23	112:16,20	154:22 155:5
89:12 98:18,18	108:24 136:3	125:12,13	117:8 118:1,2	155:21,22,25
130:19,20,22	158:10 161:20	126:10 134:15	134:23 144:23	156:6,20
132:13,23	161:22 166:17	136:1 145:20	147:25 148:7	157:12,20
148:2,4 151:13	174:23 175:12	150:12,14	156:14,24	161:4 165:15
151:19 155:16	187:6	162:14 170:9	166:22 167:21	167:4,17
155:17 160:15	numbers 24:14	175:16 180:8	168:20 170:15	168:15,22
163:7,10,19	80:7,9,12	183:2 189:9	171:16 172:3	169:16,21,22
165:18 175:9	120:20 188:13	190:12,24	172:23 176:5	171:1 172:4
177:13 178:21	numeric 120:20	191:2	180:15 190:10	176:8,8 184:3
184:5,8,11,13 184:23 185:6,9	nutshell 35:18	offer 135:15 offered 15:10	OKEY 1:22 old 32:12,12,13	186:2 188:7 ones 56:15 72:7
185:13,21	0	37:15 38:3	73:5 103:3	98:11 109:18
186:2,6	oath 111:4	46:11 129:16	120:1 184:6,7	110:21 111:8
newer 131:14	object 91:17	154:14	185:2,19	111:24 112:9
newly 163:13	153:17 156:7	offering 10:17	once 16:3,12	112:10 188:20
next 79:5 92:8	156:21 190:4	119:24 138:21	41:23 43:2	188:23
113:18 145:1	objection 20:22	offers 135:4	50:7 57:21	ongoing 83:10
nexus 43:18	21:4 99:15	offhand 188:23	60:22 61:6	only17:7 27:23
nice 27:4	113:10 171:25	office 134:15	92:7 96:20	30:20 54:11
nine 14:14	190:8	142:13	146:20	59:24 64:6
189:20	objections 113:9	often 85:21,22	one 4:10,12 5:6	67:25 71:16
nobody 120:3 nods 61:13 93:9	190:3	107:5 oh 20:9,24 21:5	6:8,11 7:24	81:25 85:24 86:17 87:5
Nolan 29:3	obliged 35:17 48:11	Oh 20:9,24 21:5 21:7 27:19	11:8,9 14:24 14:24 15:4,5	86:17 87:5
nomenclature	observable	28:20 33:15	16:6,17 21:2	110:8,12,22
148:16	168:25	45:25 47:20	22:10 27:4	115:16 132:2,4
nominal 139:20	observed 148:2	55:25 57:9	30:2 31:10,19	161:20 172:13
140:24	obtain 19:9	64:16 66:1	32:2,8,13,14	174:7 188:6
nondisclosure	36:14	77:1 82:9	32:18,23 33:2	189:1,2
46:14 130:3	obtaining 19:5	93:24 94:4	33:18 34:5	onset 178:2
none 117:17	obviously 140:25	Ohio1:1,6,13,14	36:24 39:2	open 5:7 10:25
181:22	169:22	1:23 2:4,7 4:5	47:5,11,12,13	49:19 54:24
nonresponsive	occasion 17:18	4:22,24 34:13	47:25 48:1	55:3,19,20
21:9 non-drop 174:3	occur 15:19	34:15 46:22	49:6,13,23	127:18,22
Hon-grop 1/4:3	87:13 96:20	119:3,8,16 120:15,25	50:2,4,7,12,17 53:4 57:12	166:23 167:4 169:16,25
	I	120.15,25	33.4 37.42	103.10,23

·				
170:4,5,7	134:2 146:12	94:16 101:25	151:12 152:5	161:1 162:3,4
181:6,10,11,24	146:13,20,24	103:14 126:3	156:4 160:14	167:12 171:25
181:25	151:21,24	134:16,19	160:15 161:8	172:13 173:6
opened 170:2	154:6,20	135:22,22	163:9,12,18,23	177:9 183:11
opening 127:24	157:12 163:4	136:19 145:1,9	166:7 171:20	184:22 185:22
167:17	164:13 178:16	145:16 147:16	172:24 173:22	185:22 188:5
operated 87:24	184:13 186:12	148:18 151:15	174:1,18,21	participate
88:3	others 96:15	151:20 152:4	175:8,12,18	118:12
operates 121:19	177:20	153:5 156:23	179:3 188:24	participated
operating 32:19	otherwise 100:13	165:10 173:19	pages 73:22 96:8	133:12
32:24 103:19	114:2	175:22 176:10	pagination	particular 7:3
138:21	ought 27:24	177:2,5 178:12	174:20	23:5 32:2
Operation 156:6	74:25 81:25	186:21	paid 12:4 22:14	98:25 101:11
opinion 177:5	92:17	overall 11:10	23:4 24:11	102:13 108:8
opportunity 5:21	out 19:18 23:20	99:1 165:12	25:1,5,6 26:2	122:10 153:21
15:11 46:12	46:18 48:25	173:11	31:2,5 47:23	157:16 167:4
190:22	60:23 62:19	overbilling 29:8	51:21 52:3,12	176:15,16
opposed 54:9 66:15 69:18	65:7 66:16,17	overbuilding	53:3 56:1 83:7	178:4 184:16
155:22 161:9	67:18 69:3 70:13 72:16,20	178:18 overlap 11:4	83:21 85:25 89:14 91:17	186:4 particularly
171:1 175:5	73:6,11 78:15	185:1	130:11,13	157:7 166:5
opposition	80:10 84:8	overlay 100:25	pairs 69:15	176:7 178:3,12
101:17	89:8 90:15	overnight 12:19	Pam 16:24 17:11	182:6
options 1:4 2:5	92:11 93:8,13	12:23,25 18:9	19:19 46:15	parties 6:24 7:2
4:7,16,19 5:7	100:14 103:15	89:19	81:14	7:3,19 88:17
8:14	111:7,17 124:2	overpaid 90:4,7	Panel 1:11 5:21	parts 81:9
order 5:8,17	128:24 129:5	overstated149:4	7:4 65:2 73:23	113:19 114:3
27:15,16 40:7	131:6 133:16	149:6	99:18 100:2	121:19 127:11
40:23 41:1	135:10 138:10	owe 56:17	101:4 189:13	133:7
42:4,6 45:7,23	142:12 152:2	owed 29:13 30:11	Panel's 5:22,25	party 5:23 16:19
53:16 54:14 55:16 71:15	153:15,25 154:1 159:20	30:12,19,22,24 30:25 45:23	paper 12:16,21 13:2,3,25	95:11 party's 133:15
93:22 107:24	160:11 164:16	52:20 53:2	38:24 39:20	party's 133:15
130:3 152:22	165:1,20	56:11	49:7,8 57:12	past 49:4,5,7,8
168:12,20	166:14 176:5	owing 26:18	57:14,16 58:23	50:20 51:17
173:15 185:25	177:16 179:19	own 74:13 138:22	59:4,5,6,10,11	58:18,25 62:2
ordered 71:12	182:17 186:24	154:7,10,21	60:4,6,7,8,14	62:11 64:3
ordinary 127:6	outcome 131:9	173:15 176:22	60:20	87:6,16 123:14
127:13	output 161:14	o-g-e-l-m-e-i	paperwork 86:2	176:10
organization	168:8,16	8:12	paradigm 177:14	pay 19:16,17,20
34:4 original 68:18	169:10	P	paragraph 174:1	19:22 26:22
144:8 189:25	outputs 128:17 outside 26:19		174:19,22 parameters 84:17	27:3,10 30:21 41:10 45:4
192:5	27:1,5 44:23	package 41:7,8 packet 67:3	Pardon 9:6 151:2	47:13 48:8
originally 45:22	44:24 81:25	page 3:3 9:18	parentheses	51:7 52:4 53:9
other 7:8 12:4	87:24 88:3	19:4,12 27:14	136:13	56:12 58:5
12:10,12,19	90:2,10,11,14	75:13 78:16	parse 129:4	82:25 83:1,15
16:9,19,19	90:17 103:19	79:1,2 85:14	part 13:3 29:17	83:17 85:23
18:13 34:4,20	139:8	86:4 87:8	35:8 41:7	86:1 88:7
42:3 56:1,7	outstanding	88:12 103:17	42:16 44:14,14	89:16,21 90:5
61:3 62:25	22:12 23:6	117:4,9 118:4	67:3 69:5	90:6 91:13
73:15 74:1,24 75:10 80:25	over 4:14 10:17 15:7 21:19	118:21,22	79:10 83:1,19 85:19,21,22	payable 11:11,24 12:10,13
81:4,9 84:3	30:21 45:4	125:3,6,25	101:1,1 104:3	paying 18:14
86:20,20,22	50:1 57:18	126:9,13 129:15 133:23	104:16,17,17	26:15,16,24
88:20 91:8	60:3 61:21	136:10,21	105:1,2 108:3	30:18 48:22
99:5,5 101:25	62:23 63:4	141:2 144:24	114:1 122:22	56:7 69:18
104:8,14 111:5	68:17 69:18,24	147:9,25	126:24 127:8	83:9 85:21
121:2 129:3	70:1 74:20	149:19,21	135:6,7,10,15	86:20 87:20
132:17 133:15	77:24 91:10		148:22 159:9	112:16 142:13
	,	1		

payment 10:13
17:19 19:23,24
22:6,6 26:7 84:15 87:11
105:7
payments 10:14
10:18 18:4,8 21:7 22:11
26:4 36:3
48:20 53:2
84:24 85:17,18
pays 20:7 24:5 75:15 162:25
PDF 49:21,24
50:9 63:25 64:4,21 95:25
96:3,9
people 11:8 17:3
29:4 34:4 43:10 57:21
43:10 57:21 74:24 81:14
86:2 89:17
91:19 92:14 94:24 103:13
107:9 133:11
people's 154:6
per 23:1 148:8 175:12
percent 12:11,12
percent 12:11,12 69:25 72:21,22 76:21,22
76:21,22 105:16 1 29:11
139:17,17,19
144:2,20 145:7
145:19,19,24 145:25 146:1,4
146:5,11,13,14
146:15,16
147:13,15,16 148:2,4 151:15
151:20 152:2
160:13,16,17 160:18,18,20
160:18,18,20 163:10 174:24
percentage 45:14
72:19 82:11,12
82:24 139:15 139:21 140:1
143:22 144:1,5
144:13,14
145:6 160:12 160:21,23
percentages
151:21,24
percentagewise 140:23
perception 27:23
perfect 120:4
perfectly 146:7 147:21 174:12
141.21 +/4:12

perform 128:13
perhaps 104:10
117.17 110.0
117:17 119:8 120:15 131:15
120:15 131:15
period 10:17
25:1 30:16
45:5 47:6
49:22 50:1 53:13 58:8
53:13 58:8
80:21 83:4
97:7 100:21
106:10 130:21
167:14
periodically
90:17
periods 167:10
permission
132:24
person 11:8,12
11:12,14,24
12:10,12,13
35:5 42:21
43:8 98:13,14
99:4 100:8
149:24
perspective
101:19 186:16
pertain 11:3
173:25 174:2
pertained 130:15
184:6,7
pertains 13:15
pertinent 46:10
petition 1:3
55:24
phases 130:23
phenomenon
155:13
philosophical
83:23 84:1
phone 34:5
133:14
phrase 134:7
144:15
phraseology
144:18 146:18
Physically 12:14
Ph.D3:11,19,20 3:22,24 113:22
114:24
pick 133:14
picking 159:24
piece 134:20
pieces 81:9
190:20
pipe 63:19,22
64:1,7,13,18 64:21 96:22
64:21 96:22
97.3 5

97:3,5

```
place 4:6 64:1
 64:15 107:9
 129:1 165:9
 177:13 178:24
 182:13,19
places 143:21
 155:14
placing 93:22
plan 16:17
plant 162:2
Platform 59:19
played 177:16
playing 160:11
please 8:1,6
 9:18 10:9 19:4
 19:12 21:2
 22:17 27:14
 34:22 94:5
 99:25 113:21
 114:12 118:4
 118:21 125:25
 126:13 129:15
 133:23 136:21
 141:2 150:25
 151:12 163:24
 170:20,24
 171:18 175:8
 175:18 179:3
 180:10,21
plus 21:17 45:15
 172:15
point 6:5 7:9
 15:17 20:4
 28:3 32:2 37:4
 38:11 42:1
 46:23 47:1,17
 57:1 71:11
 75:8 79:19
 82:21 84:1
 90:9 114:4
 115:17 122:6
 142:18 169:13
 172:5,5,6,8,22
 176:19 177:17
 180:14 189:23
points 146:25
 152:6
poles 177:6
 178:1,1,3,5,11
policy 70:19
pop 158:2
portion 20:15
 25:10 34:18
 41:8 43:4 45:2
 122:16 127:23
 139:6 174:3
portions 127:12
portrayed 28:23
position 7:2
```

68:7,22 79:3 95:19 109:4,25 139:4 positions 7:3 103:13 possibility 24:15 133:2 possible 83:12 139:10 147:24 possibly 6:11 118:6 179:16 Precedent 169:4 precise 175:14 precisely 178:20 178:25 predecessor 43:23 44:2 predetermined 49:1 predict 190:8 predominately 76:17 prefer 110:9 146:8 preference 7:18 115:21 prefiled 3:17,18 3:20,21,23 5:18 8:18,22 77:18,20 78:8 78:16 79:12 113:4 114:23 116:7 preliminary 158:13 premised 78:8 premises 134:22 preparation 130:16 prepare 6:24 prepared 8:17 141:6 prequal 71:15 111:25 prequalification 70:5 71:14 present 4:13 46:5 53:14 144:16 166:8 187:20 presented 130:19 132:2 169:9,12 169:24 170:3 172:9 187:14 president 8:16 presumably 100:9 presume 126:11 136:7 pretty 23:2 30:22 45:17

56:15 57:19 71:11 81:2 90:15 103:12 111:11 162:17 171:5 prevailed 53:16 prevented 56:7 prevents 167:17 previous 147:20 148:8 169:5 previously 6:22 8:18 22:7 36:25 46:9 60:25 78:9,11 140:23 143:1 150:4 174:16 176:21 price 67:19 103:15 108:12 131:13 139:22 143:25 144:1,8 144:19 148:1,2 148:4,5 164:2 164:3,8 priced 143:16 prices 41:1 131:6 132:7 144:6 152:11 152:12,24 164:25 165:10 165:12 187:18 pricing 34:11,13 34:15 35:17,18 46:13 68:18 74:13 94:18 142:19,21 primarily 18:6 131:14 primary 11:8 81:2 89:24 132:6,8 162:18 162:21 principals 6:12 principle 121:25 principles 153:14 **print** 80:10 printed 48:23 49:1 66:6 125:11 **prior 5:**9 6:25 26:4 29:4 31:3 33:22 61:5 67:24 93:22 97:4 122:11 183:12 probably 12:11 23:22,23 24:10 25:15 41:17 52:18 64:16

8:13 48:10,13

provisioning 65:8 92:8,11 programs 40:21 132:8 quickly 42:5 99:1 102:5,18 42:1 186:18 qualifying 162:5 57:24 139:15 159:19 projected 92:5 pro-competitive qualitatively quite 87:25 163:9 170:25 prominent 164:5 152:23 120:21 101:7 145:10 178:15 Proof 28:24 public 1:1,12 qualities 138:23 152:14 173:6 problem 27:22 29:24 30:8 3:20,24 4:5 138:24 139:19 quo 77:15 117:23 143:15 56:10 27:6 115:12,17 quality 140:25 quote 100:24 143:15 144:10 quantitative proper 21:24 115:21 116:5 171:17,18 167:11,13 111:2 135:10 189:24 190:15 122:17 quotes 75:21 problems 26:14 properly 29:6 190:19,23 question 20:17 quote-unquote 82:21 30:11 31:3 192:9 20:21 21:6,8 166:14 proceed 9:20 112:15 179:14 PUCO 29:2,8 22:15,18 23:23 76:12 116:21 24:20 34:22,23 R proposal 146:15 30:15 34:13 proceeded 34:16 151:13 172:23 43:4.10 44:22 35:2,10,15 R1:11 2:6 5:1 45:19 46:16 37:20,22 63:14 proceeding 28:25 187:14 raise 8:2 83:12 29:1 30:8 45:2 **propose** 61:14 53:7 56:9 71:3 83:13 113:21 proposed 10:16 45:22 56:9 91:10 92:3 93:2,3,7 raised 187:4 85:1 104:25 23:17 32:12 pulled 188:19 96:19 99:8,23 ran 60:22 157:1 68:9 73:3,17 105:3 113:17 purchase 72:4,11 100:17 101:2 range 24:25 41:2 118:7,12,20 88:17 92:21 72:16,21,22 102:24 104:1 41:18 55:13 128:15 93:13 94:21 74:17,20 76:6 104:22,22 68:3 74:25 proceedings 1:9 95:7 119:20,24 142:14 163:3 106:6 117:18 138:18 5:16 43:1 145:25 148:11 purchased 72:20 117:21,24 ranged 17:4153:6 163:14 119:7 120:6 133:13 178:24 73:6 93:7 ranges 160:19 192:3 164:22 165:10 purchases 93:21 122:6,19,21,24 ranging 160:16 process 16:4 172:25 purchasing 54:23 123:5,10,10,16 rate 28:1,11,12 39:23 41:20,24 proposing 70:12 93:12 135:14 137:6 149:18 45:13 70:4 89:23 119:22 43:14 56:23 139:2,3 179:12 159:14 164:25 72:16 75:15,17 60:24 63:7 167:7 174:17 120:11 pure 121:23 75:20,21,22,25 78:13 87:7 175:1 184:3,6 proposition purported 136:14 76:5 94:2,10 89:18 160:23 purpose 157:18 184:9,12,16,19 94:19 96:12,14 processes 61:12 185:15,23 proprietary purposes 7:4 98:4,5,25 99:9 114:19 117:15 186:10 187:16 63:1 122:8 99:11 100:4,14 produce 136:24 149:12 188:12 188:6 protective 6:14 100:19 101:9 149:5,13 6:15 pursuant 1:6 4:8 questioning 101:10,12,17 157:13 187:12 protocol 40:1,2 150:16 180:15 153:16 103:8 107:16 produced 126:8 40:3,5,7,11 **pushed 48:24** questions 5:21 108:9 119:3,4 138:15 142:15 54:20 63:19,23 96:21 5:22,24,25 6:6 119:4,8,9,13 143:18 150:8 8:21 9:5,9 97:17 put 15:4 45:13 119:14,15,16 170:22 proved 86:13 49:20 60:2 38:21 39:22 120:15,16,25 42:9,10 46:1 product 28:11 proven 86:7 69:24,25 71:15 121:1,2,12,13 75:24 127:5 48:21 51:20 provide 44:7 74:22 80:25 121:18,19 128:23 176:16 55:8,9 69:3 81:6 100:24 52:19 53:22,22 122:2,3 123:1 179:4 70:10 98:5 150:10 152:12 53:24 63:12 123:2 131:24 64:25 65:1,2,7 products 179:16 111:8 134:14 putting 98:25 141:3,5,17 Professional 143:3 176:11 140:15 67:2,9 71:24 145:24,25 75:12 76:9,12 192:8 188:10,17 p.m191:6 146:5.6 147:14 76:17 77:4 provided 22:13 proffered 46:2,5 147:16 149:6 Q 47:5,16 24:7,11 25:9 85:8 91:23 151:15,19,20 profile 57:17 26:4 55:9 91:7 95:11,15,22 QSI 36:20 37:15 152:19 153:13 59:9 92:14 91:8 128:1 99:16 100:2,18 38:3 114:17 153:14 163:10 100:24 101:1 program 16:11 130:17 134:13 128:14 129:19 163:11 165:19 17:9 60:22 135:3,22 103:17 114:6 129:21 130:4 173:10 182:1 138:19 115:2 116:11 130:10 131:1 rates 1:4 31:9 150:25 155:11 programmer 16:11 Providers 179:18 31:22 32:9 133:6 154:11 17:13 41:9,15 provides 135:5 161:3 180:11 154:22 170:12 33:10,20 35:7 41:19 providing 40:11 173:14 174:14 180:23 183:24 46:16,18,20,21 programming 141:19 142:25 188:19 186:12,13 46:25 57:3 41:20 126:14 provision 134:3 188:2,5 189:6 68:9 70:2 76:3 qualify 122:4 166:16 189:12,13,17 186:25

· ·				
108:2 118:22	ready 9:9 42:1	23:11 29:3	records 54:19	regard 68:23
119:12,19,23	76:11 92:9	38:21 41:24	55:4	109:22 131:4
119:25 120:1	114:5 116:19	50:1,22 51:1	recourse 27:6	131:22 147:1
123:25 124:17	124:24	51:15,16 52:1	90:13	186:18
125:9 136:11	real 43:10 56:11	52:13 59:24	recover 67:12	regarding 5:8
136:14 145:4	84:20 89:2,13	60:1 61:2,22	95:18	17:20 31:8
145:10,16,17	89:18 91:14	69:10 97:12	recovered 95:19	33:19 35:5
146:10,13,14	98:20 139:16	132:23,24	recross 5:20	54:4 58:10
146:14,15,16	really 21:23	156:11 158:16	Recross-Exami	61:12 103:18
147:13 148:10	44:1 47:12	169:19 181:7	3:6,10,13 54:2	158:9,16
148:13,24	50:2 63:19	184:14,14	98:1 184:1	170:17
149:3,10,13	87:13 91:4	receives 10:13	recurring 170:23	regardless 133:5
152:18 153:5	94:16 129:23	10:21 16:10	173:1	regards 73:20
153:17,20	131:17 145:10	77:21	REC'D 3:16	131:3,4 187:1
158:17 162:25	149:1 157:3	receiving 58:4	redacted 151:14	Registered 192:8
163:4,5,6,13	161:18.23	82:13	151:14,16,18	regular 12:19,21
163:14.15	163:2 164:24	recent 31:10	151:19,20	regularly 87:25
165:5 166:2,7	165:19 167:12	106:8	160:16,16,20	153:25
166:8,8,9,10	167:20,25	recently 50:20	160:20 173:19	regulators
166:13 172:24	176:2 187:7,11	recess 38:14	174:24 175:1,5	177:11
173:2,7,20	187:12	113:15 150:23	175:6,10,13	regulatory 87:6
175:23 176:13	reason 29:22	180:19	redid 49:20	relate 102:3
176:14,20	33:8 37:7 57:6	reciprocal 89:25	redirect 3:5,6	related 1:5
177:1 187:15	62:10 78:7	104:3,15	3:10,13 5:20	132:1 179:10
187:17,22	80:25 86:17	reclassificat	22:1 38:16,18	181:18
rather 45:13	133:20 153:11	131:24	58:10 63:15	relates 91:6
83:24 99:18	153:15 161:23	recollection	95:13 181:1	relating 131:19
102:15 145:3	166:12 167:22	101:5	red-face 119:19	131:20
169:8 181:11	reasonable 24:9	recommend 160:13	121:9	relationship
183:12	1 00 1 110 01	1		
	89:1 119:21	recommendations	reengaging	79:13 164:12
ratio 136:10	120:6 133:19	recommendations	reengaging	79:13 164:12 164:14 165:1,6
				i e
ratio 136:10	120:6 133:19	187:8	131:11	164:14 165:1,6
ratio 136:10 rational 136:25	120:6 133:19 reasons 132:17	187:8 reconcile 79:11	131:11 Reexamination	164:14 165:1,6 165:24 166:3,5
ratio 136:10 rational 136:25 187:12	120:6 133:19 reasons 132:17 137:7 149:21	187:8 reconcile 79:11 86:12,16	131:11 Reexamination 3:9,9 92:1	164:14 165:1,6 165:24 166:3,5 166:9,13
ratio 136:10 rational 136:25 187:12 rationale 74:23	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6	187:8 reconcile 79:11 86:12,16 reconstruction	131:11 Reexamination 3:9,9 92:1 93:4	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15 23:13 88:14	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15 23:13 88:14 103:20 118:16	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15 23:13 88:14 103:20 118:16 161:7 168:1	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13 170:15 171:8	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23 59:3,21 60:14	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25 153:1 162:14	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15 23:13 88:14 103:20 118:16 161:7 168:1 185:24	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17 149:8
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13 170:15 171:8 171:13 172:8	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23 59:3,21 60:14 78:1,2 83:11	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25 153:1 162:14 170:9 175:16	131:11 Reexamination 3:9,9 92:1 93:4 refer59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred88:15 90:16 172:11 172:18 183:10 186:7 referring8:15 23:13 88:14 103:20 118:16 161:7 168:1 185:24 refers 23:9	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17 149:8 removed 70:15,21
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13 170:15 171:8 171:13 172:8 readily 159:12	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23 59:3,21 60:14 78:1,2 83:11 97:2,4 130:3	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25 153:1 162:14 170:9 175:16 180:8,20 181:3	131:11 Reexamination 3:9,9 92:1 93:4 refer59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred88:15 90:16 172:11 172:18 183:10 186:7 referring8:15 23:13 88:14 103:20 118:16 161:7 168:1 185:24 refers 23:9 155:24	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17 149:8 removed 70:15,21 71:1,8 110:1,5
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13 170:15 171:8 171:13 172:8 readily 159:12 168:25	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23 59:3,21 60:14 78:1,2 83:11 97:2,4 130:3 150:3	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25 153:1 162:14 170:9 175:16 180:8,20 181:3 189:9 190:12	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15 23:13 88:14 103:20 118:16 161:7 168:1 185:24 refers 23:9 155:24 reflect 147:15	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17 149:8 removed 70:15,21 71:1,8 110:1,5 111:24 112:16
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13 170:15 171:8 171:13 172:8 readily 159:12 168:25 reading 77:17	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23 59:3,21 60:14 78:1,2 83:11 97:2,4 130:3 150:3 received 15:8,22	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25 153:1 162:14 170:9 175:16 180:8,20 181:3 189:9 190:12 190:23,25	131:11 Reexamination 3:9,9 92:1 93:4 refer59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred88:15 90:16 172:11 172:18 183:10 186:7 referring8:15 23:13 88:14 103:20 118:16 161:7 168:1 185:24 refers 23:9 155:24	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17 149:8 removed 70:15,21 71:1,8 110:1,5 111:24 112:16 173:19,21,24
ratio 136:10 rational 136:25 187:12 rationale 74:23 rationally 102:20 reached 44:15 45:3 read 20:16,19,21 21:1,3 22:16 22:18 27:15,18 27:21 34:21,23 40:21,24 41:2 49:17,23 50:6 50:8,10,17 54:10,14,16,25 55:16 68:14 69:21 77:20 92:13 99:13 106:24 109:20 109:21,21,22 122:20,21 138:5 143:4 146:9 156:13 170:15 171:8 171:13 172:8 readily 159:12 168:25	120:6 133:19 reasons 132:17 137:7 149:21 150:1 187:6 rebut 160:22 recall 15:14 29:23 30:4 33:13,13,16 34:6,10,19 35:9 36:19 37:14 100:21 108:3,22 109:24 133:13 158:14,18 185:15 recalled 35:4 receipt 20:18 36:6 58:13 81:19 receive 12:14,19 14:7,18 15:11 15:18 16:3,12 20:1 24:17 57:16 58:23 59:3,21 60:14 78:1,2 83:11 97:2,4 130:3 150:3	187:8 reconcile 79:11 86:12,16 reconstruction 182:11,12 record 4:4 5:5 5:19 6:4 7:2,5 8:10 10:6,7,8 13:6 17:8,9,24 17:25 18:1,24 18:25 37:10,12 41:23 43:17 54:12,20 55:10 59:16 61:8 65:22 66:10 67:1 71:2 107:21 113:1,7 113:13,16 114:1,12 115:16 117:13 123:19 124:13 124:14,15,23 124:25 145:20 150:12,14,25 153:1 162:14 170:9 175:16 180:8,20 181:3 189:9 190:12	131:11 Reexamination 3:9,9 92:1 93:4 refer 59:13 117:20 118:15 148:1 156:3,5 160:17 171:19 173:22 175:11 reference 9:22 27:14 86:11 105:5 125:13 126:14 152:8 175:15 186:2 referenced 188:23 referred 88:15 90:16 172:11 172:18 183:10 186:7 referring 8:15 23:13 88:14 103:20 118:16 161:7 168:1 185:24 refers 23:9 155:24 reflect 147:15	164:14 165:1,6 165:24 166:3,5 166:9,13 relative 14:9 20:1 24:17,21 25:1 29:21 Relatively 19:10 released 190:22 relevant 172:1 remain 22:12 remainder 152:3 remains 93:15 Remand 107:24 remediation 82:14,16,17 remember 25:16 30:13 33:5,6 36:21 46:7 58:20 removal 108:22 remove 70:16,17 70:20 108:25 109:4 110:9,12 110:14,17 149:8 removed 70:15,21 71:1,8 110:1,5 111:24 112:16

removing 70:18	158:19 161:6	148:11 158:13	23:1,6 24:3,8	131:9 139:1,7
109:15	184:10 185:19	reviews 11:6,13	30:4 36:21,23	139:9 140:22
rendered 22:7	188:11	revolves 165:23	37:14 38:2	140:24 147:18
25:4	respond 100:16	rid 60:6	53:10 80:14	149:9,22 150:4
rendering 7:5	responded 97:1	riding 186:21	83:6 105:25	157:9 158:5
renders 78:20	response 18:2	right 8:2 12:8	155:2 160:20	160:2 166:10
79:6 80:2	100:2 171:12	15:3 19:14	163:10 168:18	174:16 178:3
repeat 20:16	171:14	21:6 22:9	round 180:14	184:19
37:21	responses 183:9	23:25 25:23	route 107:14	sanity 142:15
replaced 47:21	183:10	26:6 30:25	rule 27:24 28:13	saw 129:25
reply 6:2	responsibilities	41:12 42:8	30:10,11	156:14
report 71:15	86:14	43:25 44:3,11	106:25 142:19	saying 13:25
reporter 63:10	responsibility	44:13 45:17	142:20,23	14:18,23 25:19
192:8	46:24 86:8	47:1,23,24	143:5	31:2 33:12
represent 39:12	responsive 123:7	48:3,7,9,17,19	ruled 7:13 28:2	54:23 55:15
172:9	rest 41:9 111:9	50:11 51:5,9	run 5:17 128:3	59:3 70:15
represented 96:7	123:6	51:11,19,23	155:18,21	86:24 88:8,18
representing	result 30:17	52:15,20,24	156:1 157:2,3	92:11 101:8
4:24 57:12	136:24 137:6,7	55:1 58:2,14	157:5,20	108:17,24
represents 39:9	137:14,15	59:2 60:2	166:25 167:8,9	110:4,6 111:5
reproduced 117:6	138:15 152:18	61:19,24 62:22	167:16,17,22	127:14 138:13
request 179:22	157:8 159:16	62:24 63:21,22	168:4 170:19	141:14 162:6
requested 15:25	175:24 177:23	63:24 64:9	170:22 171:18	166:20 167:15
19:16 64:21	resulted 29:12	66:21 68:3	185:18,20	167:19 169:16
81:13	131:13	71:9 74:18	187:7	172:17 177:4
requesting 67:14	resulting 142:2	75:9 76:8	running 134:15	179:8 184:5
require 88:21 90:18	152:11	81:13,20 82:6	134:16 156:25	185:10
· · · ·	results 128:18	87:4,8 88:11	157:4	says 8:5 27:24 28:15 40:4
required 69:11 71:14 82:14,15	131:7 187:13 resume 189:20	88:13,23 90:1 90:23 91:1,19	runs 155:23 171:20 172:21	66:1,7 70:6
89:6,7,9	retail 141:3,5	95:5,8,21,21	186:1	79:12 90:6
118:19 179:25	142:21 143:17	96:5,10 97:9	rural 119:9,14	95:17 109:8
requirement	retained 36:20	97:13,21,24	120:21,22	113:24 125:9
152:11 153:10	37:15,18 38:3	98:15 105:14	121:19,20,20	144:19 145:15
requirements	return 48:20	106:11,15,20	121:23 125:23	147:14 170:16
186:18	166:15	106:23 107:4	Russell 1:11 3:7	SBC 120:1 122:10
requiring 88:22	returning 44:13	107:15,17	4:14 65:2,5,15	122:12 160:17
89:24 118:11	reveal 173:18	108:11 109:17	65:18 66:11,25	161:10,10
resale 59:14	revenue 74:11	110:19 112:25	67:5,7 71:5	176:12 179:6
80:23 81:3,6,6	75:11	113:3,11,21	188:1,3	scale 125:20,22
83:14	revenues 141:23	118:10 136:19	l	127:6 137:9,15
research 34:12	142:2,7 143:2	142:9 143:14	s	138:16,25
93:19	review 12:1,2,5	144:13 146:17	S1:10	scanning 18:21 scenario 87:1
residential	16:21 21:12,14	149:12 151:5	sake 146:22	scenarios 168:4
76:22,25 77:1	21:17,18 36:20	151:16 156:16	Salley 4:20	183:1
141:3,5,19 142:21	37:1 38:4 57:13,23 63:1	165:19 167:19	Sally 2:2	schedule 6:22
resolution 157:4	89:20 107:23	168:18 172:1 173:8 174:6	same 8:23 10:24	93:18,18
resolve 86:23	120:5 123:10	175:6 182:2	10:24,25 13:1 15:1 18:19	scheduled 5:4
91:20	123:13 128:4,8	190:2,6	23:16 60:15,21	scope 5:25
resolved 85:2	130:22 133:17	ring 98:18	60:21 65:21	Scott 29:3
resources 169:22	136:13 140:9	risk 19:13,15,22	66:4,9 80:6,8	seat 8:6 85:10
respect 6:21	176:13	25:5,9 26:8,21	80:11 84:16,17	second 17:24
11:17 26:1	reviewed 102:15	26:23 89:13	88:21 91:6	20:23 49:18
33:18 76:19	102:19 103:7	Robbin 1:11 4:14	103:12 105:18	124:13 129:24
77:3,14 84:14	129:20,22	rolling 131:6	107:9 108:14	162:13 165:22
84:24 105:11	130:4 131:2	room1:13 114:4	115:2,3 116:13	171:10
119:5 128:14	133:6 155:3	rough 72:22	117:1 122:5	secondly 172:3
128:16,20	reviewing 102:25	roughly 15:1	125:10,17	187:7
150:6 157:16	122:13 130:9	19:25 22:11		
L	<u> </u>	·		•

section1:7 4:8 66:16,17,18,22 118:8 sections 68:14 68:15 105:21 security 36:14 85:13 86:6 88:19,25 89:3 89:6,7,9,23 90:19 91:15 105:23 see 5:7,25 9:17 11:10,19 12:24 28:16 37:6 46:9 47:1 66:9 70:13 86:5 87:4,8,18 88:12 93:19 112:1 117:22 118:7 119:19 124:20 126:19 126:21,22 132:21 139:9 139:23 142:15 142:17 146:24 149:15 157:6 157:25 159:23 160:11 163:11 164:6 166:2 172:14,14 182:5,13,24 183:7 190:22 seeing 28:4 131:12 133:10 182:16 seeking 88:15,25 seem 84:22 90:12 102:1,7 166:5 166:11 seemed 174:3 184:22 seems 87:25 168:20 seen 16:6 sell 17:2,4,7,8 55:12 135:11 selling 138:3 send 14:4 27:4 49:6,21,24 58:3 63:25 64:4,7 80:10 82:17 86:1 89:15,15,19 90:3,4 91:14 sending 18:22 49:12,22,23 81:15 92:15 Senior 114:17 sense 28:7 74:9 74:12 82:11,23

K

101:24 102:20 103:9 131:8 139:21 158:7 164:22 sent 29:6 46:14 47:10,13 49:11 49:13,16 50:2 50:5 54:20,21 59:7,8 170:12 sentence 20:16 20:23 79:5 123:2,3 sentences 172:5 separate 14:24 78:2,3 96:8,9 96:11,17,18 103:21 104:6 128:24 173:10 September 50:24 50:25 51:1 58:11,12,13,22 59:1,12,22,25 60:1 sequence 50:18 serve 120:6 125:22 served 33:20 server 63:19,20 servers 40:6 service 26:1,3 89:5 91:8 98:5 111:8 135:15 139:24,24 141:20 142:12 142:21,25 143:11,14,17 182:8 services 22:7,12 24:7,10 25:4,5 25:11,13,22 31:3 60:12 77:8 96:12 137:16 138:17 139:12,14 140:21 143:2 154:14,25 158:21 163:1 179:13 Session 4:1 set 126:17 152:25 153:17 sets 168:2 setting 57:3 settled 53:2,2 settlement 29:17 30:23 44:5,7 44:15,20 45:11 53:6 85:3

104:15,16

settlements 53:1 setup 170:18 seven 79:10 81:4 96:15 several 21:19 32:5 41:25 43:7,9 53:1 149:20 152:6 156:5 shakes 34:8 **share 128:18** 139:25 159:2,4 shared 139:23 140:3,3,7,12 140:13,17,20 158:20,21,25 159:5,10,17,25 160:23 **sharing** 139:16 159:24 shed 164:19 sheet 15:7 25:16 65:24 81:2 169:1 Sherlock 131:11 short 182:16 **shorten** 81:18 177:12,16,19 shortened 176:10 **shorter** 175:25 176:3,22 177:7 shot 60:23 show 123:25 140:13 170:16 175:24 showed 89:11 shown 126:8 shows 81:2 151:13 side 13:4,9 39:15 56:5 74:1,3 75:3 84:1,5,9 96:14 108:13,14 111:5 sides 75:9 sign 6:14 130:3 signed 6:10,17 24:22 32:14 114:2 significant 130:21 131:4 131:23 significantly 131:9 143:14 similar 6:25 130:25

similarly 10:23 149:14 151:18 151:22,25 175:4 simple 89:18 91:14 144:12 simply 131:19 182:19 187:15 188:10 since 53:1 62:14 66:17 104:21 131:17 140:25 144:7 156:1 185:23 single 39:10 sitting 39:4 91:10 situation 58:11 109:5 121:5 133:13 137:11 140:19 144:2 174:24 situations 107:17 108:25 137:2 161:6 six 29:3 sixteen 50:1 sixty-seven 25:17 Sixty-some 160:13 slightly 10:17 125:13 150:2 Sloas 192:8 slot 147:12 small 118:6,18 smaller 81:4 106:4 144:6 software 15:22 16:9,25 17:3,4 17:10 33:7,7 40:21 41:1,9 54:8,16,24 55:9,11,12,15 55:18 57:22 92:8,10 solution 157:2 **solve** 157:3 some 5:5,23 12:16,16 15:22 16:19 17:3,3 24:22 25:5 28:18 34:4 38:7 42:17 46:1 51:14 58:17,17,18 61:3 65:7 75:10,18 77:1

79:3 80:25

81:6 82:11,23

83:21 84:23 85:8,18 86:10 86:24 90:10,20 90:24 94:23 96:12 98:11 100:20 101:17 103:17 104:21 109:22 112:10 118:18 119:19 122:6 124:16 124:17 131:3.3 131:8 132:13 132:13 134:2 142:15 154:23 159:3 160:9 161:3 162:20 163:15 165:6 170:14,20 177:14,20 178:15 179:15 181:6,6,14,15 182:3 183:8 184:25 somebody 37:7 56:11 82:20 somehow 56:6 79:11,13 165:23 someone 17:20 144:17,19 something 12:20 14:22 24:19 25:9 37:8 38:6 38:9 41:17 47:2 54:9 60:18 62:19 64:17 87:25 88:9 89:11 100:9,10,11 106:22 117:18 121:9,15 143:19 153:8 155:23,24 157:18 166:2 185:1 sometime 17:6 27:19 48:24 sometimes 154:1 157:20 159:5 somewhere 24:25 28:6 41:18 84:7 85:10 126:12 178:5 sorry 9:7 21:1 23:24 30:7 36:17 37:19 75:16 109:11 111:20 113:1 118:5 124:8 126:9 148:3

similarity 10:21

11:2

} •

190:17 Sprint/Embarq 149:9 165:4,10 steady 85:16 subject 17:21 sort 12:18 42:11 44:8 45:4,23 165:12 174:5 88:19 120:4 stenographic 175:20 85:18 stack 57:12 192:5 178:2,17 sought 105:22 142:16 submit 57:7 Stephen 3:4 8:3 stipulate 124:16 sound 61:19 staff 4:12 11:12 8:11 stock 129:12 147:11 sounding 129:3 11:14 34:14 submitted 6:24 steps 168:7,16 stop 156:25 sounds 167:16 43:9 46:17,19 8:19 Steve 3:17 6:12 straightened 169:15 122:11 subscriber 141:4 Stewart 2:6 3:5 23:20 source 123:24 staggering 88:16 3:6,10,12,13 strange 60:19 subsequent 78:10 sources 143:16 stand 8:1 114:8 5:1,1,3,14 street 1:13,22 substantial south 1:22 2:3 123:16,20 7:14 9:12,13 2:3,7 4:21 5:2 28:21 29:11,13 4:21 41:17 130:6 162:10 9:15,17,20 133:21 30:19 42:7 spacing 125:13 176:17 10:10,11 13:19 strictly 76:20 85:16 **spare** 137:24 standard 40:18 13:22,24 18:1 **strike** 20:15 substantially 138:2 159:21 120:6,22 18:3 19:1,3 22:1 34:17 130:18 159:23 161:16 stands 13:11 20:14,24 21:6 35:21,24 70:12 substitute **sparse** 121:3 19:1 107:21 22:3,4,16,20 99:22 122:15 179:20 speak 5:12 141:12 23:10,13,18,22 122:23 subtract 144:6 142:20 154:18 start 7:21 8:14 23:25 24:1 struck 149:17 succeed 152:12 168:25 81:8 92:14 32:8,14,22,25 structure 101:18 successful 82:8 speaking 130:10 117:2 125:9 33:3,11 34:17 structured 94:3 sudden 89:12 149:15 154:23 129:21 146:20 102:8 35:3,22,25 struggle 68:11 148:12 169:7,8 87:21 89:2,13 suffice 6:16 184:4 36:1,13 37:9 special 40:16,20 sufficient 182:7 started 16:22 37:13,22,23 91:12 98:20 55:18 179:15 17:10 40:25 38:1 53:24,25 102:4 182:21 specialization 41:24 61:16 54:3 59:20 studies 32:6 suggest 118:5 176:23 67:24 73:11 61:9 63:8,11 46:2,6 48:6 145:18 146:2 specific 19:11 84:6 89:4 77:4 79:5 120:3 121:8 146:24 152:17 96:16 106:13 45:12 68:15,17 84:23 97:24,25 122:8,11,13,14 suggested 64:23 98:2 99:15,24 69:22,24 88:6 106:18 130:9,9 131:18 111:1 146:22 100:1,23 101:5 105:21 118:14 131:19,20 185:14 starting 47:9 120:15 137:1 105:6 125:9 suggesting 27:9 102:10,11 154:4,11,13 136:18 171:20 154:14,24 105:4 107:23 158:9,14 28:2 132:5 155:20 159:14 108:1 113:8,10 142:23 starts 134:15 study 31:8,22 176:7 185:1 174:22 32:3,6 33:20 suggestion 115:8,11 35:7 36:20 115:14 state 8:9 29:11 116:20,22,24 specifically 33:8 114:11 37:1,16 38:3 suggests 102:12 15:9 33:13 117:15,17 44:22 188:24 152:17 164:4 46:12,25 47:5 152:18 185:24 118:1,3 120:13 specifics 155:11 170:20 175:9 122:15,22,24 47:16,19,22 Suite 1:22 2:7 48:11,15 56:21 192:9 summarize 174:23 162:7 123:9,17,22,23 56:25 57:7 stated 27:4 supervision speculate 185:5 124:13,15,22 102:25 126:7 124:2 141:7 185:10,11,13 60:25 81:24 124:25 125:1,2 87:10 93:7 145:21 150:17 speculation supplemental 127:8,11,15,19 3:21,23 115:10 101:17 122:5 150:20,25 123:7 128:8,16,21 spell 8:10 115:24 116:7 129:23 150:4 151:3,8 152:1 129:16,19 116:12 117:6 155:19 162:15 170:10 130:4,19,24 114:12 131:1 132:23 117:12,20 **spelled** 114:13 statement 86:13 171:7,9 175:17 128:1,4 130:22 146:17 148:8 136:14 140:14 **spend** 35:17 180:4,9,11 132:24 133:4 143:18 149:20 spending 47:1 148:20 183:8,23 184:2 150:19 151:2,4 129:11,12 189:12,15,16 150:3,7,8 statements 162:8 162:9 152:11 154:10 151:10 152:5 spent 47:11,18 190:2,4,7,21 172:25 183:16 120:2 122:12 states 75:13 stick 146:22 154:16,17,24 190:1 114:23 118:23 156:25 158:17 129:7 still 13:4 32:8 Spring 61:19 171:13,16 35:2 48:10 164:18,21 **supply** 54:11 52:6 69:11 165:16 173:15 support 103:8 Sprint 42:16,21 **stating** 103:19 42:22 43:3,8 Statistics 73:7 78:13 173:18 176:15 176:20 182:21 43:19,23 44:1 187:19 80:6,6,8,10,13 176:22,24 supported 7:3 status 77:15 182:8 187:3 44:8,24 45:13 156:7 93:12,14,15 stuff 34:20 suppose 143:7 75:2 165:7 stay 42:25 97:10,14,15 149:25 144:25 139:6,18 146:3 140:24

supposed 15:21	68:6 69:2 70:7	taps 68:5,6 69:2	TELRIC-approved	109:3,20 110:3
51:7 58:9 88:7	85:10 90:1	69:14 70:15,17	34:13,15 46:16	113:4,20
99:17,20 112:4	92:11 100:8	70:18,20,21,25	46:20,21	114:22,24,25
121:20,22,23	109:8,9,13	71:8 108:21	tempted 149:19	115:6,24 116:7
sure 5:15 16:16	110:20 111:7,7	109:1,5,13,15	ten 17:23 20:12	116:9 117:3,6
26:9 30:9	111:10 119:15	110:1,5,10,12	56:13 61:22	117:9 121:11
33:16 35:2	128:25 130:10	110:14,18,20	78:21 79:7	125:12 126:12
37:6,23 48:13	141:16 142:18	111:22 112:13	80:13,19 86:8	128:2,5 130:16
57:5 64:18	143:8 149:21	112:15	86:14 89:13	130:25 132:23
65:14,15,21	150:15,21	tariff 108:19,20	91:8 103:6	132:24 133:4
66:21,22 77:1	154:3 158:13	143:14	163:10 180:17	138:6 143:21
78:15 82:9	167:18 170:24	tariffs 124:3	tendered 6:9	145:12 146:19
90:20 93:14	172:17 174:9	taught 11:18	163:5	146:25 148:12
94:4 96:16 99:7 111:3	176:5 177:11 180:14	tech 178:12	tends 177:19	152:5 159:9 163:4 165:17
112:19 115:13	taken 38:14	technical 82:8	ten-minute 38:12 term 74:8 125:14	166:6 169:13
121:15 128:23	41:25 52:4	166:18 technicians	terms 1:5 10:13	181:8 182:23
129:4 141:6	70:24 98:24	139:8	26:19 27:5	183:6,11,16,20
155:7 167:25	99:9 100:23	technology 69:1	53:15 63:3	184:15 187:4
180:6 188:7,18	110:24 112:3,8	69:1,6,13 70:6	87:24 88:3	188:24 189:25
188:20 191:1	112:9,11	70:22 112:5,6	90:2,11,14,22	190:1,20
surely 167:9	113:15 138:10	112:7	125:18 131:24	testing 64:18
surprised 129:11	150:23 165:9	Telcordia 17:1,2	139:15,16	81:12 82:8
suspension 17:21	180:19 192:3	17:2,7 40:25	142:21 152:13	92:4 112:14
sustain 152:13	takes 16:15	41:7,23 54:5,7	test 15:21,22	tests 119:19
152:19 153:15	21:14,17 100:7	54:11,19,24	16:1 42:1	148:9
sustainability	100:9 109:3	55:6,8	81:13,15	thank 4:23 5:3
152:6 153:7	182:12 187:15	Telcore 40:18	111:16,17,21	6:18 7:7 9:11
swear 113:18	taking 66:15,17	telecommunica	121:10	9:13 10:10
switch 135:1,5	100:3 109:18	67:14 126:2	tested 15:24	22:1,3 23:19
135:13 142:6	109:24 111:5	telecommunica	testified41:6	23:21 33:4
switched 142:5	152:2 182:18	1:7 4:9 152:23	46:9 50:20	35:24,25 36:19
switching 141:20 142:3 143:1	talk 31:15,17 34:2 58:9 87:3	153:3 176:7	51:13 52:22	37:24 38:11,13
sworn 8:4 113:23	133:10,14	177:23 telephone 1:6	54:4 61:10,25 99:6,17 100:2	53:23,25 63:11 64:25 71:24
symbol 39:8	140:2 174:7	4:24 75:2 84:6	183:15	76:10 85:5
Synthesis 176:13	179:4	89:5 154:15	testifies 8:5	86:4 87:8,18
system 13:23	talked 19:10	177:6 178:4	113:24	88:11 91:22
16:17,20 17:14	31:14 34:1,3	tel156:11 94:5	testifying	92:25 97:25
18:2 75:17	61:6 81:14	106:16 110:20	103:13 111:4	112:23,25
94:2,19,24	86:25 97:21	110:22 167:12	testimonies	113:12,25
systems 16:10	104:8 107:14	169:4	117:21	116:22 123:21
	108:21 145:5	telling 103:2	testimony 3:17	123:22 141:2
T	158:11 165:16	121:6	3:18,20,21,23	147:8 151:6
table 39:4 117:5	talking 14:10	tells 121:8	5:13,18 8:18	180:17 187:25
117:6,8 118:22	23:10 24:24	157:17	8:22 9:1,18	189:5,19
123:25 126:9	32:6,7 33:6	TELRIC 33:7	10:4 21:12	Thanks 149:19
136:10 141:4	44:1 53:14 61:16 63:17	34:11 35:16,18	42:19 51:2	their 7:22 27:11
144:23 145:15 147:9,17,21	65:10 71:18	46:8,13,25 48:11,15 56:21	55:19 57:21 64:20 70:8	27:12 57:25
151:12,22,25	73:11 77:4	56:24 57:7	73:21 75:13,21	61:12 62:25
163:9,18	96:25 97:8,20	118:6,12,19	76:6 77:13,18	74:12,13 83:9
172:24 175:18	99:4 115:16	130:9 138:9,12	77:20 78:8.17	84:1 90:21,21
188:23 189:1,2	129:13 135:12	140:14 152:25	79:12 80:2	92:16 93:8,13
tailor 154:24	135:20 140:16	153:1,14,20	82:4 83:25	94:18 105:13
take 6:8 21:18	142:6 146:1	160:6 161:4	85:14,15 86:5	108:18,22
24:20 30:17	152:22 166:13	164:20	86:9,10 87:9	109:12 119:9
38:12 41:16	tap 110:15	TELRICs 119:18	88:13 90:24	125:18 130:11
45:21 65:1	111:12 112:12	119:24	100:12,13	138:22 139:5
			107:5 108:3	178:19
		7	•	•

				•
themselves 54:22	133:20 134:6	139:7 156:5	66:21 68:13	treat 56:8
181:10	136:9 137:7	157:25 161:12	72:10 74:13	trick 134:11
theoretical	138:4 140:22	163:4 164:1	79:14 80:1,16	148:22
160:8	143:18 145:13	169:6 170:18	86:9 95:24	tried42:20
theoretically	150:5,8 152:14	172:7 176:8	103:22 104:12	43:12 100:24
64:10	152:21 153:4,7	178:3 179:4	111:14 115:3	157:1 170:4
theorize 164:1	153:9,11,21	Throughout	116:12 143:24	187:13
they'd 15:25	159:12 163:14	145:12	191:4	Triennial 107:23
81:15	164:19,24	time 4:5,6,15	together 66:13	trouble 146:21
thing 17:7 25:2	165:4,5,9,12	6:23 7:9 16:14	94:15 129:2	troubling 155:25
30:20 36:8	165:20,22	21:2,14,19	token 149:10	TRRO 107:18,21
54:11 64:7	166:1,3 167:6	23:5,11 24:6,9	told16:5,7	true 26:10 37:1
66:4,9 76:18	173:21 175:15	25:2 29:2	31:21,24 32:2	105:18 149:9
83:18 84:16	176:1,2,18,19	30:16 36:8	33:12,14,15	152:14 156:17
85:24 86:2	177:8,9,16	37:7 38:8	34:6,10 35:4,6	165:21 176:1 178:15 181:13
88:21 89:14	178:15,16	42:16 43:9 44:15 46:5	35:15 40:10 46:19 55:9,17	192:3
103:1 110:22 133:19 160:2	179:13,15,22 180:4 185:9	47:15 49:22	58:8,21 64:6	truly 139:22
161:20 168:5	thinking 25:23	51:16,24,25	67:16 70:19	try 42:25 60:9
things 5:17	90:16,18 92:16	52:11,13 53:7	74:23 82:20	81:10 91:19
24:18 64:19	98:8 134:5	53:7 57:1 58:8	98:7 130:2	107:23 120:14
77:12 78:14	163:15	60:21,25 61:3	156:11	133:8 149:24
85:9 86:16	third2:3 4:21	64:17 71:11	Tom 19:20	174:15
101:21 119:22	144:25 174:19	73:10 79:20	tomorrow 143:25	trying 32:20
132:18 177:6	178:6	80:20 81:17,18	189:20 190:11	56:25 60:5
189:11 190:10	though 70:22	83:4 84:21	ton 84:4	79:11 86:12
think 6:4 11:23	78:3 88:18	86:11 89:16,20	top 39:8 66:2,3	106:5 134:10
13:19 14:20	99:1,8 165:8	91:13,20 92:16	118:22 120:20	142:9 143:8
21:23 22:25	167:16 185:10	92:20 97:4	126:10 136:1	147:23 148:22
23:19 24:2	thought 15:25	106:10 109:21	144:24 156:4	186:5
25:18 26:23	57:20 89:10	114:4 126:3	total 130:23	Tuesday 1:14 4:1
20:14 30:22	104:1,11 108:8	129:6,8,25	163:19	192:4
31:19 32:5	133:2 142:8	130:21 133:3	totality 181:12	tunnel 63:21
33:1 35:4,13	167:22	140:6 148:18	totally 50:16	turn 9:18 19:4
38:6,12 39:14	thoughts 34:25	150:16 153:5	62:3 69:7	27:14 78:16
42:24 43:16 44:10 52:6,8	35:12	165:10 167:10	93:19 99:22	125:25 126:13
58:18,20 60:22	thousand 25:21 140:18	167:14 169:22 169:23 175:22	tough 56:11 73:10 78:14	129:15 133:3 136:21 141:2
61:10,21,25	three 14:3,11	177:5 180:12	107:8,8	149:19 151:12
62:8,11,13	21:17 24:25	183:16 187:10	towards 27:12	163:23 179:3
66:3,5 68:3	25:16,17 29:19	188:17 190:9	trace 140:9	turned 153:15
69:4 70:22	37:9 41:22	timely 53:3	157:25 169:3,6	Twelve 174:22
71:6 73:13,24	46:5 50:16	91:18	172:15 182:17	twice 136:4,6,8
74:25 75:15	73:12 78:7	times 17:23 27:8	track 81:10	two 4:12 5:4
77:3 79:21,24	80:22 84:10	52:2,7,12 69:8	transaction	7:19 10:17
81:6,21 82:10	96:15 145:15	69:8,9 71:23	18:22	11:8 13:9 14:3
83:22 84:11	three-band 93:18	101:25 102:9	transcript 192:3	14:23 15:3
87:16 93:15	94:24	120:5	transfer 16:23	24:25 25:16
99:19,19,21	through 5:16	timetable 92:5	18:15,20 40:1	38:8 47:10,14
100:6,17,22	11:9 20:9	timing 21:7	40:2,3,5 63:19	48:5 49:15
101:2,2 102:18	36:10 46:5	22:24	97:16	58:3 64:16
105:9 106:6	53:1 64:4,7,17 64:21 71:18	timingwise 42:11 titled 170:17	transition 73:24 79:17	80:3,15 86:16 87:22,23 89:8
107:14 113:6 118:15 119:11	82:20 89:8	171:19 172:18	translate 139:20	103:5 107:17
120:5,8 122:13	96:21 97:3.4	185:25	transport 73:21	103:3 107:17
120:5,8 122:13	97:16 109:22	today 5:9 8:22	74:1,2 107:16	112:1,2,15
124:15 125:17	118:2,5 119:11	13:18 14:5	107:19 108:9	119:7 120:9
129:10,14	120:2 129:2,4	22:6,11 38:25	108:11 141:21	130:14,23
130:7 132:10	133:9 134:18	49:21 57:15	142:3 143:1	133:25 137:1
132:25 133:4,7	136:22 138:25	59:2,8 61:4		137:16 138:17
	I	l	j	<u> </u>

·				
138:20 139:14	under 8:17 10:16	unfortunately	146:2 147:10	85:22 137:12
140:17,19,21	32:19,24 68:16	133:22	165:18 168:14	very 68:16 75:6
143:16 144:5	69:19,23 74:19	unique 154:21	168:22 169:4	123:2,14
145:3 157:10	98:17,18 106:8	unit 175:10,13	186:19	125:17 128:11
158:21,25	111:4 124:1	United 1:6 4:24	Utilities 1:1,12	130:25 131:7
161:5,5 172:4	138:21 141:7	75:2 84:6 89:5	4:5 27:7	165:2 166:2
172:15,16	145:4 163:19	units 138:2	utilization	vice 40:8
176:11,18	163:20 179:25	140:18,19	137:22,23	Vice-President
190:20	underlaid 132:20	unless 21:21	161:21	114:18
two-day 12:25	underlay 132:20	unnamed 35:5	utilize 16:9	vice-presidents
two-way 133:21	158:17	unnecessarily	75:17	82:18
two-week 187:10	underlying	147:23	utilizes 138:13	Victor 8:12
two-wire 69:16	131:18 139:19	unravel 169:12	utilizing 28:17	view 28:10 35:9
133:25 134:3	140:25 164:23	unreasonable	83:8	42:15 84:2
134:12 135:18	165:6,11	88:25	U-N-E 59:17	135:9 138:14
135:24 136:5	172:15 182:10	unsecured 28:21	l	140:7 160:22
136:11 142:14	183:7	29:13	v	187:17
142:22 144:24	understand 20:10	unsuccessful	V8:11	vintage 126:7
147:14 158:19	42:19 54:10	56:19	Valerie 20:20	violated 142:24
159:6,11,15	55:7 56:25	until 26:7 84:20	34:21 192:8	violates 142:19
160:25	57:2 77:13	87:4	valid 153:20	violation 104:24
type 11:22 12:4	91:2,4 98:21	updated 66:7	165:13	visibility
25:2,13 36:8	98:23 99:8	upper 136:6	validate 24:14	132:15 168:21
83:9 84:13	101:7,8,14	urban 120:24	69:12 70:5	visible 127:1
87:13 128:25	102:6 103:4	urged 36:25	109:19 111:3,6	133:8
131:11 155:20	107:13 121:25	usage 13:15	111:12,25	VJS-517 192:12
156:7,18	130:7 166:19	15:23 25:13	validating 70:11	Vogelmeier 3:4
types 42:3 60:11	171:20 172:20	59:6,7,10,11	validity 148:10	3:17 5:10 6:11
101:21 156:4	179:5 183:5	usage-based	value 100:24	7:22,23,25 8:3
161:18	186:1	77:10	variations 156:2	8:9,11 9:9,16
typically 20:6	understanding	use 13:6 16:17	various 98:5	10:12 21:11
24:5 85:17	43:22 45:1,10	18:7,10 28:15	118:23,24	22:5 35:3
128:25 134:15	56:18 63:18	40:10 44:1	136:11 142:24	37:14 38:20
154:13,22	82:1 98:3	74:7 75:24	148:14 167:18	43:22 54:4
157:15 TYs 74:4	102:14 104:21	76:4 87:5	168:3 181:6	63:17 65:6,24
T169:7 74:7	117:23 132:22	125:3,14	182:21 187:20	72:4 76:15
109:10,12	163:2 168:6,11	126:20 129:2 134:10 137:23	vary 126:3	85:8 92:4 95:16 98:3
T1s 68:25 74:3,5	173:14 185:8 185:21 186:8	134:10 137:23	venue 92:23	99:16.20 100:1
74:6 108:7	understated	154:17,19,21	verbally 114:2	101:6,16 158:9
74.0 100.7	149:10,14	160:10 169:1	verify 16:10,15 182:7,19	158:15 162:20
U	understood 54:6	174:8 178:10	187:11	Vogelmeier's
uh-huh 18:12	82:3 84:21	178:14	Verizon 75:15,17	10:4 113:4
39:21 77:16	104:13	used 14:11 41:14	76:7 84:4,10	
84:18 96:23	undertake 128:7	49:24 62:10	105:6,6,8,11	W
111:19 137:3	undertaking	63:23 78:4	105:22 106:2	W2:2,3 4:20
ultimate 131:9	130:8	133:3 134:3,7	163:1,3 178:18	want 15:9 27:11
ultimately 43:6	undisputed 31:6	137:21 138:1	178:22	32:1 60:10
45:2 53:16	88:7 90:6	145:13 146:19	versa 40:8	65:21 70:15
89:14 131:5	UNE 59:15,17	147:19 154:22	version 3:19,20	71:17 76:18
164:19 168:8	72:6,8 80:24	174:9 175:25	3:22,24 115:12	89:15,18,25
169:21	81:3 110:19	178:2 185:20	115:17,18	95:23 102:2
unable 55:20	124:2 179:11	187:21 188:12	116:5 117:3	107:10 110:17
93:11	unexamined 187:8	useful 178:13	125:8 151:4	110:23 119:6
unbundled 59:18	UNE-P 29:5,8,20	uses 160:15	versions 64:4	142:11 147:20
59:18 135:3,4	59:15,17,18	171:21 172:21	170:21 189:24	147:23 152:15
135:11 152:24	72:6 80:23	178:3 186:1	190:19	153:9 162:7
179:10	81:3 135:14	using 69:6,15	versus 11:21	166:15 176:16
uncovered 21:21	unfortunate	71:10 82:7	28:8 77:5,8	179:19 187:7
	153:16,22	138:7 145:5		
L	•	1	1	1

1				
l	1 45 5 40 6 40 5		1	1
190:5	47:7 48:2 49:5	51:20 52:12,19	104:12 110:19	144:12 146:2
wanted 56:4	49:7 51:3 52:9	52:23 55:23	110:21,22	172:11 174:8
90:20 122:23	56:22 57:25	56:15,19,23,24	115:16 142:9	181:15,20,23
189:2	58:7 59:10	57:9,20 58:10	144:7 154:16	182:14
wants 14:4	62:10 63:6	64:23 77:4	172:11 183:4	words 12:19
warm 45:20	68:11,24 69:21	78:7 80:1 86:5	189:10	88:20 146:12
warning 157:21	70:4 72:6	86:20 88:8,14	we've 6:1,3	146:13 164:13
157:24 158:2	73:24 74:22	88:15,18,20,20	11:18 15:23	174:23 184:13
Warnock 2:3 4:21	76:25 79:17	88:21 90:2,11	19:10 52:17	Word-based 182:6
warranted 131:10	80:4,16,22	95:3,22 96:2,3	57:17 63:17	work 87:6 90:21
wasn't 7:16	82:17 83:25	96:3,7,19	68:12,24 70:20	91:19 109:19
30:24 35:14	85:24 86:17,25	97:19 100:18	75:23,24 76:23	129:2 133:16
43:10,10,11	87:2,21 88:6	103:17,19,20	78:11 79:17,20	153:18,18
44:21 47:12	90:1,4,5,15,19	104:23 107:16	83:19 84:18,19	165:19 182:1
50:16 71:22	90:20 93:15	108:2,24 112:4	90:4 91:10	workbook 167:4
86:21 115:13	94:6,22 98:7	114:19 124:1	92:22 120:2	182:4,6,14,18
123:13 174:9	99:7,24 101:5	127:10,11,12	158:10 170:2	182:18
waste 37:7	101:19,22	127:13,18,21	whack 164:16	workbooks 127:18
way 15:23 29:11	102:23 103:3	127:22 128:5,8	165:1 166:14	127:22 166:17
49:21 59:8	104:10 106:5	129:13 130:2	while 64:20	166:23,25
65:7 68:13	106:18,25	131:12,14,15	120:3 131:7	167:5,18,23
69:12,21 70:11	111:4,10 112:7	132:4,18 133:7	white 39:7	168:1,7,15,23
75:4,10 92:15	112:17,23	133:7 136:15	whole 34:11 58:1	169:10,17
101:16 103:1	115:11 117:17	138:20 139:17	87:1 89:2	170:1,17,21
108:19 109:18	119:7 120:10	140:21 142:14	100:14	171:17,21 172:9,21 181:5
110:7 111:2,12	121:17 122:6	148:11 149:4	wholesale 179:7	181:14,18
112:3,6 121:2	122:24 123:5	149:10,13 155:18 158:13	179:9,14	-
121:17 127:25	129:21 131:17 132:4 133:1	162:20 163:5	widely 180:1 wire 18:14,19	182:6,9 183:3 185:16 186:1
128:25 133:19	1			worked 45:19
143:7,19	134:6,7,17,20 140:3,15 142:5	165:1,15 166:1	94:6,7,8,13,14	62:19 64:18
144:13 146:3,6	140:3,15 142:5	166:22 169:16	95:2 98:10	84:22 158:6
147:2,11,18	145:18 147:20	169:25 172:9	99:11 100:4	working 17:10
152:16 158:1	152:16 155:25	174:11 181:24 181:25 182:24	101:6,8,11 102:13 137:10	67:18 129:3,7
159:3 165:2 169:7 172:14	156:3 157:1	183:17 184:12	152:7	works 90:15 92:8
184:19 187:10	160:12 162:5	185:10 187:6	152:7 wires 134:8	92:19
ways 26:13	163:18 164:19	weren't 30:24	withheld 87:11	worksheets 183:3
134:14	164:24 165:3	56:16 127:16	witness 7:10,22	185:16
Webber 128:12,13	166:8 167:6,25	130:9 182:1	8:1 13:8,12,14	world 74:13
week 15:22,25	168:6,17 170:2	West 2:7 5:1	13:18,21 22:19	worry 71:22
16:1 81:13,15	171:24 172:6	we'll 5:6,18,19	33:5 34:8 36:7	worth 21:20 24:7
92:7 111:14	175:19 176:5,8	7:21 21:25	59:17 61:13	24:10 39:19
weekly 18:6	177:16 178:10	38:12 65:1	65:3 66:1 67:1	53:17 61:22
19:16,17,20,22	178:11 179:8	74:16 85:9	71:3 74:5,7	worthwhile 190:8
19:23 22:6,11	179:20 181:17	111:21 113:1	78:23 79:6	wouldn't 17:8
24:21 85:16,18	182:24 184:18	113:12,17,25	86:10 93:9	19:8 41:10
weeks 10:17	185:8,12,15,24	146:24 147:3	101:3,19 105:1	52:8,8 55:8
21:17 41:22	186:19	149:11 180:13	107:22 112:24	64:22 69:2
Weighted 147:13	went 5:5 17:1	189:20	113:18 130:6,7	86:18 87:19
welcome 113:17	29:2,7 41:6,6	we're 9:22 14:10	151:24 171:8	125:22 129:10
well 7:2 10:23	42:20 56:19	15:21 48:1	176:17 188:8	135:6 136:8
11:2 14:9	83:7 89:3,7	53:14 57:18	189:18	139:22 140:13
16:22 18:18	103:15 163:7	59:9,10 60:4,6	witnesses 3:3	140:19 141:16
19:16 20:1,6	163:16 187:18	60:8 65:21	5:8	165:19 169:17
24:16,19,21	were 5:25 26:11	66:4 68:3,4	woman 12:6	170:5
25:7 26:12	32:2 33:14	71:14,17 78:13	wonder 103:14	wrap 5:6 85:9
28:23 29:11,23	38:20 39:22	80:10,17,17	114:11	wrapping 189:11
30:22 32:1	42:9 46:1,2,2	89:11 92:8,11	wondering 26:12	writing 29:10,16
36:21 38:7	46:11 48:21	96:25 97:7	word 70:13,16	written 29:21
44:16,21 46:15	49:11,22 51:14	99:19 103:22	100:22 125:3	44:5,7 79:14
	I	1	1	

		<u></u>		
79:18	\$132 74:2 108:12	1/2 62:8	18,000 68:16,17	223-94811:23
wrong 83:15,16	\$150,000 17:5	10 27:23 28:5	69:18,20,23,24	224-57241:24
101:12 121:9	41:3,10 55:13	62:23 72:21	70:1	224-94811:23
165:2	\$16 145:4	73:20 74:16,16	1801:13	23 171:20
W-a-r-n-o-c-k	\$160 75:15	•	1813:13	23rd42:14 66:1
4:21	•	77:21 78:2,3		24 129:15
	\$160.3175:16	85:15 108:7	184 3:13	24 129:15 24th 8:19 113:5
W-e-b-b-e-r 128:12	\$177,000 83:14 83:16	144:2,20,23	1851:22 1863:14	115:19 117:3
128:12		176:10 177:2		24,000 130:15
х	\$185,000 24:23	188:23	1986:5,5 87:9 87:10	1
	\$2 20:11 21:20	100 2:3 4:21		252(b) 1:7 4:9
K 108:9	53:17 61:22	145:25 146:14	19th 14:21 50:22	260,00053:12
	\$2,600 108:14	146:14 152:2	50:24 51:15	27 133:23 136:10
Y	\$20,00041:17	1011:22	1973:18,20,21	281:15 4:2
yeah 17:12 20:2	\$25,000 68:4	11 27:25 28:6,11	3:23	39:19 65:25
23:2 26:23	\$300,00083:6	29:7 42:23	1990 89:4	136:21 170:17
28:20 31:14	\$35 56:12	43:2 70:12	19961:7 4:9	170:18 192:4
37:6 38:7	\$35.69145:1	74:25 75:3	152:24 153:4	28th 65:17,17,18
44:21 47:20	\$4,000 83:16	108:7 147:9	153:12 177:13	66:2
50:5 51:19	\$400,00023:1,6	163:23 175:4	1998 89:7	2919:12
52:6 55:17,21	24:3,8,10 62:1	11-G1:13	l ————	
58:1 61:20	\$448,00030:6	1133:17 147:14	2	3
62:2 64:5,5,14	\$5 62:20	114 3:12,18	23:18 12:12	33:21 9:18
80:14 84:18	\$5,20074:3	115 3:20	36:11 72:18,20	36:11 58:12,22
92:22 96:18	108:13	1163:12,21,23	72:21,24 73:1	59:1,12,22,25
98:7 110:2	\$50 62:23	12 39:18 170:15	73:6,7,13,14	72:18,20,22,24
144:15 178:7	\$50,00083:14,15	174:18	73:17 76:18	73:7,7 78:16
year 42:13 58:11	\$500 98:17	12/7 163:20	93:8,14,15	79:1,2 93:16
61:19 62:21	101:10	126 12:6 21:13	98:19 101:9	116:1,2,4
87:16	\$ 51.45 145:2	13 60:15 74:25	114:23 115:13	119:8,11,16
yearly 62:6,17	\$600 110:23	75:3,13 118:5	115:18 117:2	120:16 121:1,3
years 17:23	\$68,00045:8,11	126:9 147:16	117:16 151:12	121:12,19
20:12 21:19	45:14	152:8	152:8 163:18	122:2 123:1,2
28:18 30:21	\$680,00045:15	13th 60:17	172:5 189:23	125:11 136:22
40:19 52:18	45:23	14 39:19 77:23	2A3:20 115:22	151:4,9 163:9
54:22 61:11,22	\$75,00062:14	125:25 156:4	115:23 151:1	164:1 172:5,24
62:15,23 68:12	\$750,00062:17	160:15 175:8,9	189:23 190:13	174:22 189:23
84:19 86:8,14	\$97 103:3	140 145:19	2/5136:13,15	3A3:23 116:2,5
89:8,13 91:8		144 145:19,24	20 28:1 72:21	151:2 189:23
91:11 102:1	00	146:1,5,11,13	74:3,4,9,20	190:13
103:10,14,15	03 19:18	146:16 148:2,3	87:9,11 139:17	3rd6:2 14:10,12
122:9 176:10	06 53:12 62:14	148148:4,4	139:17,19	14:15,18,24
177:2 178:13	82:18 83:5	1536:12 60:16	177:2	51:13,14 58:10
yesterday 109:22	07 67:24	122:9 160:14	20th115:25	58:20 60:17
<u> </u>	08 59:1,12,25	161:8 176:10	116:8	79:22,23
Z	08-45-TP-ARB 1:5	15th14:20 60:17	200,000 22:19	3s 93:17
Zeigler 16:24	08-45-TP-ARP 4:7	60:17,18 89:4	2000 19:17 42:13	30 10:14 17:4
17:11 19:19	l	15,000 41:17	42:14 53:1,14	20:7 21:16
81:14	1	15-day 82:4	2001 29:18	23:5,9,10,11
01.14	13:17 9:21 10:2	1651:16 118:4,5	2005 32:17 33:2	23:13 24:5
\$	27:15 66:12,18	126:14 175:18	33:3,9,21 35:7	25:23 26:2,3
\$1,000 71:23	73:13 113:2,6	16th 14:22 15:6	67:17	36:9 41:3,10
\$1,000 /1:23 \$1.129:18 53:5	117:5,6,8	16,000 130:20	2007 87:17	48:22 51:10,2
\$1.129:18 53:5 \$10 143:25	119:12,16	17 174:6	2008 1:15 4:2	51:25 52:4,7
	120:16,23	17th6:2 14:22	53:1 59:22	52:12,12 55:1
\$10,00088:20	120:16,23	15:6	116:8 192:4	58:6 105:9,11
\$10071:23	123:2 156:4	1860:1 86:5	2011 192:11	105:18 141:2
143:24 144:20	L	126:13 179:3	21 137:10 173:22	30th 65:23,25
\$110 143:25	170:18 172:24	18th 14:20 51:15	174:1,6	30-day 51:17
144:21	1,102,000 44:12	58:13 60:18	22 68:3	32 144:24 188:25
\$118,000 29:19	1.102 44:10	30.13 00.10	22 00:3	JA 144:24 100:43
	i	1	I	i

· ·				
		Ī	Ī	1
34 147:10	7 78:19,23,25			
35 147:25	85:13 87:8			
36002:7	88:12 103:17			
383:5	136:23			
l ——————	723:7			
4	750 62:18			
4 58:12 62:8	750,00062:13,16			
117:4,4,9	763:8			
125:3,5,6,9				
4.862:9	8			
4:23 191:6	83:4 27:14			
40 55:25 129:12	65:10 66:13,16	1		
40,000106:2	73:22 118:21			
130:23	125:3,6 136:10			
400 62:4	147:25 164:1			
400,00062:9,12	166:7 192:11			
43215 2:7 4:22	8th 14:12,14,25			
5:2	15:2 58:16,18			
43215-42912:4	58:19 79:23			
43215-5201 1:23	8001:23			
44 145:6 146:4	85 3 : 8			
440 62:18				
45 19:25 20:3	9			
40:14	93:5,17 73:22			
45.6166:16	141:4 147:25			
450 62:19	160:20 163:9			
46 149:20,21	179:4			
47 75:13	9:00 190:11			
	9:051:14			
5	900,00053:10			
519:4,12 30:21	91 84:7 89:5			
62:7,8 76:21	923:9 84:7 89:5			
85:14 117:4	933:9			
126:9 151:12	953:10 76:21			
156:5 163:12	983:10 12:11			
163:18 174:18				
179:4				
502:7 5:1 55:25	1			
	<u> </u>			
50/50129:10,14				
500 103:4	İ			
53 75:15	l			1
54 3 : 6	l			
6	l			
6 62:7 86:4	l			
118:4 119:11	l			
152:5	l			
60 129:11	l			
60/40129:11	l			
600 102:5	l			
61.87 160:18	l			
	Į.			1
614 1:23,24	1			
633:6	l			
653:7				
6613 179:4				
68,500 30:21	I			
69.14 160:18	l			
7				
	l			
	•	•	-	-