	٢	-	١	
		1	2	
1	•			

)
3	In the Matter: The) Docket No. 04-049-145
	Petition of Qwest)
4	Corporation for) TRANSCRIPT OF
5	Arbitration of an) PROCEEDINGS
б	Interconnection)
7	Agreement with Union)
8	Telephone Company)
9	d/b/a Union Cellular)
10	under Section 252 of)
11	the Federal)
12	Telecommunications Act)
13)
14		
15		
16		
17	November 6,	2007 * 9:30 a.m.
18		
19	Location: Publ:	ic Service Commission
20	160 East 300 S	South, Hearing Room
21	Salt La	ke City, Utah
22		
23		
24	Steve	e Goodwill
25	Administra	ative Law Judge
26		

1 APPEARANCES 2 FOR UNION TELEPHONE COMPANY: 3 Stephen F. Mecham, Esq. CALLISTER, NEBEKER & MCCULLOUGH 4 Attorneys at Law 10 East South Temple, Suite 900 5 Salt Lake City, Utah 84133 Tel: 801.530.7300 6 Bruce S. Asay, Esq. 7 ASSOCIATED LEGAL GROUP, LLC Attorneys at Law 8 1807 Capitol Avenue, Suite 203 Cheyenne, Wyoming 84001 Tel: 307.632.2888 9 10 FOR QWEST CORPORATION: 11 Gregory B. Monson, Esq. 12 STOEL RIVES, LLP Attorneys at Law 13 201 South Main, Suite 1100 Salt Lake City, Utah 84111 14 Tel: 801.328.3131 15 Thomas Dethlefs, Esq. Qwest, Law Department 16 Senior Attorney 1801 California Street, 10th Floor Denver, Colorado 80202 17 Tel: 303.383.6646 18 FOR DIVISION OF PUBLIC UTILITIES: 19 20 Patricia E. Schmid, Esq. ATTORNEY GENERAL'S OFFICE 160 East 300 South, 5th Floor 21 Salt Lake City, Utah 84114 22 Tel: 801.366.0353 23 24 25 26

1		
	WITNESS: ANN MARIE CEDERBERG	PAGE
2		
	Direct Examination by Mr. Dethlefs	9
3		
	WITNESS: ROBERT WEINSTEIN	
4		
	Direct Examination by Mr. Dethlefs	12
5		
	WITNESS: JASON P. HENDRICKS	
6		
	Direct Examination by Mr. Asay	18
7	Cross-Examination by Mr. Monson	26
	Cross-Examination by Ms. Schmid	86
8	Redirect Examination by Mr. Asay	96
	Recross-Examination by Mr. Monson	103
9		
	WITNESS: JAMES HOWARD WOODY	
10		
	Direct Examination by Mr. Asay	105
11	Cross-Examination by Mr. Dethlefs	110
	Redirect Examination by Mr. Asay	129
12	Recross-Examination by Mr. Dethlefs	133
13	WITNESS: HENRY D JACOBSEN	
14	Direct Examination by Mr. Mecham	135
	Cross-Examination by Mr. Monson	151
15	Cross-Examination by Ms. Schmid	193
16	WITNESS PETER E. COPELAND	
17	Direct Examination by Mr. Monson	197
	Cross-Examination by Mr. Asay	212
18		
19		
20		
21		
22		
23		
24		
25		
26		

1		EXHI	BITS	
2	EXHIB	IT NO.	OFFERED	ADMITTED
3	Qwest	1 (Cederberg)	11	11
4	Qwest	1R (Cederberg)	11	11
5	Qwest	1SR (Cederberg)	11	11
б	Qwest	2 (Weinstein)	15	15
7	Qwest	2R (Weinstein)	15	15
8	Qwest	2SR (Weinstein)	15	15
9	Qwest	3RR (Copeland)	200	200
10	Qwest	3SR C (Copeland)	200	200
11	Qwest	3PSR C (Copeland)	200	200
12	Qwest	3SR-D (Copeland)	200	200
13				
	Qwest	Cross Exhibit 1	52	86
14				
	Qwest	Cross Exhibit 2	52	86
15				
	Qwest	Cross Exhibit 3	84	86
16				
	Qwest	Cross Exhibit 4	85	86
17				
	Qwest	Cross Exhibit 5	111	129
18				
	Qwest	Cross Exhibit 6	111	129
19				
	Qwest	Cross Exhibit 7	112	129
20				
	Qwest	Cross Exhibit 8	115	129
21				
	Qwest	Cross Exhibit 9	121	129
22				
	Qwest	Cross Exhibit 10	164	193
23				
	Qwest	Cross Exhibit 11	174	193
24				
	Qwest	Cross Exhibit 12	191	193
25				

1	EXHIBITS (Co	ont'd.)	
2	EXHIBIT NO.	OFFERED	ADMITTED
3	Union 1 (Hinman)	16	17
4	Union 1SR (Hinman)	16	17
5	Union 2 (Hendricks)	15	15
6	Union 2SR (Hendricks)	15	15
7	Union 2SSR (Hendrick)	20	21
8	Union 2PSR (Hendricks)	20	21
9	Union 3 (Woody)	107	107
10	Union 3R (Woody)	107	107
11	Union 3PSR (Woody)	107	107
12	Union 4R (Jacobsen)	137	137
13	Union 4PSR (Jacobsen)	137	137
14			
15			
16			
17			
18			
19			
20			
21			
22			

1	PROCEEDINGS
2	
3	THE COURT: Let's go ahead and on the
4	record. This is a Public Service Commission hearing
5	in the Matter of the Petition of Qwest Corporation
6	for Arbitration of an Interconnection Agreement with
7	Union Telephone Company d/b/a Union Cellular under
8	the Section 252 of the Federal Telecommunications
9	Act, Public Service Commission Docket 04-049-145.
10	I'm Steve Goodwill, the Administrative Law Judge for
11	the Commission, and I've been assigned by the
12	Commission to hear this matter. Notice of this
13	hearing was issued by the Commission on the 11th of
14	September, 2007. At this time we'll take appearances
15	and we'll start with let's go ahead and start with
16	Union.
17	MR. MECHAM: Your Honor, Steve Mecham
18	representing Union Telephone Company. And with me
19	today is Bruce Asay, whom you've met before who is an
20	attorney in good standing from Wyoming here
21	representing Union Telephone as well.
22	THE COURT: All right. Thank you.
23	For Qwest?
24	MR. MONSON: Gregory Monson appearing for
25	Qwest. And also with me is Tom Dethlefs, there's an
26	

"H" in it and it's silent, D-E-T-H-L-E-F-S, and he is
 an in-house attorney with Qwest from Denver.

3 THE COURT: Thank you. For the Division? MS. SCHMID: Patricia Schmid with the 4 Attorney General's Office representing the Division. 5 6 THE COURT: Okay. We had some brief 7 discussion prior to going on the record just concerning how we would proceed this morning, and 8 9 it's my understanding that we will essentially look 10 first to Union to provide its testimony and witnesses and then to Qwest, and then we'll finally turn to the 11 Division. 12 I just wanted to remind everybody that 13

information claimed as confidential has been prefiled 14 15 in this matter and will likely be filed as evidence 16 in this docket. A Protective Order is in place 17 governing this information. If necessary, we can close this hearing to discuss confidential 18 19 information in detail. My preference would be that we not do so and I will ask the attorneys' 20 21 assistance, and to the extent possible, referring to 22 confidential information without actually citing that 23 information so that everybody can understand where we're at, but so that we can keep the hearing open 24 25 for all parties. If, of course, that's not possible

in order for you to put your best evidence forward on the record we can certainly close the hearing. And again, I'll just ask the attorneys to sort of be the watchdogs through this and let me know if we're getting close to anything that your clients believe is confidential and should be treated as such.

7 With that I'll go ahead and turn to Union,8 Mr. Asay.

9 MR. ASAY: Your Honor, we can easily do 10 that with respect to what we're going to do. I had 11 suggested before that perhaps we put the two Qwest 12 witnesses on, Winestein and Cederberg first, and then 13 I can put Mr. Hinman on. But honestly, it's very 14 easy to put Mr. Hinman on first if that's what you 15 would like.

16 THE COURT: No, that's fine. I did that 17 incorrectly. We'll go ahead and start with the Qwest 18 witnesses.

MR. DETHLEFS: Thank you, Your Honor. Wewould call first Ms. Ann Marie Cederberg.

21THE COURT: Ms. Cederberg, if you will22stand and raise your right hand I'll swear you in.23ANN MARIE CEDERBERG,24called as a witness, was examined and25testified as follows:

1	THE COURT: Thank you. Please be seated.
2	Mr. Dethlefs?
3	
4	DIRECT EXAMINATION
5	BY MR. DETHLEFS:
6	Q. Ms. Cederberg, will you please state your
7	full name and business address for the record.
8	A. Ann Marie Cederberg. Last name is
9	C-E-D-E-R-B-E-R-G. My business office is 700 West
10	Mineral Avenue, Littleton, Colorado, 80120.
11	Q. And Ms. Cederberg, have you prepared
12	testimony for today?
13	A. Yes, I have.
14	Q. And is that testimony your Direct
15	Testimony dated October 4, 2005, your Rebuttal
16	Testimony dated October 24, 2005, and your
17	Surrebuttal Testimony dated November 7, 2005?
18	A. Yes, it is.
19	Q. And those have certain exhibits numbers,
20	AMC-1 through AMC-7 attached to your Direct
21	Testimony, and Exhibit AMC-8 to your Rebuttal
22	Testimony?
23	A. Yes.
24	Q. Do you have any corrections that you would
25	like to make to any of this testimony?
26	

1 Yes, I do. In my Direct Testimony on page Α. On line 171 it should say "wireless" and not 2 10. 3 "wire line call." THE COURT: Wireless local calling area? 4 5 THE WITNESS: On line 171 where it says, 6 "used to determine whether a wire line," that should 7 say "wireless." 8 THE COURT: That's 172 on my copy. 9 THE WITNESS: Okay, I'm sorry. 10 THE COURT: I'm sorry, go ahead. (BY MR. DETHLEFS) And then on page 22 of 11 Ο. your Direct Testimony, in my copy it's line 437. 12 So it could be my 438 for you where it 13 Α. 14 starts, "An ILEC can only transport traffic." 15 Ο. That is correct. Now, on that particular 16 statement, have the lateral restrictions for Owest 17 Corporation been lifted? 18 Α. Yes, they have. 19 Q. Does Qwest have facilities that allow it to carry, Qwest Corporation have facilities that 20 21 would allow it to carry traffic across lateral 22 boundaries? 23 Α. Not at this time we do not. 24 Ο. Is that the clarification you would like 25 to make? 26

1 That's the clarification I would like to Α. 2 make on that part, yes. 3 Do you have any other corrections to Ο. either your Direct Testimony, your Rebuttal Testimony 4 or your Surrebuttal Testimony? 5 6 Α. No, I do not. 7 If I were to ask you the questions Ο. contained in each of those pieces of testimony, would 8 9 your answers as corrected be the same today? 10 Α. Yes, they would. MR. DETHLEFS: We would offer Ms. 11 Cederberg's testimony into evidence. 12 MR. ASAY: No objection. 13 14 MS. SCHMID: No objection. 15 THE COURT: Okay. They are admitted. MR. DETHLEFS: And offer her for 16 cross-examination with the understanding that Counsel 17 for Union has stipulated to waive cross-examination. 18 THE COURT: I know we discussed that prior 19 to going on the record, Mr. Asay, but do you have any 20 21 cross-examination for this witness? 22 MR. ASAY: No. We have waived it and 23 Counsel is correct. 24 THE COURT: For the Division? 25 MS. SCHMID: No cross-examination. 26

1 THE COURT: Okay. Thank you, Ms. 2 Cederberg. 3 MS. CEDERBERG: Thank you. MR. DETHLEFS: Owest would call as its 4 5 second witness Mr. Robert Weinstein. б THE COURT: Mr. Winestein, if you will 7 please stand and raise your right hand I'll go ahead 8 and swear you in. 9 10 ROBERT WEINSTEIN, 11 called as a witness, was examined and 12 testified as follows: 13 14 THE COURT: Thank you. Please be seated. 15 16 DIRECT EXAMINATION 17 BY MR. DETHLEFS: Mr. Weinstein, will you state your full 18 0. name and business address for the record. 19 20 Robert Weinstein, W-E-I-N-S-T-E-I-N. My Α. 21 work address is 1801 California, Denver, Colorado, 80202. 22 23 Q. Mr. Weinstein, have you prepared testimony 24 for today? 25 Α. Yes. 26

1	Q. And does that encompass or include Direct
2	Testimony dated October 4, 2005, Rebuttal Testimony
3	dated 10/24/2005, and Surrebuttal Testimony dated
4	November 7, 2005?
5	A. Yes.
6	Q. There are no attachments or exhibits to
7	either of those pieces of testimony, are there?
8	A. I agree.
9	Q. Do you have any corrections you would like
10	to make to any of your pieces of testimony?
11	A. Yes. In my Direct Testimony on page 17,
12	line 326, it says "paragraph 6.2.8.14" and it should
13	be "6.3.8.14." And I've made that same mistake five
14	more times. The next one would be on page 18, line
15	350, the same correction; line 351, the same
16	correction. Page 19, line 372 where it says, "the
17	section of the contract 6.2.8," it should say
18	"6.3.8." And then also on that line it says
19	"paragraph 8.2.8.14" and it should say "6.8.3.14."
20	And finally on page 23, line 445, again it should say
21	"Section 6.3.8.14."
22	Q. Mr. Winestein, in my copy of what has been
23	marked as your Rebuttal Testimony there appears to be
24	an Exhibit 2R.1?
25	A. I do recall that would be the Dispute
26	

1 Resolution section of the Interconnection Agreement being arbitrated. I don't have it on the copy I 2 3 brought up here, but I do recall having that now. MR. DETHLEFS: Your Honor, we would ask 4 that we -- we would need to add that to the list of 5 6 exhibits that were prepared to hand out. I believe 7 that's in the original that was filed with the 8 Commission and served on the departments. 9 THE COURT: Yes, I have it in my copy. 10 I'll assume the parties have it if they don't state otherwise. I'm not as concerned about adding it to 11 the list as making sure -- as long as the Court 12 Reporter has it in the copy that has been provided to 13 14 her. 15 MR. DETHLEFS: We'll check that at the 16 break. So the statement that I made earlier that there were no exhibits, we would correct that. 17 18 THE COURT: Right. 19 Q. (BY MR. DETHLEFS) Mr. Weinstein, are there any other corrections other than that to either 20 21 your Rebuttal or your Surrebuttal Testimony? 22 Α. No. 23 Ο. And if I were to ask you the questions as 24 are contained in your testimony as corrected, would 25 your answers be the same as corrected? 26

A. Yes.

2	MR. DETHLEFS: We would offer Mr.
3	Weinstein's Direct, Rebuttal and Surrebuttal
4	Testimony into evidence and offer him for
5	cross-examination.
6	THE COURT: Any objection?
7	MR. ASAY: No objection.
8	MS. SCHMID: No objection.
9	THE COURT: We'll go ahead and admit it.
10	MR. ASAY: We would waive cross.
11	THE COURT: Ms. Schmid, any cross?
12	MS. SCHMID: No cross.
13	THE COURT: Okay. Thank you, Mr.
14	Weinstein.
15	Any other witnesses at this time, Mr.
16	Dethlefs?
17	MR. DETHLEFS: Your Honor, the only
18	remaining witness that Qwest has is Mr. Peter
19	Copeland, who we agreed would be testifying after
20	Union's case is presented.
21	THE COURT: Okay. Mr. Asay?
22	MR. ASAY: Yes. Your Honor, with respect
23	to Union's presentation, we would like to start by
24	spreading on the record the testimony of Mr. Alan
25	Hinman, and I have one question with respect to that.
26	

I would spread on the record his Direct Testimony of
 October 4th as well as the attachment which we have
 marked as 1.1.

4 For point of clarification with respect to his Surrebuttal Testimony of November 7, 2005, which 5 6 we would also spread on the record, would you like me 7 to identify that as 1S or Exhibit 2? What is your 8 preference? 9 THE COURT: 1 SR or Union 1SR. 10 MR. ASAY: Thank you. And with that, then, we would offer that testimony and that exhibit 11 into the record as 1, the Exhibit 1SR. 12 13 THE COURT: The Surrebuttal is 1SR, 14 correct? 15 MR. ASAY: Correct. 16 THE COURT: Okay. And we have the exhibit to Union 1 as Union 1.1? 17 MR. ASAY: That's correct. 18 THE COURT: Okay. They are so marked. 19 Any objection to their admission? 20 21 MR. DETHLEFS: No, your Honor. We 22 stipulated that Union did not need to bring Mr. 23 Hinman in. We did ask, however, that we would have the opportunity to ask any questions that we had 24 25 based on his testimony of other Union witnesses. So 26

1 subject to that qualification, we have no objection. THE COURT: Ms. Schmid? 2 3 MS. SCHMID: No objection. THE COURT: All right. They are admitted. 4 5 Mr. Asay? 6 MR. ASAY: We would then present or 7 proceed with our testimony on the asymmetrical rate. 8 We will do that, Judge Goodwill, by calling Jason 9 Hendricks to the witness stand. 10 THE COURT: Mr. Hendricks, if you would please stand and raise your right hand, I will go 11 ahead and swear you in. Do you solemnly swear the 12 testimony you're about to provide will be the truth, 13 14 the whole truth and nothing but the truth, so help 15 you God? 16 17 JASON HENDRICKS, called as a witness, was examined and 18 testified as follows: 19 20 21 THE COURT: Thank you. Please be seated. 22 Mr. Asay, is your mic on? I just wanted 23 to double-check, or maybe move it a little closer. Is the green light on? 24 MR. ASAY: It is on now. 25 26

1	THE COURT: Great. Thank you.		
2			
3	EXAMINATION		
4	BY MR. ASAY:		
5	Q. Mr. Hendricks, would you identify yourself		
6	for the record?		
7	A. Jason P. Hendricks, H-E-N-D-R-I-C-K-S.		
8	Q. And by whom are you employed?		
9	A. GVNW Consulting.		
10	Q. And what is your address?		
11	A. 2270 LaMontana Way, Colorado Springs,		
12	Colorado, 80918.		
13	Q. And for whom are you presenting yourself		
14	today?		
15	A. Union Telephone Company.		
16	Q. Okay. And what is the purpose of your		
17	testimony?		
18	A. The purpose of my testimony is to present		
19	Union's position on asymmetric compensation rates.		
20	Q. And to accomplish that, have you presented		
21	prefiled testimony to the Commission thus far?		
22	A. I did.		
23	Q. And that testimony, which we'll identify		
24	beginning with Exhibit 2, would that include the		
25	Direct Testimony of October 4, 2005?		
26			

1 A. Yes.

2 Q. With an exhibit that's attached to that?3 A. Yes.

4 Q. Which would be 2.1?

5 A. Yes.

Q. Which is previously marked as 11 and
incorporated. And did you also present testimony on
November 7, '05 which was Surrebuttal Testimony,
which would be 2SR? And attachments to that, that
would be 1.2 and 1.3 and 1.4, 1.5 and 1.6, which
incorporated the Exhibits 11.1, 11.2 to 12, 13 and
14?

13 A. Yes.

And did you also prepare Supplemental 14 Q. 15 Surrebuttal Testimony which I would mark, with the 16 approval of the Administrative Law Judge as SR and 17 2SSR with the accompanying attachments which are previously marked as 15, 16 and 17, and I would mark 18 them now as -- oh, excuse me. Your exhibits would be 19 2.1 and so forth. We had picked them up, as I 20 21 understand it, Mr. Goodwill, with the witness itself. 22 So if I didn't correct that before, 23 Jason's would be 2.1 and then continuing after that would be 2.2 through 2.6, which would bring us to the 24 25 Supplemental Surrebuttal and the attachments to that,

which would be 2.7, 2.8, 2.9.

2		And then finally, you presented Post
3	Surrebuttal	which I'll mark, with the approval of the
4	Administrat	ive Law Judge, that was presented on
5	October 26	as 2PSR with the attachments to that,
6	which would	be 2.10 and 2.11.
7		Subject to maybe later review, but does
8	that sound	correct with respect to the testimony and
9	attachments	that you provided in this proceeding thus
10	far?	
11	Α.	Yes, that's correct.
12	Q.	And were those testimonies and exhibits
13	prepared by	you or under your direction?
14	Α.	Yes.
15	Q.	And are they true and correct, to the best
16	of your kno	wledge as you testified today?
17	Α.	Yes.
18	Q.	Do you have any corrections or changes
19	that you ne	ed to make to the testimony and exhibits
20	at this tim	e?
21	Α.	No.
22		MR. ASAY: With that I would offer Mr.
23	Hendricks o	r offer his testimony and exhibits into
24	the record.	
25		THE COURT: Just a note on the marking
26		

real quick, just to make sure we understand. We've 1 got Union-2.0, the Direct Testimony of Mr. Hendricks, 2 3 with one exhibit which we'll mark as 2.1. Then we move to the Surrebuttal, which is Union-2SR. So I 4 believe we've got six exhibits there, so we will mark 5 6 those as 2SR.1 through 2SR.6. Supplemental Surrebuttal is Union-2SSR, two exhibits? 7 8 MR. ASAY: I believe there's three. 9 THE COURT: Three exhibits. So we'll go 10 2SSR.1 through 2SSR.3 for those. And then Union-2PSR, Post Surrebuttal Testimony, and that has 11 two exhibits? 12 MR. ASAY: That's correct. 13 14 THE COURT: So those would be 2PSR.1, 15 2PSR.2, just for clarification. I think that's 16 easier. With that, is there any objection to their admission as so marked? 17 18 MR. MONSON: No objection. 19 MS. SCHMID: No objection. THE COURT: Okay. They are admitted. 20 21 ο. (BY MR. ASAY) Mr. Hendricks, with that do 22 you have a summary that you would like to offer at 23 this time? Yes. I'll go chronologically by my 24 Α. 25 testimony. In my Direct Testimony I cited to the FCC 26

1 asymmetric compensation and TELRIC rules pursuant to 2 which Union is filing its cost study. And while some 3 of the methodology contained in the original study 4 has changed -- is the same, I should say, it was 5 ultimately replaced by a study that was filed on 6 August 11, 2006.

7 In my Surrebuttal Testimony, I responded to Mr. Copeland's Rebuttal Testimony. And within 8 9 that testimony I provided evidence that the Union 10 switch and cell sites are traffic-sensitive. And as part of that I cited to a case, a Sprint case, in 11 which the FCC clarified that the basis upon which 12 wireless carriers are entitled to receive asymmetric 13 compensation is they need to show that their costs 14 15 vary to some degree with the traffic carried on the 16 network.

17 So we provided evidence to that effect in November of 2005. So that evidence has been on 18 19 record for two years that Union's cell sites and switch are traffic-sensitive. That, using Mr. 20 21 Copeland's terminology, could be described as a qualitative evidence. He came later and said that 22 23 there should be some quantitative evidence, which we also provided, and I'll touch on that a little bit 24 25 later. But there has been evidence on the record for

26

over two years that the network is traffic-sensitive.

2 My Supplemental Surrebuttal, which was 3 filed August 11, 2006 contains the current version of the cost study as proposed by Union. That cost study 4 was changed from the original one primarily to use 5 6 actual costs that Union has incurred to implement its 7 PSM network. Those were recent costs that Union incurred, actual costs, and that was the primary 8 9 purpose. We also updated the model to do other 10 things as well. We've included all of Qwest's proposed inputs on things like depreciation, the cost 11 12 of capital, tax rates that resulted from their TELRIC 13 case, whatever docket number that was, the name of it escapes me right now, but Qwest proposed that. 14 15 And although we disagreed with using their 16 inputs and I have previously provided testimony explaining why our proposed inputs were better and 17 more appropriate, in order to limit the number of 18 19 issues in this case we did agree to use their proposed inputs, with one exception, the 20 21 traffic-sensitive factors. We maintain our position that Union's network is 100 percent 22 23 traffic-sensitive, we've provided evidence to support that. We do have a traffic-sensitive factor input 24

25 within there that if the Commission believed that

1 it's some other number than the 100 percent number we 2 proposed, that fact can be changed in the study and 3 the cost would be correspondingly reduced because of 4 that change.

But that testimony also responded to Mr. 5 6 Copeland's July 21, 2006 testimony, and I explained 7 that the common costs included within the study, the methodology is consistent with HAI. I explained 8 9 there was no double counting of expenses with the 10 Union study and I explained that the switch is not underutilized and is in fact on the verge of exhaust 11 12 in response to Mr. Copeland' statements that the switch is underutilized and, therefore, because of 13 that is not traffic-sensitive or cost sensitive. 14

15 I also filed testimony on October 26, 16 2007. The primary purpose of that testimony was to respond to the testimony of staff witness Anderson 17 18 and Owest witness Mr. Copeland. Within that 19 testimony I explained that Union's cost study is not based on embedded costs, as the FCC has defined that 20 21 term within its first report and order. They are 22 actual costs, but they are recent costs that were 23 incurred in an efficient manner in a competitive industry and I don't believe those should be 24 25 considered embedded costs. And I explained why, that

the way we've done it is consistent with the FCC
 TELRIC methodology.

3 I also explained that the inclusion of 4 support assets is consistent with the HAI methodology that's preferred by staff and I explained it's always 5 6 consistent with the FCC methodology in response to 7 staff's statement that they prefer the HAI methodologies, but yet they don't include support 8 9 staff consistent with HAI. I also explained why the 10 Union's unit calculation resulted in discounted 11 revenue streams matching discounted cost streams 12 which leads to the exact recovery of costs, whereas, 13 Mr. Anderson's approach leads to an under recovery of I explained that any costs associated with 14 costs. 15 the retail offerings for both staff and Qwest say 16 that those should be eliminated from the study, I explained that they're very minimal and why they 17 shouldn't be reduced, but if they are the model can 18 19 handle it.

The same thing with structure sharing. Union does receive some revenue from other carriers. If the Commission finds that that revenue should be accounted for within the model, it can be. I propose that it be done in a manner consistent with how HAI does it and how it was approved for Qwest, but it can

1 be done if the Commission finds that appropriate. And some, Union's position is that its 2 3 network is traffic-sensitive, the costs included are 4 appropriate. We've provided both qualitative and quantitative evidence to support that, but that 5 6 Union's model can handle any changes that the 7 Commission finds appropriate so that we don't recommend -- if the Commission finds that certain 8 9 things aren't supported, despite what we've said, the 10 model can be accommodated for that. There's no reason to reject the model in its entirety, just we 11 12 request that if the Commission finds changes need to be made that we be given the opportunity to file a 13 revised study that incorporates those changes. 14 And does that complete your summary? 15 Ο. 16 Α. It does. MR. ASAY: With that I would offer the 17 witness for cross-examination. 18 19 THE COURT: Mr. Monson, are you handling that? 20 21 MR. MONSON: I am. 22 23 CROSS-EXAMINATION BY MR. MONSON: 24 25 Good morning, Mr. Hendricks. My name is Ο. 26

1 Greg Monson, I'm an attorney for Qwest. In your Direct Testimony, if you'll flip 2 3 to that, lines 44 to 49, please. 4 Α. Okay. 5 I'm starting with the sentence on line 44 Ο. 6 that starts "FCC pricing rules." You say there that 7 "FCC pricing rules for Interconnection Agreements 8 dictate that rates for transport and termination of 9 telecommunications traffic must be symmetrical, 10 except that a State Commission may establish asymmetric rates if the carrier other than the ILEC 11 proves that its costs are higher than the ILEC's 12 costs"; is that correct? 13 14 That's correct. Α. 15 Ο. And you cite CFR Section 51.711 in support 16 of that; is that right? 17 Yes. Α. 18 Ο. So you agree that Union has to prove to the Commission that its costs are higher than Qwest's 19 costs to get asymmetric rates? 20 21 Α. That's correct. 22 And you acknowledge that the cost Ο. 23 methodology to be used by a wireless carrier in 24 supporting asymmetric rates is TELRIC; is that right? Yes, sir. 25 Α. 26

1	Q.	And you refer to some TELRIC principles a
2	little late:	r on lines 52 to 53; is that correct?
3	Α.	Yes.

4	Q. Okay. And then starting on line 55 you
5	say, "Among TELRIC components are requirements that
6	costs must be developed assuming the most efficient
7	technology currently available and the lowest cost
8	network configuration given the existing location of
9	wire centers. In addition, the costs must be
10	developed assuming forward-looking cost of capital,
11	cost of capital and depreciation rates, and a
12	reasonable allocation of common costs."
13	Did I read that correctly?
14	A. Yes.
15	Q. And in support of those principles you
16	cite Sections 51.505 and 51.511 of Title 47 of the
17	Code of Federal Regulations; is that right?
18	A. Yes.
19	Q. So I assume those principles appear in
20	those sections?
21	A. Yes.
22	Q. And you also agree that these are the same
23	principles that are applied to ILECs like Qwest when
24	TELRIC rates are established for them; is that right?
25	A. Yes.
26	

1 In your Direct Testimony you didn't Q. 2 discuss the additional quidance that was provided by 3 the FCC in 2001 and 2003 on what elements of a wireless network may be considered in a TELRIC study 4 to establish asymmetric rates? 5 6 MR. ASAY: Object to the form of the 7 question. Can that be restated? 8 THE COURT: I'm not sure. What's your 9 objection to the form of the question? 10 MR. ASAY: My objection is it's unclear. I would ask that it be restated. 11 THE COURT: Restate it, please. 12 MR. MONSON: I would be happy to do that. 13 (BY MR. MONSON) In your Direct Testimony, 14 Q. 15 although you discussed the TELRIC principles, you 16 didn't discuss the FCC's later guidance about what elements of a wireless network could be considered in 17 18 a TELRIC study to establish asymmetric rates; is that 19 correct? 20 I'm not sure what later guidelines you're Α. 21 referring to. Can you be more clear? 22 Okay. I'm talking about, for example, the Ο. 23 2003 Order that you've attached to your -- I think it's an exhibit to your -- to one of your pieces of 24 25 testimony? I think your --26

A. The Sprint proceeding?

2	Q Surrebuttal Testimony, Exhibit well,
3	you've got it marked as Exhibit 12, but I think it's
4	now marked as anyway, it's not the Sprint
5	proceeding, it's the Order issued by the FCC on
6	September 3rd of 2003.
7	THE COURT: 2SR.2 would be the second
8	exhibit to your Surrebuttal Testimony.
9	MR. MONSON: Thank you, Judge.
10	THE WITNESS: Actually, I would refer to
11	that as the Sprint proceeding.
12	Q. (BY MR. MONSON) All right. That's what
13	you were calling it, the Sprint proceeding. But you
14	didn't talk about that in your Direct Testimony, that
15	was all I was trying to get to?
16	A. That's correct.
17	Q. And there was also an FCC Notice of
18	Proposed Rulemaking, I think in 2001, that referred
19	to what elements a wireless carrier could include in
20	a TELRIC study for asymmetric rates. Are you
21	familiar with that?
22	A. Is that the one that started the first
23	Sprint proceeding?
24	Q. I don't call them the Sprint proceedings
25	so I'm a little confused and I don't have a number.
26	

1 So if you know about it, that's fine. If you don't that's okay too. I'm just --2 3 Α. And did I refer to it in other portions of my testimony, my Surrebuttal? 4 5 I don't think so. I don't think you did Ο. 6 refer to it. 7 I can't recall exactly. Α. 8 Okay. You attached a study to your Direct Ο. 9 Testimony. And did you attach the whole study or 10 just the summary page? I couldn't tell. Do you have the whole thing there? 11 There's the whole study. 12 Α. Okay. And it was marked as Exhibit 11, is 13 Ο. that right, originally? 14 15 Α. That's correct. 16 Okay. And was that because it was the Ο. same Exhibit 11 that was filed in the Colorado 17 18 proceeding? Is that why it was marked Exhibit 11? 19 Α. I believe that's probably the case, yeah. And it was identical to the one filed in 20 Ο. 21 Colorado, wasn't it? 22 Α. I think it was, yes. 23 Q. And your testimony in Utah was filed about a month to five weeks after your testimony in 24 25 Colorado, if you remember? 26

A. Yeah, it's been a while.

2	Q. Okay. I mean, would you accept that
3	subject to check? Does that sound about right?
4	A. That sounds about right.
5	Q. And I think in the Colorado proceeding you
6	testified that your cost study wasn't just limited to
7	Colorado situs elements or parts of the network, but
8	it was the whole wireless network for Union; do you
9	recall that?
10	A. Yes, that's correct.
11	Q. And so since your cost study in Utah you
12	initially filed was the same it would be the same in
13	Utah; is that right?
14	A. Yes, that's correct.
15	Q. And at that time you were assuming an
16	increase of 3 percent per year in maintenance costs;
17	is that right?
18	A. Yes.
19	Q. And then the common costs included in your
20	study were 10 percent of expected costs of
21	maintenance, power and depreciation; is that right?
22	A. That's correct.
23	Q. So the increase in maintenance costs or
24	these other costs would also result in an increase in
25	common costs; is that right?
26	

1 Right. And just to clarify again, we did Α. file a revised study in 2006. 2 3 And in your Surrebuttal Testimony you Ο. filed in this proceeding you acknowledge that the 4 5 Commission's Order approving TELRIC rates for Qwest 6 in Utah, that the Commission used a negative 7 4 percent net productivity inflation factor; is that 8 right? 9 Α. Yes. Can you point me to that? 10 Yes. It's line 75 of your Surrebuttal, I Q. believe. 11 That's correct. 12 Α. Okay. And staying in your Surrebuttal for 13 Ο. a minute, if you'll go to line 85 you state, 14 15 "Union's estimated costs for the life of the study do 16 not include additional equipment purchase 17 assumptions"; is that correct? 18 Α. That's correct. And the life of the study at that point in 19 Q. time was 10 years; is that right? 20 21 Α. Right. 22 Okay. Now going back to your Direct, as I Ο. 23 understand it, you used Union's actual wireless minutes of use for the first half of 2004 and 24 annualized them and then increased them to account 25 26

1 for additional demand expected with projected cell site additions; is that right? Do you want me to 2 3 give you the reference? I found it. 4 Α. 5 Q. Okay. 6 Α. That's correct. 7 And you increased the annual use by Ο. applying a 3 percent per year growth factor; is that 8 9 right? 10 Α. Yes. And so even with this increased 11 Ο. Okay. usage per customer, you're saying you did not assume 12 additional equipment purchase assumptions; is that 13 14 correct? 15 Α. The assumption made at the time, which I 16 later corrected, was that the plant would -- all the plant would be purchased in the first year, and that 17 was rejected and increased in use over the life of it 18 to match up with that. But rather than doing it like 19 we did in the later study of matching the minutes 20 21 used with the cost in year 1, we did up the costs in

22 year 1 in minutes of use growing in later years.

Q. Okay. But in your real study you had
sufficient equipment to cover the growth in usage
throughout the whole ten-year period; is that

1 correct?

2	A. That's correct.
3	Q. Okay. Is the proposed rate confidential?
4	I know that I mean, it's in the cost study, but
5	A. No, it's not. We haven't marked it that
б	way.
7	Q. All right. So at that time your testimony
8	was that the asymmetric rate you were proposing was
9	3.8144 cents per minute for terminating transporting
10	local traffic; is that correct?
11	A. Actually, according to Exhibit 11 it's
12	3.6626 or .036626.
13	Q. Okay. Sorry, I got that off the wrong
14	page somewhere. So it's 3.6626 cents per minute,
15	right?
16	A. That's correct.
17	Q. Now, you said in that Direct Testimony
18	that you were recommending that the Commission adopt
19	that if it chose not to adopt Union's access rate
20	proposed in the testimony of Mr. Woody; is that
21	right?
22	A. Yes.
23	Q. What was the access rate proposal
24	contained in the testimony of Mr. Woody? I couldn't
25	find it.
26	

1 I believe -- I think that it was Union's Α. 2 general recommendation at the time that Union should 3 be allowed to charge its terminating access rates, 4 but that position changed in subsequent testimony 5 whenever an FCC ruling came out prohibiting the 6 charging of access rates for wireless. But I can't 7 tell you specifically where it was within Mr. Woody's testimony, but I understood that to be the position. 8 9 Ο. Okay. Do you know what the rate was, by 10 chance? I don't know that. 11 Α. 12 Q. Okay. Thank you. And then you filed some corrected studies, 13 and I just want to check and make sure I've got the 14 15 dates right. You filed one on April 28, 2006; is 16 that right? 17 I'm not sure. I don't know if that was Α. 18 submitted in the record or not. Oh, I see. Okay. You provided one to 19 Q. Owest; is that right? 20 21 Α. I think that I have the date as May 1st, but I believe -- of 2006 you said? 22 23 Q. Right. Yes. Somewhere around that time there was 24 Α. a change in the study that was provided to Qwest. 25 26
1 Whether it made it into the record, I'm not sure. 2 Ο. And you also provided a new study or a 3 corrected study on May 30 of 2006; is that right? 4 Α. If you'll give me a moment, please. 5 Ο. Sure. 6 I don't recall there being two at that Α. 7 time. I'm not sure. 8 ο. Okay. And then when you filed your 9 Supplemental Surrebuttal Testimony on August 11 you 10 provided a new study then; is that right? 11 Α. That's correct. And then you provided some corrections to 12 ο. that study on August 12th, the next day; is that 13 14 right? 15 Α. No. The study that was attached to my 16 testimony on August 11 is the correct testimony -- I 17 mean is the correct printout of the exhibit. I mean, that's the corrected study. I believe that the 18 19 unelectronic version that was sent to Qwest, there was one sent on August 14th because the one that was 20 21 sent to them on August 11th was basically the wrong 22 one. But the one that was attached to my testimony, 23 the one that's the printed copy that's in the record is the correct study. So there weren't two studies 24 25 there, there was one.

- 1
- Q. There was just one study filed?

2 A. Right.

3	Q. Okay. Thank you.
4	Now, in your Surrebuttal Testimony you
5	discussed traffic sensitivity, right?
б	A. That's correct.
7	Q. And you acknowledge at least the 2003
8	Order, I can't remember if you acknowledged the 2001
9	Notice of Proposed Rulemaking, but you at least
10	discuss the 2003?
11	A. Yeah. I still don't know what you mean by
12	the 2001 Notice of Proposed Rulemaking. If you can
13	clarify what that case is, it would help me
14	understand what you're referring to.
15	Q. Okay. I'll try to do that. I don't have
16	it with me right now, but we'll try to do that.
17	You quoted from the 2003 Order, is that
18	right, in your testimony?
19	A. That's correct.
20	Q. And you quoted, this is on lines 206 to
21	208, you said, "A determination of compensable
22	wireless network components should be based on
23	whether the particular wireless network components
24	are cost sensitive to increasing call traffic"; is
25	that right?

- A. That's correct.

2	Q. And that's a quote from the document you
3	attached to your testimony as an exhibit, right?
4	A. Yes.
5	Q. Okay. And that was originally marked as
б	Exhibit 12. Did you file that as Exhibit 12 in
7	Colorado also, do you know?
8	A. It was filed in Colorado. I can't recall
9	what the exhibit number was.
10	Q. Okay. So this quote that you quoted from
11	the FCC's Order, it makes it clear that in
12	determining whether the CMRS carrier is entitled to
13	asymmetric compensation, you need to identify a
14	particular component, compensable components by
15	determining whether the component is cost sensitive
16	to increasing call traffic; is that right?
17	A. Yes. And I would also note the following
18	bullet point where it says the costs vary to some
19	degree with the level of traffic.
20	Q. Okay.
21	A. 2001, there was a Notice of Proposed
22	Rulemaking discussed on page 10.
23	Q. Okay. And that's what I've been talking
24	about. I'm sorry I didn't have the reference for
25	you.
26	

- A. Okay.

Q. Your study assumed that all components of
the wireless network were cost sensitive to
increasing call traffic; is that right?
A. No. We didn't include spectrum in the
study. Sprint in their proceeding included spectrum,
we didn't include it, but the other items listed on
page 11, cell sites, backhaul links, base station
controllers, mobile switching centers were
traffic-sensitive.
Q. Everything but spectrum?
A. In this study, yes.
Q. And that's everything in the network
except spectrum, right?
A. It doesn't include handsets.
Q. Okay. And the handsets are, just for us
amateurs, those are the phones that people carry
around with them, the cell phones, right?
A. That's correct.
Q. So you consider them part of Union's
network?
A. Well, they're provided by Union as part of
the provisioning service. Unlike a typical land line
phone which you can buy at the store off the shelf
and plug into your wall, you can't do that with a

1 cell phone to the same extent. Those are more comparable to a loop kind of analysis, which is why 2 3 they weren't included. 4 Ο. So do Union's customers not buy their own cell phones? 5 6 Α. You know, I don't know to the extent on 7 how those are provisioned. But are they more of a 8 network compared to a land line phone? I would say 9 yes. 10 Do you know if Union considers those cell Q. phones to be its property as opposed to the property 11 of its customers? 12

A. If that's your position on whether it's part of Union's network, whether it's Union's property or not, then to that extent, yes, it's the end user's property.

Q. And so you couldn't include something in a cost study for Union that wasn't Union's property, could you?

A. Well, to the extent that those were subsidized. I mean, if they're providing a handset below cost, Union is providing those handsets to customers at a cost where the handset is \$400, but they're providing them for free as part of a service subject to a two-year term commitment, potentially

you could. But it's a moot issue because we didn't
 include it.

3 ο. And if Union did that it would be doing that to promote sales of its service; isn't that 4 correct? 5 6 Α. Well, there's numerous reasons why you 7 would want to do it, and that could be one of them. You didn't provide any quantitative 8 Ο. 9 analysis of the capacity or utilization of the 10 components of the network that you included in your study in your Surrebuttal Testimony; is that right? 11 I think you said that in your summary. 12 Yeah, that's correct. 13 Α. 14 Okay. Now would you look at lines 322 to Q. 15 324. And there you state that the capacity of BTSs, 16 which are base -- is it base transceiver stations? Is that the correct usage for BTSs, do you know? 17 Page 13 defines it as base transceiver 18 Α. 19 system. Sometimes I've seen it as transceivers and 20 Ο. 21 sometimes transreceivers, and I don't know what the difference is. Anyway, we'll just call them BTSs for 22 23 now. 24 You say that "The capacity of BTSs can be 25 expanded by adding electronic equipment to the BTS

26

1 that permits additional radio carriers," and then in parentheses, "(frequencies that were previously 2 3 unused) to be brought into service"; is that right? That's correct. 4 Α. 5 And then you also state that there's a Ο. 6 second method of expanding capacity, and that's cell 7 splitting; is that right? That's on line 327. 8 Α. Yes. 9 Ο. Now, in the Colorado hearing you were 10 asked whether it's less expensive to increase the capacity of a BTS with a radio carrier addition than 11 with the addition of a cell site or cell splitting. 12 13 Do you remember that? 14 Somewhat. Α. 15 Ο. Okay. And let me represent to you that 16 you stated you didn't know. Does that seem correct? 17 Α. Yes. If you want to look at the transcript I 18 Ο. can let you look at it, but I don't know if it 19 matters if it seems right to you. 20 21 Α. No, that seems right subject to check. 22 Okay. And you also said that you hadn't Ο. 23 discussed the differences in cost between the two alternatives in your testimony? 24 25 Α. That's correct. I mean, any questions 26

1 along those lines are probably better directed to Mr. Jacobsen who has experience with those kind of 2 3 decisions on a day-to-day basis. 4 Ο. And you haven't provided testimony in this case either about the difference in cost between 5 6 those two alternatives; is that correct? 7 That's correct. Α. 8 ο. And then the Colorado hearing went forward 9 in December of 2005; is that right? 10 Α. Yes. And in that proceeding you proposed an 11 Ο. asymmetric -- I'm sorry, you proposed an asymmetric 12 rate of 2.6484 cents per minute; do you recall that? 13 14 That number seems low. Α. 15 Ο. It seems low? Okay. Let me represent to 16 you that was the number in your late-filed exhibit. I can give you a copy if you want. 17 Actually, if I recall correctly, I believe 18 Α. 19 that that was a number that if we included Qwest's proposed changes to the inputs. It was a "what if" 20 21 study, if I recall correctly. It was a "what if" 22 study. If we took our study and the only changes we 23 made to it were to include Qwest's proposed inputs, 24 cost of capital, depreciation, those things, that would be what the rate is. And I believe that I 25

26

- discussed that somewhere.

2	Q. So it's your testimony then today that
3	MR. ASAY: Excuse me, I believe the
4	witness is still answering.
5	Q. (BY MR. MONSON) Okay. I'm sorry.
6	A. Page 7 of my testimony, line 130.
7	THE COURT: Which testimony?
8	Q. (BY MR. MONSON) And should we look at
9	which testimony?
10	A. The Rebuttal, the November 7th one. Is
11	that the rate that you have written down?
12	Q. Yes.
13	A. That's a "what if" scenario, that's not
14	what we proposed in Colorado.
15	Q. Okay. So that late-filed exhibit in
16	Colorado wasn't your recommended rate, it was just a
17	"what if"?
18	A. That's correct.
19	Q. Okay. Because I wanted to ask you about
20	the difference between that rate and the rate you're
21	recommending in Utah, but now that I understand it's
22	a "what if" I don't need to ask you that.
23	Up to this point in time your testimony in
24	Utah and your testimony in Colorado is the same; is
25	that right?
26	

1 Give or take. I mean, in the Utah case Α. 2 there were specific inputs relative to Utah that 3 Qwest was proposing because it was state specific as 4 compared to Colorado where they proposed Colorado 5 specific results, and there were probably some other 6 variations within the testimony to make it state 7 specific. But the general position, the general 8 study, to my knowledge, were the same. 9 Ο. Will you look at the exhibit attached to 10 your Surrebuttal Testimony as 2SR.2 which you had marked at the top as 11.2; do you see that? 11 Yeah. The 11.2, that's the "what if" 12 Α. 13 case. 14 Pardon? Q. 15 Α. That's the "what if" one. 16 Right. And that's the same study that you Ο. filed as a late-filed exhibit in Colorado with the 17 2.6484 number; is that right? 18 19 Α. Yeah. Again, subject to check, I believe, I mean, I recall that we did a similar kind of filing 20 21 in Colorado. The rate was probably the same. Actually, you know what, probably the rate might have 22 23 been -- can you tell me again that the rate that you 24 have there for Colorado is exactly the same as 11.2? 25 ο. It is.

46

A. Okay.

2	Q. If it's helpful I can give you the
3	Colorado study. It's confidential, obviously, but
4	would you like to see it?
5	A. Sure.
6	MR. MONSON: May I approach the witness?
7	THE COURT: Certainly.
8	MR. MONSON: Since this is a confidential
9	exhibit I didn't make ten copies of it, I only made a
10	few.
11	I don't know if you want one, your Honor.
12	THE COURT: That's fine. Thanks.
13	MR. MONSON: Do you need one?
14	MR. ASAY: Thanks.
15	Q. (BY MR. MONSON) Now that you've had a
16	chance to look at that, can you see that it's the
17	same? This exhibit, which was filed as a late-filed
18	exhibit in Colorado, is the same as your Exhibit 11.2
19	filed in this case?
20	A. Yes, I agree.
21	Q. Okay. And in fact, it even has 17 years;
22	is that right, the one you filed in this case?
23	A. That's correct.
24	Q. And that was because the rate, the
25	depreciation rate that the Commission had approved
26	

- 1 for Qwest in Colorado for some elements of its
- 2 network was 17 years, right?

3 Α. Yeah, that's correct. 4 Ο. Okay. Now let's turn to your Post Surrebuttal Testimony. 5 6 Α. Can I do one more check on that? Yeah, it 7 appears that the filing in this case was done 8 consistent with Colorado based on an understanding at 9 the time that Mr. Copeland was proposing the same 10 kind of adjustments to the study that he did in Colorado. So with respect to the 17 years for 11 depreciation, in fact in Utah it was 14.5, which I 12 talk about in the later testimony. 13 14 Right. And so the Exhibit 11.2 that you Q. 15 filed in this case included the Colorado Qwest 16 recommended amounts, not the Utah amounts; is that

- 17 right?
- 18 A.

19 Q. Okay. Now, in your Post Surrebuttal 20 Testimony, starting on line 62 you discuss the 21 application of HAI 5.2a to the study in this case; is 22 that right?

That's correct.

A. I'm responding to Mr. Anderson's statement that it's the staff's position or that the principle used must be the same as those in HAI 5.2a.

1 Okay. And you refer to towers, buildings, Q. power equipment, cables and fiber conduit as support 2 3 assets; is that right? 4 Α. Yes. 5 Are you familiar with Part 32 of Title 47 Q. 6 of the Code of Federal Regulations? 7 Α. Yes. 8 Ο. And that's the Unform System of Accounts, 9 right? 10 Α. That's correct. 11 And are you aware that Part 32 identifies Ο. support assets? 12 I'm not sure if it defines it in the same 13 Α. 14 way that I've defined it here. MR. MONSON: Okay. May I approach the 15 16 witness? 17 THE COURT: Certainly. (BY MR. MONSON) There's two different 18 Ο. 19 excerpts if you would like to take a look at those. 20 Referring you to the sheet that's page number 381; do 21 you have that? Α. 22 Yes. 23 Q. And do you see that the Count 32, Section 24 32.2110 is entitled "Land and Support Assets"? 25 Α. Yes. 26

1 And then under that there's a listing of Q. some sub accounts, the first one is Land, the next 2 3 one is Motor Vehicles, the next one is Aircraft, the next one is Tools and Other Equipment. Do you see 4 5 that? 6 Α. I do. 7 And so those would be under the Uniform Ο. System of Accounts, those would be the things defined 8 9 as support assets; is that right? 10 That's how it's defined in the Uniform Α. System of Accounts. 11 12 Ο. Thank you. And then would you look at the other page 13 I gave you, the first page of which is 387. Do you 14 have that? 15 16 Α. Yes. 17 And can you see on that the heading for Ο. Section 32.2410, Cable and Wire Facilities? Do you 18 19 see that? 20 I do. Α. 21 ο. And then under there's sub accounts for poles, aerial cable, underground cable, buried cable, 22 23 submarine and deep sea cable, intrabuilding network 24 cable, area wire and conduit systems; do you see 25 that? 26

A. I do.

2	Q. So under the Uniform System of Accounts,
3	poles and wires and conduits and things like that are
4	not support assets, are they?
5	A. I would have to I mean, there's pages
6	missing between 383 and 387, but I would note that on
7	the top of page 387, this is talking about
8	accumulated depreciation, whereas, the other ones
9	were referring to accounts. But with that
10	clarification, I will I would agree that under the
11	Land Support Assets on page 381, as that is defined,
12	these things listed as depreciation aren't included
13	under that.
14	Q. Okay. And I'll represent to you that this
15	is a complete copy of Section 32.2110 and all of its
16	subparts and then 32.2410 and all of its subparts.
17	So would you accept that subject to check?
18	MR. ASAY: You know, Judge Goodwill, I
19	guess I would object to the offer. If Counsel has
20	the complete copy that he would like to provide
21	again, but I also object to the immateriality of the
22	document with regard to the support features we're
23	trying to explain here.
24	THE COURT: I'll go ahead and allow Qwest
25	to ask its questions of these documents to the
26	

1 witnesses as it wants to at this point.

2 MR. MONSON: Your Honor, I didn't know if 3 I needed to offer these into evidence because they're 4 part of the Code of Federal Regulation and, 5 obviously, the Commission can take notice of them if 6 it wants to.

7 THE COURT: Right. What I had intended to do, and we might as well just do it now, is mark the 8 9 first two-page document you passed out that begins 10 with page 381 as indicated at the bottom of the first page as Owest Cross Exhibit 1 and the second two-page 11 12 document that begins with page 387 as Cross Exhibit 2 13 and we will take administrative notice of these as a part of the FCC regulations. And to the extent that 14 15 either party wants to discuss the intervening pages 16 or anything else, we can certainly do that at a later time or when the party feels it's appropriate, and 17 18 we'll mark them as such for now.

19 THE WITNESS: I mean, I -- I'm sorry, go 20 ahead.

Q. (BY MR. MONSON) In TELRIC studies, cable and wire accounts are evaluated individually; is that right? I mean, the assets in those accounts are evaluated individually to determine if they're cost sensitive, traffic-sensitive? Do you know that? Do

you know whether or not that's correct?

2 Α. I'm sorry, can you repeat that question? 3 Yeah. Cable and wire accounts, which are Ο. the ones in 2410, are directly assigned, they're 4 considered individually, the assets in those accounts 5 6 are considered individually to determine whether or 7 not they're traffic-sensitive; isn't that right? My understanding of how the studies 8 Α. Yeah. 9 are done, and I explained it in my Post Supplemental 10 Testimony -- or my Post Surrebuttal Testimony is they do look at the primary assets in isolation or they 11 look at the switch or the fiber and determine if 12 those are traffic-sensitive and then whatever is 13 supporting of those gets assigned the same 14 15 traffic-sensitive rate. 16 Okay. Thank you. Ο. 17 Now, in your Post Surrebuttal Testimony at 18 lines 92 and 93 you state that Union's cost study should not be held to a higher standard than Qwest's; 19 is that right? 20 21 Α. That's correct. 22 And you're referring, when you talk about Ο. 23 Qwest's cost study, you're talking to cost studies that were adopted by the Commission in setting 24 25 Qwest's reciprocal compensation rate? 26

A. Right.

2 Q. And you recognize that those weren't 3 necessarily Qwest's cost studies?

Well, the Commission approved some 4 Α. methodology that was consistent with TELRIC. I 5 6 understand that Qwest proposed its own model, other 7 parties proposed another model and the result was a 8 blended approach. So I'm not saying here that -- I'm 9 not comparing it to Qwest's proposed study, I'm 10 comparing it to the results of that proceeding which was some type of blended TELRIC approach. 11

12 Q. Okay. And you agree that Union's cost 13 study should be held to the same standard as Qwest's; 14 is that right?

A. I'm not -- well, not necessarily. I agree that it should be held to the standards of TELRIC, the TELRIC rules, and for the most part I would expect the Commission to look at similar kinds of issues. But the basis of the comparison is the TELRIC rules. I think that's what we proposed and that's what the study does.

Q. Okay. So you're not saying it should be a lower standard, is what I'm getting at? You're not saying that Union's cost study should be held to a lower standard than the cost study approved by the

Commission for Qwest?

2	A. No. Whatever was approved by Qwest is
3	presumably consistent with TELRIC. Again, our study
4	should also meet proposed or our study also should
5	meet those same TELRIC principles.
6	Q. Okay. Thank you.
7	And you're aware that in Qwest's
8	proceeding that the Commission required the
9	assumption of a 90 percent fill factor for the
10	switch; is that right?
11	A. Yes, that's my understanding.
12	Q. Okay. Now, I do have the Order if you
13	would like to look at it. Would it be helpful?
14	A. No. I mean, I recall, I recall reading
15	that.
16	Q. Okay. Now, flip back just for a moment to
17	line 347 of your Surrebuttal Testimony if you could.
18	The question there is, "Are you saying that cell
19	sites are more equivalent to ILEC switches than they
20	are to ILEC loops?" And your answer is "Yes"; is
21	that right?
22	A. Yes.
23	Q. And then at line 162 of your Surrebuttal
24	Testimony, let's go to that I'm sorry, I got you
25	in the wrong testimony. It's in your Post
26	

1 Surrebuttal Testimony, I think. Let me just check. Yeah, line 162 of your Post Surrebuttal Testimony. 2 3 You state that "Union operates in a competitive wireless industry and so the costs that 4 5 Union incurs are the costs of an efficient 6 facilities-based entrant"; is that right? 7 Α. Yes. So it's your position that Union can use 8 ο. 9 its actual costs in its cost study and that such 10 costs comply with TELRIC principles? They can use the current costs because 11 Α. it's an efficient technology and that technology was 12 recently deployed, it's been deployed in the last 13 14 couple of years. So because it's current for an 15 efficient forward-looking technology, yes, they can 16 be used to comply with TELRIC rules. 17 And your cost study does use Union's Ο. actual costs where they're available; is that right? 18 That's correct. 19 Α. You updated the minutes of use that were 20 Ο. 21 used in your original study based on actual minutes of use in 2005; is that right? 22 23 Α. Can you point me to that? I know it's in my Supplemental Surrebuttal, but if you have a cite 24 25 that would be helpful. 26

1 Maybe the easiest way to see it is to look Q. at your study which is part of your Supplemental 2 3 Surrebuttal. And you don't have the date on there. Sorry. I don't have a reference for you right now. 4 5 Maybe I can get it during the break. 6 Α. I acknowledge that those were updated based on some later actual minutes. The date is what 7 8 I'm not sure of. 9 Ο. Okay. So you're not sure if those are 10 2005 or what it was? 11 Α. Right. Okay. But they were updated based on some 12 ο. actual minutes? 13 14 Right. Α. 15 Ο. All right. And you also said you updated 16 the GSM cell site costs from projections to costs actually incurred; is that right? 17 18 Α. Yes. 19 Q. When did the company, when did Union start installing GSM cell sites? 20 21 Α. I believe it was 2004. 22 Okay. When did it acquire the GSM switch? Ο. 23 Α. That was late 2003. Okay. So the costs you're using would be 24 Ο. the installation of GSM cell sites. Would you 25 26

1 accept, subject to check, that some of them were
2 installed in 2003?

3 Α. Is there --4 Ο. I can't give you a reference, but if you want I'll get one for you during the break. 5 6 Α. The GSM switch wasn't even put in until 7 late 2003. So it was my understanding it was 2004. But if it was 2003, I'm not sure where that 8 9 information was provided that will say that. But I 10 mean, is that the general time frame? The general time frame, I believe, what we used in the study was 11 2004, 2005 for the GSM sites. Then in my Post 12 Surrebuttal I talk about some additional sites that 13 were put in in 2005 and 2006. 14 15 Ο. Does your study include any costs for cell 16 sites that were not actual costs incurred for GSM cell sites? 17 I don't believe the current study does, 18 Α. 19 I believe those were all actual for the ones no. that were put in place and I projected out for all of 20 21 them. 22 Okay. And how did you project them? Ο. 23 Α. Just a simple ratio was projected. They've had 325 in place, which they're projected to 24 25 have by 2008, August of 2008. So whatever they had, 26

I believe it was 68 at the time of the study. So the
 ratio of 68 to 325 will give you total GSM cell site
 costs.

4 Ο. So you take the average costs for the 68 and then multiply that by the balance of the 325? 5 6 Α. Exactly. 7 Okay. And your study still uses the GSM Ο. switch cost that was incurred in 2003; is that right? 8 9 Α. That's correct. 10 Now, Mr. Copeland testified in this Q. proceeding that Union is currently using 26 percent 11 of the capacity of its BTSs. Do you recall that? 12 You're talking cell sites now to BTSs? 13 Α. Yes. I think BTSs and cell sites, I 14 Q. think, are --15 16 Yeah, right. I recall that he proposed Α. something that was what he considered to be a low 17 utilization, but I don't recall the exact number. 18 19 Q. And in your Post Surrebuttal Testimony you respond to that and said you believe that Union's 20 21 network was efficient because it locates cell sites 22 to provide coverage in rural areas; is that right? 23 Α. In my Post Surrebuttal? Uh-huh (affirmative). And I'm not quoting 24 Ο. there, so if you want to correct it, please feel free 25 26

1 to do so.

Well, I would prefer if you could point me 2 Α. 3 to the general area where I talked about that. 4 Ο. Let me come back to that when I've had a chance to find it. Is it your testimony that Union's 5 6 network is efficient and forward looking? 7 Yes. Α. ο. And assuming for me, with me for a minute 8 9 that it's only using 26 percent of the capacity of 10 its cell sites, what is the basis for that belief? It's comparable to Qwest serving rural 11 Α. 12 areas with a switch that has a capacity of 10,000 lines, but it's in a wire center that only has 200 13 customers. It's the nature of serving a rural area 14 15 that even if you use the minimum size technology, you 16 still might end up with underutilization just simply because of the rural nature of the service. 17 It's like 12 fiber cables is the minimum 18 19 fiber cable that you can get, and Qwest and other carriers who serve rural areas may only utilize two 20 21 or four fibers. As long as you're putting in the 22 minimum technology to serve that rural area you can 23 still be efficient, but have what would be defined as low utilization or a low fill factor. 24 25 Are you aware that Union receives Federal Ο.

60

1 USF support for its wireless business?

2	A. I'm not aware of that. If Union receives
3	it for if they're an ETC, as a wireless carrier
4	receiving Federal support, I'm not aware of it.
5	Q. Okay. Would you look at Exhibit 16 to
6	your Supplemental Surrebuttal Testimony, and that's
7	not the correct number, but that's the way it's
8	numbered on the exhibit. Do you have it?
9	A. I do.
10	Q. And this is a listing of minutes, used
11	minutes and so forth, and then it also includes total
12	call-related revenue in the next to the last column.
13	Is that right?
14	A. That's correct.
15	Q. And this is for GSM usage January 1, 2005
16	to December 31, 2005?
17	A. That's correct.
18	Q. So if we look at the number at the bottom
19	of the second to the last column we can see the
20	amount of revenue that Union received during 2005,
21	call-related revenue from its customers for GSM
22	usage; is that right?
23	A. Yes.
24	Q. Okay. And so I won't say the number on
25	the record, but I just wanted to clarify that.
26	

1	Does Union also receive substantial
2	revenue from roaming customers?
3	A. I believe so. The word "substantial" I'm
4	not sure is accurate, but I believe they receive
5	revenue from roaming.
6	Q. Could you turn to what you marked as
7	Exhibit 15 attached to your Supplemental Surrebuttal
8	Testimony?
9	A. Okay.
10	Q. Do you have that?
11	A. Yeah.
12	Q. Can you look at page 3? That has on it
13	the minutes of use that were used in your study,
14	right?
15	A. Yes.
15 16	A. Yes. Q. And it has, it includes Union to Union
15 16 17	A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and
15 16 17 18	A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes?
15 16 17 18 19	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct.
15 16 17 18 19 20	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct. Q. And would you agree with me that the
15 16 17 18 19 20 21	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct. Q. And would you agree with me that the percentage of minutes of use that are on a roamer is
15 16 17 18 19 20 21 22	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct. Q. And would you agree with me that the percentage of minutes of use that are on a roamer is about 45 percent of the total?
15 16 17 18 19 20 21 22 23	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct. Q. And would you agree with me that the percentage of minutes of use that are on a roamer is about 45 percent of the total? A. That looks about right.
15 16 17 18 19 20 21 22 23 24	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct. Q. And would you agree with me that the percentage of minutes of use that are on a roamer is about 45 percent of the total? A. That looks about right. Q. Okay. Do you happen to know what percent
15 16 17 18 19 20 21 22 23 24 25	 A. Yes. Q. And it has, it includes Union to Union minutes of use, Union to Other, Other to Union and Roamer Minutes? A. That's correct. Q. And would you agree with me that the percentage of minutes of use that are on a roamer is about 45 percent of the total? A. That looks about right. Q. Okay. Do you happen to know what percent of Union's revenues come from roaming? I think I

maybe already asked you that.

2	A. I don't know.
3	Q. I'm not trying to okay. You also
4	discuss in your Post Surrebuttal Testimony the
5	Colorado Commission decision; is that right?
б	A. That's correct.
7	Q. And that decision was issued October 1st
8	of 2007, mailed or something? I'm not sure how they
9	do it over there, but is that right? Do you have it?
10	A. Yes.
11	Q. And now refer to lines 613 to 616 of your
12	Post Surrebuttal Testimony. There you state that
13	there's a difference in the record in this proceeding
14	versus the Colorado proceeding and you believe that
15	should cause the Commission to reach a different
16	conclusion than Colorado; is that right?
17	A. Yes.
18	Q. And you list seven differences there in
19	your testimony there; is that right?
20	A. Yes.
21	Q. Let's go through those.
22	And, your Honor, I don't know if everyone
23	has a copy of the Colorado decision, but I have
24	copies if anyone needs one.
25	THE COURT: Why don't you give them to
26	

1 anyone who doesn't. I know I have a copy here. MR. MONSON: Do you need one? May I 2 3 approach the witness? 4 THE COURT: Certainly. Mr. Monson, why don't you give one to the 5 6 court reporter and we'll mark it as Qwest Cross 3 for 7 identification. MR. MONSON: All right. 8 (BY MR. MONSON) 9 Ο. The first one you list is 10 that you've included actual GSM cell sites costs in 11 Utah where you only included projected GSM cell site costs in Colorado; is that right? 12 13 Α. Yes. 14 Okay. Can you show me in the Colorado Q. 15 decision where the Colorado Commission stated that it 16 was rejecting your cost study because you had used projected rather than actual GSM cell site costs? 17 Well, the problem with the Colorado 18 Α. decision is their findings, as I state on page 26 of 19 my testimony, are only three paragraphs long. 20 So 21 it's difficult to interpret exactly all of their 22 concerns. On page 27 of my testimony I talk about my 23 inference on what some of their concerns are. 24 So they didn't specifically identify 25 anything more than what's listed on page 26, but they 26

1 generally referred in a couple of other spots, they used the word "insufficient information" a few times. 2 3 So to my knowledge, including actual costs instead of 4 projected makes this proceeding much more accurate as far as the costs that Union has to incur. 5 6 And also during the hearing there was a 7 number of questions of me in Colorado about the 8 projected costs and why they were the same for site 9 after site. And whether that had an influence on the 10 Administrative Law Judge, I'm not sure. But to our understanding, including actual costs instead of 11 12 projected makes this study more accurate. But you can't point to anything in the 13 Ο. decision that says the Commission rejected your study 14 15 because you didn't include actual costs, can you? 16 Α. No. 17 Ο. Thank you. 18 Now, you have included actual costs in 19 your Utah study, right? That's correct. 20 Α. 21 ο. And the impact of that change was to 22 increase the cost, the asymmetric rate that you're 23 proposing; is that right? I'm not sure in isolation what the impact 24 Α. of that change itself did because we did a number of 25 26

changes, including increasing the assumed cell sites 1 2 of the 325, was a much smaller number in Colorado. 3 So I'm not sure on a cell site by cell site basis, I can't recall what the impact was. 4 5 If we were to look at your -- at the Ο. 6 Exhibit 28 from Colorado that I handed out and then 7 look at your Exhibit 15 in Utah, could you identify for me on there where the cell site, the difference 8 9 in cell site costs would show up? 10 THE COURT: Mr. Monson, the Exhibit 28 you're referring to is the cost study from Colorado? 11 MR. MONSON: Yes. 12 THE WITNESS: Page 29 of Exhibit 28 from 13 Colorado has the average cost per cell site at the 14 15 bottom. Union --16 (BY MR. MONSON) Can you find the same Ο. number or the number that was used in the cost study 17 in Utah on Exhibit 15? 18 19 Α. Yeah. There's not a page number, unfortunately. 20 21 ο. Does it look the same or does it look 22 different? 23 Α. No, it's different. It's page 10. Page 10. Which column are we looking at? 24 Ο. 25 If you look at the very bottom where it Α. 26

1 says "Average costs per site."

So if I'm looking at this correctly, the 2 Ο. 3 average cost per site in Colorado is about -- well, 4 the average cost per site in Utah is about more than 5 150 percent higher than the average site in Colorado; 6 is that right? 7 I don't think that percentage is right, Α. 8 but I can acknowledge that it's higher. But I don't think your percentage was right. 9 10 Okay. But, I mean, if you took the Utah Q. amount and the Utah study and divided it by the 11 Colorado amount you would get more than 1.5, is what 12 I quess I'm saying. That's what I'm trying to show. 13 14 Oh, okay. That's correct. Α. 15 Ο. Okay. All right. And so that would 16 increase the asymmetric rate in Utah by having a higher cost, wouldn't it? 17 That change in isolation, all else being 18 Α. 19 equal, yes. Now, the second change you referred to in 20 Ο. 21 your Post Surrebuttal Testimony between the Colorado 22 study and the Utah study is the inclusion of the user 23 adjustable traffic-sensitive factor in the Utah study; is that right? 24 25 Α. That's correct. 26

1 Can you show me in the Colorado decision Q. where the Commission said that it rejected your study 2 3 because you didn't have a user adjustable traffic 4 sensitivity factor in the Colorado study? I would point to page 56, paragraph 174 of 5 Α. 6 the Commission decision, Part B, where it talks about 7 the traffic-sensitive factor. To my knowledge, the Commission rejected the study in Colorado because --8 9 well, it's hard to infer exactly what he said, but 10 they talk in here about the traffic sensitivity of the switch that we've assumed without analysis that 11 the entire network is traffic-sensitive. 12 13 So it seemed to me they thought it's so embedded within the model, this traffic sensitivity 14 15 assumption of 100 percent was so embedded within the 16 model, that there was no choice but to just simply 17 reject the entire model. So our approach was to make 18 it clear through a user adjustable input that if the 19 Commission in Utah wanted to come up with a different assumption, all it would have to do is change one 20 21 input. 22 So you read the Colorado Commission's Ο.

language as it assumes without analysis that Union
Cellular's entire wireless network is
traffic-sensitive. That means that they wanted you

1 to have a user adjustable input in the model, and 2 that's why they rejected it because it doesn't have 3 that input?

No. To me, that they rejected it because 4 Α. they had felt that that assumption was so embedded 5 6 within the study that you couldn't change it even if 7 you wanted to. So by having a specific input, I want 8 to make clear that that's not the case. So we could 9 have done it in Colorado. All you had to do was put 10 in a different finding on the traffic sensitivity and come up with a different conclusion, there was no 11 12 reason to reject the entire study. So by having that here and making it 13 explicit to the Commission, we believe addresses some 14 15 of the concerns in Colorado. 16 Is your user adjustable input in Utah on a Ο. 17 component-by-component basis? 18 Α. Well, there's one for switches and there's 19 one for cell sites. So there's two adjustments that could be 20 Ο. 21 made? 22 That's correct. Α. 23 Q. Okay. Which is -- you know, which in Qwest's 24 Α. 25 case there's one. In the HAI model -- let me

clarify. In the HAI model which was used in the
 development of Qwest's rates there's one usage
 sensitive factor which is just for the switch.

Q. Okay. The Colorado Commission mentioned that it rejected Union's cost study because it assumes that the entire wireless network is traffic-sensitive. Aren't you assuming here that your entire network is traffic-sensitive?

9 A. Yes. But we put in a lot of evidence and 10 Qwest and staff put in evidence too that you can come 11 up with a different assumption. It doesn't have to 12 be zero or 100 percent, it could be something in 13 between. So by having it explicitly an input we 14 wanted to make it clear to the Commission that that's 15 a conclusion they could come up with.

16 When you -- I'm sorry, go ahead. Ο. In a TELRIC proceeding in HAI, you don't 17 Α. 18 simply reject an entire study because a person's 19 proposed input is rejected. There's thousands of inputs -- not thousands, there's a lot of inputs 20 21 within HAI and those are individual points of dispute 22 within a case. This threw out an individual point of 23 dispute. It doesn't mean that the entire study has to be rejected if you find a different conclusion. 24 25 ο. And the third change you list between the

1 Colorado study and the Utah study is that in Utah you have used a projected MOU factor? 2 3 Α. Yes. For year 1, that drives the investment 4 Ο. decision in year 1 rather than the 3 percent growth 5 6 factor that was used in Colorado; is that right? 7 Α. That's correct. 8 ο. The Colorado Commission did have a 9 question about where the 3 percent factor came from, 10 didn't they? 11 Α. Yes. And they wanted to know whether it was 12 ο. based on expected increases in voice traffic, data 13 traffic, usage by Union customers only, usage by 14 15 Union customers and roaming customers, or usage by 16 Owest customers; is that right? 17 That's correct. Α. In Utah, instead of that 3 percent factor 18 Ο. 19 in your revised study, you've projected a growth in MOU of 50 percent over the 14.5-year term of the 20 21 study; is that right? 22 Α. Yes. 23 Q. And what would that be compared to in the Colorado, if you had used that same? Would you have 24 25 used a 50 percent factor in Colorado if you had 26

applied the same analysis?

2	A. Well, I can't answer that exactly. The
3	assumption on what we did here in Utah was that if
4	you were looking at the demand, the demand is
5	expected to be 150 percent. You match up the costs
6	of the cell site with it and you do it in year 1. In
7	comparison to a similar assumption in Colorado, by
8	having it in year 1, even though Union probably won't
9	have all of the demand in year 1, what we've done is
10	understated the costs in Utah compared to Colorado,
11	that change in isolation.
12	Q. In Utah in this case, have you explained
13	the basis for the 50 percent projection were
14	attributed to customer type, as the Colorado
15	Commission raised?
16	A. I believe so, yes.
17	Q. Can you tell us where you did that?
18	A. That was the what you just referred me
19	to not too long ago, which would be page 3 of Exhibit
20	15 to my Supplemental Surrebuttal.
21	Q. Okay. That shows, I believe, the
22	whatever year it is, and I don't think we have
23	established yet what year it is, but that showed the
24	actual minutes of use by customer type; is that
25	right?
-	
---	--
Τ	
-	

A. Right.

2	Q. But does it show how the 50 percent
3	projection was arrived at based on changes in use
4	among those individual customer types?
5	A. Can you refer me to the portion of the
6	Colorado decision that I believe the question is
7	based?
8	Q. Yes. I didn't write it down, but I can
9	find it.
10	Your Honor, are we going to be taking a
11	break soon?
12	THE COURT: I would be happy to take one
13	now if you would like so you can find what you want.
14	MR. MONSON: Okay. Thank you.
15	THE COURT: Why don't we take a 10-minute
16	break.
17	(Recess taken.)
18	THE COURT: Let's go back on the record.
19	Mr. Monson?
20	Q. (BY MR. MONSON) When we broke you had a
21	question about where in the Colorado Commission Order
22	they talk about the MOUs, and let me refer you to
23	paragraph 152 on page 48, and including Footnote 65.
24	So you can review that if you want.
25	A. Okay.
26	

1	Q. And you can see there that they talk
2	about, particularly in Footnote 65 they talk about
3	the fact that they didn't know whether the increase
4	was based on increased usage by which type of
5	customer, including Qwest customers, right?
6	A. That's correct.
7	Q. And on your Exhibit 15, the page we were
8	looking at, I think it was page 3, you have Union to
9	Union, Union to Other, Other to Union and Roamer.
10	You don't have a separate category for Qwest to
11	Union. That would be included, I suppose, in Other
12	to Union; is that right?
13	A. I need a bigger desk. Yeah, that would be
14	Other to Union.
15	Q. Okay. And do you know if, say I'm a Qwest
16	customer in Salt Lake City and I call a Union
17	customer in Cheyenne, would that call be a
18	wireless customer. Would that call be included in
19	Other to Union here?
20	A. I believe so.
21	Q. And would the same thing apply to a Union
22	customer in Casper or in Gillette or in other cities
23	in Wyoming?
24	A. Yeah. This is supposed to represent all
25	the minutes of use that Union receives on a
26	

terminating side. So that, to my knowledge, includes
 everything, including the scenarios you're talking
 about.

Q. Okay. So in paragraph 152 the Colorado Commission explained a concern it had about the MOUs and why you were projecting they were going to grow and how you were going to attribute that to various types of calls, but it didn't say that that was why it was rejecting your study, did it?

10 MR. ASAY: Object, Judge Goodwill, to the 11 form of the question in that it misstates the Order, 12 the Order speaks for itself, and ask the inquiring 13 attorney to restate it.

14 MR. MONSON: Do you want me to rephrase?
15 THE COURT: Go ahead and rephrase your
16 question.

Q. (BY MR. MONSON) Okay. Can you show me where the Colorado Commission said in its decision that it was rejecting your study because you hadn't provided projections -- you hadn't stated the basis for your projections based on customer type?

A. Yes. To me, that's where I get into my inference on what they mean by Part C on page 56 where they talk about "Neither the study or Union provides critical detail and analysis required by the

1 law." And when I read that I thought, what exactly 2 are they referring to? So that's when I went back 3 through and I identified things when they talked 4 about questions, open issues they had, and this to me 5 is one of them. And I believe that the way that we 6 did the minutes of use methodology here in Utah 7 addresses most of these points.

Q. Did you explain in Utah how you hadarrived at your 50 percent projection?

10 Well, I do in my Post Surrebuttal, I talk Α. about how it's an estimate of demand and we used that 11 to match up with the cost, but it is an estimate. 12 And because we're using all minutes of use within the 13 denominator, it doesn't really matter whether it's 14 15 attributable to one source or another, we're matching 16 total cost to total demand, not total demand to increase. 17

And you haven't included any analysis of 18 Ο. whether that increase is attributable to roamers or 19 to Qwest or to Union's calls within its own system? 20 21 Α. No. And as long as we keep that matching the same it shouldn't matter. Now, if we were trying 22 23 to define a system just for Qwest traffic, you know, if Union were to simply build a cost study to account 24 25 for traffic just from Qwest and we included minutes

of use just from Qwest, my position on that is that you would end up with the same rate as you would if you used the totals, the totals that would be used because the ratios would be the same. You would end up with the same cost. So as long as we did it the way that we did, it shouldn't matter.

7 Okay. The fourth change you list between Ο. the Colorado study and the Utah study, and this is 8 9 back in your Post Surrebuttal Testimony at line 630, 10 is that you've used inputs for annual productivity offset, cost of equity, cost of debt, debt ratio, tax 11 rate and depreciation lives that match those that the 12 Commission used in determining Qwest's reciprocal 13 compensation rate; is that right? 14

15 A. Yes.

Q. Now, I understand that you said that Exhibit 28 was not offered as Union's position in Colorado, but Exhibit 28 includes all those same assumptions; is that right?

A. Yeah. That was the "what if" analysis that included what Qwest proposed in Colorado for each of those inputs. And in Colorado we didn't include those in our proposed study, in Union's proposed study. In Utah we have.

Q. Okay. But you filed that in Colorado?

- 1
- A. That's correct.

2 Q. And it was before the Commission when they 3 made their decision; is that right?

4 A. Yes.

5 Q. Can you show me in the Commission's 6 decision where it said it rejected your cost study 7 because you didn't include those things in your 8 recommendation?

9 Α. With the same caveat that I applied on the 10 other ones, again, yeah, if you infer what the Commission means by their statement about 11 insufficient evidence or cost analysis required with 12 the law, critical detailed analysis required by the 13 law. They mention the depreciation lives on page 45 14 15 of the Order and they say that "We find that the 16 record contains insufficient information upon which we can determine whether a 10-year depreciation life 17 for a GSM switch is reasonable." 18

19 So, again, we were proposing 10 years in 20 Colorado, Qwest was proposing 17. And to me, I'm not 21 sure if the Commission, I'm not sure if that's just 22 one of the reasons why they rejected it, they claimed 23 there was insufficient evidence. So here in Utah we 24 just simply agreed to use what Qwest was proposing, 25 which is 14.5.

1 And you agreed to do that before the Q. Colorado Commission issued its decision? 2 3 Α. Yes. We agreed to do that in Utah before the Colorado decision came out. 4 The fifth change you list is the use of 5 Ο. 6 different expense assumptions to costs based on 7 actual wireless expenses incurred by Union; is that 8 right? 9 Α. Yes. 10 Can you show me in the Colorado decision Q. where the Commission said it was rejecting your study 11 based on the assumptions you used in that study? 12 With the same caveat about this falls, 13 Α. again, under the critical detail and analysis 14 15 required by the law, what they might have meant by 16 that. They talk about insufficient data on cost allocation pursuant to 47 CFR, Parts 32, 36, and 64, 17 they talk about that on page 50. So the way that we 18 did it in Colorado was different. 19 20 We changed the methodology here and we

21 have specific sub accounts that we use for the 22 expense allocation which I think tie exactly to how 23 Union books the costs. So the way that we did it is 24 more verifiable and more supportable perhaps than in 25 Colorado.

Q. With regard to this change, can you point me in your study in Colorado -- I'm sorry, your hypothetical study in Colorado and your study in Utah to where that number would be found, the difference in the expenses?

6 Α. On page 33 of the Colorado Exhibit 28, I 7 have the radio system expenses listed. Specifically 8 the Colorado Commission's main concern is that we 9 were somehow including regulated Union telephone 10 costs within a cost study for the wireless operation which we weren't, and we're not in this proceeding 11 either. But page 28 -- I'm sorry, page 33 of Exhibit 12 28 shows how we came up with the radio system 13 expenses. And you can see that those were based on 14 15 booked values for Union, but perhaps the Commission 16 felt it wasn't clearly delineated on whether it 17 included regulated or not. And then we also did the 18 growth and the maintenance expenses, that would be on 19 page 2.

20 Q. So you're referring there to the inputs? 21 A. Yes. And then as far as in this 22 proceeding, and can you look at Exhibit 15 for me? 23 Yours doesn't have the page numbers and all the pages 24 either, does it?

25 Q. It doesn't. It has 1 and 2 and then it 26 doesn't have ones after that.

2	A. Okay. Starting I believe on about page 11
3	of Union Exhibit 15 to my Supplemental Surrebuttal,
4	it shows how those accounts or how the expenses
5	were arrived at. It takes it down to a per cell site
6	and then grows it based on the projected cell sites.
7	But within there, anything with a sub account that
8	starts with 3 or 8, which is the only thing that
9	we've included in the model, was specifically Union's
10	wireless expenses. And that's how I've explained in
11	my testimony that it's clear that we haven't included
12	anything other than the wireless operation here.
13	Q. Okay. If we look at the summary page,
14	page 1 of both studies, you have a category there of
15	Expenses, right?
16	A. That's correct.
17	Q. And it looks like in the Colorado study
18	there's five subparts under that and in the Utah
19	study there's four subparts; is that right?
20	A. That's correct.
21	Q. But would you agree with me that the
22	amount, the total expenses let's just say for year 1,
23	or we could look at the total for the whole study, I
24	guess, either one, the total expenses in the Utah
25	study are nearly three times more than in the

1 Colorado study; is that right?

Yeah, they are higher. Keeping in mind 2 Α. 3 that there are more cell sites projected in this study than there were in the Colorado one. 4 5 And so the effect of that would be, all Ο. 6 other things being equal, would be to increase the 7 asymmetric rate that Union is proposing in Utah; is 8 that right? 9 Α. Yeah. Individually, in isolation, if the 10 expenses went up then the costs would go up. Again, there are more sites here in Utah, in the Utah study 11 than the Colorado. So the impact wouldn't be as 12 great as you just graded on a per cite basis. 13 14 There's also more minutes of use, right, Q. in Utah than in Colorado? 15 16 That's correct. Which means that the Α. devisor, the dividing number kind of equalizes 17 18 things. 19 Q. The sixth change you list in your Post Surrebuttal Testimony is that you used a different 20 21 tax calculation consistent with that proposed by Mr. Copeland in Utah. You didn't use that in Colorado; 22 23 is that right? 24 Α. That's correct. 25 And I'm sure you know what I'm going to Q. 26

1 ask you next. Can you show me in the Colorado decision where the Commission said that it was 2 3 rejecting your study because it didn't use the tax calculations proposed by Mr. Copeland in Colorado? 4 5 Yeah, I don't know of an exact spot where Α. 6 that issue came up. The point on this one is the --7 you know, the question again is why should this 8 Commission reach a different decision than the 9 Colorado one, and simply this point here is related 10 to the fact that we're agreeing to what Qwest 11 proposed. And your late-filed exhibit in Colorado 12 Ο. 13 did include the same adjustment as you've made in Utah; is that right? 14 15 Α. Yeah, I believe it did. I think it did. 16 Without looking at these formulas I can't tell for sure, but I think that it did. 17 And then the seventh change you list is 18 Ο. that -- is different, but actual MOU calculations is 19 broken down by type of MOU category; is that right? 20 21 Α. Yes. 22 Have we already talked about that? Ο. 23 Α. It's the same -- it's the same basic principle about the minutes of use and the 24 25 Commission's question about which minutes of use they 26

were. So it's the same basic issue that we talked
 about before.

3 Okay. You already brought up paragraph Ο. 174 of the Colorado decision. Could you please read 4 that into the record? 5 6 MR. ASAY: I guess I would object to the 7 question. It's been admitted as an exhibit. The witness has already put it in his testimony. I think 8 9 it's duplicative and a waste of time. 10 THE COURT: We had marked it as Qwest We hadn't admitted it, but we do intend to 11 Cross 3. take administrative notice of it. I will go ahead 12 13 and let the witness read it, though. 14 THE WITNESS: "We find that Union 15 Cellular's cost study is deficient in at least three 16 areas: (a) it does not distinguish between voice and data services; (b) it seems, without analysis, that 17 Union Cellular's entire wireless network is 18 traffic-sensitive (that is, costs sensitive to 19 increasing call traffic); and (c) neither the cost 20 21 study nor Union Cellular provides critical detail and 22 analysis required by law." 23 Ο. (BY MR. MONSON) And as you were reading 24 that, would you agree with me it says at the end of

25 line 1, "in at least the following"?

A. Yes.

2	Q. I think you read it slightly differently
3	than that. Your cost listed in Utah doesn't list any
4	difference between cost and data services, does it?
5	A. No, it does not because of the reasons
6	stated by Mr. Jacobsen and myself that very small
7	subset of the network is designed for voice
8	primarily. That is just a small portion of it.
9	Q. And the Colorado Commission said that they
10	rejected your study because it assumes 100 percent of
11	the wireless network is sensitive to increasing call
12	traffic. Your study in Utah assumes the same thing,
13	right?
14	A. Again, with an input assumption, yes.
15	Q. You also referred in your testimony to the
16	fact that Union had filed a Petition for Rehearing,
17	Reargument and Reconsideration in Colorado; is that
18	right?
19	A. That's correct.
20	Q. I've handed you a document during the
21	break. Is this the petition you're referring to?
22	A. Yes, it is.
23	MR. MONSON: Could we mark this as Qwest
24	Cross 4, your Honor?
25	THE COURT: Yes.
26	

1 MR. MONSON: That's all my questions. I guess I want to offer Qwest Cross 1 through 4 or ask 2 3 you to take notice of them, anyway. THE COURT: We will take notice of Qwest 4 Cross 1, 2, and 3. Any objection to Qwest Cross 4? 5 6 MR. ASAY: No objection. 7 MS. SCHMID: No objection. THE COURT: Okay. We'll go ahead and take 8 9 notice of that one as well. 10 MR. MONSON: Thank you. 11 THE COURT: I'm sorry, Mr. Monson, did you say that was all of your questions? 12 MR. MONSON: Yes, that's all. 13 14 THE COURT: Ms. Schmid? MS. SCHMID: Thank you. 15 16 17 CROSS-EXAMINATION BY MS. SCHMID: 18 19 Q. I have a few handfuls of questions, but not nearly as many as Mr. Monson. Good morning, Mr. 20 21 Hendricks. 22 Α. Good morning. 23 Q. Did the switch cost you used in your model come from an existing cellular switch installed at 24 Mountain View, Wyoming? 25 26

- A. Yes.

2	Q. Did the cell site costs you used in the
3	model come from existing construction and equipment
4	installation costs that are on the books of Union
5	Cellular's accounts?
6	A. I hate to do it, but can you repeat that?
7	Q. That's okay. Did the cell site costs you
8	used in the model come from existing construction and
9	equipment installation costs that are on the books of
10	Union Cellular's accounts?
11	A. Yeah, that's correct. Those were recent
12	costs that were for an efficient network that were
13	recently completed.
14	Q. Did you base the future costs for cell
15	site expenditures on the same existing construction
16	and equipment costs that are on the books of Union
17	Cellular's accounts?
18	A. Yes, I did. Despite of what I point out
19	in my Post Surrebuttal, that the costs have actually
20	increased in the last couple of years.
21	Q. Were the expense costs you used based on
22	the existing expense for cell site and switch
23	maintenance that are on the books of Union Cellular's
24	accounts?
25	A. Yeah. They were based on those costs, but
26	

1 the ratio and the way that they're utilized in the model is just simply that, it's a ratio. We looked 2 3 at current expenses and then applied that kind of a ratio to the investment. 4 Did you exclude equipment costs that 5 Ο. 6 provide other retail offerings, such as data 7 services, from your switch costs? 8 Α. No. We found those costs to be very 9 minimal. Mr. Jacobsen references that the costs are 10 minimal and the revenue is only about 1 percent of total revenue. So looking at that, we didn't 11 specifically remove each of those because if we did 12 the impact would be small. 13 14 With regard to current demand, did you Q. 15 project the cell site costs out to 2008 from 2004? 16 Α. The way that the -- I talk in my Post Surrebuttal that 325 is what it's expected to be in 17 place by August of 2008. At the time that we did the 18 19 study we did a reasonable projection for foreseeable demand, and that's the number we came up with. 20 21 ο. And when was the study done again? 22 The revised study that included the 325 Α. 23 was performed in 2006. Okay. So it's based on numbers from 2006 24 Ο. and then you project from 2006 to 2008? 25 26

- 1
- A. That's correct.

Q. Did you include the effect of sharing cell site space and equipment space in the calculation of cell site cost in your model?

No. Again, for the same reasons that we 5 Α. 6 didn't with data, it's very minimal. And I wasn't 7 sure whether the methodology that was used for Qwest 8 included those same kind of costs as proposed by 9 Qwest and by staff. But the summation of those 10 revenues is found in Exhibit 18 of my testimony. And again, the impact of that, of making that change and 11 12 including those revenues is very minimal.

13

So you didn't include them?

14 A. I did not.

Ο.

Q. Was your transport rate calculation based on the interoffice facility costs, tandem and local switching costs, and signaling and network data costs that would be incurred in a hypothetical transport network?

A. No. It was a simplified approach because the expected costs were so minimal it didn't justify going into that kind of analysis. But again, I talk about that in my Post Surrebuttal, the methodology used.

Q. Switching to traffic-sensitive issues, are

stand-alone cell towers non-traffic-sensitive? 1 You mean a tower that has absolutely 2 Α. 3 nothing on it? Just one moment while I confer with my 4 Ο. witness. I'm not terribly telephone fluent. Just by 5 6 themselves. 7 Α. Yeah. And --8 MR. ASAY: Object. I know the witness 9 believes he has an answer. I'm just a little 10 concerned and would ask for this to be restated. It's confusing and I want to make sure the record is 11 clear with respect to not only the question but the 12 response. And so I object on the basis of confusing. 13 14 MS. SCHMID: I can restate the question in 15 just one second. 16 THE COURT: Please do. (BY MS. SCHMID) Do you believe that cell 17 Ο. towers are non-traffic-sensitive on their own if we 18 19 just look at them in isolation? 20 MR. ASAY: Again, I object because it's 21 unclear to me what we're talking about when you say on their own or in isolation. I just want to be 22 23 clear that we know what we're addressing with respect to that. So I would object to that. 24 25 ο. (BY MS. SCHMID) Okay. Let's try it again 26

1 and see if I can make it more clear so we can get an
2 answer. Do you believe that cell towers are
3 non-traffic-sensitive?

The towers themselves, the definition of 4 Α. traffic-sensitive is contained in my testimony and I 5 6 believe in Mr. Copeland's testimony. And actually, 7 just so that we're clear, let me find that real quick. Okay. It's on page 9 of my Surrebuttal 8 9 Testimony. It comes from the FCC's First Report and 10 Order. And it's basically that the costs do not vary 11 in proportion to the number of calls terminated over 12 those facilities. So a tower, you can put presumably a number of radios on it and all kinds of traffic on 13 it. So in isolation, the tower itself, the cost of 14 15 the tower does not vary in proportion, but it's to me 16 a support asset. So it's non-traffic-sensitive? 17 Ο. Well --18 Α. 19 MR. ASAY: Objection. THE WITNESS: -- to be clear, we've 20 21 included it. I'm sorry, go ahead. 22 MR. ASAY: I just wanted the witness to be 23 able to respond and answer this question. THE COURT: Sure. Go ahead. 24 25 THE WITNESS: The tower is considered 26

1 traffic-sensitive within our study because it is a 2 support asset for a traffic-sensitive facility, 3 similar to a switch building, switch power and so forth. Well, switch building, land, being 4 non-traffic-sensitive is included in the switch cost. 5 6 If it's a support structure for something that is 7 traffic-sensitive then the facility is included in the traffic-sensitive rate. So by itself, if you 8 9 just had a tower out there, no. But if the tower is 10 used to hold radios which are traffic sensitive, then yes, it is. 11 12 Ο. (BY MS. SCHMID) Okay. Are stand-alone cell site land and buildings non-traffic-sensitive? 13 14 For the exact same reasons I just Α. 15 mentioned, they are not on their own just sitting 16 there, land is not -- land, and what was the other thing you mentioned? I'm sorry. 17 Cell site land and buildings. 18 Ο. 19 Α. Yeah, land and buildings. If they are used to house something that is considered 20 traffic--sensitive then they become 21 traffic-sensitive. 22 23 Ο. Are stand-alone cell site power supply and emergency engines non-traffic-sensitive? 24 25 Α. Well, again, for the same reasons, that 26

1 the power investment and so forth that was used for something that is traffic-sensitive makes it 2 3 traffic-sensitive. My hesitation on that is whether 4 or not power costs themselves, expenses, whether you have higher power expenses with more traffic. You 5 6 know, if you run more stuff through does your power 7 expense qo up? That I don't know. That's probably a 8 question better addressed to Mr. Jacobsen. But it's 9 included for the same reasons as land, buildings, 10 et cetera, it's a support asset for something that is traffic-sensitive. 11 Many things are affected by minutes of 12 Ο.

13 use, but does land increase as the minutes of use 14 increases?

15 Α. No. It's the same thing, though, we're 16 trying to get something that's comparable to what was done for Qwest. Qwest was allowed to use those in 17 18 the rates because they support a switch and we're 19 doing the same thing here. So you can't look at land like that in the TELRIC study, it's what is the land 20 21 used for. And if it's used for traffic-sensitive 22 purposes you include the cost.

Q. Turning to your Post Surrebuttal Testimony
that you filed around October 26 of this year, do you
refer to cell site towers, land and building and

power as non-traffic-sensitive support assets? 1 Do you have a page number for me? 2 Α. 3 ο. Just one moment. While we're checking on 4 that maybe we can come back to it and I can just -- I have two final questions ideally. Do you multiply 5 6 minutes of use by present value factors in your cost 7 model calculations? 8 Α. Yes. 9 Ο. I'm sorry? 10 Α. Yes. Has Union Cellular's cost model to 11 Ο. 12 develop, transport and termination costs been adopted by other Commissions? 13 14 No. But this present value methodology Α. 15 that I've used, I've used in other states with 16 respect to L&P costs -- L&P costs is local number and portability -- where we use similar kinds of 17 18 methodology to support our estimates that the L&P 19 costs would be so substantial that a carrier should receive a waiver from the L&P requirements. 20 So we did this kind of calculation, me, 21 22 did this kind of calculation in other states. So 23 with respect to your minutes of use question, that 24 has been approved in other states. The Union cost 25 study itself has not been approved in other states. 26

1 It's only ever been ruled upon by one other state,

2 and that's Colorado, and we talked about that 3 earlier.

4 Q. And Colorado rejected it?
5 A. Yes. Of course, we've changed the study
6 since then.

7 Coming back to the question I was asking Ο. before concerning your Post Surrebuttal Testimony 8 9 filed October 26, 2007, the question was, "Did you 10 refer to cell site towers, land and building and power as non-traffic-sensitive support assets?" And 11 the line references are lines 118 through 121, 12 approximately, of your Post Surrebuttal Testimony on 13 14 that date.

So the question again is, do you refer to cell site towers, land and building and power as non-traffic-sensitive support assets?

18 Α. Yeah. The tower one isn't in there, but I 19 refer to it I believe in another portion of my testimony as falling under that same category. 20 21 MS. SCHMID: Thank you very much. Those 22 are all my questions. 23 THE COURT: Mr. Asay, Redirect? 24 MR. ASAY: Yes. 25 /

1

REDIRECT EXAMINATION

2 BY MR. ASAY:

3	Q. Mr. Hendricks, just starting where we left
4	off to make sure we address that with respect to your
5	Post Surrebuttal Testimony as referenced by Ms.
6	Schmid, particularly with respect to the reference to
7	lines 119 and 120 and that area, what is your point
8	with respect to the non-traffic-sensitive nature of
9	these assets or traffic-sensitive? How do they
10	relate and what are you trying to put across with
11	respect to that?
12	A. Two things. Well, at least two things.
13	We have put forward a study that I believe, at least
14	on this specific issue and on all of the issues, is
15	consistent with TELRIC principles and the principles
16	in HAI. And what I'm trying to do here is respond to
17	what staff has said. Staff witness Mr. Anderson,
18	first states that the cost study should be consistent
19	with HAI principles. But within HAI they allow these
20	kind of things, land, buildings, poles, manholes,
21	these things that the costs do not vary in proportion
22	to the traffic. They allow those kind of things to
23	be included in the permanent rate.
24	So what I'm trying to do here is, one,
25	make sure our approach is consistent with TELRIC;

two, it's consistent with HAI; and three, that it's consistent with the development -- because of those things it's consistent with the development of Qwest's reciprocal compensation rates, and we should not be held to a higher standard than Qwest. If they're allowed to include those kinds of things, we should too.

Q. At the outset of Mr. Monson's questioning there was a reference to what you identified as the Sprint proceeding and the Order that came out of that. Where in that particular Order -- or in what part of that Order do you rely upon to establish what you consider to be the FCC's standard in addressing traffic versus non-traffic sensitive costs?

15 Α. I cite to that on page 10 and 11 of my 16 Surrebuttal Testimony of November 7 of 2005 and the particular provision within there. The FCC cite is, 17 18 "If a CMRS carrier can demonstrate that the costs 19 associated with spectrum, cell sites, backhaul links, base station controllers and mobile switching centers 20 21 vary, to some degree, with the level of traffic that is carried on the wireless network, a CMRS carrier 22 23 can submit a cost study to justify its claim to 24 asymmetric reciprocal compensation that includes 25 additional traffic sensitive costs associated with

1 those network elements."

2	So between that and the general and
3	other provisions within the Order and the general
4	TELRIC rules, we've made that demonstration through
5	my testimony, through Mr. Hinman's testimony, through
6	Mr. Jacobsen's testimony, that the costs do vary with
7	level of traffic. And I don't know about in response
8	to what we were just talking about, but the support
9	assets for those assets are appropriately included.
10	Q. Now, in making that statement and in
11	providing your testimony here today there's been much
12	reference to the Colorado Order, for instance. Have
13	you had occasion to develop other cost studies in the
14	past, particularly TELRIC cost studies?
15	A. I have.
16	Q. And have they been approved by the
17	Commission?
18	A. Yes.
19	Q. And is your approach here that you take
20	consistent with what you've had approved elsewhere?
21	A. Yeah. They're following the same general
22	TELRIC principles, yes, they have been.
23	MR. ASAY: May I approach the witness?
24	THE COURT: Yes.
25	Q. (BY MR. ASAY) I believe there were some
26	

1 questions that Mr. Monson asked you with respect to a fill factor and I think there was a reference to a 90 2 3 percent fill factor in the Qwest proceeding. Do you remember that line of questioning? 4 I do. 5 Α. 6 I would represent to you that I have 0. 7 presented to you the Order of the Utah Commission in 8 that case. Would you verify that that's, in fact, 9 what you're reading from? 10 It is. Α. Can you read the provision that relates to 11 Ο. the 90 percent fill factor? 12 Yes. "We also note that Qwest has to 13 Α. serve the current demand, and in some isolated areas 14 of its Utah territory, such high levels of fill 15 16 simply are not attainable. We direct the Commission to adopt a 90 percent switching fill factor level." 17 Is a 90 percent fill factor, according to 18 Ο. 19 your opinion with respect to that Order, appropriate for the rural areas? 20 21 Well, when I read the entire paragraph, Α. 22 what the Commission is saying here is that there are 23 currently, in the sentence previous to the one that I just read, actually I read two sentences, the 24 25 sentence previous to the first sentence I just read, 26

1 it talks about how Qwest currently operates some 2 switches in Utah at fill levels approaching 98 3 percent. So Qwest, the way I understand their 4 service territory, has large urban areas that have a 5 98 percent fill and then they have sparse rural 6 areas. But the majority of their lines, the largest 7 proportion, is in the urban areas.

8 So the way I understand what the 9 Commission did here is that they took some kind of 10 weighted average. So you have 98 percent for the 11 large majority of the population compared to some 12 smaller utilization for a smaller portion of the 13 population. A weighted average on that would be 14 where they came up with the 90 percent.

15 For Union, Union doesn't have those large 16 kind of metropolitan areas in total, in the same proportion that Qwest does. So whenever Union serves 17 a very rural area with low fill factors, it doesn't 18 19 have anything to offset those to the extent that Qwest does. So the answer to your question is no, I 20 21 don't think the 90 percent would be reasonable given 22 the types of geography and demographics that Union 23 serves.

24 Q. How, then, if you look at the modeling 25 that you're attempting to accomplish, an efficient

26

1 network, if you will, who do you recover from for providing the services in the rural areas? 2 3 Α. Are the costs recovered from customers in the rural area? 4 5 Yes. How? Ο. 6 Α. Well, through provision of monthly retail 7 rates, any roaming rates that you receive, and then 8 in this case from other entities who terminate 9 traffic on Union's network. 10 And with respect to roaming rates, do Q. roaming customers contact Qwest customers? 11 12 Α. No. I'm sorry, can you repeat the 13 question? 14 Yes. Do roaming customers, those who are Q. 15 roaming, contact Qwest customers? 16 Α. Do you mean when a customer is roaming, do they end up calling Qwest as part of the roaming? 17 18 Ο. Yes. 19 Α. With that clarification, the answer is 20 yes. 21 THE COURT: Let me just break in a minute. 22 Mr. Hendricks, I just want to be clear for the 23 record. A moment ago at Mr. Asay's request you read from an Order. Would you just go ahead, and I don't 24 25 know if you've got the entire copy there, but just

1 cite by Docket Number or Date Issued, so forth, what 2 you read from? 3 THE WITNESS: Sure. It's Docket Number 01-049-85. It's a Report and Order issued May 5, 4 2003. 5 6 THE COURT: That's by the Utah Commission, 7 correct? 8 THE WITNESS: That is correct. 9 THE COURT: Thank you. 10 Sorry, Mr. Asay. Go ahead. MR. ASAY: Mr. Goodwill, do we need to 11 enter that into the record? 12 THE COURT: I can certainly mark it. You 13 know, it's the Commission's own order, we can take 14 15 administrative notice of it. It's a matter of public 16 record. We can go ahead and mark it. We just need to make sure we have a copy for the court reporter. 17 MR. ASAY: And I'm perfectly happy with 18 19 the status of the record. 20 THE COURT: That's fine. We can leave it 21 that way. MR. ASAY: And I believe that's all I 22 23 have, Judge Goodwill. Thank you. 24 THE COURT: Mr. Monson, any recross? 25 MR. MONSON: Just one question based on 26

1

the interpretation of this Order.

RECROSS-EXAMINATION 2 3 BY MR. MONSON: Mr. Hendricks, were you an expert witness 4 Ο. in this proceeding? 5 6 Α. No. 7 And so your assumptions about what the Ο. Commission did with regard to a weighted average is 8 9 simply based on reading the language on this page; is 10 that correct? That's correct. 11 Α. And you don't know for a fact whether or 12 ο. not Qwest was attaining a 90 percent fill factor on 13 a weighted average of its switches in Utah, do you? 14 15 Α. Well, it says that "The 90 percent fill 16 level balances the competing facts that much higher fill levels in some switches are possible...but due 17 to the location and dispersion of customers, lower 18 19 fill levels will be required in some switches." So whether they actually did a specific 20 21 calculation and came up with 90 percent, I don't 22 know. But reading this language, it appears that 23 they did that kind of analysis. They've looked at here's higher, here's lower, we're going to come up 24 25 with 90 percent, we think that's a balance.

1	Q. Do you know whether or not Qwest achieves
2	that level of fill factor on its switches in Utah?
3	A. I don't know.
4	MR. MONSON: Thank you.
5	THE COURT: Ms. Schmid?
б	MS. SCHMID: No, no recross.
7	THE COURT: Anything further of this
8	witness?
9	MR. ASAY: Judge Goodwill, I do not have
10	anything further.
11	THE COURT: Okay. Thank you, Mr.
12	Hendricks. Do we want to move on to the next
13	witness? I know we just took a break a short while
14	ago, or we could take our lunch break now, whatever
15	makes most sense.
16	(Off the record.)
17	THE COURT: Back on the record. We had a
18	brief discussion off the record about scheduling and
19	the next witness. We'll go ahead and take our lunch
20	break now and return at 1:30.
21	(Noon recess from 12:12 to 1:34 p.m.)
22	00000
23	THE COURT: All right. Let's go back on
24	the record. Before we broke, Mr. Asay, I believe you
25	were about to call your next witness.
26	

1 MR. ASAY: I would call Mr. James Woody to the witness stand. 2 3 THE COURT: Mr. Woody, please stand and raise your right hand. Do you solemnly swear the 4 5 testimony you're about to provide will be the truth, 6 the whole truth and nothing but the truth, so help 7 you God? 8 MR. WOODY: I do. 9 THE COURT: Thanks. Please be seated. 10 11 JAMES HOWARD WOODY, 12 called as a witness, was examined and testified as follows: 13 14 THE COURT: Mr. Asay? 15 16 MR. ASAY: Thanks. 17 18 DIRECT EXAMINATION BY MR. ASAY: 19 20 Would you state your name for the record? Ο. 21 Α. James Howard Woody. 22 And, Mr. Woody, by whom are you employed? Q. 23 Α. Union Telephone Company. 24 What is your position with Union Telephone Ο. 25 Company? 26

1 I'm a member of the management team. Α. I quess that's probably the primary position I serve. 2 3 I also serve as Treasurer, a number of odds and ends. 4 Ο. And why are you testifying here today? 5 To explain Union's basic position with Α. 6 respect to asymmetrical rates. 7 And as part of that position, are you Ο. sponsoring certain testimony and exhibits, including 8 9 testimony, Direct Testimony that was presented on 10 October 4, '05, and I have marked as Union testimony 3.0, which would have four attachments to it which 11 have been marked as 3.1, 3.2, 3.3, 3.4, which line up 12 with initially Exhibits 1 through 4 for Union 13 14 Telephone. 15 In addition, have you presented testimony 16 which would be Rebuttal Testimony marked as 2R --17 3R. Α. Oh, 3R and attachments, which would be 18 Ο. 19 attachments 3R.1 through 3R.5 which correspond to Exhibits 5A through 5E as originally filed; and 20 21 finally certain Post Surrebuttal Testimony which has been marked as PSR which would be 3PSR. 22 23 Does that incorporate the testimony and exhibits that you have provided? 24 Yes, it does. 25 Α. 26

1 Q. And were these testimony and exhibits 2 prepared by you or under your direction and are they 3 true and correct, to the best of your knowledge and belief? 4 5 Yes, they are. Α. 6 Do you have any supplements or corrections Q. 7 that need to be made to the testimony? 8 Α. No, I do not. 9 MR. ASAY: With that, Mr. Goodwill, I 10 would offer those testimonies and exhibits into the record. 11 THE COURT: Any objection to their 12 13 admission? 14 MR. DETHLEFS: No objection, your Honor. 15 MS. SCHMID: No objection. 16 THE COURT: All right. We'll admit them as marked. 17 18 0. (BY MR. ASAY) Do you have a short summary you would like to offer? 19 20 MS. SCHMID: Pardon me. Could Mr. Woody 21 check that his microphone is on? 22 THE WITNESS: I think the light is on. Is 23 that better? MS. SCHMID: That's better. Thank you. 24 25 THE WITNESS: Yes, I do. 26

1 Union Telephone Company is a small rural 2 carrier that provides both land line and wireless 3 services in the rural areas of Wyoming, Utah, and in 4 Colorado. We have approximately 7,000 land line 5 customers and roughly ten times that -- roughly 6 40,000 wireless customers.

7 Because we serve the rural areas of 8 Wyoming, we have much higher costs than an urban 9 carrier like Qwest and, therefore, a need for an 10 asymmetrical rate, a rate that is more reflective of 11 the costs that we incur when a carrier such as Qwest 12 dumps traffic on our system and causes additional 13 costs for us.

14 One of the issues that was brought up in 15 the Rebuttal Testimony was the issue of access. 16 Union initially sought access charges as a means of compensation for this interconnected traffic. 17 18 However, with the T-Mobile decision that occurred, I 19 believe it was in February of 2005, the FCC stated basically that wireless companies could not use 20 21 access tariffs as a means of collecting the necessary rates for their traffic. 22

There is, however, an exception, and that deals with the issue of interMTA traffic, where basically the FCC has set up areas that they have
1 classified as metropolitan transport areas. They're 2 rather large areas, but in our case some of the 3 boundaries run right through the middle of our territory because, again, as a rural carrier they put 4 the lines out in the rural areas to separate the 5 6 pieces. So we serve partly the Denver MTA, the Salt 7 Lake MTA, the Billings MTA, and I think there's probably another MTA in there. 8

9 And the traffic that flows between those 10 areas, for instance, a call, say, from Rock Springs, 11 Wyoming, to Dutch John, Utah would be an in interMTA 12 call because Dutch John is in the Salt Lake MTA and 13 Rock Springs is in the Denver MTA. And the FCC has 14 said that access charges is the appropriate thing to 15 charge between those areas.

And in that respect, Union respectfully requests to be able to charge Qwest when they send traffic to us that's in the interMTA nature, the ability to charge them an access charge as opposed to the interconnection charge.

In addition to that, in the Post Surrebuttal Testimony, basically I disagree with the conclusion that our wireless network is not 100 percent traffic-sensitive. Basically it is traffic-sensitive in that additional call volumes

cause every element within our network to be added to 1 or changed from the antennas at the cell site clear 2 3 back to the cards within the switch. As traffic 4 expands on the network and you have to add more radios to a cell site, you also have to add more 5 6 antennas because, guess what? You can only hook so 7 many radios to an antenna before you end up with 8 losses that are unacceptable in the transmission. 9 At the same time that drives size and 10 number of towers because, guess what? You can only put so many antennas on a tower before you have to 11 build another tower alongside or build a larger 12 13 tower. And that goes clear through to the buildings, which you can only put so many radios within a 14 15 building, you can only put so many buildings on the 16 land. So basically the whole network is traffic 17 sensitive. 18 I think that concludes my summary. 19 MR. ASAY: Thank you. We make the witness available for 20 21 cross-examination. THE COURT: Mr. Dethlefs? 22 23 24 CROSS-EXAMINATION 25 BY MR. DETHLEFS: 26

1 Good afternoon, Mr. Woody. Q. Good afternoon. 2 Α. 3 I would like to start kind of where you Ο. left off and talk about what you referred to as 4 metropolitan transport areas. 5 6 Your Honor, may I approach the witness? 7 I have an exhibit that would be very helpful for this 8 discussion. 9 THE COURT: Sure. 10 MR. DETHLEFS: I might as well at this time, if I may hand out two more exhibits relating to 11 this, it would also be helpful. 12 THE COURT: All right. 13 14 MR. DETHLEFS: Your Honor, so we have the 15 record clear, can we mark the document that has the 51 major trading areas as Qwest's Cross Exhibit 5? 16 17 THE COURT: All right. MR. DETHLEFS: And then the two GSM home 18 19 coverage maps, I'll represent I took from Union's The first one has actually the website on 20 website. 21 it, and the second one is actually the blowup of the picture that's in the smaller space on the first. So 22 23 if we could mark the document that has the website 24 reference on it Qwest Cross Exhibit 6 and then the 25 blowup of the map within that as Qwest Cross

111

1 Exhibit 7.

2 THE COURT: All right. We'll mark them as 3 such.

(BY MR. DETHLEFS) Mr. Woody, let's talk 4 Ο. for a minute about the Major Trading Area map. First 5 6 of all, does the name "Major Trading Area" sound 7 correct to you? I believe you said metropolitan 8 transport area. 9 Α. I think the basic area has been defined as 10 both, as a major trading area, which represents what Rand McNally calls it in terms of how they build the 11 maps. In terms of the transport, in terms of whether 12 it's local or not, it's been referred to as a 13 metropolitan transit area. So I think both are 14 15 correct and for discussion here I'll accept MTA as 16 a --If it's all right, we'll refer to as MTA 17 Ο. 18 so we don't have to worry about what it's called. 19 Have you seen what we've marked as Cross Exhibit 5 before? 20 21 You're referring to the MTA map? Α. 22 The MTA map, yes. Q. 23 Α. Yes. And on this map it's correct, isn't it, 24 Ο.

25 that the MTA boundaries are marked in blue?

1 That's correct. Α. And the state boundaries are marked in 2 Ο. 3 red, right? 4 That's also correct. Α. 5 And just looking at this map and the Q. 6 boundaries, it's true, isn't it, that Salt Lake City is in MTA 36? 7 8 Α. That is correct. 9 Ο. And most of Wyoming and Colorado are in 10 MTA 22? 11 That's also correct. Α. Now, Union Cellular service, it offers it 12 ο. in the states of Colorado, Wyoming and Utah. And 13 14 does it also offer it in Idaho? 15 Α. Yes, we have some service in Idaho. 16 ο. And it's true, isn't it, that the bulk of 17 Union Cellular's customers are located in Wyoming; isn't that true? 18 That's also true. 19 Α. 20 Could you give me a breakdown of, say, how Ο. 21 many customers, how many wireless subscribers you 22 have in Wyoming versus Colorado versus Utah today? 23 Α. I really can't off the top of my head. 24 Would it be fair to say that the number of Ο. 25 subscribers that are based out of Wyoming is 26

1 two-thirds of the number?

2	A. I'm not sure it's that high, although it's
3	relatively close. I just off of the top of my head
4	can't really tell you what the number is.
5	Q. All right. Let's look at what we've
б	marked as Cross Exhibit Number 6. This is, in fact,
7	a coverage map that Union has on its website; isn't
8	that true?
9	A. That's right.
10	Q. And I'll represent that the only
11	difference between Cross-Examination Exhibit 6 and
12	Cross-Examination Number 7 is that I printed up
13	Cross-Examination Number 7 without the website
14	reference so that the map was a little bit larger.
15	But it also looks right to you, doesn't it?
16	A. It does. Although the age of it is such
17	that there's a lot of green and yellow area that
18	actually exists that doesn't show on this map.
19	Q. Okay. So do you recall when this map was
20	first put on the website?
21	A. I don't. I don't know what the age of
22	this map is.
23	Q. Is it within the last five years?
24	A. Yeah, at least.
25	Q. Because you didn't start offering GSM
26	

1 until within the last five years; isn't that correct? That's correct. 2 Α. 3 Ο. And there's, in the bottom right-hand corner, there's it looks like a date reference and 4 you can see it on Cross-Examination Exhibit Number 7, 5 6 9/6. Does that sound like a correct date for the 7 map? 8 Α. It's entirely possible that's the date of 9 the map, although it could be a date of something 10 else. I just don't know the age of the map. 11 Now, based on this map, am I correct that Ο. Union offers cellular service in Cheyenne, Wyoming? 12 That is correct. 13 Α. 14 And in Casper, Wyoming? Q. 15 Α. That's also correct. 16 Ο. And in Gillette, Wyoming? 17 Yes. Α. And in Laramie, Wyoming? 18 Ο. 19 Α. Yes. 20 And in Steamboat Springs, Colorado? Ο. 21 Α. Yes. How about Douglas, Wyoming? 22 Q. 23 Α. We do there as well. Are those the largest cities within 24 Ο. 25 Union's cellular coverage area or are there other

1 areas that are equivalent size or bigger?

Those probably represent most of the 2 Α. 3 larger towns. I wouldn't really characterize any of them as cities. You know, Steamboat Springs is not a 4 real big place. It's maybe a couple of thousand 5 6 regular residents and Casper is only about 50,000. Ι 7 believe that's about the largest of the group. 8 Ο. Okay. Now, if we look at Qwest Cross 9 Exhibit 5, the MTA map, I want to go through a few 10 hypotheticals. Let's say a Qwest customer in Salt Lake City called a Union Cellular customer located in 11 12 Cheyenne. Uh-huh (affirmative). 13 Α. 14 That would be an interMTA? Q. 15 Α. That's correct. 16 Ο. I-N-T-E-R? 17 Inter. Α. And the same would be true of a call from 18 Ο. 19 a Qwest customer in Salt Lake City to a Union Cellular subscriber in Casper, Wyoming, correct? 20 21 Α. That's also an interMTA call. 22 And the same would be true for a call 0. 23 from a Qwest customer in Salt Lake City to either a 24 Gillette customer of Union Cellular, a Douglas 25 customer of Union Cellular, a Laramie, Wyoming

1 customer of Union Cellular, or a Steamboat Springs customer of Union Cellular, correct? 2 3 Α. Yes. If it originates in the Salt Lake MTA and terminates in Denver, it would be an interMTA 4 5 call. 6 And then looking at the intraMTA calls, Q. 7 let's take an example of a call from a Owest customer 8 in Salt Lake City to a Union Cellular customer in 9 Vernal, Utah. 10 That would be an intra. Α. IntraMTA. Now, it's your understanding, 11 Ο. isn't it, that under the FCC's rules that intraMTA 12 calls are the calls that are subject to reciprocal 13 14 compensation, correct? 15 Α. That's correct. 16 And so interMTA calls are not calls that Ο. are subject to reciprocal compensation? 17 18 Α. No, they're subject to access. 19 Q. And so in this proceeding when we're talking about creating an asymmetric rate, we're 20 21 talking about creating an asymmetric rate for 22 reciprocal compensation, correct? 23 Α. We're talking about both. Both issues were brought up in this case. 24 25 ο. Well, in terms of the rate that you're 26

- 1 asking the Commission to set --

2	A. In terms of the study that Mr. Hendricks
3	did, that generates the asymmetrical rate for the
4	intraMTA calls.
5	Q. That was my question. Thank you.
б	Now, one of the service now, there are
7	a group of services that Union Cellular offers with
8	its GSM switch that are data services, correct?
9	A. Yes, there are.
10	Q. So, for example, you have Text (SMS) and
11	Multimedia (MMS) Messaging, correct?
12	A. Yes, that's correct.
13	MR. DETHLEFS: Your Honor, may I approach
14	the witness again? I have another
15	THE COURT: Yes.
16	MR. DETHLEFS: Your Honor, if we could
17	mark this page I've just handed out as Qwest Cross
18	Exhibit Number 7, or excuse me, number 8?
19	THE COURT: We'll mark it as 8.
20	Q. (BY MR. DETHLEFS) Okay. Mr. Woody, I
21	took this from the Union website. Does this look
22	familiar?
23	A. Yes, it does.
24	Q. And this is, in fact, from Union
25	Cellular's website?
26	

- A. It appears to be.

2	Q. And the services down along the left-hand
3	side of the page, Text (SMS) Multimedia (MMS)
4	Messaging, Mobile Web, bundles of those services and
5	Downloadable Services, those are all services that
б	Union Cellular offers using its GSM switch, correct?
7	A. That's correct.
8	Q. And these services, whether they're
9	actually ordered by Union Cellular customers are, in
10	fact, available to all Union Cellular customers,
11	correct?
12	A. Yeah, they're available.
13	Q. And the prices on this sheet, are those
14	the current prices for those services?
15	A. I believe so, but I'd have to check to be
16	certain.
17	Q. Would you accept subject to check that
18	they are the prices?
19	A. Yes.
20	Q. Now, I believe Mr. Jacobsen testified, and
21	Mr. Hendricks as well, that Union today currently
22	only gets a small percentage of its revenue from data
23	services; is that correct?
24	A. That is correct.
25	Q. Now, one of the reasons for going to GSM
26	

1 was to have a greater data capability, right? Well, that and also the spectral density 2 Α. 3 of the radios allows more calls than under the older technology, such as TDMA. 4 5 Now, would it be fair to say that these Ο. 6 data services are not highly subscribed? 7 At this point, no. Α. 8 Q. A very small percentage of use? 9 Α. A very small percentage. 10 And that's the reason why the revenues are Q. low is because very few customers actually subscribe 11 to them? 12 Yes, that's true. 13 Α. 14 Now, I believe you've testified in a Q. 15 number of places in your testimony, including your 16 summaries today, that Union offers, Union Cellular offers services primarily in rural areas, correct? 17 18 Α. That is correct. 19 Q. And it's true, isn't it, that Union Cellular receives Universal Service revenues from the 20 21 Universal Service Fund; isn't that correct? 22 Α. That's true. 23 Q. And in fact, it's currently running at about 8 or \$9 million a year? 24 25 Α. That would be close. But again, I would 26

1	have to check to know what the exact number is.
2	Q. Now, I believe, are you the person who
3	submits reports to the Universal Service Fund
4	Administrator?
5	A. No, I am not.
б	Q. Is it done by somebody under your
7	supervision?
8	A. Yes.
9	Q. Let me show you if I may approach the
10	witness again, your Honor.
11	THE COURT: Yes.
12	MR. DETHLEFS: Your Honor, this is a page
13	that we have taken from the USAC website. USAC I
14	believe stands for, just a second, USAC, Universal
15	Service Administrator Company. And if we could mark
16	this as Qwest Cross Exhibit Number 9.
17	THE COURT: We'll mark it as such.
18	Q. (BY MR DETHLEFS) Mr. Woody, have you ever
19	accessed the Universal Service Administrator's
20	website to check to see how much
21	A. No. I usually just look at paper reports.
22	Q. That they submit to you?
23	A. Yes.
24	Q. Now, if you look at the bottom right-hand
25	corner there's three references for Union Telephone
26	

1 Cellular?

2	A. Uh-huh (affirmative).
3	Q. In the far right-hand column it says,
4	"Total High Cost Quarterly" and it's got about
5	\$440,000 for the first Union Cellular line, the
6	second Union Cellular line has \$1.781 million, and
7	then finally at the bottom it's got \$3,700. Do you
8	see those references?
9	A. I do.
10	Q. Does that refresh your recollection as to
11	about how much revenue Union is currently receiving
12	from the Universal Service Fund?
13	A. Yes, it did.
14	Q. And 8 or \$9 million is an accurate number
15	on an annual basis?
16	A. It would be in that range.
17	Q. About how much revenue does Union Cellular
18	receive in roaming charges?
19	A. Oh, roughly a million dollars a month.
20	Q. Did I hear that right, a million dollars a
21	month?
22	A. Uh-huh (affirmative).
23	Q. If you could turn to your Direct
24	Testimony, I would like to go through a few of the
25	statements that you make in your testimony. There's
26	

1 a number of statements that seem to me to pertain to 2 Wyoming, and that's why I'm asking you about them. I 3 was just trying to get some clarification. On I believe it's -- do you have -- give 4 me a second to find the reference. Yes, it's on page 5 6 6 of your testimony, you discuss Union purchasing the 7 assets of Pyxis Communications. Do you see that? Pyxis Communications. 8 Α. 9 Ο. Now, Pyxis had operations in Wyoming, 10 correct? 11 Α. That's correct. And so Pyxis, your testimony about Pyxis 12 Ο. doesn't relate to Utah, it relates to Wyoming, 13 14 correct? It relates to Utah in that when in 15 Α. 16 approximately the same time that we acquired the 17 licenses from Pyxis, we also acquired some licenses here in Utah from AWS, most particularly in the 18 19 Roosevelt/Duchesne areas. And the same thing occurred here in Utah that occurred in Wyoming and in 20 21 Colorado, Qwest blocked the traffic to the NXXs assigned to Union. So it does relate. 22 23 Ο. It does relate to Union. Pyxis has had 24 operations in Utah? 25 Α. No. Pyxis had -- was operations in 26

1 Wyoming, the licenses we acquired in the eastern part of the state of Wyoming. 2 3 At some point in your testimony, and I'm Ο. 4 not going to try to track down the reference, there's a reference to Kemmerer Hill. Do you recall that 5 6 reference? 7 Α. I don't recall, but there is a Kemmerer 8 Hill. 9 Ο. And that's located in Wyoming as well, 10 correct? That is correct. 11 Α. Now, if you could turn for a moment to 12 ο. your Post Surrebuttal Testimony. 13 14 Sure. Α. 15 Ο. On the first page at the very bottom, the 16 last sentence that starts on the page, you say, 17 "Union has expended a great amount of expense and time in building a rural network for its service 18 19 areas in Utah, Wyoming and Colorado." 20 And then a few lines below that you say, 21 "I believe that Union's efforts in extending 22 facilities to rural areas in Utah are consistent with 23 the policy of this state." 24 Is the policy of this state that you're 25 referring to encouraging the deployment of 26

1 telecommunications in underserved areas? I believe it's the policy to provide 2 Α. 3 ubiquitous services throughout this state, and that includes the rural areas we serve. 4 But Union's focus has been on the rural 5 Ο. 6 areas, correct? 7 That is correct. Α. 8 ο. And one of the characteristics of the 9 rural areas is that there were not a lot of other 10 providers who were offering service, correct? 11 Α. That's correct. So the stated competition is lower than, 12 ο. for example, in a larger municipality or a city like 13 14 Salt Lake City, correct? 15 Α. It usually is. Although, in every market that we serve there's at least one other carrier, and 16 most markets there's three and four carriers. 17 And is this true of the most rural parts 18 Ο. 19 of Union Cellular's coverage area? 20 Α. Yes. 21 ο. Is the policy that you're referring to, 22 the policy of the state, as you say, the same policy 23 under line Universal Service? I'm not following what you're asking. 24 Α. 25 Well, there's a reason why --Ο. 26

1 It's true, isn't it, that there is a 2 reason why Universal Service Fund has been created 3 and why payments are made to carriers like Union Cellular who serve in rural areas, correct? 4 That's correct. 5 Α. 6 And is that the policy that you're Ο. 7 referring to when you refer to the policy of this 8 State on line 26? 9 Α. The Universal Service Fund is a Federal 10 fund that we draw from as a wireless company. So, therefore, it's not -- it's not a policy of this 11 12 State. Well, I guess what I'm getting at, are you 13 Ο. referring to something different than a State version 14 15 of the Federal Government's Universal Service goals? 16 I think the goals are similar. Α. Now, I would like to ask you a few 17 Ο. 18 questions that were really in the testimony of Mr. 19 Hinman to see if you can help me understand them. 20 Α. Sure. 21 ο. One of the statements that's made in Mr. 22 Hinman's testimony, I'll just read to you, it's in 23 the Surrebuttal Testimony on page 7. It says, "The GSM switch, on the other hand, will change much more 24 25 rapidly as technology changes and as customers demand 26

1 more features and capabilities." 2 Is that a statement you share? Do you 3 agree with that? Α. I think so. 4 5 Is it true that Union offers a service Ο. 6 called General Packet Radio Service? 7 Α. Yes. We offer GPRS. 8 0. And GPRS is based on Internet protocol, 9 correct? 10 Α. It will handle Internet protocol. It's not really based on the Internet protocol. 11 And GPRS supports applications like 12 ο. Internet browsing and multimedia message services and 13 14 things like that? 15 Α. Yes, it does. 16 Ο. And one of the advantages of GSM is that 17 Union will be able to provide more complex and technologically advanced data services; is that 18 19 correct? 20 And that's also correct. Α. 21 ο. And that's related to General Packet Radio 22 Service? 23 Α. Yes. And Union also has a service or product 24 Ο. 25 called Edge; is that true? 26

1 That's true. Α. Could you tell me what Edge is? 2 Ο. 3 Α. It's kind of like GPRS on steroids. It allows up to, I think, 400 kilobytes of data rates. 4 5 So it allows a higher data rate than GPRS? Q. 6 Α. Right. 7 And to have Edge you have to have software Ο. 8 upgrades? 9 Α. That's true, sir. 10 And were those done in the GSM switch? Q. 11 Yes. Α. And Edge, it's true, is it not, allows 12 ο. delivery of advanced mobile services like downloading 13 14 video and music clips? 15 Α. You can download about anything with it, 16 yes. 17 Does Edge also require upgrades to what we Ο. were calling BTSs? 18 Not to my knowledge. 19 Α. 20 Not to your knowledge? Ο. 21 MR. DETHLEFS: Your Honor, I believe those 22 are all the questions I have at this time. 23 I believe I would like to offer into 24 evidence what we've marked as Qwest Cross Exhibits 5 through 9. 25 26

1 THE COURT: Any objection to their 2 admission? 3 MR. ASAY: No. MS. SCHMID: No objection. 4 5 THE COURT: We'll go ahead and admit them. 6 Ms. Schmid? 7 MS. SCHMID: No questions for this 8 witness. THE COURT: Mr. Asay, any Redirect? 9 10 MR. ASAY: Three, your Honor. If I could 11 approach? 12 THE COURT: Certainly. 13 14 REDIRECT EXAMINATION BY MR. ASAY: 15 Mr. Woody, I'm going to hand you a 16 Ο. 17 complete set of your testimony that's been received and one of the exhibits that has been received is 18 Exhibit 3.3, which I believe is a copy of the 19 20 agreement. This proceeding that we're here for is in 21 the end an arbitration of an Interconnection Agreement; is that correct? 22 23 Α. That's correct. 24 And there was some questioning by Mr. Ο. Dethlefs with respect to I believe inter and intraMTA 25 26

1 calls. Do you remember that questioning? Yes, I do. 2 Α. 3 Directing your attention to what I believe Ο. is page 46 of Exhibit 3.3 --4 5 MR. DETHLEFS: Your Honor, I don't have a 6 copy of what the witness is being shown. Does Mr. 7 Asay have a copy I can look at or --8 MR. ASAY: If I can meander over. 9 THE COURT: Sure. 10 (BY MR. ASAY) Do you see my reference to Q. the exhibit, page 46, and particularly Section 6.3.9? 11 Yes, I see that. 12 Α. And what does that relate to? 13 Ο. 14 It relates to interMTA factors or interMTA Α. 15 traffic. 16 So as part of this proceeding, is there Ο. provisions that are requested by the parties as that 17 relates to compensation on an interMTA basis? 18 19 Α. Yes, there are. 20 Then just with respect to the exhibit that Ο. 21 you have, how is Qwest requesting that they're being 22 compensated? How are they requesting compensation 23 for interMTA costs? 24 They're requesting that we pay them access Α. 25 charges for any interMTA calls that would originate 26

1

in Union's area and terminate to Qwest's customer.

And what is Union's request with respect 2 Ο. 3 to the same calls?

4 Α. We request the reciprocal of it, to be compensated at an access charge rate for traffic 5 6 originated from a Qwest customer, terminated on a 7 Union Cellular customer as a different MTA.

8 There was also questions with respect to Ο. 9 roaming, and I believe you referenced an amount as it 10 related to roaming. Just out of curiosity, is that a confidential number or is that non-confidential or 11 was it so general that it doesn't matter? 12

13 It's general enough that it probably Α. doesn't matter. The actual amounts are confidential 14 15 and, you know, basically I don't see how they relate 16 to interconnection.

Well, let me ask this with respect to 17 Ο. 18 that. As you look at roaming traffic, is it possible 19 that you're going to have roaming traffic that connects to a Owest customer? 20

21 Certainly. When a customer of another Α. 22 carrier roams on our network or uses our network, 23 they both place and receive calls just as our local customers would. So they'll make interMTA calls, 24 25 they'll make intraMTA calls, they'll terminate and

1 receive calls from Qwest customers.

2 Ο. And finally with respect to the line of 3 questions related to the data services. Did your 4 testimony in any way contradict your position that data services are essentially a small fraction of the 5 6 total services provided by Union? 7 No. It doesn't change my testimony in the Α. least about the fact that data is a very small piece 8 9 of our network. And you have to remember that when 10 the network is designed, it's designed for voice, it's not designed for data. And the way the network 11 works, when it handles a data call or a data 12 transmission is it takes a voice channel and uses it 13 and allocates that for data. If a voice call comes, 14 15 it takes the channel back away from the data and 16 allocates it to voice. And so voice has priority over data. All that happens in terms of data is the 17 18 data rate gets slower because there's no channel 19 available for the call.

But the sizing of the network and the number of channels in the network are sized for voice, not for data. So you can't just say, oh, well, you've got an arbitrary amount that you take out for data. We built the network for voice and it wouldn't be any smaller or cost any less if we didn't

1 have data.

Mr. Woody, does that conclude your 2 Ο. 3 testimony? Α. Yes, it does. 4 5 MR. ASAY: Your Honor, I have no more 6 questions for this witness. THE COURT: Mr. Dethlefs? 7 MR. DETHLEFS: I do have one follow-up 8 9 question. 10 RECROSS-EXAMINATION BY MR. DETHLEFS: 11 Mr. Woody, we were talking, both myself 12 ο. and Mr. Asay asked you some questions about interMTA 13 14 calls. So let me give you a hypothetical situation with an MTA, interMTA call. 15 16 Let's say the call originates by Qwest in 17 Salt Lake City. Qwest hands the call off to an interexchange carrier. The interexchange carrier 18 delivers the call to Union Cellular, who in turn 19 20 delivers the call to a Union Cellular subscriber who 21 is located in Gillette. 22 In that circumstance the carrier who would 23 pay access charges to Union Cellular would be the interexchange carrier, correct? 24 That is correct. 25 Α. 26

Q. It would not be Qwest Corporation, would
 it?

3 Α. No, not in that situation. However, you 4 would have situations where a Qwest customer was making what they thought was a local call, but it 5 6 crossed an MTA boundary and so, therefore, would be 7 interMTA and there would be no interexchange carrier 8 involved in it. So you can't just say, well, they're 9 all going to go to the IXCs because they're not. 10 MR. DETHLEFS: That's all I have, your 11 Honor. THE COURT: Ms. Schmid? 12 13 MS. SCHMID: Nothing further. 14 THE COURT: Anything further, Mr. Asay? 15 MR. ASAY: Nothing further. Thank you. 16 THE COURT: Thank you. MR. Mecham? 17 MR. MECHAM: Your Honor, Union would call 18 19 Mr. Jacobsen. THE COURT: If you would please stand and 20 21 raise your right hand I will go ahead and swear you 22 in. Do you solemnly swear the testimony you are 23 about to provide will be the truth, the whole truth, and nothing but the truth, so help you God? 24 25 MR. JACOBSEN: I do.

1	THE COURT: Thank you. You may be seated.
2	MR. Mecham?
3	MR. MECHAM: Thank you, your Honor.
4	
5	HENRY D JACOBSEN,
6	called as a witness was examined and
7	testified as follows:
8	
9	DIRECT EXAMINATION
10	BY MR. MECHAM:
11	Q. Mr. Jacobsen, could you state your name
12	and business address for the record, please?
13	A. My name is Henry D Jacobsen. That's
14	J-A-C-O-B-S-E-N. My address is 1496 Mountain View
15	Drive, Lyman, Wyoming, 82937.
16	Q. Thank you.
17	And for whom are you appearing today?
18	A. I'm appearing on behalf of Union.
19	Q. And did you prepare and have filed
20	Rebuttal Testimony on March 15, 2007 consisting of
21	nine pages with one confidential exhibit attached?
22	A. Yes.
23	Q. And did you also have filed Post
24	Surrebuttal Testimony on October 26, 2007 consisting
25	of 24 pages with two exhibits attached?
26	

A. Yes.

2	MR. MECHAM: Your Honor, I think to be
3	consistent we would mark Mr. Jacobsen's Rebuttal
4	Testimony as Union 4R with a confidential exhibit
5	marked as Union 4R.1, and Mr. Jacobsen's Post
6	Surrebuttal Testimony would be marked as Union 4PSR
7	with the two exhibits being 4PSR.1 and .2.
8	Q. (BY MR. MECHAM) Do you have any
9	corrections that you would like to make to any of
10	that testimony?
11	A. Yes. I would like to make two small
12	changes to my testimony.
13	Q. Which piece?
14	A. This would be on the testimony dated March
15	15, 2007. On the footnote on page 4 where it says
16	"TDMA" or Time Division Multiple Access, is a first
17	generation," that should be "second generation, 2G."
18	And then it says, "It's world-wide
19	successor is GSM, which is," and please add the word
20	"also," "considered to be a second-generation
21	deployment of digital wireless."
22	Q. Anything further?
23	A. Yes. On page 5, line 89 in the same
24	testimony, I would like to add a word which was
25	inadvertently deleted. It says, "it is a shared,"
26	

1 and would you please add the word "access resource and therefore traffic sensitive." Those are the only 2 3 corrections. And nothing on your other piece of 4 ο. testimony? 5 6 Α. No. 7 And if I were to ask you the same Ο. questions that are posed in those two pieces of 8 9 testimony, would your answers under oath today be the 10 same? 11 Yes, they would. Α. 12 Q. Thank you. Your Honor, we would move the admission of 13 14 Union 4R with 4R.1 attached and Union 4PSR with 15 4PSR.1 and 4PSR.21 attached into evidence. 16 THE COURT: Any objection to their 17 admission? 18 MR. MONSON: No objection. 19 MS. SCHMID: No objection. THE COURT: All right. We'll admit them. 20 21 Q. (BY MR. MECHAM) Do you have a summary of 22 your two filings? 23 Α. Yes, I do. Let me just preface this by saying that I have been fortunate in my career to see 24 25 the evolution of telephone services from copper 26

cables and mechanical switching all the way through 1 the latest technologies involving fiberoptics 2 3 wireless communications, packet switching and all of the technologies in between, and I have been involved 4 in the actual construction, engineering, design, 5 6 planning, acquisition, operation, administration of 7 these networks for more than 35 years. 8 And I feel like I have a good historical 9 appreciation for technology as it has changed over 10 the years. And I would say that the most radical change that's occurred in my many years has been 11 12 what's occurring today in mobile services. 13 It may not be apparent to everyone that as of June 2005, which was several years ago, the number 14 15 of wireless handsets or lines exceeded the number of 16 land lines. And today the dominant method of communications both in minutes and in lines in the 17 18 American telecommunication industry is wireless. And 19 it is a radical departure in technology from anything that's in land line technology. 20 21 I have a diagram, your Honor, that I would 22 like to show. It's actually an attachment in my 23 second testimony. May I put that on the easel? THE COURT: Sure. 24 25 MR. JACOBSEN: With your permission, I 26

1

2

would discuss technology just very, very briefly as an introduction to my summary.

3 THE COURT: Okay. MR. JACOBSEN: The land line services are 4 basically composed of a dedicated cable that goes 5 6 from a telephone switch to a customer -- or to a 7 customer premise or a home. And this is referred to as a loop facility because when you lift a telephone 8 9 set the electrical current flows in a loop from the 10 switch to the home and back. It's referred to as 11 loop facilities and they're fairly simple to 12 construct.

You place cable or in some cases a carrier 13 14 facility in the ground with a service drop to the 15 home. And once it's installed in the ground it 16 requires very little maintenance and is what we call non-traffic-sensitive, since as a dedicated circuit 17 18 to the home, it doesn't matter to anyone else whether 19 you provide one call, ten calls, a thousand or many more calls per month on that facility since it's not 20 21 shared. I mean, your use of that circuit does not 22 affect anyone else in the telephone network.

And of course the telephone switch is a shared resource because it receives all calls and connects them. And on the outbound side, if the call

is transferred to another switch, that is a shared resource because calls are aggregated on a shared facility between switches, but at least from the home to the switch is a dedicated facility and has been consistently and logically found to be non-trafficsensitive.

Now, the corresponding piece, if I might8 stand and go to the board?

9 THE COURT: Sure. If you'll just make 10 sure and speak up so that the court reporter can hear 11 as well.

12 MR. JACOBSEN: The corresponding piece in 13 a wireless network that would represent the same access of maybe a mile or two of copper wire is 14 15 represented by this entire network up here. The 16 access portion in a radio network is a shared resource because there are only a fixed number of 17 18 radio channels available in the spectrum allocations 19 or licenses that have been purchased or leased by Union Telephone, Union Wireless. 20

21 And if a customer is out here in some 22 remote location making a phone call, basically 23 turning on his cell set to make a call, that call 24 moves on a wireless basis to antennas, through what's 25 called a base transceiver station, which is diagramed

here, and it goes through things like duplexers,
power amplifiers, and radios, and then is
consolidated on a microwave link and carried many,
many miles, sometimes hundreds of miles back to a
base station controller through a transporter, which
is basically a decompression device, into a GSM
switch.

8 Once it reaches the GSM switch it is 9 handled much like any other telephone call. And if 10 it goes to the outside world again it goes through 11 shared facilities called trunks between switches.

Now, I was asked to -- I respond and my 12 13 testimony is in response to testimony filed by Peter Copeland in which he had represented that the 14 15 wireless infrastructure out here was non-traffic 16 sensitive. Now, I have been involved in traffic engineering for many years, including some years of 17 18 research, and in fact wrote many of the traffic 19 practices and procedures used throughout the old Bell system and did actual doctoral level research in the 20 21 area of congestion theory, and this struck me as very 22 strange since by a classical argument everything on 23 the wireless side is a shared resource.

There's a limited number of channels.Customers vie or contend for those channels. If the

channels are not available the only recourse is only
 to block traffic or add more channels, and that is
 the essence of a traffic sensitive network.

I was somewhat baffled by that and so was asked to respond. And the logic of this notwithstanding, it's my understanding that Qwest's position on this was that in the absence of quantitative, meaning numerical data to confirm the obvious, Union had failed to meet a burden of proof that it was traffic sensitive.

Well, it is true that Union had not 11 12 implemented prior to the beginning of this year an effective data collection system that would gather 13 hourly statistics off the radio network. And when 14 15 the data request previously was posed by Qwest that 16 Union produce what's called utilization and 17 performance data and capacity data, Union was really 18 not in a position to respond because the only system 19 that was available for collecting data really did not aggregate traffic on an hour-by-hour basis, but on a 20 21 total day/total week basis, which is really not germane to capacity, which is basically on a peak 22 23 hour basis. We didn't have the traditional capacity 24 measurements.

But quite independent of this proceeding,

1 in the essence or interest of managing the network 2 more appropriately for greatest service 3 considerations and quality of service, Union did 4 place into service at the first of the year a system that would collect the statistics particular to this 5 6 proceeding. And so as soon as that system had gone 7 through test and acceptance, we promptly made 8 available to Qwest the data that would not only 9 qualitatively, but quantitatively, without question, 10 qualitatively and quantitatively define a network in terms of traffic sensitivity. 11 It showed, for example, that in about 20 12 13 percent of our working sectors we were undersized with respect to radio channels and that our 14 15 subscribers were being denied service for that 16 reason. And steps were immediately taken to add radios in some cases and add cell sites in others to 17 remedy the fact that we had more traffic than the 18 19 network could carry. And so I would argue in summary that the cost of carrying traffic in a wireless 20 21 network is extremely more complex and it's traffic 22 sensitive. 23 From a viewpoint of history, I look at the wireless infrastructure as probably the most 24

25 complicated arrangement of switching and control and

handoff that I have seen throughout my many years of
 career in this industry. Certainly more complex than
 a pair of copper wires going to a home, your Honor.

4 The reaction to my Rebuttal Testimony and the submission of traffic data was somewhat 5 6 interesting. First Qwest argued that we could not 7 enter that data into record. That, of course, was overturned and the data was entered. And then there 8 9 came a very subtle change. I think in conceding the 10 fact that it was traffic sensitive, the issue arose then, which I think is a very separate issue, was it 11 12 cost sensitive. I agree to traffic sensitive, but is 13 it cost sensitive, with the argument that many of the cell sites, or at least the sectors in the cell 14 15 sites, have more capacity in them than they would 16 normally see in, for example, land lines. And, therefore, since -- let me just back up one moment. 17 18 When you say something is traffic 19 sensitive, it simply means that if you have more traffic you need more facility. And that is 20 21 generally equivalent to saying it's cost sensitive because more facilities is more cost unless the 22 23 facilities are free. That would be the only condition that cost and traffic sensitivity would 24 25 mean the same.
1 And so they changed the argument from traffic sensitive to cost sensitive by arguing that 2 3 there was idle capacity in the network, which 4 basically meant that the additional traffic would have no additional cost for being carried. But if we 5 6 take a step back and understand some of the 7 differences between the two networks, I think that argument somewhat falls apart. 8

9 Number one, the traffic in a cell network 10 is mobile. We might have a cell site that appears to be idle today, but next week there might be a rodeo 11 or a special sales event or some other kind of event 12 13 which suddenly brings many people to that area and suddenly a cell site that would appear to be 14 15 underutilized is overflowing with traffic by the very 16 nature that the customer base is mobile, which is not the case in land line, which is a fixed telephone set 17 18 in someone's home.

19 Number two, the traffic data that was 20 provided by Union was for March, I believe March or 21 April, which is far outside the busy season. Being a 22 mobile service there is tremendous change in 23 month-to-month traffic depending on the number of 24 customers who are transiting or are using their 25 mobile phones.

1 For example, we talked briefly about In roaming traffic, a customer from one of 2 roamers. 3 our roaming partners who enters the Union network is 4 treated as though it is a Union customer. Its telephone number is registered in what we call the 5 6 Visitor Location Register and is treated as if it is 7 one of our own. And in fact the roaming partner maps would show coverage, reflect Union's coverage as if 8 9 it were theie own coverage.

10 And so during the summer months, which were not part of the Data Requests of Qwest, during 11 12 the summer months traffic might be 40, 50, 60, 70 13 percent higher depending on the circumstances and locations in the network. And so in trying to draw 14 15 conclusions about utilization in the network it's 16 somewhat erroneous to take a small snapshot at one time and draw broad conclusions about how efficient 17 18 the network is.

I would also point out that the nature of rural communications in the cellular business is as follows: We have a cell site that is in a remote area. Typically Union, I think in a wise move, uses mountains for the bottom 90 percent of their towers. And since the signal is line of sight, it travels in straight lines, the towers are usually in a difficult

1 location to access. It is true that when we go into a cell site, a minimal configuration would be one 2 3 radio with eight channels. And that might be greater than the immediate demand for that period or it might 4 not depending on the profile of the area, but in the 5 6 interest of having what we call electronic diversity, 7 we as a general engineering rule, as a practice, a good engineering practice of continuing service we 8 9 tend to put in two radios so that if one radio goes 10 down, which happens from time to time, traffic is not denied to those who would want it in that area. 11 12 And so the minimal design from an engineering standpoint, what I would call good 13 engineering practice to provide continuous service is 14 15 to provide a minimum of two radios. 16 Now, Qwest would argue that that is overengineering, that it is a waste of money and, 17 therefore, the network is not cost effectively 18 19 designed. We would argue, but that's what you do to provide reliable communications and it is a minimal 20 21 design for a forward-looking network. 22 Another issue that was raised by, and 23 especially by Mr. Anderson in his discussion, was that the modernization of networks, especially the 24 wireless network, is not something that's traffic 25 26

sensitive. We have heard some testimony regarding
 the effect of new technology on the ability to
 utilize spectrum. Spectrum means the radio channels
 and frequencies that Union has been able to acquire
 in order to operate the network. This is a fixed
 amount of radio channels.

7 Much of the technology from analog to first and second-generation digital radios, and I 8 9 agree that it's more data friendly, but most of that 10 has been designed around the ability of your wireless providers to use limited spectrum more efficiently. 11 12 On the drawing boards we have what we call 2.5G, which is universal mobile telephone service which 13 moves cell phone traffic into a completely new 14 15 technology of packet switching, which will in the 16 next 12 months require Union to retire its GSM switch 17 or to augment it with a new switch, new technology. 18 And on the drawing boards already and in some limited 19 deployment overseas there is yet a third generation called LTE, which is a long-term environment, which 20 21 again changes the technology to use spectrum more efficiently. And in fact, in many instances the only 22 23 way that we can continue to meet the demands of traffic in the industry as a whole is by introducing 24 new technology which uses spectrum more efficiently. 25

1 That isn't to say that there aren't other 2 benefits and other services, but the important 3 element of new technology is the ability to use 4 spectrum more efficiently.

5 Now, in my Rebuttal Testimony I have 6 discussed some of the -- some of the issues raised by 7 Copeland and by witness Anderson in their attempt to redesign the Union network to be more cost-effective. 8 9 Neither Copeland nor Anderson, respectfully, have had 10 any experience in designing wireless networks and their approach in doing so in their testimony is 11 deeply flawed from a technical standpoint, and I 12 believe I have covered those flaws in my testimony. 13 In summary, my conclusion would be simply 14 15 this. It is patently clear that a wireless 16 infrastructure network is extremely more complex, is extremely more costly than simple cable in the ground 17 and then to a wire center. Traffic is mobile and 18 19 it's very hard to define what is proper utilization in the network. 20

21 Clearly many of the sites and sectors in 22 the Union wireless network overflow significantly 23 showing that the facilities are traffic sensitive. 24 All sites potentially could be traffic sensitive 25 depending on the migration of traffic. And on the

1 basis of additional cost and being traffic sensitive, it is my opinion that Union has well met its burden 2 3 of proof in establishing the basis for asymmetric 4 compensation. 5 Ο. (BY MR. MECHAM) Does that conclude your 6 summary? 7 It does. Α. MR. MECHAM: Mr. Jacobsen is available for 8 9 cross-examination. 10 THE COURT: Just quickly, Mr. Jacobsen, just for clarity's sake, the diagram on the easel to 11 12 which you referred earlier in your testimony you had 13 mentioned was also contained in your testimony. I just wanted to make sure we're referring, then, to 14 15 what's in your Post Surrebuttal Testimony, 4PSR. 16 It's Exhibit 19 and I believe it's been admitted as 4PSC.1; is that correct? 17 18 MR. JACOBSEN: That is correct. I might 19 add, if I may, that there is a second attachment there which talks about frequency reuse. I meant to 20 21 mention, if I may, the fact that much has been said 22 about the traffic sensitivity of cell sites. As 23 traffic grows, since there is no more radio channels to be added, it's important or essential to reuse the 24 25 existing channels. And you can't have them on

1 adjacent cell sites because you would be

2 self-interfering, much like you would have two radio 3 stations in the same town, you wouldn't be able to 4 discriminate one from the other.

And so as traffic becomes more dense, it 5 6 is necessary to shrink the footprint of existing cell 7 sites to accommodate the reuse of frequencies. And to a certain extent, by down-tilting the antennas, 8 reducing power and shrinking the footprint there can 9 10 actually be a diseconomy of scale in that as traffic grows some cell sites must surrender frequencies or 11 12 reduce the coverage to accommodate additional cell sites and those sites can actually reduce the call 13 carrying capacity as we add more cell sites. And 14 15 that is a fact within the cellular industry itself. 16 THE COURT: Is that all, Mr. Mecham? MR. MECHAM: He's available for cross. 17 18 THE COURT: Cross-examination from Owest? 19 MR. MONSON: Thank you, your Honor. 20 21 CROSS-EXAMINATION BY MR. MONSON: 22

23 Q. Let me start with something that we had 24 asked Mr. Woody that I don't think he knew the answer 25 to. We were asking him about Edge service, E-D-G-E.

1

Are you familiar with that?

2 Α. Yes. 3 ο. And he said that required an upgrade to the switch, but he didn't know if it required an 4 5 upgrade to the BTS. Does it require an upgrade to 6 the BTS, do you know? 7 Α. It's primarily a DSC issue where you have 8 a gateway function there which takes the data off of 9 the Intel and takes it to the network. But it 10 involves a switch upgrade as well. 11 And where is the TRX in the network? Ο. TRX, sir? 12 Α. Yes. TRX capability, are you familiar 13 Ο. 14 with that term? 15 Α. No. 16 MR. MECHAM: Is it in his testimony 17 response? 18 MR. MONSON: No. (BY MR. MONSON) I'm reading out of Nortel 19 Q. BTS 800, S8003, 8000, I'm sorry, S80003, S Indoor and 20 21 S8000 outdoor engineering rules. 22 Let me be quick. In the BTS, in order to Α. 23 be data compatible, there is a software feature that is added to the BTS to enable data services. I wish 24 25 to right my testimony, I was wrong. 26

- 1
- Q. Thank you.

It's a minor expense. It's a software 2 Α. 3 only patch. 4 Let me ask you some background. Have you Ο. 5 read, have you reviewed the cost study that's been 6 filed by Union in this proceeding? 7 Not deeply. My involvement has been Α. 8 limited to the technical issues of traffic 9 sensitivity. 10 So are you familiar with the assumptions Q. made in the cost study and the model? 11 Not deeply. I, of course, listened to the 12 Α. proceeding today. 13 14 Okay. And also, you have reviewed Union's Q. 15 responses to Qwest's Data Requests since you became involved in the case? 16 17 Well, certainly, since I prepared them, Α. 18 yes. 19 Q. So you prepared some of the answers? 20 Yes. Α. 21 Q. Okay. 22 Since my initial testimony, yes. Α. 23 Q. Okay. Please turn to line 85 of your Post

24 Surrebuttal Testimony.

25 A. Yes.

1 In this paragraph you're taking issue with Q. Mr. Copeland's statement that Union did not provide 2 3 traffic data to Qwest; is that right? 4 Α. I represent in my testimony, as it states, 5 that Mr. Copeland represented that we had 6 purposefully withheld critical data involving 7 capacity and utilization of cell sites. 8 Ο. Okay. And you note in this paragraph that 9 utilization and usage are different; is that right? 10 Absolutely. Α. Does utilization refer to usage during the 11 Ο. 12 peak hour? Utilization is the percent of available 13 Α. capacity that is used on what would be a peak hour. 14 15 Ο. Okay. And you also discussed that subject 16 in your Direct Testimony; is that right? 17 Α. Yes. In your Direct Testimony, turn to that for 18 Ο. 19 a minute. Turn to line 50, please. Have you got 20 that? 21 Α. Yes. 22 Okay. And you say there, "Union has had Ο. 23 the means of obtaining traffic data from its TDMA and 24 GSM networks from their inception through the Nortel 25 OMCR operations, measurements and cell radio system": 26

1 is that right?

2	A. Yes, usage data.
3	Q. Okay. And you say that "Traffic
4	measurements have been collected by Union only as a
5	daily or weekly total rather than peak hour
6	statistics"?
7	A. Correct.
8	Q. And you say that "System augments have
9	been carried out on the basis of aggregate statistics
10	rather than on busiest or peak hour demand"?
11	A. Yes.
12	Q. And so, therefore, on that basis you
13	believe that Union's response to Data Request 4-009
14	was correct; is that right?
15	A. Yes.
16	Q. And you then go on to say that "Union has
17	looked at traffic-related performance on the basis of
18	total, daily or weekly call volumes and call
19	blocking"; is that right?
20	A. Yes.
21	Q. "Call blocking occurs when a Union
22	customer attempts to place a call and is unable to do
23	so because no capacity is available to carry the
24	call"; is that right?
25	A. Yes.
26	

1 So if Union was looking at traffic-related Q. performance on the basis of call blocking, it needed 2 3 to know that call blocking was occurring? 4 Α. Correct. How did Union know if a customer 5 Ο. 6 experienced call blocking before the new traffic 7 monitoring system was available? 8 Α. The OMCR system collected total daily and 9 total weekly statistics. It might, for example, say 10 that 5 percent of the total calls during the week failed to find an idle channel and were blocked, 11 12 okay? Now, it's not known whether that occurred 13 in one busy hour or whether it was distributed over 14 15 many, many hours. And so that has a very different 16 meaning from utilization because utilization is designed around a peak hour grade of service. 17 18 So Union could recognize in some coarse 19 way, some general way that a cell site needed to be augmented and could react by providing additional 20 21 facilities. But to know exactly what the grade of 22 service was or percent utilization was occurring was 23 an unknown. And that was one of the weaknesses of relying on the OMCR system because we could not 24 25 develop or measure a service level agreement, grade

26

1 of service particular to the site.

2	Q.	So it's your position that call blocking
3	is not a ty	pe of data related to utilization?
4	Α.	It's not reflecting utilization against
5	a defined g	rade of service which is specific in a
6	traditional	sense to a peak hour performance.
7	Q.	So Union did have call blocking data, but
8	didn't prov	ide well, I don't know if you were
9	there at the	e time. I should clarify. Were you
10	involved in	the initial response to that?
11	Α.	No, I was not.
12	Q.	Okay. And you've talked about this new
13	monitoring	system?
14	Α.	Yes.
15	Q.	That allows the peak hour data, right?
16	Α.	Uh-huh (affirmative).
17	Q.	And you talk about what information is
18	included in	that report; is that right?
19	Α.	Yes.
20	Q.	And you say that it included all
21	components (of the wireless infrastructure?
22	Α.	All of the components that are
23	traditional	ly measurable and administered in the
24	course of ne	etwork administration. Now, there are
25	some compone	ents of the wireless network which are not
26		

1

measured by the system.

Let me draw a parallel for you. In your 2 3 land line network, if you have a Nortel land line 4 switch, there is an operational measurement system which all traffic engineers and systems engineers 5 6 utilize. It's called the OM system. It collects 7 about 22 different measurements on each trunk group in the switch. It imports it every half hour, 30 8 9 minutes or 60 minutes, depending on how you set the 10 parameters, and this data is collected and used by the switch engineers to administer the switch in 11 putting up enough circuits from here to there. There 12 are things that that OM system does not measure and 13 does not normally report, okay? 14

15 For example, engineers and operating 16 people do have access through special instructions to things like memory and CP utilization, but they're 17 18 not generally reported as routine statistics on the 19 OM system. Now, if your question is do we collect normal administration statistics on the radio system? 20 21 The answer is yes, we do. In fact, on the mobile 22 radio system there are about 200 statistics instead 23 of 22, which makes some of the analysis very difficult because it measures so many things in so 24 25 many ways. But again, there are some things,

particularly about processors and memory, that are
 not part of the OMCR.

3 Ο. Okay. But do I understand correctly that there would be measurements available on 4 approximately 200 components of the network? 5 6 Α. No. The components such as the wireless 7 channels, for example, instead of having 22 measurements might have 50 or 60 measurements of 8 9 different types. Why? Because there are timing 10 issues, there are handoff issues, there are power issues that are very important to know, but are 11 totally unrelated to anything in the land line 12 network. Therefore, the OMCR system is much more 13 robust to gather the statistics of a radio network 14 than on a land line network. 15 16 Okay. You said in your Post Rebuttal Ο. 17 Testimony that the components that were included in the report were radio channels, aggregated BSC, BTS 18 19 transport, as well as all trunking components; do you 20 recall that? 21 Α. Yes. 22 What does aggregated BSC/BTS transport Ο. 23 mean? May I go to the board? 24 Α. 25 THE COURT: Sure. 26

1 MR. JACOBSEN: This is the base station 2 controller. All of the radio channels, for example, 3 let's take the radio channels here, as they -- as a 4 call is originated, a channel is seized, a channel is taken, made busy, and the channel is brought back to 5 6 the BSC, okay? If the call is between cell 7 subscribers behind this BSC, the BSC will switch the call and it will not be carried back to the switch, 8 9 which is great, right? 10 However, all of the calls here then that are leaving this part of the network are 11 12 consolidated, condensed, and brought over to these facilities. And again, this is traffic sensitive. 13 We have to make sure that we have enough facilities 14 15 for all the calls behind here that are coming out of 16 that BSC territory. And this is consolidated much like a telephone trunk would be between two switches 17 18 because at a low level this is a switch for 19 connecting calls behind it. And this is the consolidated transport to which I refer. 20 21 Q. (BY MR. MONSON) So you did participate in 22 providing the response to Qwest Data Request 6-001? 23 Α. I'm not sure the exact reference to that one, but if it is the one in which we provided 24 traffic data, usage data, then the answer is yes. 25

26

- 1
- Q. Do you have a copy of that?

2 A. I do not.

3 MR. MONSON: Can I approach the witness? Your Honor, I only have one copy of this. I didn't 4 5 make extra copies of this, I apologize. 6 THE COURT: That's okay. You can approach 7 the witness and if we need to make copies we can. 8 ο. (BY MR. MONSON) Do you recognize that? 9 Α. Yes, I do. 10 And is it true that in Qwest's request it Q. asked for any reports you could get on any aspects of 11 the network from the new system, right? 12 That is correct. 13 Α. 14 Q. And it didn't limit it to any particular 15 time period; is that correct? 16 Α. Yes. 17 And in Union's response Union objected Ο. because it said it was overbroad and so forth, right? 18 I believe we provided data. 19 Α. 20 And then you did provide a report? Ο. 21 Α. Yes. 22 And the report was just for the one-week Ο. 23 period, March 3 to March 8? 24 Α. Yes. Of 2007? 25 Ο. 26

- 1
- A. Yes.

2	Q. And on the back, this is the continuation
3	of the answer, Union said, "However, we do provide
4	the four reports for Qwest's review, busy hour and
5	daily traffic summaries of the wireless and wire line
6	network of Union"; is that right?
7	A. That's correct.
8	Q. Okay.
9	MR. MONSON: May I approach the witness
10	again?
11	THE COURT: Yes.
12	Q. (BY MR. MONSON) Is this the portion of
13	the response, the report you referred to dealing with
14	trunking?
15	A. It is a summary of all of the trunks, what
16	we would consider a trunk group in a very liberal
17	sense, that appear on the Union wire line network for
18	both the GSM switch and for the DMS tandem and the
19	DMS local switch.
20	Q. Okay. So this shows some statistics on
21	trunks that are into and out of the GSM switch; is
22	that right?
23	A. And?
24	Q. And the tandem.
25	A. And the tandem and the local land line
26	

1 switch.

Ο. Right. In looking at this report, can 2 3 Qwest get any data about usage of BSC/BTS transport? 4 Α. Yes. From this report? 5 Q. 6 Α. I believe so. 7 Does this cover the transport between the Ο. 8 BSC and the BTS? 9 Α. No. That would come off the -- this 10 particular report here -- now, here's what you're asking, let me make sure I understand that. You're 11 asking between here, between here and the switch, or 12 between here --13 14 Between the BTS and the BSC. Q. You were also given statistics, in fact a 15 Α. 16 different sheet, a different tab, which included all of the traffic from the BTS by sector, right? The 17 18 answer is yes. We had traffic from each cell site --19 Q. 20 Each sector of a cell site. Α. 21 ο. But not the route that traffic followed so we didn't know where it went. 22 23 Α. What you received was a traffic summary of each sector to the BSC. So, for example, if there's 24 25 three sectors in a BTS in a cell site, you found 26

1 three lines of data which explicitly identified the amount of usage, in fact, very identical statistics 2 3 of these, from the BTS back to the BSC. The traffic from the BSC to the GSM switch is on this report and 4 the traffic from the GSM switch to the other switches 5 6 is also on this report. You received a complete 7 traffic profile from the BTS all the way to the public network. 8 9 Ο. For a one-week period in March? 10 A. For a one-week period in March. THE COURT: Let me just clarify real 11 12 quickly. Mr. Jacobsen has just referred to this report. That is the confidential document that Mr. 13 Monson just handed out a few moments ago. Can we go 14 15 ahead and mark that as Qwest Cross Exhibit 10? 16 MR. MONSON: Sure. 17 THE COURT: I'm sorry, Mr. Monson. Go 18 ahead. 19 MR. MONSON: I appreciate that, your 20 Honor. 21 ο. (BY MR. MONSON) And in your summary today 22 and in your testimony you say that Qwest's analysis 23 is incorrect because it relied on the one week of data instead of some data during some busier period; 24 25 is that right? 26

1	A. That's true. The busy period, of course,
2	was many months subsequent to this, probably in June,
3	July, August, is the typical busy period for the cell
4	networks.
5	Q. And could Union have provided that data to
6	Qwest?
7	A. Upon request, yes.
8	Q. You also mentioned in your summary about
9	some cell sites not being busy much of the time, but
10	then being busy during something like I think you
11	said Frontier Days or something, or rodeo; is that
12	right?
13	A. Well, isn't that logical when a large
14	group of people carrying cell phones aggregate to a
15	special event, they make phone calls and so traffic
16	at that location peaks.
17	Q. Is that kind of like Mother's Day?
18	A. Not exactly because Mother's Day is more
19	of a network-wide phenomenon in which the traffic
20	level of all locations rise, right? Mother's Day
21	across the industry, across the country, wherever it
22	might be, raises the traffic everywhere. We're
23	talking about an event that peaks local traffic, not
24	all traffic across the network. It's very different
25	from an engineering standpoint.

1 Does the traffic engineer design the Q. capacity of the cell site by the peak day for the 2 3 whole year, by some unique event like a rodeo or some special holiday in that neighborhood? 4 5 No. It doesn't design it, but it's Α. 6 recognized as a design consideration. Nobody designs 7 a network for one day of the month or one day of the year. That would be kind of crazy. But the fact 8 9 that we have additional capacity in a place like 10 Laramie is not a great concern for us because we know that there are occasions, football games, whatever it 11 might be, where that system capacity will be well 12 13 utilized. 14 Can you turn to line 121 of your Post Q. 15 Surrebuttal Testimony, please. In this question 16 you're addressing accounting for the idle capacity in 17 Union's network, Union's wireless network, right? 18 Α. Yes. 19 Q. And this is where you talk about the fact that the facilities are not easily accessible and 20 21 that access to them, particularly in the winter, can 22 take many hours? 23 Α. Excuse me. Let me get to the right 24 testimony here. 25 Ο. Okay. 26

- 1
- Α.

Yes.

2	Q. So you conclude on that basis that an
3	efficiently operated network requires electronic
4	redundancy in the radio systems?
5	A. That is correct.
6	Q. And you say that results in a minimal cell
7	site design with two radios, 16 channels per sector;
8	is that right?
9	A. Typically, yes.
10	Q. And later in your testimony, this would be
11	at lines 212, 215, if you want to refer to it. Do
12	you have it?
13	A. Yes.
14	Q. You say, "The traffic demand of existing
15	customers requesting service in that area is traffic
16	engineered with the context of minimal radio
17	provisioning, one radio, 8 channels per sector with
18	electronic diversity. Second radio, 8 channels per
19	sector."
20	So that's your view of the minimal
21	engineering requirement?
22	A. For effective and reliable operation, yes.
23	Q. Okay. So if Union places a cell site, you
24	believe it should install it with two radios and 16
25	channels per sector for reliability purposes?
26	

A. That is correct. And that is the general
 practice within the company.

And this would be the case whether there's 3 Ο. 4 1 or 100 customers who want coverage in that area? Yes. If the decision were made to provide 5 Α. 6 service in that area. And it would be the same 7 situation if Owest had a home in an area which is a 8 potential subdivision or whatever, you wouldn't take 9 one pair of cable out to that home. You would 10 probably take 25 or 50 or 100, 150 pair of cable to 11 that area because that's what the smallest cable is 12 that you install. And we used the very same 13 approach.

Q. You understand that when the Commission does TELRIC cost studies for Qwest or for any other company that it determines, based on information that it receives, what's the appropriate level that it will allow in the cost for that installation; is that right?

20 A. That is correct. However, the appropriate 21 cost could very well be different for wireless than 22 it is for wire line.

Q. Turn to the Network Administration Report
which you filed with your Rebuttal Testimony, please.
Have you got it?

- 1
- Α.

1	Α.	Yes.
2	Q.	Okay. This shows on it the number of
3	sectors and	working channels for a large number of
4	cell sites,	correct?
5	Α.	For all the sectors in the wireless
6	network as	of that date.
7	Q.	And you said there should be two radios,
8	16 channels	. It's true that one of those channels is
9	a control c	hannel; is that right?
10	Α.	Yes.
11	Q.	And one of those channels is devoted to
12	data servic	es?
13	Α.	Potentially.
14	Q.	So maybe we would expect on this report to
15	see 14 chan	nels for each sector; is that right?
16	Α.	On the earlier, on the very early cell
17	sites const	ructed by Union, you know, some years ago,
18	four years	ago, Union went in to these cell sites
19	with one ra	dio per sector. And we still have some
20	legacy netw	ork sites that have one radio. It was
21	soon appare	nt that this was a bad practice because
22	when there	was electronic failure of a radio, and
23	these are h	arsh environments that are on
24	mountaintop	s. Winters in Wyoming aren't exactly
25	pleasant.	When there was a radio failure and it took

hours and hours to get there by snowcat or some cases
 by snowshoes, the traffic was completely out of
 service.

And so there are some residual sites that 4 still have one radio per cell site. In addition, 5 6 there are some cell sites, which cover very large 7 areas of terrain, in which case they use extended 8 timing and they actually combine two channels for one 9 in order to take care of timing considerations over 10 longer distances. And there might only be six or seven channels, but two radios because of the way 11 that they configure the radios for timing 12 considerations. 13

14 Now, those are things that a radio
15 engineer would understand but others might not.
16 0. But you would agree -- and I think what

17 you're explaining here is why there are several cell 18 site sectors on this report that don't have the 19 number of channels you set out there?

A. Or it might be two radios or it might be an issue that they're still in the process of resolving. They're legacy sites.

Q. Okay. Now if you could turn to line 132
of your Post Surrebuttal. Have you got that?
A. Yes.

1	Q. And in that question and answer you're
2	discussing differences for traffic sensitivity
3	between a wireless network and a land line network;
4	is that right?
5	A. Yes.
6	Q. Are you familiar with the FCC regulations
7	on TELRIC studies?
8	A. Somewhat and in the context of this
9	proceeding.
10	Q. Are you familiar with the FCC's orders
11	relating to traffic sensitivity on a wireless
12	network?
13	A. I have seen the definitions of the FCC.
14	Q. And are you aware that the FCC said with
15	respect to wireless networks, that determination of
16	compensable wireless network components should be
17	based on whether the particular wireless network
18	components are cost sensitive to increasing call
19	traffic"? Are you familiar with that statement?
20	A. Yes.
21	Q. And that's what we've been talking about
22	in this proceeding is traffic sensitivity, right?
23	A. No. We've been talking about cost
24	sensitivity.
25	Q. Okay. Whatever we call it, the FCC's
26	

1 standard is cost sensitive to increasing call

2 traffic. Do you agree with that?

3 Α. In a broad sense, yes. 4 Ο. Okay. And you say in this portion of your 5 testimony that "The traffic sensitivity on a wireless 6 network depends on the availability of idle radio 7 channels and the presence and strength of that channel"; is that right? 8 9 Α. That's correct. 10 And you say, "The customers lose service Q. when they pass out of coverage or when they enter 11 facilities that block the channel"? 12 That's correct. 13 Α. 14 You called that second thing the Wal-Mart Q. phenomenon, right? 15 Phenomenon, right. A good metal building. 16 Α. 17 Right. A building that blocks the signal? Ο. 18 Α. Right. 19 Q. The customers you're referring to are 20 Union's customers? 21 Α. Existing customers. 22 And then on line 146 you say that "With 0. 23 each improvement in coverage, more call attempts of existing customers are served"; is that right? 24 Α. That is correct. 25 26

1 And again, the customers you're referring Q. to are Union's customers? 2 3 Α. That is correct. Now turn to line 309 of your Post 4 Ο. 5 Surrebuttal, please. This is where you're addressing 6 a dispute between you and Mr. Copeland about 7 integrated digital loop carrier systems; is that 8 right? 9 Α. That is correct. 10 And the testimony that you were responding Q. to is found in Mr. Copeland's Post Surrebuttal reply 11 testimony starting on line 132; is that right? 12 Correct. 13 Α. 14 And he does refer on that line to Q. 15 integrated digital loop carrier systems; is that right? 16 17 As being traffic engineered. Α. And you say in your testimony here that 18 Ο. "Integrated digital loop carriers are not traditional 19 loop technology as it provides line concentration 20 21 normally provided within the switch itself"; is that 22 right? 23 Α. That is correct. 24 Have you reviewed the TELRIC study that Ο. 25 was approved by the Commission for use in Utah's --26

1 in Qwest's last cost docket?

2 Α. No. 3 MR. MONSON: May I approach the witness? THE COURT: Certainly. 4 5 MR. MONSON: Could we have this one marked 6 as Qwest Cross whatever? 7 THE COURT: 11? We'll mark it as Owest 8 Cross 11. 9 MR. MONSON: Thank you. 10 Q. (BY MR. MONSON) Mr. Jacobsen, I'm going to represent to you that this is a excerpt from the 11 cost study, the HAI 5.25 study that was used in 12 setting Qwest's rate, Qwest's interconnection and 13 14 unbundled network element rates in its last cost 15 docket in Utah. 16 MR. MECHAM: When was that, Mr. Monson? 17 MR. MONSON: Pardon? 18 MR. MECHAM: When was that? MR. MONSON: It was in 2003, I believe. 19 The Order came out in -- the Order was the Order we 20 21 referred to earlier, the May 5, 2003 order. 22 (BY MR. MONSON) We have added one number Ο. 23 to this page. It's the number in the lower right-hand corner and the description of that number. 24 25 But would you agree, subject to your checking this 26

1 exhibit, that 46.2 percent of Qwest's lines use integrated digital loop carrier technology for 2 3 purposes of the questioning? I have no way of checking that. But if 4 Α. you want to enter that as fact, I guess I'm not in a 5 6 position to contend it. 7 You're not in a position to --Ο. To contend or to argue. 8 Α. 9 MR. MECHAM: Well, and he's also said he 10 wasn't familiar with this. MR. MONSON: Well, he's made the statement 11 that this type of technology is not traditionally 12 used in the network. 13 14 MR. JACOBSEN: I believe you've 15 misrepresented my testimony. I said that the kinds 16 of technology that actually concentrate traffic outside the switch, which is typically referred to 17 the general reference 303 technology, is not used in 18 19 loop technology. Digital carriers like Slick systems, described as a new carrier or digital new 20 21 carrier, as you call it here, is widely used in the network to avoid having to build cable facilities all 22 23 the way back to the Central Office. 24 In today's technology, your Honor, if you have a new subdivision going in, you would typically 25 26

1 have to bring wire all the way from the homes all the way back to the switch. This might parallel some 2 3 existing cable. So what they do is they put in electronics between the switch and where those cables 4 join and then multiplex would combine electronically 5 6 the signals coming from the home to the switch to 7 avoid construction costs. 8 So if anything, this argument simply 9 suggests that when it is able to lower its cost of 10 loop facilities, which we're unable to do in a corresponding way with the wireless network. 11 (BY MR. MONSON) And those are shared 12 Ο. facilities, right, those integrated digital loop 13 14 carriers? 15 Α. No. No, they're not. They are multiplex 16 facility, not shared, because each channel on the DLC is still dedicated back to the home. 17 18 0. So are you saying there's as many channels 19 on a DLC as there are customers connected to that 20 DLC? 21 Α. If this is DLC technology and not another technology, that is true. 22 23 Q. Now, please look at line 327 of your Post Surrebuttal Testimony. There you're discussing the 24 issue raised by Mr. Copeland about the traffic 25 26

1 sensitivity of the GSM switch; is that right? 2 Α. Yes. I think in your -- let's see, it's either 3 ο. in your testimony or Mr. Copeland's testimony, 4 5 there's a reference to Union's data response to Data 6 Request 6-005. Is that the one I just showed you? That was 6-001. Do you recall, was that in your 7 8 testimony? 9 Α. I don't recall. 10 Do you have Mr. Copeland's testimony? Q. I do not have it here. 11 Α. Well, let me go to something else and 12 Ο. we'll come back to that. 13 14 On line 339 of your Post Surrebuttal 15 Testimony you take issue with Mr. Copeland's response 16 to a statement made in your testimony about doubling 17 usage; is that right? Uh-huh (affirmative). 18 Α. 19 Q. And you conclude this discussion by saying, "I made no statement of whether this doubling 20 21 of requirements would or would not exceed the 22 installed capacity of the network." 23 Do you recall that? 24 Α. Yes. 25 Q. The statement Mr. Copeland was responding 26

1 to is found on lines 94 to 96 of your Direct

2 Testimony; is that right?

3 Α. Yes, I believe that's correct. Let me check the line numbers. 4 5 Q. Okay. 6 Α. Yes, that's right. And in those lines you said, "If they," 7 Ο. and "they" I assume was cellular customers; is that 8 9 right? 10 Α. Uh-huh (affirmative). 11 "Collectively double their amount of Ο. individual usage, twice as many end-to-end facilities 12 are required"; is that right? 13 14 Α. Yes, correct. 15 Ο. And the end-to-end facilities you're 16 referring to were named in your testimony just ahead 17 of this, right? Radio channels all the way back to the 18 Α. 19 telephone switch. 20 Okay. So they include antennas, coaxial Ο. 21 cable, radios, duplexers, combiners, splitters, 22 amplifiers, radio transceivers, controllers, 23 compressing equipment and long backhaul facilities, 24 right? 25 Α. Correct. 26

1 Okay. But based on your statement in your Q. 2 Post Surrebuttal Testimony that we referred to at the 3 start of this, I take it that it's not still your testimony that if Union customers doubled their 4 individual usage that twice as many end-to-end 5 6 facilities would necessarily be required? 7 Well, this is perhaps an issue of Α. interpreting what the question was asking. Clearly, 8 9 if we double the number of calls in a network we're 10 going to have to double the number of circuits to carry them. I mean, that's fairly simple math. 11 Now, if the question was would we have to 12 build twice as many facilities, that's a different 13 question than the one I answered. But within the 14 15 small margin of error where you have some improved 16 efficiency to scale, it's just law of the large numbers and statistics, about twice as many circuits 17 would be required if you double the number of calls. 18 19 I looked at that as a simple question with a simple 20 answer. 21 ο. Okay. Let's go back to the question I was

22 asking you about before that. And let me give you a
23 copy or I'm going to let you look at a copy of Mr.
24 Copeland's testimony. It's in his Post Surrebuttal
25 Reply Testimony on page 9.

1 Can I give this to the witness? 2 THE COURT: Certainly. 3 MR. MECHAM: Which piece of Mr. Copeland's 4 testimony? 5 MR. MONSON: It's Post Rebuttal Reply 6 Testimony. 7 MR. ASAY: What date? 8 MR. MONSON: September 28th, 2007. 9 Ο. (BY MR. MONSON) Can you see on that page 10 9, starting with line 151, Qwest provides a copy of its Data Request and Union response? 11 12 Α. Yes. Okay. And in Union's response, did you 13 Ο. help prepare this response? 14 15 Α. Yes. 16 You said that, after objecting you said, Ο. 17 "With regard to 1 through 3, which are the processor and common control busy hour call attempts, the 18 19 switching matrix, busy hour minutes of use and memory capacity of customers, that they are, although in 20 21 principle these elements of the switch are traffic 22 sensitive, their traffic capability is sized for the 23 life and maximum capacity of the switch; is that 24 correct? 25 Α. That's correct. 26
1 And then with regard to number 4, which Q. 2 was the busy hour minutes for use of various ports or 3 spigots, you said, "The attached telephone network 4 reports includes traffic information for all such switch trunk ports"; is that right? 5 6 Α. That's correct. 7 Okay. Are you aware that the Commission's Ο. Order in Qwest's cost docket says that if the switch 8 9 is able to accommodate projected growth in traffic it 10 is not traffic sensitive? Would you like to look at the Order? 11 12 Α. No, no, but I want to respond along the There is a difference between size for the life 13 wav. of the switch and size for the life of the network. 14 15 What I made clear in my testimony was that Nortel, in 16 recognizing the pure difficulty of changing the internal plumbing, electrical plumbing of the switch, 17 18 realizes that it's virtually impractical to go in and 19 change a processor or change the internal fabric of the switch, right? 20 21 And so they make available a series of 22 switch sizes, and I listed those in my testimony, and 23 it is common in the industry that for a company who is a growing network will buy a certain size switch 24 25 and as the network grows and the switch becomes 26

1 traffic constrained, then it's a simple matter of adding a second switch, which is sometimes done. Or 2 3 if we want to keep it a one switch environment we simply do our forklift, operate it and put a new 4 5 switch in. And I made the clear statement that the 6 switch is traffic sensitive, but on a grosser level 7 because of the sheer difficulty of changing some of 8 those components. 9 And in fact, Union bought the smallest 10 possible version of Nortel, which is the SNSE 11 processor and it is right now having to either expand 12 or replace that switch because traffic has grown to

13 the point where the switch can no longer carry much 14 additional growth. That's a simple statement.

Q. Okay. Now turn to lines 367 to 369 ofyour Post Surrebuttal Testimony, please.

17 A. Okay.

18 Q. And here you're talking about the issue 19 about whether or not costs should be allocated to 20 data services; is that right?

A. That's correct.

Q. And you say that "Data services currently account for less than 1 percent of Union's monthly wireless revenue"; is that right?

25 A. That is correct.

1 Q. Are you familiar with the revenues of Union from its various wireless services? 2 3 I was given the statistic by the people in Α. 4 the IT Department who had aggregated all of the data services revenue for the GSM network. 5 6 So would that indicate that you're not Q. 7 familiar with the other revenues? I'm not sure what you mean by "the 8 Α. 9 revenues." 10 The revenues from the other wireless --Q. from wireless services. 11 Could you be more explicit? 12 Α. Well, I wanted to know if you were 13 Ο. familiar with the revenues received by Union for the 14 wireless services it offers? 15 16 Are you talking about voice products and Α. voice services? 17 Whatever wireless services it offers. 18 Ο. 19 Α. I don't have access to the dollar values, but the people who provided the statistic do. 20 21 Ο. Okay. So would this indicate to you that 22 if data services account for less than 1 percent of 23 Union's monthly wireless revenue that many people are not subscribing to those services? 24 I do not know that. 25 Α.

1 Okay. But they are available on the Q. network to anyone who wishes to purchase them; is 2 3 that right? That is correct. 4 Α. 5 So Union has incurred the cost necessary Ο. 6 to provide those services? 7 Α. Yes. But understand that those costs are 8 pretty minimal. The daily capability in a GSM 9 network is a software feature, not a hardware 10 feature. And software features are always much 11 simpler and less expensive to implement than hardware. 12 They cost money, though, don't they? 13 Ο. 14 A small amount, yes. Α. 15 Ο. And as we talked about earlier, in 16 response to Data Request 6-007 you said that at least 17 one channel is dedicated to data and sometimes more 18 than one; is that right? 19 Α. Typically one channel. 20 Okay. And data offerings are a retail Ο. 21 offering by Union; is that right? 22 Α. Yes. 23 Q. Are you familiar with the 46 CFR 51.507? 24 No, I am not. Α. 25 Ο. At lines 378 to 379 of your Post 26

Surrebuttal Testimony you're talking about offered
 load data; is that right?

3 A. Yes.

Q. And you say that Mr. Copeland made an error in his utilization calculations by basing them on carried load rather than offered load; is that right?

8 A. Correct.

Α.

9 Q. And you say, you said earlier, that Union 10 had provided a complete response to Qwest regarding 11 all aspects of the network. And we talked about that 12 earlier, right?

13

Uh-huh (affirmative).

14 Q. Did Union provide offered load data to 15 Qwest?

A. Offered load data cannot be given if the traffic has been lost. But what is typically done, having done this for 35 years, is that you adjust carried load by the percent blocking and increase that traffic to what is called the offered load as a basis for all analysis, which he failed to do.

22 Q. If a call is blocked that means it wasn't 23 completed?

24A.He was never able to access the network.25Q.Right. And so, therefore, we have no idea

1 how long that call would have lasted had it been 2 completed, do we?

3 A. In the laws of large numbers that's moot4 statistically.

Q. Okay. So when you're talking about offered load data you're talking about projecting how much would be available in an ideal situation; is that right?

9 Α. Well, if you're going to analyze the 10 network on the basis of traffic and you're carrying 100 minutes and you have 20 percent blocking, meaning 11 12 20 percent of your traffic has been lost, it is a reasonable assumption to make that there's 120 13 minutes that are there and 20 percent is being lost, 14 15 which would be approximately 100 minutes. That is 16 always the design criteria when you do network analysis. You start with what the real traffic 17 actually was, which he failed to do. 18

Isn't the real traffic the carried load? 19 Q. Absolutely not. The real traffic is what 20 Α. 21 was offered to the network. It's true that the measured traffic, which is real traffic is carried, 22 23 but that may not be all the traffic that would be carried if the network were redesigned properly. 24 25 ο. Okay. Now, turn to line 393 of your Post

1

26

Surrebuttal Testimony, please.

Yes. 2 Α. 3 ο. There you state that "Mr. Copeland's conclusion that there's a trend of decreasing minutes 4 of use per BTS is totally unfounded on a year-to-year 5 6 true busy season growth, " right? 7 Α. That's correct. 8 Ο. And you're referring to the analysis 9 that's on page 16 of Mr. Copeland's Post Surrebuttal 10 Reply testimony, right? 11 Α. Yes. And that study is based on total annual 12 ο. minutes of use per year, right? 13 14 Not exactly. Α. 15 Ο. Aren't those numbers on that table total 16 minutes of use per year for the years listed? 17 No, they're not. I would defer to Mr. Α. Hendricks on these numbers since he was the one who 18 19 provided the previous numbers on these, but my understanding is that these were based on numbers 20 21 based in 2004 and simply projected forward. I am 22 fairly sure that the 2005 and 2007 numbers are not 23 actual total year-end numbers. 24 Are these the numbers that were out of 0. 25 Union's cost study, do you know?

A. You would have to ask Mr. Hendricks that
 question.

3 Q. But in any event, these weren't based on 4 any busy season numbers?

5 A. They were not.

6 Q. They were based on annual numbers,7 wherever they came from?

8 Α. Well, if the numbers are flawed then the 9 analysis is flawed. What I think the weakness of 10 this is that he has taken two or three data points out of context and drawn a straight line. The fact 11 of the matter is, and this is throughout the 12 industry, and in fact it's been shown by studies by 13 both the Yankee group and TeLethea, which is a 14 15 monitoring group for a wireless network, that traffic 16 has been compounding about 40 percent per year across 17 the country. I find it incongruous and inconsistent 18 with the industry trends to say that traffic for BTS 19 is decreasing when traffic is radically increasing, especially among the 18 to 24-year-olds which 20 21 currently create about four times as much traffic per 22 cell line as they do per land line. This is not 23 logical in relation to what's happening in the 24 industry.

Q. So if this data came from Union, you're

1 saying you don't think it's creditable data? I do not know the basis for the traffic. 2 Α. 3 It was an extrapolation based on certain assumptions made by Mr. Hendricks and it was for him to describe 4 what these numbers were. 5 6 You also described the 18 to 24 age group. Ο. 7 Isn't it true that those people are principally 8 communicating now through text messaging? 9 Α. I don't know that. In any case, text 10 messaging is an extremely low utilization factor in the network. 11 It's a data service, though? 12 ο. It's a data service, but it does not 13 Α. 14 travel over voice facilities. 15 Ο. Okay. Now please look at lines 432 to 433 16 of your Post Surrebuttal Testimony. You can see we're almost done. There you state that "Mr. 17 Copeland clearly does not understand how to interpret 18 19 TELRIC study results"; is that right? 20 Well, certainly not in the interpretation Α. 21 of the R squared regression statistic. 22 Okay. We'll get to that in a minute. Did Ο. 23 you read Mr. Copeland's background and qualifications in preparing your response to his testimony? 24 Yes, I did. 25 Α. 26

1 So you're aware that he's been doing cost Q. 2 studies for many years? 3 Α. Yes. And I've been a mathematician for 4 more. 5 And are you aware that Mr. Copeland has Q. 6 been cited favorably by the Federal Communications 7 Commission in Orders with regard to cost study information that he's provided in that context? 8 9 Α. This might be true, but he's a bad 10 mathematician. Okay. Does this all go to the R squared? 11 Ο. It typically does. I find it inconsistent 12 Α. for him to quote a statistic that's completely wrong, 13 to misinterpret it, and by misinterpreting it to 14 15 represent that Union has failed to meet a burden of 16 proof. 17 Okay. And so now let's talk about the Ο. R squared regression statistic. He said in his 18 19 testimony that an R squared value of 0.06 indicated a low correlation between working channels and BTS 20 21 costs; is that right? That's what he said. 22 Α. 23 Q. And you said that doesn't represent the relationship between material costs and working voice 24 25 channels and there's no absolute standard for a good 26

1 R squared value?

2	Α.	Straight out of the textbooks.
3	Q.	Okay. I have a textbook that I would like
4	to show you	somewhere here in my pile of stuff. And
5	I have copie	es out of it for everybody else since I
6	was too chea	ap to buy 10 copies.
7		May I approach?
8		THE COURT: Yes.
9	Q.	(BY MR. MONSON) Could you turn to page
10	well, first	of all, could we mark this as Qwest
11	Cross	
12		THE COURT: Qwest Cross 12.
13		MR. MONSON: Qwest Cross 12.
14	Q.	(BY MR. MONSON) Could you turn to page 74
15	of the book	, Mr. Jacobsen?
16	Α.	Yes, I have it here.
17	Q.	Could you read the paragraph, the first
18	full paragra	aph under the table? Not the footnote but
19	the paragrap	ph.
20	Α.	Beginning with "The value of R squared"?
21	Q.	Yes.
22	Α.	"The value of R squared for our estimated
23	consumption	function is .99, which is indicative of
24	an extremely	y strong association between C and Yd. It
25	means that	the estimated regression equation accounts
26		

1 for 99 percent of the variation of C3 and only 1 percent remains unexplained. This confirms the 2 3 tentative conclusion we drew earlier by simply 4 looking at the scatter category described and regression line in Figure 2.14." 5 6 Q. Okay. Do you agree with that statement? 7 In a certain context, yes. Α. 8 Ο. Okay. Thank you. That's all my 9 questions. 10 Where did I start? THE COURT: Ten, 11 and 12. 11 MR. MONSON: I would like to offer Qwest 12 10, 11 and 12, Qwest Cross 10, 11 and 12. 13 14 THE COURT: Any objection to their 15 admission? 16 MS. SCHMID: No objection. 17 MR. MECHAM: I would like a little more explanation on Qwest Cross-Examination 11. This 18 comes out of the 2000 case, and was this a submission 19 by Qwest? 20 21 MR. MONSON: No. This is the cost study run as a result of that case to set the rates. 22 23 MR. MECHAM: So this bottom line number in 24 the bottom right-hand is the actual number of lines 25 served by DLC in Qwest's network, or is this a 26

1 modeled number?

2	MR. MONSON: It's a modeled number.
3	MR. MECHAM: I won't object.
4	THE COURT: We'll go ahead and admit it or
5	admit all three. That was all your questioning, Mr.
6	Monson?
7	MR. MONSON: Yes, it was. Thank you.
8	THE COURT: Let's go off the record just a
9	minute.
10	(Off the record.)
11	THE COURT: We'll go back on the record
12	and we'll turn to Ms. Schmid.
13	CROSS-EXAMINATION
14	BY MS. SCHMID:
15	Q. Good afternoon.
16	Earlier this afternoon you discussed the
17	second exhibit to your Post Surrebuttal Testimony
18	that you filed on October 26, 2007. The title of
19	this exhibit is called "Impact of Increasing Traffic
20	on Cell Size and Frequencies." Do you remember this?
21	A. Yes.
22	Q. Has Union Cellular actually used the cell
23	site splitting technology and practice that you've
24	described here anywhere on Union's network?
25	A. Absolutely. This is called a seven color
26	

approach, and unfortunately it's not in color so you 1 miss the impact on this, but it allows for the 2 3 frequency reuse for at least two sectors in between 4 any duplicated center and in places like Rock Springs, Cheyenne and Laramie is exactly what we have 5 6 done to reuse frequencies within the city. And as we 7 do so and add cell sites we actually have to restrict 8 or downsize the footprint of existing cells. MS. SCHMID: Thank you. 9 10 THE COURT: All right. Let's go ahead and take a 10-minute break and come back with any 11 redirect. 12 13 (Recess taken.) 14 THE COURT: All right. Let's go back on 15 the record. I know before we broke I indicated that 16 we would be turning to you, Mr. Asay, for any redirect, but I did forget I had one question of Mr. 17 18 Copeland first. Or excuse me, Mr. Jacobsen. If you 19 could, sir, turn to page 19 of your Post Surrebuttal and starting on line 374, this concerns the 20 21 discussion you had earlier concerning the proffered 22 load and the carried load capacities. 23 MR. JACOBSEN: 394? 24 THE COURT: 374, page 19. 25 MR> JACOBSEN: Yes. 26

1 THE COURT: I just wanted to, it may be a fairly minor point, but I just wanted to clarify. I 2 3 believe there was some discussion about 100 percent 4 versus an upscaling to 120 percent to adequately capture the offered load capacity for calls that were 5 6 not able to be carried? 7 MR. JACOBSEN: Yes. 8 THE COURT: How does that work and how 9 does that fit into your analysis? If, 10 hypothetically, I'm driving down the road in Union territory and I attempt to make a call, the network 11 can't handle it. Presumably I would try again and 12 try again until the call did go through. And so when 13 it did go through that would be measured under the 14 15 carried load capacity figure as a call that was 16 connected, if you will, whereas, your upscaling would capture each of my attempts to make that call. 17 Is 18 that the proper way to look at it? 19 MR. JACOBSEN: Well, this is a -- happened to be the area of my dissertation. It's called 20 21 congestion theory and it is appropriate to adjust 22 statistics for what we call reattempt or retry 23 traffic. However, that analysis is very complicated and there's never been an established method for 24 25 doing that.

1 It is, therefore, because there is no I 2 quess industry accepted way of adjusting that, it is 3 typical to assume that you simply divide by the 4 percent blocking to upscale the carried load to true 5 offered. Now, it is true that there are sometimes 6 second and third attempts, but not every call is 7 tried a subsequent time. Typically the percentage of 8 retry is in the 60 to 70 percent range on blocked. Do I try again? Yes or no. 9 10 And so it very quickly diminishes down and has fairly minor impacts on the total traffic. So I 11 think as a conservative estimate of carried load it's 12 just been a practice for many, many years to divide 13 by the percent blocking to estimate carried --14 15 offered load. 16 THE COURT: Okay. With that, Mr. Asay? Or I'm sorry, Mr. Mecham. 17 MR. MECHAM: And we have no redirect. 18 19 THE COURT: I guess just because I asked that question I'll just turn real quick to Qwest or 20 21 the Division. Do you have any questioning based on 22 my questions? 23 MR. MONSON: No. 24 MS. SCHMID: Nothing from the Division. THE COURT: Thanks, Mr. Jacobsen. 25 26

1 Anything further from Union at this time? MR. ASAY: That is essentially our 2 3 presentation in regard to particularly the asymmetrical data. 4 5 THE COURT: We'll go ahead and turn to 6 Qwest. 7 MR. MONSON: We would call Peter Copeland. 8 MR. COPELAND: Is it okay if I have my 9 laptop here? 10 THE COURT: Sure. As soon as you secure all that stuff, if you'll raise your right hand, I'll 11 swear you in. Take your time. 12 Do you solemnly swear that the testimony 13 14 you're about to provide will be the truth, the whole 15 truth and nothing but the truth, so help you God? 16 MR. COPELAND: I do. 17 18 PETER COPELAND, called as a witness was examined and 19 20 testified as follows: 21 22 THE COURT: Thank you. Please be seated. 23 Mr. Monson? 24 DIRECT EXAMINATION BY MR. MONSON: 25 26

1 Mr. Copeland, could you state your full Q. name for the record? 2 3 Α. My name is Peter E. Copeland, C-O-P-E-L-A-N-D. 4 5 What's your position, what's your Q. 6 employment? 7 Α. I'm employed by Qwest in the Public Policy 8 Department as Director of Cost and Economic Analysis. 9 Ο. And what's your business address? 10 My business address is 1801 California Α. Street, 47th Floor, Denver, Colorado, 80202. 11 Did you prepare four pieces of testimony 12 Ο. that have been filed in this proceeding? 13 14 Α. Yes, I did. 15 Ο. Revised Rebuttal Testimony dated July 21, 2006; is that right? 16 17 Α. Yes. Surrebuttal Testimony dated March 5 of 18 Ο. 2007, that's the confidential and non-confidential 19 20 version with two exhibits; is that right? 21 Α. Yes. 22 And Post Surrebuttal Reply Testimony dated Ο. 23 September 28th of 2007, and that's also confidential testimony with five attached exhibits? 24 25 Α. Yes. 26

1 And Surrebuttal Testimony to Division Q. testimony dated October 26, 2007? 2 3 Α. Yes. 4 Ο. Do you have any corrections to any of this 5 testimony? 6 Α. Yes. I have two corrections. Those both 7 occur in my Revised Rebuttal Testimony of July 21st. 8 The first --9 MR. ASAY: Hang on for a second. 10 Thank you, Mr. Copeland. MR. COPELAND: Okay. The first correction 11 is on page 23, line 3. And my correction is to 12 strike "In Decision No. C02-636" and then capitalize 13 14 the "i" in "In" and then to add after Docket No. 01-049-85, add "issued May 5, 2003." 15 16 My second correction is in the same testimony at page 26, line 14. And on that line I 17 would like to strike "towers, comma." 18 Do you have any other corrections? 19 Q. No, I don't. 20 Α. 21 ο. So if I were to ask you the questions set forth in your testimony today, would your answers as 22 23 corrected be the same? 24 Α. Yes. 25 MR. MONSON: Your Honor, we would offer 26

1 Qwest 3RR, Qwest 3SR, Qwest 3SR.1, Qwest 3SR.2, Qwest 3PSR, Qwest 3PSR.1, Qwest 3PSR.2, Qwest 3PSR.3, 2 3 Owest 3PSR.4, Owest 3PSR.5 and Owest 3SR-D. THE COURT: Any objection to their 4 admission? 5 6 Okay. We'll go ahead and admit them. 7 MR. MONSON: Okay. 8 (BY MR. MONSON) Mr. Copeland, have you Ο. 9 prepared a summary, and consistent with what other 10 witnesses have been doing also, some comments on other statements that have been made during the 11 course of this hearing? 12 Yes, I have. 13 Α. 14 Okay. Would you provide that, please? Q. Yes. And before I start, if you don't 15 Α. 16 mind I would like to sign in on my computer so it will be ready if I need it, or should I do that at a 17 later time, your Honor? 18 19 THE COURT: You can do that now. Just be sure and let anyone know if you're referring to your 20 21 computer at all. 22 MR. COPELAND: Okay. 23 MR. MONSON: Your Honor, can we go off the record for a moment? 24 25 THE COURT: Sure. 26

1	(Off the record.)
2	THE COURT: Let's go back on the record.
3	Mr. Copeland, you were going to offer your summary?
4	MR. COPELAND: Yes. The reason we're here
5	today is to determine what network components that a
6	cellular carrier can include in calculations of an
7	asymmetric local interconnection transport
8	determination cost. And I think first that the first
9	place to start in looking at this is the Federal Code
10	of Regulations where the FCC set up rules
11	specifically for these interconnection rates at
12	51.709a.
13	"In state proceedings, a state commission
14	shall establish rates for the transport determination
15	of telecommunications traffic that are structured
16	consistently with the manner that carriers incur
17	those costs and consistently with the principles in
18	51.507 and 51.501 which are part of the TELRIC
19	rules."
20	So what does this mean? I think my
21	interpretation of this is that the how the
22	carriers incur these costs are the key. If a
23	subscriber causes a service, the service causes a
24	cost, then that cost cannot be part of an
25	interconnection rate. I think that's a key to many
26	

1 of the issues here.

2	And the FCC released an Order on September
3	3rd, 2003 which specifically addresses the CMRS
4	issues on the type of cost study and the type of
5	analysis that needs to be done. There has been
6	quoted today a cost-based approach, one that looks at
7	whether the particular wireless network components
8	are cost sensitive in seeking call traffic should be
9	used to identify compensable wireless network
10	components.
11	So, I mean, we're talking here about how
12	do you determine whether a network component is cost
13	sensitive to increasing call traffic? Well, you need
14	to see how that component is used in the network.
15	You need to know the capacity of that component is
16	and what the utilization of that component is. Is
17	the component designed and is it provisioned such
18	that it has sufficient capacity for the component
19	planning horizon?
20	That's a standard that this Commission
21	uses in determining the TELRIC switching rate for
22	Qwest. Will the component need to be augmented
23	during its life? So there are various things you
24	need to look at. It takes work to create a factual
25	record. We tried to get relevant data through

discovery to determine if Union's wireless network
components were cost sensitive to increasing call
traffic. Most of the time we were told that our
questions weren't relevant to the issues at hand. We
disagree. At one point they finally provided some
limited data.

7 So what's on the record now? I think one of the confusions that we're hearing from Mr. 8 9 Hendricks and Mr. Jacobsen are the confusion of 10 traffic engineering conscious with the determination of a proper interconnection rate based on these 11 12 TELRIC rules, mixing up what TELRIC says is efficient cost causative versus how they've actually designed 13 their network. And those aren't the same thing, as 14 15 Owest has found out in many unbundled network element 16 proceedings.

17 So let me give you some examples of where 18 these things differ. In Utah, the UNE switching 19 decision decided that the unbundled switching element was completely non-traffic sensitive. So that means 20 21 that there is no increasing costs with increasing 22 traffic. Qwest still uses traffic engineering to 23 engineer the trunk side of the switch. They also use it for the integrated digital loop carrier on the 24 25 subscriber side, and the Order found that sensitive

equipment, as purchased, is designed to accommodate 1 the expected levels of usage, that there is no 2 3 increasing cost for the usage charges to recover. 4 So it's pretty clear that depending on how it's provisioned, you cannot necessarily charge that 5 6 as a local interconnection cost as being cost 7 sensitive to increasing call traffic. Integrated digital loop carrier. I think 8 9 Owest has a rate of service of .01. But like the 10 rest of the loop, it is declared to be non-traffic 11 sensitive for purposes of recovery of these costs for 12 interconnection. We get to charge it on a non-traffic sensitive basis. However, because there 13 are fewer time slots between the integrated digital 14 15 loop carrier system terminal in the field and the 16 number of subscribers, the number of lines that subtend that, the number of homes and the number of 17 18 lines, that if everyone went off hook at the same 19 time there would be blocking, and it's designed to have only 1 percent blocking. 20 21 But again, that's a traffic engineered 22 system that's thought to be MTS for these purposes. 23 There is other examples in Minnesota. They also

24 declared both the UNE switch to be completely MTS and 25 also carried that decision over into local switch

interconnection rates. Those are also zero because 1 they found those costs to be non-traffic sensitive. 2 3 So these principles of traffic 4 engineering, you need them to run your network, but they don't necessarily mean for purposes of what you 5 6 can charge another carrier for interconnecting, that 7 that's the holding piece of logic. The FCC has other rules that would supersede those. 8

9 So once a wireless network component meets 10 these criteria where you found it to have increasing 11 cost when there's increasing call traffic, then what 12 comes next? Well, then you need to go to creating a 13 TELRIC study of that element. And those items are 14 laid out in the FCC rules at 51.505.

15 And in summary, those are forward-looking 16 costs over the long run, which is the total quantity 17 of facilities and functions directly attributable to 18 the element, that's an important point, use of the 19 most efficient network technology currently available, and the lowest cost network configuration, 20 21 including utilization levels, and you can't include 22 embedded costs, retail costs or opportunity costs. 23 You have to create a written factual record that's 24 sufficient for purposes of review for people to 25 determine that these components are, in fact, cost

sensitive to increasing call traffic and that they
 are based on a forward-looking efficient network and
 that you are using the most efficient technology
 currently available.

So once a study is placed, meets or 5 6 doesn't meet these things, and let's say for instance 7 it doesn't meet these things, what do you do? What do you do with that study? Do you adjust it like Mr. 8 Hendricks says? Well, the local Competition Order at 9 10 paragraph 1089 says, "In the absence of such cost 11 study justifying the departure from symmetric 12 compensation, reciprocal compensation traffic shall be based on the ILEC carrier's cost study." 13

So essentially there is a burden of proof on Union. If they don't meet it, they use the Qwest existing rates. So the burden is on them to show that they actually have higher costs and that they are cost sensitive to increasing call traffic for each of the components in the wireless network.

20 Now, I want to go on to a couple of other 21 issues. Mr. Hendricks and Mr. Jacobsen said I 22 created a proposed TELRIC study in my proposed 23 Surrebuttal Reply Testimony. I did not. I created 24 an alternative study, not a TELRIC study. I was 25 trying to show a hypothetical example to demonstrate

26

1 that an asymmetric rate is not necessary for Union to 2 recover its own costs, that its costs are similar to 3 those already that are recovered in that rate.

4 I had only limited data. I had the seven days that was provided, even though we asked for an 5 6 indeterminate length of data, Union chose just to 7 provide that. In most cases if they have more recent pertinent data, it's my understanding in the state 8 9 dockets I've been in, that that Data Request gets 10 updated. It was not updated and I have no other The data I received didn't meet TELRIC 11 data. standards because it included, among other things, 12 embedded costs and costs of retail services and data 13 14 services.

15 And as Mr. Jacobsen pointed out, if you're 16 using flawed data, you end up with a flawed analysis. So I was just trying to show a hypothetical if you 17 made some assumptions about how an efficient network 18 19 could be built to handle the usage that has been put forth in the Union model, how many radios would you 20 21 need and what would they cost per minute based on the 22 costs that they provide and the usage data they 23 provided me.

Now I would like to move to fill factors.
The FCC calls for the lowest cost and most efficient

technology currently available. And the Utah 1 Commission Order in May 5, 2003 had an Order stating 2 3 that switching should use a 90 percent utilization 4 factor. That's not happened in this study. And Mr. Hendricks has compared their BTS sites to switching. 5 6 So if they're to look at what would meet efficient 7 TELRIC standards, it would have to be at the 90 percent utilization if the analogy to switching is to 8 9 hold.

10 Sharing of certain network elements. Cable and wire facilities contain poles and trenches 11 12 and conduit and they can support all the services on 13 the cables that are running that. In the cost study that was developed for loop and transport, those 14 15 elements were -- included special access services, so 16 as to allocate costs of the trench, costs of the poles away to other Qwest services that we've 17 18 provided on a retail basis.

Additionally, there was what was called the sharing percentage, which actually varied for each type of plant, whether it's aerial, underground or buried by density group, but the data that was used, that was ordered in the Utah cost docket showed that at least 50 percent -- or up to 50 percent, excuse me, was allocated to other carriers and away

1 from Qwest's costs.

2 So if you had a trench that cost \$10 a 3 foot and it was in a middle density group, it was assumed that there would be at least one other 4 carrier in there 50 percent of the time, and 50 5 6 percent of that \$10 disappeared and wasn't included 7 in the trenching costs. That also happened in the sections of 8 9 interoffice transport that made up the local 10 termination rate or local transport rate for interconnection where we included special access 11 services and data service. So they had all services 12 13 that would be riding interoffice to size, all those cables and all the terminals that do the multiplexing 14 15 to the most efficient level. So you might have pipes 16 that are carrying OC48 worth of traffic, where your 17 local traffic might be a tiny portion of that, but 18 when you bring it down to a per minute basis it 19 reflects all of those efficiencies and you look at, because we included special access services, they 20 21 took their portion of those costs as well and took 22 them away from the local interconnection rates. So 23 the most efficient network created these lower 24 interconnection rates.

Now, structure is equally applicable to

the towers that exist for the cell sites. And it's 1 2 my take that those towers are not traffic sensitive 3 because you don't have to increase those with 4 increasing call traffic, but those towers can also be shared with other carriers providing long haul 5 6 microwave and other services. So 100 percent of 7 those costs should never be in the study. They should be consistent with the way poles and 8 9 right-of-way -- or poles, ducts and the conduit are 10 considered, and trenching. Now I want to move on to the issue of 11 12 mobility because I think mobility needs to be 13 discussed in terms of cost causation under 51.709A and we have to look at how these costs are incurred. 14 15 You know, the basic question is why do people 16 subscribe to the Union wireless. And they get 17 wireless service so they can have mobility, be able 18 to call from their house on their way to work, from 19 their office or from where they might be going and doing recreation. And so Union created a service at 20 21 some point and built out their cell network. That 22 cost was incurred because they had a business plan to

serve subscribers and provide mobility. Those plans,

that network wasn't built so Qwest could terminate a

call to someone's cousin calling from Salt Lake to,

26

23

24

1 say, Vernal, Utah.

2	So essentially they put that out there to
3	get and incurred the cost to have a cellular network
4	and provide a service to subscribers. So when did
5	Union incur these costs to build the coverage? You
6	know, when they built their network originally. So
7	the network costs of creating the coverage started
8	when Union first decided to serve its subscribers.
9	It didn't start when a Qwest customer in Utah made
10	the first intraMTA call to a Union cell phone
11	customer.

12 Now, Union claims that 100 percent of the network costs are cost sensitive to increasing call 13 14 traffic. Well, if that's true, then if the number of 15 calls decreased their costs would decrease. If the number of subscribers dropped to a single subscriber, 16 17 Union would still have the cost of having all those cell sites that they've sold the coverage to this 18 single subscriber with the expectation that he could 19 go anywhere within that calling area and make a call. 20 21 Those costs don't go away. They're not traffic 22 sensitive. There are basic minimum costs to provide 23 that network and you have to put those out and 24 they're not traffic sensitive. They aren't -- those costs do not increase with increasing call traffic. 25

1 And continuing, if for redundancy purposes you need to put in additional radio capacity, I don't 2 3 see how that capacity is related to increasing costs from increasing call traffic. They seem to be 4 totally unrelated. 5 6 And that concludes my wrap-up and I'm 7 complete. 8 MR. MONSON: Okay. Mr. Copeland is 9 available for cross. 10 THE COURT: Mr. Asay, who will be handling that for --11 MR. ASAY: I will be doing that. 12 THE COURT: Okay. Go ahead. 13 14 MR. ASAY: Thank you, your Honor. 15 16 CROSS-EXAMINATION BY MR. ASAY: 17 Mr. Copeland, you were here during the 18 Ο. examination of Mr. Jacobsen? 19 20 Α. Yes, I was. 21 ο. And there was a reference read into the 22 record from a selected book that I assume that you're 23 aware of? 24 Α. Yes. 25 Q. I also have a book for you that I'm going 26

1 to ask you if you're aware of and if you've studied it as part of your analysis of the R squared 2 3 phenomenon. This is from Basic Econometrics, 2nd Edition, McGraw-Hill publisher 1988, page 186. And 4 it says, "In concluding this section a warning is in 5 6 order: Sometimes researchers play the game of 7 maximizing R squared, that is, choosing the model 8 that gives the highest R squared. But this may be 9 dangerous, for in regression analysis our objective 10 is not to obtain a high R squared per se, but rather to obtain dependable estimates of the true population 11 regression coefficients and draw statistical 12 13 inferences about them. In empirical analysis, it is not unusual to obtain a very high R squared, but find 14 15 that some of the regression coefficients are either 16 statistically insignificant or have signs which are contrary to a priori expectations. Therefore, the 17 18 researcher should be more concerned about the logical 19 or theoretical development of the explanatory variances, to be presented variables and their 20 21 statistical significance. If in this process we obtain a high R squared, well and good. On the other 22 23 hand, if R squared is low it does not mean that the model is necessarily bad." 24

Are you familiar with that quote?

26

A. Not that specific quote. But I mean, the general concept follows in all statistical classes. That's why we provided the scattergram that showed the relationship between working channels and the BTS cost.

6 Q. And what is the danger, Mr. Copeland, in 7 simply grabbing particular excerpts from books when 8 you're trying to make an analysis and provide useful 9 information to the Administrative Law Judge and, in 10 turn, the Commission?

Well, I thought my analysis was very 11 Α. 12 useful. We were given working channels. We developed the working channels and thought that it 13 was a useful model to look at working channels versus 14 15 the BTS cost, and we found by examining that that it 16 wasn't a good model because the change in working 17 channels could only explain 6 percent of the variation in the BTS cost. So we said, "Well, that's 18 not a very good model." We don't know why, but it's 19 showing that there's not much sensitivity to the cost 20 21 of BTS from the working channel numbers that you 22 provided.

Q. Thank you, Mr. Copeland. I appreciate
that explanation, but it was only remotely associated
with my question.

1 MR. MONSON: I object to that comment and 2 suggest it be stricken.

3 THE COURT: Mr. Asay, why don't you just rephrase your question and we'll see if the witness 4 can answer it. 5 6 Ο. (BY MR. ASAY) The question is, is it 7 appropriate in giving direction to the Commission to draft or draw certain snippets from documents and 8 9 take them essentially out of context? 10 Well, I think that's --Α. That's really just a yes or no answer. 11 Ο. 12 Α. I don't think that's a yes or no answer, if you don't mind. 13 14 THE COURT: Go ahead and answer. 15 MR. COPELAND: Thank you. That was 16 directly relevant to the issue because I was just 17 saying that the R squared provides the percent change in the dependent variable that is based on the 18 independent variable. That's all it said. And it 19 only explains 6 percent of that change; 94 percent is 20 21 not explained by that variable. It means there's got 22 to be other variables out there that explain. I 23 think that's appropriate and I think that's what the quote said that we provided so it was in context. 24 25 MR. ASAY: Judge Goodwill, in all due

1 respect, it's not responsive to my question. It doesn't go where I want to go with my examination and 2 3 I would move that it be stricken and that the witness 4 be instructed to answer my very specific question. 5 THE COURT: Ask your question again and 6 we'll see if it can elicit a yes or no. 7 Ο. (BY MR. ASAY) Mr. Goodwill -- excuse me. THE COURT: I'll answer yes or no if you 8 9 want me to. 10 (Laughter.) MR. ASAY: Forgive me. And I wish that 11 was the only time I'm going to make that mistake, but 12 I'm afraid I'll do it again. I apologize in advance. 13 14 THE COURT: No problem. Go ahead. 15 Ο. (BY MR. ASAY) Mr. Copeland, is it 16 appropriate to take snippets of information from a book, take them out of context and give them to the 17 Commission to explain a point of view? 18 19 MR. MONSON: I'm going to object on the third time this question has been asked because it 20 21 mischaracterizes Mr. Copeland's testimony. MR. ASAY: Judge Goodwill --22 23 THE COURT: I think it's certainly fair to 24 provide a yes or no answer to that question, but I 25 will give Mr. Copeland to then continue his answer in 26
1 saying whether or not he feels that was what was done 2 in this case.

3 MR. COPELAND: If the snippet is 4 inappropriate then it's not appropriate to add. However, the quote that was provided by Mr. Monson 5 6 was precisely the interpretation that I provided of 7 the R squared. And I think that was a factual quote 8 and it was pertinent. 9 Ο. (BY MR. ASAY) Perhaps you misperceive 10 what my question is going to elicit because what I'm really concerned about is to get your understanding 11 12 of what appropriate authority is for relaying, if you 13 will, to a decision-making body, such as the 14 Commission and Administrative Law Judge. 15 As we bring information to the 16 Administrative Law Judge, what are appropriate documents and authority that we should provide? 17 18 Α. That sort of sounds like a legal question. 19 Q. Well, for instance, and I'll take that as your answer, you provided appropriately references to 20 21 the FCC, the opinions and Orders of this Commission. 22 Are those appropriate authority? 23 Α. Yes. What else? 24 Ο. 25 Well, there would be findings in other Α. 26

regulatory cases and work done in other TELRIC 1 2 proceedings and what's been allowed, what hasn't been 3 allowed, that type of information. 4 Ο. And should it be the type of information that has sufficient authority that other 5 6 decision-making bodies can rely on it? 7 What do you mean by "authority"? Α. Well, for instance, should it be equal in 8 Ο. 9 authority? In other words, the FCC on top, state 10 commissions, should it be of that nature? 11 MR. MONSON: Your Honor, I think this is not only repetitive, but I think it's misinterpreting 12 his own witness's answer. His witness agreed with 13 the quote I read out of the book. He said it was 14 15 correct and then he gave a little explanation. I'm 16 not sure why we're going down this road. 17 MR. ASAY: Judge Goodwill, in fact Counsel 18 does very much misinterpret why we're engaged in this 19 line of questioning. It has not only some relevance to the R squared issue, but it has other relevance 20 21 with respect to what authority this Commission should 22 rely on in making its decision. And all I want to 23 know is what this witness's position is with respect 24 to authority.

25THE COURT: Your question is just in26

1 general terms what authority?

2	MR. ASAY: Yes.
3	MR. MONSON: I think it's been asked and
4	answered.
5	THE COURT: Do you have anything to add,
6	Mr. Copeland, to what you've already said?
7	MR. COPELAND: No, I don't.
8	Q. (BY MR. ASAY) Okay. And just so I am
9	clear, because I don't want to misquote you or
10	misunderstand you, when you're talking about
11	authority upon which this Commission can rely, you're
12	talking about decisions of Federal agencies and
13	decisions of State and Regulatory Bodies, essentially
14	those that deal with regulated entities, particularly
15	telecommunications?
16	A. Yes. And specifically with extra emphasis
17	on what Utah has ordered in the past to keep it
18	consistent with those rulings.
19	Q. This is your opportunity. Anything else?
20	A. Well, I mean, I don't know. It depends on
21	what you want to ask. I'm having trouble
22	understanding several things you asked so keep asking
23	and we'll see.
24	Q. Okay. So to the best of your knowledge,
25	when we're talking about authority that the
26	

1 Commission can rely on, we're talking about essentially opinions of regulatory bodies? It might 2 3 be this authority or it might be equal authority from other jurisdictions, including the FCC, correct? 4 5 MR. MONSON: Your Honor, Mr. Copeland gave 6 a list of these about five minutes ago which included 7 other things. And I don't know what Mr. Asay is 8 trying to do, but he's leaving some things out and I 9 guess he's trying to get Mr. Copeland to forget he 10 earlier said them. I mean, he's already answered this question. 11 MR. ASAY: And, Judge, to the extent he's 12 answered it, I'm satisfied with the answer. I just 13 don't want to misquote this witness later. 14 15 THE COURT: I think he's answered and said 16 he had nothing else to add. We can move on. 17 MR. ASAY: Thank you very much. 18 Ο. (BY MR. ASAY) Mr. Copeland, you 19 introduced your testimony and your exhibits. Did I understand correctly that you did not include and 20 21 introduce your October 24, 2005 testimony? That's correct. 22 Α. 23 Q. That you in fact have essentially replaced that with later testimony? 24 25 Α. Yes. 26

1 Was there anything in that initial Q. testimony that was replaced that was in any way 2 changed by Qwest over time? 3 Well, obviously because it was filed at a 4 Α. 5 later time, I decided when there was a completely new 6 study filed by Union that it didn't make sense to use 7 my previous testimony and it would take too much work 8 to change that. So I went and completely 9 restructured it and redid it. 10 And really what I'm asking is whether Q. there were any particular issues that were contained 11 in the initial testimony of which Qwest changed its 12 opinion or its recorded position in regard to? 13 14 Α. I don't recall. 15 Ο. One docket that I believe was continually 16 referenced by you was the Docket Number 01-049-85. Do you remember that particular docket? 17 Is that the Utah docket? 18 Α. 19 Q. Yes, the Utah docket. 20 01-049-85? Α. 21 Q. Yes. 22 Α. Yes. 23 Q. Are you familiar with that docket? Yes, I am. 24 Α. Was that the docket in which the Utah 25 Ο. 26

Commission established reciprocal compensation rates
for Qwest?

3 Α. They did. In a later order they stated 4 that the UNE switching rates that they established in that was not to apply to reciprocal compensation. 5 6 But that was in an order that was a year or two 7 later. Okay. I'm just trying to understand, 8 ο. 9 because this specific docket you've talked about, 10 01-049-85, was that a UNE docket? That was a docket that covered UNEs and it 11 Α. 12 was Qwest's opinion at the time that it also covered 13 the elements of reciprocal compensation. 14 Well, I guess that's what I need to know. Q. 15 You, as part of your reciprocal compensation rates, 16 actually charge us a rate other than zero, correct? 17 That's correct. And I think when I have Α. cited this Order I've stated that in a later Order 18 the Commission determined that it would continue 19 using the previously established reciprocal 20 21 compensation rate for local switching. 22 Okay. Because there's just been a lot of Ο. 23 reference to this Order and I just need to know. The 24 reciprocal compensation rate that we use, that's 25 Union and Qwest , that is not the rate that came out

26

1

2

A. That's correct.

3 Do you recall the docket number that was Ο. 4 used to establish the reciprocal compensation rates that are presently used by Qwest in charging Union? 5 6 Α. Well, the -- I would have to look up the 7 Order, if you don't mind. I think there was an Order 8 that was clarified on March 2004 in Docket 01-049-85 9 and that's where they said, "The Commission did not 10 intend the Report and Order," meaning the previous one we were talking about, "or subsequent Orders in 11 this docket for rates filed for end office call 12 termination to be modified from the rates set forth 13 in Qwest's SGAT." 14 15 Ο. So was it the SGAT proceedings that 16 established the reciprocal compensation rate that we presently use? 17

There was a 1999 cost docket that 18 Α. 19 established the local switching rates and those were 20 used for reciprocal compensation. This docket was 21 held and at the time of the docket it was assumed 22 that if they found a local switching rate, if the 23 Commission found a local switching rate to be non-traffic sensitive it would apply also to local 24 25 interconnection because it's the same cost, the same

1 switch. And later, in approximately nine months later or ten months later the Commission said that we 2 3 want to -- we did not want to change local interconnection rates. So it was a 1999 order that 4 5 in fact set those, but the 01-049-85 is the latest 6 cost docket that has been held in this state. 7 But the present reciprocal compensation Ο. 8 rates include an element of switching costs in them, 9 correct? 10 I said yes to that before and I say yes Α. again. 11 Did Qwest's reciprocal compensation 12 ο. proposal include integrated DLC costs? 13 14 No, it didn't. Α. 15 Ο. Did the Commission, as part of its Order, 16 specifically determine that these costs should not be part of the reciprocal compensation rate? 17 I don't believe that there was an explicit 18 Α. determination of that. Owest did not file for that. 19 20 You referenced a Minnesota Order, correct, Ο. 21 in your testimony? 22 Yes. Not an Order, but I said the Α. 23 Minnesota Commission has determined that switching is non-traffic sensitive, including reciprocal 24 25 compensation. 26

1 And I assume, as in Utah, what they were Q. addressing was UNE switches, essentially, correct? 2 3 Well, in Minnesota they addressed both Α. 4 UNE switching and reciprocal compensation. So the 5 local switching portion of reciprocal compensation is 6 zero in Minnesota. But in Minnesota, as in Utah, is there 7 Ο. 8 still a per minute rate for switching in the 9 reciprocal compensation rate? 10 No. I said the rate is zero per minute. Α. So the reciprocal compensation rate does 11 Ο. not have any element of switching? 12 In Minnesota it has no element of local 13 Α. 14 switching. 15 Ο. In contrast to what it is in Utah which 16 has an element, correct? 17 Α. Yes. In your testimony, and specifically 18 Ο. referencing the July 21, 2006, Revised Rebuttal 19 Testimony at page 4. 20 21 Α. Yes. 22 Lines 14 and 15 you address an increase of Ο. 23 24 percent in the asymmetric compensation rate from one study to another. But it is true, is it not, 24 25 that Mr. Hendricks in his testimony explained that 26

1 that increase was a form of a late change?

Yes, Mr. Hendricks did explain that. 2 Α. 3 However, he didn't seem to have any qualms about 4 wondering why the rates went up that much and not examining his logic prior to filing. 5 6 But he provided an explanation as to why Q. 7 the change was made, did he not? 8 Α. Yes, later. 9 Ο. In addition, on the next page, page 5, you 10 represent to the Commission that with respect to Union's rate plans, and I'm looking at I believe line 11 12 17, the per minute charge is slightly over 1 cent per 13 minute? 14 Α. Yes. 15 Ο. Would you acknowledge that as referenced 16 by Mr. Hendricks that that's a gross overstatement and that the more typical charge is much higher from 17 18 what you have represented in this testimony to the 19 Commission? My example was showing if a subscriber to 20 Α. 21 Union used all of the minutes available to him, the rate would be .01. Of course, not all subscribers 22 23 are able to do that, but the rate of such is offered. That was my point. 24 25 Ο. And so, really, as a practical matter, 26

what you've provided to the Commission is a 1 hypothetical possibility rather than the actual 2 3 amounts as provided by Mr. Hendricks? Yes, I'll accept that. 4 Α. Mr. Copeland, are you aware that other 5 Ο. 6 rural ILECs in the State of Utah have higher recip 7 rates than does the one that Qwest is offering? I'm not aware of what the other ILECs 8 Α. 9 might charge for reciprocal compensation. 10 On page 10 of the same testimony, line 24, Q. you state, and of course you're under oath when you 11 do it, you've indicated that "Union Cellular has 12 provided no evidence of the traffic sensitive nature 13 14 of its costs." Is that still your testimony? 15 Α. Yes. 16 That with all the proceedings that we've Ο. held, which goes on for three years, September of 17 2004, all the testimony that's been provided, the 18 19 studies that have been provided, the responses to you that have been provided, and it's your testimony as 20 21 you sit before the Commission today that Union has 22 provided no testimony? 23 Α. They have not shown that they have costs that will increase due to increasing call traffic in 24 25 the network that's been presented in their study.

227

Q. So it would be a fair representation that you're not persuaded by the evidence that's been provided?

A. Well, I certainly haven't been persuaded and I don't think many other people have either, but that remains to be seen. But based on what was provided, I don't -- and the investment that was provided, I don't see any proof that that network is cost sensitive to increasing call traffic.

10 Q. And I appreciate that opinion and of 11 course you've stated it. But isn't that a different 12 analysis than stating that they, Union, has presented 13 no evidence?

A. Well, at the point that this was stated there was no evidence. There was nothing on the record other than the study. But I still concur that given what I have seen of the study, the investment in the study, that it can't be shown that those investments increased due to increasing call traffic in the planning horizon.

21 Q. Now, Mr. Hendricks had provided testimony 22 in November of the year before of the traffic 23 sensitive nature of the equipment. Did you in July 24 omit or fail to remember that?

A. Mr. Hendricks discussed that the limiting

1 factor on the BTS was the processor and he didn't explain how the processor needed to be supplemented. 2 3 Therefore, I didn't think that was an adequate explanation for traffic sensitivity. 4 5 Well, would you acknowledge that that was Ο. 6 evidence? I don't think it was valuable evidence. 7 Α. 8 It might be evidence that Mr. Hendricks said it, but 9 I don't think it actually provided anything, any 10 information that would help this Commission see that the costs are in fact increasing with increasing call 11 traffic. 12 Very well. 13 Ο. 14 Judge, could I approach the easel for a 15 moment? 16 THE COURT: Sure. 17 (BY MR. ASAY) Mr. Copeland, in many Ο. 18 respects, although we argue about little things and lots of little things, would you agree with me that 19 in many respects the majority of Union's case, or a 20 21 great part of it, relates to whether essentially the 22 system is traffic sensitive? Would you agree with 23 that? 24 It relates to whether your costs increase Α. 25 with increasing call traffic by component. 26

Q. So are you ignoring the testimony that has been provided as part of this proceeding that when a cell tower, for instance, is near exhaust, we either have to build a new cell tower or we have to take other measures to address the level of increasing traffic?

7 Well, I think you're confusing the proof Α. of traffic sensitivity for an asymmetric rate with 8 9 what hypothetically might happen in your network. 10 The network you provided had a great deal of capacity and it had such capacity that I calculated the 11 utilization to be at 26 percent, and that if you 12 increase the call volumes it would not increase the 13 cost for those network components. So because you 14 15 provided a network based on your CPRs, which are your 16 continuing property records or your customer property records, and that had a certain amount of capacity, 17 it didn't look to me, at the latest data I have from 18 19 you, that you are going to actually need additional -- or incur additional costs based on that. 20 21 ο. All right. Now, there's been testimony 22 that there are BTS towers and the radios and

equipment associated with it that are near exhaust.In fact, Mr. Jacobsen, among others, has testified to

25 that fact. Do you remember that testimony?

- 1
- A. Yes, I do.

2	Q. Now, to the extent that there are certain
3	towers or certain equipment that are near exhaust so
4	that new equipment needs to be provided, are you of
5	an opinion that that doesn't show that this equipment
6	is traffic sensitive?
7	A. That data is not incorporated into the
8	study that would show what portion of the components
9	are traffic sensitive. So it is not brought forward
10	into the study in a manner that allows you to arrive
11	at what could be traffic sensitive. It's just not
12	put together.
13	Q. So all the testimony from Mr. Jacobsen and
14	the other witnesses who have testified to the system
15	and the fact that certain components of the system
16	are going to be exhausted and need to be changed and
17	are traffic sensitive, you reject that testimony
18	because it's not incorporated in the cost study?
19	A. Well, that's correct. Because the cost
20	study is the proof.
21	Q. Outside of the cost study, would you
22	acknowledge that that presentation and that testimony
23	shows in fact that there are elements of the system
24	that are in fact subject to traffic increases and
25	decreases?

15 ucc

A. On a hypothetical basis, but without seeing the data I would -- I think I've been told that the data I was given while on the one hand was complete and then on the other hand I was told it was incomplete because it didn't include the busy season. So I don't have complete data on which to make that assessment.

8 Q. And just so I'm clear, your assessment 9 also ignores all of the testimony that's under oath? 10 That is not included and can't be incorporated into 11 an analysis by the Commission or the Administrative 12 Law Judge; is that your testimony?

13 No. My testimony is that Union needs to Α. provide in a component-by-component analysis and how 14 15 each component's cost increased as call traffic 16 increases. Now, I see this presentation by Mr. Jacobsen where he said, "We're going to need to 17 18 replace this, we're going to need to replace this." 19 What I haven't seen is showing me that for each of the BTSs, including the ones that have a very low 20 21 utilization, what's going to change in the study and what needs to be incremented and what doesn't and 22 23 what's -- so I have gotten incomplete information and a study that doesn't present the picture that you 24 25 guys are describing.

1	Q. But isn't it true, Mr. Copeland, that in
2	fact Union has changed what it has attempted to
3	provide Qwest over time in showing different studies
4	and different information?
5	A. Changed does not make it a TELRIC
6	compliant study that shows that the costs increase,
7	each component increases with increasing traffic.
8	And what has been provided is a move from a
9	forecasted GSM cell site cost to an embedded cost
10	version using the CPRs, and what has changed is the
11	demand quantities, what has changed is the expenses
12	to a book basis.
13	So I don't see significant changes in the
14	methodology that would allow you to decide component
15	by component within the model how things are cost
16	sensitive to increasing call traffic.
17	Q. Mr. Copeland, are you aware of another
18	jurisdiction that has allowed and asymmetrical rate?
19	A. No, I am not.
20	Q. Do you know if Verizon in Wisconsin and
21	Michigan was allowed an asymmetrical rate?
22	A. I don't know. I have done research to try
23	to find if there are any that exist and I have not
24	found any in my research. But that doesn't mean they
25	might not exist.
26	

1 Could you understand Union's position that Q. no matter how it changes its study, the inputs and 2 3 what it provides to Qwest, that Qwest will never accept an asymmetrical rate for any study that's 4 associated with it? 5 6 MR. MONSON: I object. I think the 7 question asks the witness to speculate about Union's position. I don't think he has any basis to answer 8 9 that question. 10 THE COURT: Can you rephrase, Mr. Asay? MR. ASAY: Yes. 11 (BY MR. ASAY) Mr. Copeland, it's true, is 12 ο. 13 it not, that no matter how many times Union changes its study and its presentation that Qwest will simply 14 15 always take the position that we failed to carry our 16 burden of proof and you will never accept a presentation relating to an asymmetrical rate? 17 18 Α. Well, I think that's an untrue statement. 19 I think we have laid out in our testimony what you need to include. We've laid it out in our Data 20 21 Requests what you need to include and our Data 22 Requests were deemed to be irrelevant and my 23 testimony was deemed to be flawed. Therefore, I 24 mean, I have stated what you need to supply, but I 25 haven't seen a change in your studies.

234

1	Q. Okay. Well, in fact, Mr. Hendricks
2	testified that in many respects he changed the inputs
3	to correspond with what Qwest had requested, correct?
4	He testified to that point, did he not?
5	A. He, Mr. Hendricks changed the cost of
б	money, he changed it to depreciation lives. He
7	changed the composite tax rate calculation. But for
8	the significant areas of the study to prove traffic
9	sensitivity, he has done nothing in the model to do
10	that. And he concludes your entire network as if
11	it's traffic sensitive, and that's just flawed.
12	Q. If, in fact, the Commission finds that the
13	testimony of the Union witnesses is correct and in
14	fact the cell sites and the switch are in fact
15	traffic sensitive, would the resulting reciprocal
16	compensation rate be close to what Union has
17	requested?
18	A. Well, I could only answer that if the
19	Commission accepted all the initial inputs and the
20	model as it existed. If that's the case then the
21	Commission would be accepting the proposed rate that
22	Union is suggesting.
23	Q. Well, you, for instance, have taken issue
24	with Union's claim that if its argument is correct
25	and that it has explained that parts of its system
26	

1 are in fact traffic sensitive, that a finding could be made that parts of it are traffic sensitive such 2 3 that it could provide a reciprocal compensation rate 4 to the Commission that would reflect that, correct? MR. MONSON: Can I ask a clarifying 5 6 question? Are you asking him to assume that the 7 Commission would alter the study that was provided by 8 Union or are you just asking him to assume that all 9 the assumptions made in the study are correct? 10 MR. ASAY: Well, I object to Counsel trying to help the witness. I believe that my 11 12 question was very clear with what I was attempting to ask and so I believe it was appropriate and would ask 13 the witness to testify and answer the question that 14 15 was asked. 16 THE COURT: Why don't you ask your 17 question again. 18 MR. ASAY: Thank you. 19 Q. (BY MR. ASAY) Mr. Copeland, with respect to the testimony that was provided specifically by 20 21 Mr. Hendricks, if in fact the Commission finds that certain elements of Union's network are traffic 22 23 sensitive, why do you object to a finding that would allow the Commission to at least parse part of the 24 25 network out for a finding of reciprocal compensation?

1 Why do you object to that?

2	A. I don't object to that. I object to the
3	use of a single factor for all the plant that's not
4	the switch as traffic sensitivity because the FCC
5	states that the determination needs to be made on a
6	component-by-component basis. And I don't think that
7	there's a possible method with that aggregate
8	percentage to determine a component-by-component
9	analysis of what would be included on a traffic
10	sensitive basis.
11	THE COURT: Let me just interject because
12	I have a quick question. Mr. Copeland, do you mean,
13	then, that if the Commission were to do as Mr. Asay
14	suggests, it doesn't have the information before it
15	to complete that analysis?
16	MR. COPELAND: Yes, that's correct.
17	THE COURT: Sorry, Mr. Asay, go ahead.
18	MR. ASAY: Thank you. And thank you for
19	that question.
20	Q. (BY MR. ASAY) Did the Qwest model that it
21	proposed in its reciprocal compensation case include
22	a component-by-component analysis of traffic
23	sensitivity?
24	A. No. That component-by-component analysis
25	is actually laid out in the Order directed at the
26	

1 cellular carriers, the wireless carriers. The 2 Commission, the FCC had previously stated that the 3 loop was non-traffic sensitive and could not be 4 included, that the line portion of the switch was non-traffic sensitive and could not be incorporated 5 6 into the local interconnection rate, and that left 7 the traffic sensitive portion of the switch to be 8 included for the local and end office rate. The 9 tandem transmission rate and direct trunking rates 10 are, of course, ones permitted and the others on a flat-rated basis. 11 12 Ο. The answer to my question at the outset 13 was no, correct? Could you restate the question? 14 Α. 15 Ο. I'll let the record reflect what your 16 answer was. I was just asking you if you remembered 17 your answer. 18 Α. My answer to which? 19 Q. The last question. Well, didn't I just tell you that the FCC 20 Α. 21 had indicated that at that time that land line 22 companies have the loop as non-traffic sensitive, the 23 line ports are non-traffic sensitive, and the remainder of the switch is traffic sensitive that can 24 25 be recovered on a permitted basis. The cellular

1	carrier order that really defined their burden and
2	was in the Order came out in December 2003, and
3	that said each component must be examined and see if
4	it's cost sensitive to increasing call traffic.
5	That's a different analysis than existed in 1999 for
6	land line switches.
7	Q. Thank you.
8	And, Mr. Copeland, my question really
9	related to the Qwest model, the model that Qwest
10	proposed.
11	A. In 1999?
12	Q. Yes.
13	A. I don't recall.
14	Q. Because I have another question with
15	respect to that and maybe you won't recall again. In
16	the '99 model proposed by Qwest, Qwest proposed to
17	recover switching costs, correct?
18	A. Yes.
19	Q. And part of the costs that Qwest proposed
20	to recover were for switching costs even in rural
21	areas, such as remote switches in, I don't know, some
22	remote Qwest village someplace, correct?
23	A. Okay.
24	Q. Is that correct?
25	A. Well, what we proposed was a single
26	

average rate and I think what we ended up was a
D average switching rate.

3 Ο. I understand that. But the proposal for the rate included host switches in small rural areas, 4 correct? 5 6 Α. What do you mean by whole switches? 7 Host switches. My pronunciation is not so Ο. 8 good. I'm sorry, host switches. Host switches, 9 Α. and what about -- I mean, I don't understand the 10 11 context versus because you haven't talked about remote switches. 12 13 Ο. Okay. 14 Α. I just don't understand the context of the 15 question. 16 I used the wrong word. Remote switches, Ο. and that gets even with my language. A remote switch 17 in a rural area, are you with me? 18 19 Α. Okay. I have the remote switch. Now go on to the rest of the question. 20 21 Q. Okay. Part of the Qwest model was to recover costs for that remote switch, correct? 22 23 Α. Yes. And that was even though the remote switch 24 Ο. 25 would not be fully utilized, correct? 26

1 Well, I'm not sure what you mean by "fully Α. utilized." The Commission's Orders have generally 2 3 adjusted our utilizations upward in both urban and rural switches. 4 5 You know, Mr. Copeland, I appreciate that, Ο. 6 but that's not my question. My question is, when 7 Qwest applied for the reciprocal compensation rate 8 and it requested compensation for remote switches, it 9 requested that compensation even though the remote 10 switch would not have been fully utilized, correct? 11 Α. I would like one definition. What do you mean by "fully utilized"? 12 Well, I'm going to start with 100 percent 13 Ο. 14 and we'll go from there. 15 Α. Okay. I'm sure the switch wasn't at 100 16 percent. 17 It might have been 50 percent. Ο. I don't know at the time what our remote 18 Α. 19 switches' capabilities were or how many citizens or lines might be served off of that. So I can't tell, 20 21 give you a definitive answer as far as the 22 utilization. It would be less than 100 percent, 23 definitely. Mr. Copeland, I appreciate that. All I'm 24 0. 25 trying to indicate and elicit a response from you is

26

1 that you requested reciprocal compensation for remote switches that were less than 100 percent utilized? 2 3 Α. Yes, I would agree that that was part of the total state switch cost included remotes as well 4 as host switches. 5 6 And in fact this Commission has recognized Q. 7 that serving in rural areas is different than serving 8 in urban areas with respect to fill factors, correct? 9 Α. Not that I'm aware of. 10 Q. All right. THE COURT: Let me break in real quick. 11 Let's go off the record just a second. 12 Off the record. 13 14 (Recess taken.) 15 THE COURT: Back on the record. Off the 16 record we just had a brief discussion about ending for the evening and we decided to do so now. 17 So we'll see you all tomorrow morning at 9:30. 18 (The taking of the deposition was 19 20 concluded at 5:06 p.m.). 21 22 23 24 25 26

1	CERTIFICATE
2	
3	STATE OF UTAH)
	: ss.
4	COUNTY OF SALT LAKE)
5	
	I, LANETTE SHINDURLING, a Registered
б	Professional Reporter, Certified Realtime Reporter
	and Notary Public in and for the State of Utah,
7	residing at Salt Lake City, Utah hereby certify;
8	That the foregoing proceeding was taken
	before me at the time and place herein set forth, and
9	was taken down by me in stenotype and thereafter
	transcribed into typewriting;
10	
	That pages 1 through 243, contain a full,
11	true and right transcription of my stenotype notes so
	taken.
12	
	I further certify that I am not of kin or
13	otherwise associated with any of the parties to said
	cause of action, and that I am not interested in the
14	event thereof.
15	WITNESS MY HAND and official seal at Salt
	Lake City, Utah, this 26th day of November, 2007.
16	
17	
18	
19	
	LANETTE SHINDURLING, RPR, CRR
20	Utah License No. 103865-7801
21	
22	
23	
24	
25	