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00817
    BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION
 2.
                          COMMISSION
   In the Matter of the Continued )
   Costing and Pricing of ) Docket No. UT-003013
   Unbundled Network Elements and ) Volume VII
   Transport and Termination. ) Pages 817-998
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             A hearing in the above matter was held on
   August 24, 2000, at 9:42 a.m., at 1300 South Evergreen
   Park Drive Southwest, Olympia, Washington, before
   Administrative Law Judge LAWRENCE BERG, Chairwoman
10
   MARILYN SHOWALTER, Commissioner RICHARD HEMSTAD.
12
             The parties were present as follows:
13
             QWEST CORPORATION, by LISA A. ANDERL,
   Attorney at Law, 1600 Seventh Avenue, Suite 3206,
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   Seattle, Washington 98191.
15
             THE WASHINGTON UTILITIES AND TRANSPORTATION
16
   COMMISSION, by SHANNON E. SMITH, Assistant Attorney
   General, 1400 South Evergreen Park Drive Southwest,
   Post Office Box 40128, Olympia, Washington 98504-0128.
17
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             VERIZON NORTHWEST, INC., by JENNIFER L.
   McCLELLAN and GREGORY M. ROMANO, Attorneys at Law,
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   Virginia 23219.
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             COVAD COMMUNICATIONS, by CLAY DEANHARDT,
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22
             NEXTLINK WASHINGTON, ELECTRIC LIGHTWAVE,
23
   INC., ADVANCED TELCOM, INC., NEW EDGE NETWORKS, INC.,
   NORTHPOINT COMMUNICATIONS, McLEOD USA, AT&T, by GREGORY
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00818
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    TRACER, by ARTHUR A. BUTLER, Attorney at Law, Ater
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   Kathryn T. Wilson, CCR
25 Court Reporter
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1 PROCEEDINGS 2 JUDGE BERG: Let's be on the record, please. Today's date is Thursday, August the 24th, year 2000. This is continued hearings in Docket No. UT-003013. 5 For today's session, we are going to begin with the cross-examination of Owest witness Barbara Brohl. 7 Before we do, I have a few administrative matters to take care of. 9 First of all, with regards to exhibits 10 previously identified and numbered for Ms. Brohl on the 11 exhibit list, Exhibits T-100 through T-123, I'm going 12 to direct the reporter to insert each of those exhibits 13 into the transcript record as if I had read them in 14 their entirety. 15 T-100 is Direct Testimony (BJB-T). C-101 is 16 Total Start-up Cost (BJB-1). C-102 is Unbundling OSS 17 Projects (BJB-2). C-103 is Rebundling OSS Projects 18 (BJB-3). C-104 is LIS OSS Projects (BJB-4). C-105 is Collocation OSS Projects (BJB-5) C-106 is Systems 19 20 Access OSS Projects (BJB-6). C-107 is Cross Product 21 OSS Projects (BJB-7). C-108 is Resale OSS Projects 22 (BJB-8). T-109 is Supplemental Direct Testimony 23 (BJB-T9). 110 is OSS Gap Timetable (BJB-10). 111 is 24 US West System Descriptions (BJB-11). 112 is Revised 25 Line Sharing Modifications (BJB-12). C-113 is Long

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Term Line Sharing solution (BJB-13). 114 is IMA-EDI
   and IMA-GUI Descriptions (BJB-14). 115 is Interim Line
   Sharing Agreement (BJB-15). T-116 is Response
   Testimony (BJB-16). T-117 is Rebuttal Testimony
 5
   (BJB-RbT-17. 118, C-118 are RLI 03-008. 119, C-119
   are RLI 03-009. 120 is RLI 03-007. 121, C-121 is CLEC
 7
   01-023. 122 is WUTC 01-024. T-123 is Supplemental
   Direct Testimony (6/9/2000).
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              There are several other exhibits that have
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   been identified for use with Ms. Brohl's
   cross-examination today, and I will identify those now.
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   These five exhibits all consist of data requests and
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   responses. CLEC 02-031 is marked as Exhibit 124 and
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   C-124, CLEC 02-032 is 125. CLEC 02-023 is 126. CLEC
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   02-034 is 127, and CLEC's 02-035 is 128. Mr. Kopta, I
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   understand there may be a stipulation regarding the
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   admission of these exhibits?
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             MR. KOPTA: Yes, Your Honor.
                                           I discussed
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   these exhibits with Ms. Anderl, and I believe Qwest is
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   willing to stipulate their admission into the record.
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             MS. ANDERL:
                          That's correct, Your Honor.
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              JUDGE BERG: Any other objections?
                                                 Exhibits
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   124 and C-124 through 128 are admitted. Also
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   distributed this morning is a copy of Exhibit 7, which
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has previously been admitted into the record. Also,

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Exhibit 8 has been distributed. I do not show Exhibit 8 as previously being offered into the record. This was, I believe, a Covad cross-examination exhibit; is that correct? MS. ANDERL: Actually, it was an exhibit that 5 we've offered prompted by Covad's cross, but I believe Mr. Deanhardt and I have stipulated to the admission of Covad responses to Qwest Data Requests 6 through 11 9 inclusive as a single exhibit number. 10 MR. DEANHARDT: That's correct, Your Honor. 11 JUDGE BERG: I show Exhibits 6, 7, and 8 as 12 being all separate exhibit numbers. 13 MS. ANDERL: Right. These are Data Request 14 Responses 6 through 11 as Exhibit 8. 15 JUDGE BERG: Exhibit 8 is admitted. 16 Commission has also received pages to be added to 17 Exhibit 106, and those are received. The errata to 18 Knowles' response testimony shall be marked as Exhibit E-162. Yesterday, the parties did discuss the 19 20 preparation of an Exhibit C-86. There is some question 21 as to whether or not that exhibit has been offered and 22 admitted into the record. At this time, is there any objection to its admission? 23 24

MS. ANDERL: No, Your Honor.

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00826
              JUDGE BERG: C-86 is admitted into the
   record, and the Commission has also received two
    additional pages to be attached to and part of Exhibit
    161, and those will be considered part of Exhibit 161
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   to be addressed later. Anything else, counsel? We
   will be off the record.
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              (Discussion off the record.)
8
              (Witness sworn.)
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              JUDGE BERG: Ms. Anderl?
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              MS. ANDERL:
                           Thank you, Your Honor.
                      DIRECT EXAMINATION
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12
   BY MS. ANDERL:
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              Good morning, Ms. Brohl.
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        Α.
              Good morning.
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        Ο.
              Would you please state your name for the
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   record?
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              Barbara J. Brohl, B-r-o-h-l.
        Α.
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              Ms. Brohl, do you have before you the direct
        Q.
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    and supplemental testimonies as well as the
20
    accompanying exhibits that you filed in this docket?
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              Yes, I do.
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              Just so that the record is clear, that's
        Ο.
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    T-100 through T-117, as well as T-123; is that correct?
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              Yes.
        Α.
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        Q.
              Ms. Brohl, do you have any changes,
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1 additions, or corrections to make to your testimony?
2 A. I have two corrections.

- Q. Could you direct us to the appropriate exhibit number and page and then tell us what those are, please?
- A. Yes. On Exhibit 102, Page 3, the second full bullet where it starts, "U S West developed the ability to speed bundle loops," that should say, "unbundled switch ports," striking the word "loops." The second correction is in Exhibit 106, Page 30, the third full paragraph, the first line where it says "relationships" near the end of the line should be stricken, and the word between "USOC" and "FID" should say "and" as opposed to the word "to." The line right below that, the word "relationship" should also be stricken, and in the next paragraph, the words "for valid relationships" should also be stricken.
- Q. Ms. Brohl, are those the only substantive changes or corrections that you need to make to your testimony?
- A. Yes.
- Q. Other than that, are those testimonies and exhibits true and correct to the best of your knowledge?
- 25 A. Yes.

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1 MS. ANDERL: Your Honor, we would offer 2 Exhibits T-100 through T-117 inclusive as well as 3 T-123.

JUDGE BERG: Any objections? Exhibits T-100 through T-117 and Exhibit T-123 are admitted into the record.

MS. ANDERL: Thank you, Your Honor. We would tender the witness for cross.

JUDGE BERG: Mr. Deanhardt.

CROSS-EXAMINATION

# 11 BY MR. DEANHARDT:

- Q. Good morning, Ms. Brohl. I'm going to talk with you exclusively about the upgrades to the OSS system for line sharing, and the information regarding that is contained not in your direct testimony but in your supplemental direct testimony, your response testimony and your rebuttal testimony; correct?
  - A. Correct.
- Q. We should in the interest of full disclosure, despite the fact that you have stricken relationships from your other testimony, talk about our relationship.
  - A. Please explain.
- Q. Ms. Brohl, we should let the Commission know that it's correct, isn't it, that during the meetings where Qwest, at that time U S West, and the CLEC's

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- worked on developing the operational parameters for line sharing that although I missed the first couple of those meetings that I was at the remainder of those meetings either in person or on the phone for most of the development of this project; correct?
  - A. Yes.
  - Q. Again, as I did with Mr. Hubbard, we are going to try to not talk too quickly or past each other since we have a familiarity with this. Qwest is using Telcordia to upgrade its systems to support line sharing, according to your testimony; correct?
  - A. Actually, the systems that need upgrading currently belong to Telcordia, and as a result, that's the reason we are using Telcordia, yes.
  - Q. There is a second piece as well that I can't remember the dollar amount but that Qwest is doing in-house.
    - A. Yes, that's true.
  - Q. Did Qwest explore the possibility with any additional vendors other than Telcordia of trying to find OSS solutions for line sharing?
- A. No, but I need to explain that. The systems currently in place to handle the functions that would have to be modified currently belong to Telcordia. We license those from Telcordia, and as a result, do not

l have the flexibility to go outside of those contracts, in my understanding.

To have gone to another vendor would have required that vendor to completely develop not all the functionality that those systems have but at least some portion of it and to have to retrofit those systems into the processing streams.

- Q. We did have discussions, however, during the meetings that we had in Denver regarding the possibility of looking for other vendors to accomplish some of these tasks, didn't we?
- A. From a high-level perspective, we did have those discussions, but as I said, it did not prove to be feasible.
- Q. I guess we should probably define these discussions took place primarily on the 23rd floor of 1801 California Street in Denver in November and December of 1999.
  - A. Actually, it was October and November.
- Q. It's been too long already. According to your testimony in Exhibit 109 on Page 32, the total estimate for what you refer to as the Telcordia solution is 14 million dollars of which Qwest is proposing that it should obtain recovery of 11.9 million dollars; correct?

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- A. Correct.
- And that 11.9 million dollars, according to Ο. Footnote 3 on Page 32, is 85 percent of the 14 million dollars; correct?
  - Α. Correct.
- The allocation of 85 percent of the total 7 cost is based on statements from Telcordia that 85 percent of the work to be done for this upgrade is solely devoted to line-sharing purposes; correct? 9 10
  - Α. That's correct. They advised us that 85 percent of the functionality -- let me explain that. What they did was we were very cognizant of trying to keep the cost from line sharing separate from the cost for other unbundled network elements, mainly because when we started a lot of this, we were going into Minnesota, and Minnesota was requiring a line-sharing cost docket solely, so we were very concerned about keeping those costs separate.

We asked Telcordia to go back and evaluate the functionality, come up with an apportionment of which portion of that software would benefit line 22 sharing solely and which portion of that would benefit 23 other UNEs, other unbundled network elements, and then 24 to appropriate the cost. They came back and said, We've done that, and for the functionality that is

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- 1 solely attributable to line sharing, that cost is 85 percent of the 14 million.
- Q. As I understand it, the basis for Qwest's understanding in that regard is a telephone conversation that you had with someone at Telcordia; correct?
  - A. Yes.
  - Q. Who was that person?
  - A. I couldn't tell you off the top of my head.
  - Q. Has Qwest performed an independent analysis to determine what portion of the total price of the Telcordia package should be attributable to line sharing as opposed to other UNEs?
- 14 No, and I need to explain that as well. 15 software does not belong to Qwest. It belongs to 16 Telcordia. In the way software works is there is 17 source code, which is kind of English driven, and there 18 is object code, which is really what the machine can read and what it uses to process. They give us the 19 20 object code. They keep that source because they are 21 the ones that have to modify that. What that really means is we don't see that software, and they consider 22 23 that to be an electrical property asset as well as 24 proprietary and confidential for themselves, so it 25 wouldn't be appropriate for us to go in and do an audit

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1 of their systems.

- Q. I'm going to ask you for Kathryn's sake to slow down just a little bit. As you testified, however, Qwest did, over the course of these line-sharing discussions, come up with a breakdown of the system's enhancements that would be necessary to support line sharing; correct?
- A. Yes. We came up with a high level set of requirements that we then turned into some high level designs during those two months.
- Q. At the highest level, that would be the document that's been marked as Exhibit 110, which is what we call the gap analysis; is that correct?
- 14 Actually, the gap analysis is kind of an 15 output of what those requirements were. The requirements that we gathered were a little bit bigger 16 17 than this, and then what we did is we identified what 18 we were currently able to do and then what's different. 19 The difference between what you really want to have 20 happen, what is currently happening, would then be the 21 gaps that fall out, so these were the gaps that we 22 needed then to address.
- Q. And these are the gaps that the Telcordia fix and the U S West additional fixes are designed to address; correct?

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- Correct. Α.
- 2 Has Owest asked Telcordia to make an attribution of the costs it is going to charge Qwest to the various gaps? Let me rephrase that. What I'm trying to ask is has Owest asked Telcordia to tell them, Okay, one million dollars of this fix is going to go to fix the system so that we address Gap 1, or two million of it is going to fix Gap 6; anything like that?
  - Α. I'm not sure if we did ask them to do that specifically. I do know when they gave us that price, it was an all-inclusive price, and frankly, it has worked to our benefit because we've found a couple of systems that they didn't originally anticipate modifying that they are now modifying without any additional costs to us.
  - So the 14-million-dollar price that's referred to in your testimony was a fix-it-all price and not subject to change.
- 19 20 Α. I don't know what you mean by "fix-it-all 21 price," but it was one that was not subject to change. 22 There was a lot of negotiation in the price. I do have 23 to kind of explain. We deal with Telcordia products 24 and projects and systems for our own use, so it's in 25 our best interest to attempt to negotiate volume

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discounts, and as you can see in one of the exhibits, we were able to negotiate a volume discount on this. It's not to our best interest to allow these costs to be higher than they absolutely must be, and as 5 a result, we do what we can to keep the costs low, but you have to understand that Telcordia is a separate 7 company. It is no longer owned by the RBOCs, hasn't been for five years, and as a result, they do what they 9 consider remarket pricing, so we really aren't able to

10 go in and do the kinds of things that we might have 11 been able to do six or seven years ago. It's a 12 completely separate company, not even a subsidiary.

- Has Telcordia provided Owest a breakdown of the cost of the work per system as opposed to per gap?
- Not that I'm aware of, no.
- According to your testimony in Exhibit 109 at Page 20, one of the enhancements that comes from the Telcordia package that relates to preordering is batch 19 preordering information, or prequalification information; isn't that correct?
  - That is not coming from Telcordia.
- 22 Where is that one coming from? Ο. 23
  - We had developed that in-house. Α.
- 24 Is the price for that batch preorder 25 functionality included in the approximately 100

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- thousand dollars that is in the OSS figures you are trying to recover in this docket?
  - Α. No, it isn't.
- That saved about six questions. understand it, the primary purpose for these enhancements are to enable Owest's operating and support systems to recognize two users of the loop, Owest and a CLEC.
- 9 Actually, I like to refer to them as two 10 providers of local service because that's really where 11 the complexity comes in.
- 12 In contrast, the two end users is two Ο. 13 providers.
  - Α. Right.
  - Ο. These enhancements though would be available for any other technology that was developed that also could provide or could result in two providers on the loop, assuming that we are talking that one of the providers is Qwest.
- Α. If everything were exactly the same, that 21 might possibly be the case, but all the functionality, all the processes would have to be identical. 22
- 23 Let's explore that for a second, because you 24 don't mean by that that the second provider, the CLEC provider of some new technology would also have to be

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1 providing xDSL service; right?

- No. I mean that the processing would have to be the same. For example, and let me give you a real example, the way that line sharing works with the CLECs 5 at this point is that they maintain their own inventory of which splitter and which splitter port they want us 7 to use and they pass it to us. That's information we don't keep in our system. We kind of catalog it, but 9 we don't assign it. We don't say, "Here is the next 10 one for you." Whereas with out MegaBit services, the way that its process works is we do assign the next 11 12 one, and mainly because it's an integrated DSLAM and 13 splitter and those kind of things. Some of the 14 equipment is different, which causes some of the 15 processes to be different, and so in that case, those 16 would not be the same processes, and as a result, the 17 system behaviors wouldn't be the same. 18
  - Q. I'm going to try to simplify this a little bit and take it back to some of the conversations we had with Mr. Hubbard and Mr. Thompson. Basically, we designed this product so that the CLECs would only have to provide Qwest with two circuit facility assignments, or CFA, in order for Qwest to be able to provision a line shared loop; correct?
    - A. There are two meet points, two points of

- connection, you are correct, but we didn't use the CFA because that has a very specific format and meaning.
  We actually changed it somewhat, and they are now called meet points, but they also have a different nomenclature and a different format.
- Q. Those new meet points though would be the same thing that Mr. Hubbard were calling appearances on the frame?
  - A. I think so.
  - Q. So any product then where that could be designed so as to have no more than two appearances on the distribution frame, that that's the only information that would have to be provided to Qwest in order to provision the new type of service or circuit, could use the system upgrades.
  - A. I think in some of them, yes. I hesitate to say yes, because as a technician, I feel very hesitant to say, Yes, this system will work for this before I see what those requirements are.
- Q. But we've kind of built this in anticipation of having some flexibility. I shouldn't say we built this. When we were having the discussions in Denver, we kind of designed this to try to have that kind of flexibility as much as possible.
  - A. As much as possible.

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- Q. Currently, unbundled loops are provisioned by Qwest through the TIRKS database; correct?
  - A. Yes.
  - Q. And that means that each unbundled loop is a designed circuit that has to be in the systems kind of created from scratch every time an unbundled loop is ordered; correct?
    - A. What do you mean by that?
- 9 Q. I was trying to differentiate between going 10 out and laying copper and simply that you have to use 11 TIRKS to design the circuit path from the central 12 office to the end user.
  - A. Yes.
  - Q. And POTS service is redundant and has flow-through. I'll get to what flow-through is, but you would agree it's a flow-through service.
- 17 Flow-through is one of those words that's 18 used to mean a lot of things, so I'm going to kind of 19 give you a couple of those things, and you tell me 20 which one you are talking about. There is service 21 order flow-through, which is the electronic conversion of local service requests into service orders and 22 23 placement into the service order processors. There is 24 provisioning flow-through, which means in the back end 25 provisioning systems, those orders do not fall out from

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- annual handling for the systems work. There may be central office work, but for the systems work, unless there is an error or the CLEC or Qwest has designated that it must fall out, so I want to keep the two kind of separate, because when you mix them up, it gets kind of muddy.
  - Q. That's fine. What was that first one again?
- 8 A. I call it service order flow-through, and the 9 other one is provisioning flow-through.
- 10 Q. The TIRKS system that I was talking about 11 before is in the provisioning end of the cycle; 12 correct?
  - A. Correct.
  - Q. So as compared to that process, on the provisioning side, POTS is flow-through; correct?
    - A. Generally, yes.
- 17 Q. Instead of using TIRKS, it uses the switch 18 database for assignments; correct?
  - A. Correct.
- Q. One of the advantages of the system
  enhancements for line sharing is going to be to move
  the orders that will be placed to provide DSL service
  in a line-sharing environment from TIRKS into the
  switch data base, and therefore to achieve provisioning
  flow-through; correct?

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- Α. Can I kind of clarify what you said here? 2 Please do. Ο.
- Α. The local service requests or the requests for line sharing as they go through the provisioning 5 flow do not currently go through the TIRKS system. They are going through kind of an adjunct system to switch, which is called APP right now, so they really aren't going through TIRKS at all.

There was a lot of discussion surrounding 9 10 that in our meetings, and we came to the conclusion 11 that it was best to put it where the efficiencies can 12 be best realized right away rather than have an 13 inefficient use of resources and then have to remove 14 all of those data points and put them all into the 15 correct application.

- Like I said, it had been too long. 17 forgotten about APP. The compare contrast I'm trying to make here is that currently, the provisioning of unbundled loops is done through TIRKS and is therefore 20 a design circuit process, and as we move to line 21 sharing and we get the Telcordia package, that 22 provisioning is going to be done in a provisioning 23 flow-through environment; correct?
- 24 That's where I keep wanting to separate this. 25 Unbundled loops, in and of themselves, currently are

provisioned through that TIRKS process and will continue to be provisioned through that TIRKS process. There is a line. Now we go into the line-sharing environment. The line-sharing environment is using an adjunct system off the switch system, and in the new Telcordia solution, we will also be using a switch system, but at this point -- I think I know what you are getting at, and we can kind of take care of some of this.

Right now, even though we had originally thought that some of those were going to have manual handling, it's my understanding that we were able to, through that APP system, achieve flow-through. As you recall, it wasn't going to be for large, large volumes, and since we couldn't limit the volumes, we had to make sure we had interim processes and solutions for this adjunct for the volumes we were anticipating for this first year, and we needed in order not to have a cap on volumes to actually go into the switch system.

So in both of the instances with line sharing, we currently have and will continue to have a provisioning flow-through environment. That doesn't mean that the central office techs don't do work. It means that the systems don't have to have manual input and that sort of thing.

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- So a central office tech will do work, which switch will have provisioning flow-through, and we have, quite happily, I must say, ended up having provisioning flow-through with APP as well.
  - Α. Yes, we did.
- That is the provisioning side of this. Let's talk about the service order side of this for a moment. There are currently two electronic means for CLECs to 9 place loop orders or submit their LSRs -- which is loop 10 service request?
  - Local service request. Α.
  - -- to submit their LSRs to Qwest, and that is Ο. through either IMA or through an EDI; correct?
  - Yes. We tend to call IMA the entire gateway of which there is a GUI portion and an EDI portion, so between those two interfaces, yes.
- So for purposes of this discussion, we will 18 try and stick with talking about the GUI or about EDI, 19 and GUI is graphical user interface; correct?
- 20 Α. Yes.
- 21 Q. And EDI --
- 22 Electronic data interchange. Α.
- 23 In the GUI application, as I understand it, Ο. 24 if a CLEC places an order through its interface, the CLEC manually enters that order at the CLEC premise;

1 correct, into the computer?

- It's how it's presented to the CLEC customer service rep. It is a GUI interface, so when you log into your system in the morning, instead of logging 5 into the CLEC system, you actually have an interface point into the U S West IMA system. So the presentation of screens that come up are Owest's screens -- this is going to be difficult for me. So 9 every time I say U S West, please understand I'm 10 talking about Qwest -- those are the screens that come 11 up, so as the CLEC service representative enters that 12 local service request, it's just a matter of whether 13 entering it into their system or entering it into our 14 interface.
- Q. And entering it into your interface means it's going to go directly into Qwest's systems; correct?
- 18 A. It goes into the gateway. There is a gateway 19 that's just set up for the entry of local service 20 requests and in the parsing of those, and then it goes 21 into the downstream systems.
- Q. And to get from the gateway into the downstream systems, if you've correctly input an order into the GUI, there is no manual process involved in that, is there?

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- I think you are talking about the conversion Α. from that local service request into the service order, and that's what we call service order flow-through, and for many products and for some of those products, we do 5 have that service order flow-through, yes.
  - And by "service order flow-through," that means that there is no manual intervention in the process of going from the local service request into the service order processor.
    - Α. Yes.
- 11 For line-sharing orders submitted through a Ο. 12 GUI, there will be service order flow-through; correct? 13
  - No, there won't be. Α.
  - Q. I thought that was part of the systems that we were --
- 15 16 It was part of the original negotiation; I Α. understand that. Unfortunately, there have been 17 18 some -- I shouldn't say unfortunately. The way systems 19 development works, and especially the way we are 20 working in this environment, is we need to take a look 21 at what the, I'm going to call at this time, the biggest bang for the buck is, and right now, we are 22 23 focusing on the types of orders or the types of 24 services that we have a greater volume in. So we are
- focusing on unbundled loops, that sort of thing, to

continue to get the flow-through going.

Line sharing just has not had the type of volumes that we've needed to bubble that up to the surface, and as a result, that's not one of the things that will be delivered within the December time frame or in April, but it's still on the horizon.

- Q. How far down the horizon?
- A. I can't tell you that. I will tell you that it's something that I watch very closely.
- Q. Would your answers to that same line of questioning be the same for EDI as opposed to the GUI?
- A. Yes. Because EDI and the GUI are just the presentation, and it's a very small part of that. The majority of the gateway system is the BPL, which is the business process layer, which is where all the rules are associated and all the edits take place, and then something called an OSS access layer, which is where the transactions that come in get parsed out to the various downstream systems and pulls back the data that's needed to go back to the CLECs. All of that is a shared system, so once we get service order flow-through for one portion, it transcends to the other one as well, because as I said, it's just a presentation. It's not really a processing stream.
- Q. Your descriptions of EDI and the GUI are at

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1 Exhibit 114; is that correct?

- A. Yes.
- Q. Ms. Brohl, while I'm flipping through this to see what else I have left in your testimony, and we've heard this several times during the proceeding, you refer to Qwest not line sharing with itself; correct?

  A. Correct.
- Q. The thought behind that is that, I think as it's explained in your testimony, since line sharing is defined in the line-sharing order as a CLEC sharing a line with an ILEC, then Quest providing its own service across its own loop doesn't meet that definition; correct?
- 14 Α. That's part of it. The other part of it is the way the systems work, and I think it would be 15 16 easier if I gave an analogy, but it's a true analogy. 17 The way this works is that when Owest is 18 providing the voice and Qwest is providing the data 19 services as well, that's only one provider, and it's 20 one provider with two products, but when you introduce 21 a second provider, that introduces complexity, and let 22 me give you an example of what I mean by that. I'm not 23 sure how many people were in this industry in 1984, but
- 24 I was able to survive divestiture. I was in the TOL 25 and CRIS billing systems during divestiture, so I have

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a very real world experience with that, and it's kind of a parallel because the RBOCs had local service in intrastate toll, and AT&T had interstate and international toll. Because of the difference in the 5 product set, it was very easy for the systems to define what belonged to whom. Once divestiture happened, suddenly there were a lot of interexchange carriers. There was MCI; there was Sprint; there was Allnet. There were a lot of them as well as AT&T. Now did we 9 10 not only have to identify the different product set but 11 also identify who it belonged to. 12

This is very analogous to that because that's 13 exactly what we are doing with the line sharing. 14 are not only identifying that it's a different product, 15 voice versus data, but now who does that data belong 16 As a result, you have to set up accounts that are 17 a little bit different. You've got to set up all sorts 18 of things that are different, and it's, in my mind, 19 very analogous to that, and as you recall, it didn't 20 happen overnight. It was very complicated. Now, once 21 that infrastructure was delivered and built, we can add 22 new interexchange carriers pretty easily provided they 23 have the same kind of model.

I also was the technical project manager for 25 many of the newer products that the interexchange

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- carriers were doing. We had a basic product, and as I recall, MCI came out with their invoice-ready and things like that. That caused new development. We couldn't just retrofit them into what was existing, even though a portion of it could be. So this to me is very analogous to that, and that's why it's very complicated, and it's a little more complex than it seems on the surface.
- 9 Q. I was going for something much easier. The 10 much simpler thing I was getting at is this gets back 11 to the distinction that we were talking about earlier 12 of two different providers on the loop rather than two 13 different end users; correct?
  - A. Correct.
  - Q. At its core, we are talking about providing the same product. Qwest provides DSL across the loop that contains voice, and the CLECs will be providing DSL across the loop that contains voice; correct?
    - A. Correct.
- MR. DEANHARDT: Ms. Anderl, can we just 21 stipulate to 118, 119, and 120?
- MS. ANDERL: I think so. Let me just look at them. Yes.
- MR. DEANHARDT: Your Honor, with that stipulation, I would move for the admission of 118,

00850 119, 120. 2 JUDGE BERG: What was the stipulation? 3 MS. ANDERL: Qwest has no objection to the 4 admission of those exhibits. 5 JUDGE BERG: 118, C-118, 119, C-119, and 120 are admitted. 7 (By Mr. Deanhardt) Ms. Brohl, if you could Q. look at C-118 for a moment, and in particular, 9 Attachment A, as I understand it, this is the final 10 software order from Telcordia to Qwest for the OSS 11 upgrade. 12 Α. I believe so, yes. 13 MR. DEANHARDT: In the interest of fair play, 14 one thing that I will note, Ms. Anderl, and we may want 15 to correct this, in the answer to Part A to the actual 16 request, it refers to the statement at work. One of 17 these says that the software order itself is one of the 18 highly proprietary documents as opposed to the just 19 straight confidential. 20 MS. ANDERL: And ought to only be reviewed --21 MR. DEANHARDT: -- in Seattle. I just want 22 to make sure we have the correct document attached to 23 this and that if there is something that is highly 24 proprietary, maybe we can do that off the record and 25 come back later.

MS. ANDERL: I think that in the overexuberance of responsiveness, we provided a document we should have said you should come and look at, but we'll go over that on a break. Do you want to ask questions that get into it right now?

MR. DEANHARDT: I do not.

- Q. (By Mr. Deanhardt) You've referred in your testimony several times to the CLECs' agreements to the systems changes. When we were having our meetings in Denver, isn't it correct that the way this worked is Qwest identified for the group the various processes that we were going to need to change in order to support line sharing, and then from that, we developed as a first step the gap analysis; correct?
- Well, there is one step that you missed, and that was the requirements gathering portion of it, and that was when Owest and the CLECs, in my estimation, together identified what would be required in order to be able to support line sharing. From that, then Qwest came back and discussed many of the processes that were going to be impacted by those requirements, and then came back to say, And these are some of the system --and from that, we developed the gaps; that's true, and then came back with, And these are the system

modifications that we believe are necessary.

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- Q. In the requirements gathering though, again, it wasn't like the CLECs came in and said, "Qwest, you are going to need to fix your billing systems," because frankly, we didn't know about them.
  - A. True.
- Q. Qwest came in and said, "Okay, here are the things that we are going to need to do to be able to support this product."
  - A. Right.
- 10 MR. DEANHARDT: I think with that, Your 11 Honor, I have no further questions for Ms. Brohl. 12 Thank you, Ms. Brohl.
  - JUDGE BERG: Mr. Kopta?
- MR. KOPTA: Thank you, Your Honor.

15 CROSS-EXAMINATION

- 16 BY MR. KOPTA:
  - Q. Good morning, Ms. Brohl.
- 18 A. Good morning.
- 19 Q. I want to explore a couple of areas in your 20 testimony and exhibits. The first is Qwest's proposal
- 21 to recover its OSS costs on a per service order basis,
- 22 and I'm correct that there are two separate per service
- 23 order charges that Qwest is proposing, one for
- 24 development costs and one for maintenance costs; is
- 25 that correct?

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- 1 A. One is for the start-up costs and then one is 2 for maintenance and operations.
- Q. Just so the Commission will have a visual reference, will you turn to your supplemental direct testimony, which is Exhibit T-109 on Page 7. You discussed a bit with Mr. Deanhardt what an LSR, or local service request is, and I just want to make sure that we know what's happening here. The local service request is essentially a form that the CLEC submits to Qwest either electronically or via fax for services and facilities that the CLEC wants to obtain from Qwest; correct?
  - A. Essentially. Precisely, it's a series of forms, and it's nationally standardized forms as well.
  - Q. And those nationally standardized forms are then taken by Qwest and converted into service orders to be processed through Owest's systems.
- 18 A. Yes. The Qwest service order processors do 19 not understand local service requests. They understand 20 service orders, and so there had to be a conversion 21 into that medium.
- Q. Is the same true for an accessed service request or ASR?
- 24 A. Yes.
  - Q. Would you turn to Exhibit 124 and C-124,

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- 1 which is Qwest's response to the joint CLEC Data 2 Request 02-031.
  - A. Yes.
  - Q. Are you familiar with this document?
    - A. I am.
- Q. Based on Qwest's response, C-124 is just an example of the service orders that are generated from either an LSR or an ASR. It's not a comprehensive list.
- 10 Α. No, and there are reasons for that. Much of 11 this is slightly situational. For example, let's say 12 there was an LSR for five unbundled loops that because 13 it's less than the 20, we would be able to get on one 14 service order. However, one of those unbundled loops 15 was for a location that was in a held situation, then 16 that would become actually two service orders, one for 17 the four loops that could actually be provisioned and 18 one for the held order loop that couldn't be 19 provisioned until a later date, so there really isn't 20 any way to, in my mind and with my knowledge of these 21 systems, to come up with an exact, precise list. 22 Now, these are very good guidelines, and a
- lot of these really do deal with how the CLEC does business. How many types of products do they put on a service order? How many numbers of those products they

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- 1 place on an LSR, and so we will be able to kind of 2 control some of that.
  - Q. Before I ask too many questions about this, this being Exhibit C-124, the document is designated as confidential. Can you tell me generally what is confidential about the information in this document so that I don't reveal anything confidential?
- I think what is confidential about this is there are some things in here that can be inferred 9 10 based on how the service orders work. For example, if 11 you will look at the second item, which is loop 12 conversion to coprovider, TM account, our systems 13 operate in such a way that they can manage 20 of a 14 particular type of UNE on an order. After that, they have to go to another service order, so there are some 15 16 things in there that can kind of be inferred, and 17 that's really the reason for it.
  - Q. I will try to avoid revealing on the record anything that would give rise to those kinds of inferences, but please correct me if I seem to be going down that path.
    - A. I will.
- Q. I guess actually a couple of the things that I wanted to ask were elements or services or facilities that are not on this list. I don't see a category for

- 1 line sharing. Does a CLEC submit an LSR for line
  2 sharing?
- A. Yes, and you are right. It's not on here, 4 but a line-sharing LSR, because it's for a specific 5 telephone number, really only deals with one line, one 6 account, and as a result, will generate one service 7 order.
- Q. Am I correct then that the CLEC would, under 9 Qwest's proposal, pay the nonrecurring OSS charge on 10 that service order as well as the recurring charges for 11 line sharing for OSS recovery?
- 12 You are going to find I'm kind of a stickler Α. 13 for terminology. Recurring charge is really not the 14 right term because a recurring charge and a 15 nonrecurring charge are kind of in the transaction 16 arena. In other words, that's what costs to process. This OSS charge is for OSS cost recovery, and what that 17 18 means is it doesn't really -- it doesn't have a relation to processing times, processing costs, 19 20 processing processes, for lack of a better use of 21 words. What it deals with is this is the mechanism for 22 which we are attempting to spread across the cost recovery dollars. 23
- Q. Let me try and avoid a terminology faux pas, and really the basis of my question is a CLEC ordering

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- line sharing would pay the start-up cost OSS charge, the maintenance OSS charge -- that's one time for the one service order -- plus the \$3.75 per month line-sharing OSS cost recovery charge?
  - Α. Correct.
  - I also don't see any listing here for the UNE Ο. platform. Are you familiar with the UNE platform?
- Yes. And the reason for that is we essentially consider the UNE platform from a systems 10 processing perspective only to be a comparable product to resale because essentially that's what it is. It's a total service, and we even use the resale forms. don't use them. The CLECs when they UNE-P use the resale forms, and as a result, that would be identified under the resale portion of this.
- That was my question is whether it generated the same number as a resale order or individual 18 elements.
- 19 No. It would be identical to resale at this Α. 20 point.
- 21 Another thing that I don't see listed here 22 would be switch features. For example, if a CLEC orders UNE-P and the customer later decides they want 23 24 call-waiting, would that be something that is submitted on an LSR to Qwest, the request for call-waiting?

If you will look down, I'd say about four Α. fifths of the way down, look under resale, there is resale new account, resale change, changing the OTN, and then you have resale new connect or change. 5 of that, the change, is change orders, which is changing features and functionalities of that system. So if you are going to add call-waiting on either a UNE-P or on a resale account, you would have one per 9 circuit, so one for each telephone number. 10 JUDGE BERG: Mr. Kopta, after you finish 11 clarifying this particular exhibit, we will take a 12 15-minute break. 13 MR. KOPTA: I just have a couple more 14 questions on this. Although, we could take the break 15 now, if you would like. 16 JUDGE BERG: The Chairwoman has been trying 17 to be in two places at once, and this would be a good 18 time, and let's be back on the record at 11:05. Thank 19 you. 20 (Recess.) 21 JUDGE BERG: Mr. Kopta, please resume. 22 (By Mr. Kopta) Ms. Brohl, there is one other Ο. area on this exhibit that I wanted to clarify, which is 23 24 repair orders. Do repair orders generate service

orders or trouble tickets or any kind of problem?

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- 1 A. No. Repair inquiries or repair transactions 2 do not culminate in service orders.
- Q. Just to clarify an earlier response to one of my questions, if a CLEC orders five unbundled loops and one of them is held, is it my understanding that for each held orders, for example, if there were two unbundled loops that were held, then each of those would generate a service order?
- 9 A. I don't know the answer to that one for sure.
  10 I would think they would go on the same service order,
  11 but I'm not positive of that because we don't know when
  12 that service order would be released and when those
  13 facilities would be released, but I'm not positive. I
  14 really can't answer.
  - Q. On the second page of Exhibit C-124 are service orders for LIS trunks, which are local interconnection service trunks; correct?
    - A. Correct.
  - Q. And each order for local interconnection trunks and facilities would generate corresponding service orders that would then be subject to the OSS charges?
    - A. It's my understanding, yes.
- Q. And do you know whether those OSS charges would be shared with Qwest in proportion to its use of

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- the trunks that are ordered?
- No. Owest does not issue ASRs, so they wouldn't be going through this process, and if you recall, I said earlier that this isn't a charge for the ordering of those services. It is merely a cost recovery mechanism, and this is the denominator, for lack of -- and I'm probably not saying this correctly because I'm truly not a mathematician, but this is just 9 the set of products that we've identified that we can 10 spread that cost over.
  - Do commercial mobile radio service, or CMRS, providers, most commonly, cellular carriers, order LIS trunks?
    - Α. I don't believe that they do.
- Would you turn to Exhibit 126, which is 16 Owest's response to the joint CLEC Data Request 02-033.
  - I have.
- 18 Just to clarify the response in this, the 19 second sentence states that ASRs for connectivity to a 20 base station are not included in this docket. Is that 21 more or less what you just responded to?
- 22 Correct. It's my understanding that mobile radio or cellular providers establish connectivity to a 23 base station as opposed to establishing connectivity 25 with LIS trunking.

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- 1 Q. Do trunks ordered by a CMRS provider use the 2 same systems as LIS trunks for CLECs?
- 3 A. I don't know to what proportion or if they 4 do.
- 5 Ο. Another aspect of your testimony that I wanted to explore are the benefits of modifications to Qwest's OSS, and specifically, I'd like to ask you some questions about Exhibit C-104, which is the list of 9 summary projects to your Exhibit BJB-4, and 10 specifically, if you would turn to the second page of 11 that exhibit under the heading, "Qualifications for OSS 12 cost recovery, " is the last sentence under that heading confidential? 13
  - A. No.
  - Q. That last sentence states, "No work on this project was done at the request of U S West retail," and that's the same last sentence in each of the specific projects that's listed in this exhibit; correct?
    - A. Correct.
- Q. Is that the standard that Qwest uses to determine whether or not Qwest itself benefits from the system modifications?
- A. No. In fact, that's probably misleading, and we will modify that. What the standard is, the process

- that we go through is we identify what the system modification is and identify whether or not there is a benefit solely to the wholesale side or if there is a benefit to the retail side, and if there is a benefit to the retail side, then those projects are not included in this cost recovery effort, so the projects that have been identified here are those that have benefit to wholesale and to wholesale customers but are 9 not of benefit to the retail side of the house for a 10 variety of reasons. Either that's not a product that 11 the retail side is providing -- for example, unbundled 12 network elements. Qwest does not sell unbundled 13 network elements on a commercial level to the retail 14 end users. That is strictly an animal and a type of 15 product that is sold from a wholesale perspective to 16 our wholesale customers who are in that instance CLECs 17 who then use them to provide services.
- Q. Do Qwest retail customers benefit from the ability to place and receive calls with customers of CLECs?
- 21 A. I'm sure that they do, but that to me is a 22 different thing than benefitting from these particular 23 modifications.
- Q. Let's explore that then. The companies' respective customers can't make and receive calls from

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- 1 each other without interconnection facilities between 2 the companies, can they?
  - A. That's true.
- Q. So ultimately, don't Qwest customers benefit from interconnection facilities between Qwest and CLECs?
- 7 A. From a very high level perspective, I think 8 that makes sense.

9 MR. KOPTA: Thank you. Those are my 10 questions.

JUDGE BERG: Mr. Butler? CROSS-EXAMINATION

13 BY MR. BUTLER:

- Q. Good morning, Ms. Brohl. Can you tell me whether or not you are aware of any other ILECs that use Telcordia software for OSS?
- 17 A. I do think that a large number of them do use 18 many of the systems. Which ones in particular, I 19 wouldn't be able to tell you.
- Q. Are any of those OSS systems similar to or the same as Qwest's, to your knowledge?
- A. They all started off that way, because back when we were all owned by AT&T, all the systems were the same. Since divestiture occurred in 1984, everyone has kind of gone off on their own separate way. Some

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- of the systems have continued to stay the same, and some of them, I'm sure, have modified or have been replaced.

  Are you aware of whether Telcordia is
  - Q. Are you aware of whether Telcordia is providing an OSS upgrade to support line sharing for other ILECs?
    - A. I think I have been in meetings where that's been discussed and that they are, but I don't know to what extent.
  - Q. Did Qwest in its dealings with Telcordia for the line-sharing upgrade take any steps to insure that Qwest was not paying for a software upgrade that Telcordia had already been paid to do for another ILEC?
- 14 And I think that goes back to -- let me 15 explain some things. I can't answer that yes or no. We did not, but there is a reason for that. Back when 16 17 Telcordia was actually Bellcore and it was owned by the 18 seven companies, that was a normal process, a normal way of doing business, because the way that worked back 19 20 then is that any software modification that then 21 Bellcore did was then divided up. The cost was then divided up amongst how many of the seven RBOCs had 22 23 requested that change.
- That's different now. They are not owned by any of us any longer, have not been for at least five

- years, and so what they deal with now are not cost-base pricing. They deal with market prices. They don't cost-base price to us or to anyone else, as far as I know, and so that's not really an appropriate thing in this environment any longer.
- Q. Am I correct then from your answer then that Qwest did not discuss nor negotiate with Telcordia the possibility of sharing costs on any of the software upgrades that were involved here?
- A. Qwest did negotiate. Qwest did not pursue the ability of Telcordia to spread this cost amongst the RBOCs or the existing ILECs because we don't have the proprietary information that would tell us which of those ILECs are using which systems and to what extent they are going to rely on Telcordia systems. What we did do is negotiate with them to get the lowest price that we could and with the most functionality.
- Q. Did you discuss with Telcordia the subject of whether any of the work that Telcordia would do for Qwest would be duplicative of work it was doing for any other ILEC?
- A. No. We did ask them if there was any of the work that was in that system, in that set of systems that underlaid any of the other work that was being done for unbundled network elements.

00866 MR. BUTLER: That's all I have. 2 JUDGE BERG: Ms. Smith? 3 CROSS-EXAMINATION 4 BY MS. SMITH: 5 Q. Thank you. I'm Shannon Smith, and I'm representing Commission staff in this proceeding. Do 7 you have before you Exhibit No. 122? Α. Yes. If you will give me a moment, I'll turn 9 to it. 10 Ο. Do you recognize that exhibit as being the 11 Company's response to Commission staff's Data Request 12 No. 24 to the Company? 13 Α. I do. 14 Q. That DR essentially asks Qwest to explain the 15 procedures and criteria it used to determine whether 16 and the extent to which projects also benefited Qwest; 17 is that correct? 18 Correct. Α. 19 Ο. If you would look at the response portion of 20 the document in the second paragraph, there is a 21 sentence that begins in the third line, and I'll read 22 that to you: "If the project effort involved 23 enhancements that were used by U S West's retail

systems users, the project was considered a benefit to

25 U S West and was not considered a candidate for cost

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1 recovery."

In that sentence, who are the retail systems users that are referenced in that sentence?

- A. They would literally be the end-user customers that are using the retail products and are considered a Qwest retail end-user customer. That's at the lowest level. When you go up a level -- the way the Company is organized is by market unit, as well as other business units. Our market units are segmented to market, so it would also benefit from a product standpoint the market unit that was responsible for retail versus the one that was responsible for wholesale or any of the wholesale CLECs or end-user customers.
- Q. What exactly does the Company mean by "used by" in that sentence?
- 17 A. For example, if an end-user customer calls in 18 and asks if they can order local telephone service, and I kind of see what you are getting at, and this is kind 19 20 of confusing. The end-user customer does not log into 21 the system and actually use the system. The end-user 22 customer uses products and services that are supported 23 by these systems, and that is really what this is 24 intended to convey is that for those products and 25 services that are retail products and services that are

- l in the systems modifications that are in support of those, then those are not considered part of the candidate list for cost recovery.
  - Q. What entity within Qwest is responsible for the retail provisioning of OSS systems?
  - A. Are you asking me what entity is responsible for the systems themselves or what entity is responsible for provisioning, because there is two different things there.
    - Q. Why don't you just identify both of them.
    - A. Systems modifications are all under the purview of the information technologies organization, IT, and it does its work on behalf of the Company. The provisioning side is dealt with by the service delivery organization, and that generally involves members from network. It may involve members from some of the market units, those types of things, because someone has to issue an order and someone has to actually install the order.
    - Q. Were any of the people responsible for the retail provisioning consulted as to whether the various projects would provide any benefit to the retail OSS?
- A. No, but they didn't have to be. From a systems perspective, we understand the functionality that is provided to the retail side of the house. We

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also understand the new functionality that is in place for the wholesale side, for lack of a better term, and as a result, in the information technologies organization, we can make that determination based on our knowledge of the products and our knowledge of the systems that have to support those products, whether or not they will be.

We do talk amongst ourselves from a systems perspective. It's not totally a confidentiality wall or anything like that. We do talk amongst ourselves. We find out who is working on what products and projects, and since we have to install the retail projects, we know what the differences are in the wholesale ones.

- Q. In providing CLECs with access to Qwest's OSS systems, is Qwest providing a completely separate OSS system for the CLECs, or will the CLECs share in the existing OSS system with Qwest?
- A. More of the latter, because the way that this works -- and there isn't any one system. For example, the CRIS system that I discussed earlier, we talk about it as being a system. It's actually probably three different geographical locations, each one comprising of probably anywhere from 150 to 250 programs, so that's just one piece of information.

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- Now, there is a basic set of functionality in these systems, and every time you add functionality, you add additional abilities and capabilities of those systems. While the underlying functionality, data may be shared, there are certain things that are just specific to CLEC access, and that is the only part that's in this docket. That shared portion, the infrastructure, the base, that's not in here at all.
- 9 Q. Is it correct that Qwest or U S West has 10 spent over 16 million dollars to date in new investment 11 to provide access to OSS?
  - A. Could you repeat that?
- Q. Has U S West or Qwest spent over 16 million dollars to date in new investment to provide access to 15 OSS?
  - A. Now, you have to help me a little bit because I'm not an accountant and I don't do well with numbers. What does "investment" mean? Does it mean total dollars expended, or someone was talking about investment being capital.
    - Q. Capital.
- A. Let me go back to one of my exhibits, which is 101, and in there, to date, it looks for 1997 capital -- now, you have to understand these are the inputs to all the cost studies. I don't know what

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- 1 happens to the dollars once they go to the cost study,
  2 and I'm not the person to ask that.
  - Q. I'm not asking you to go into that much detail, but I recall reading in Ms. Million's testimony and in her exhibits that the Company essentially has spent about 16 million dollars in new investment for OSS. Would you agree with that figure?
  - A. I would, because if you look at '97, capital total is 4223. 1998 capital total is 4201, and 1999 capital total is expected to be 7813, so approximately 16 million. That adds up to about that.
  - Q. Would you agree that that investment is classified to Account 2124, General Purpose and Computers?
    - A. That is not my area of expertise.
  - Q. Just assuming that that's the case, if new computer investment provided the ability to allow the OSS system to process transactions faster, would Qwest consider that increased processing capability to benefit only CLECs?
- A. If that was the only reason it was purchased, I don't think so. I think you need to look at what processing capacity does. Processing capacity is required for volumes, not just performance, and with an increased volume of transactions that go through the

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systems, you have to have increased -- it's called DASD, which is basically hard disks. You have to store this data somewhere. You have to be able to retrieve it, so volume alone can cause, and generally does cause, additional hardware expense.

- Do you know whether Owest has augmented the ability of its OSS system to process transactions more rapidly?
- I believe that it has, but it's something 9 Α. 10 that's done on overall system planning and system kind 11 of capacity and planning type of system planning kind 12 of -- I'm not saying this very well. Let me start 13 over.

You don't look at a system, this system or that system or this set of transactions when you go off and do overall kind of network views and performance kinds of things, and as a result, if there were some performance problems and if we needed to speed up things and that sort of thing, it wouldn't go to any particular type of project, necessarily. It would be an overall upgrade to the systems that's parts of U S West technologies expense. I think I sense that's where you are trying to get to is if we've done that in this case, and that's not part of this.

Ο. So is your answer to my question yes or no, I

1 guess?

- A. The answer is yes, but it's not a part of this cost docket.
- Q. Could you tell me whether Qwest's retail OSS would also benefit from the increased processing speed?
- A. If U S West were to, say, buy a new HP machine and put a data to the ZUNI data center in order to then process certain transactions faster, all transactions that went through that computer would be impacted in a positive way. That's not something that's associated with a project that's listed here. It's something that's part of us doing business.
- Q. Is it your testimony then or is it your belief that none of the 16 million dollars of investment was used to increase processing capacity?
- A. I can't say that because we are also looking at the gateway systems, and I'm sure it was used to develop and to increase processing capacity in the gateway systems. The gateway systems, the IMA, GUI and EDI, aren't used by our retail organization.
- Q. I'd like to direct your attention, if I can, just finally here to your, I believe it's your direct testimony, which is Exhibit 100 at Page 12?
- 24 A. Yes.
  - Q. And the question and answer beginning on Line

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- 1 19, and you say in there that service order volumes are 2 predictable. Do you see that testimony?
  - A. Page 13?
- Q. I'm sorry, Page 12. It's Page 12 on my version, and the question begins on Line 19.
  - A. Can you tell me what question it is?
- 7 Q. The question is: "Why does U S West propose 8 per service order charges rather than per local service 9 LSR charges?"
- 10 A. And that is in Exhibit 100?
- 11 Q. That's what I have, your direct testimony.
- 12 A. I'm sorry. I don't find that anywhere.
- MS. ANDERL: Your Honor, may I provide the

14 witness with another copy of her testimony?

JUDGE BERG: Yes. And Ms. Anderl, if you've already found the spot, maybe you could point it out to the witness.

THE WITNESS: Yes.

- 19 Q. (By Ms. Smith) You see the bit where it 20 says, "service order volumes are predictable"?
- 21 A. Yes.
- Q. Why does the Company believe that the service order volumes are predictable?
- A. Because that is how we've -- by using service order volumes and trending them, we have been able to

identify what the increases are needed for processing and that sort of thing. That's the reason that we have used those is to be able to identify in our systems when we do have to increase direct access storage devices and that sort of thing, increased hardware in order to process additional volumes.

- Q. If your service order forecasts turn out to be too low, does that mean that the Company is going to have to expend additional dollars to process the orders or to increase the capacity?
- A. If the volume of service orders through the systems increases and we have not identified that or anticipated that -- I think that's where you are going -- then whether we've anticipated it or not, we would have to expend dollars to purchase hardware to increase the ability to handle those volumes.
- Q. We had some discussion when we started our questioning about benefits to Qwest and benefits to CLECs, and I guess the last question I have is, is it possible for something to be a benefit to Qwest without necessarily being a benefit to end users?
- 22 A. The payroll system, human resources systems, 23 those infrastructure systems.
- Q. I'm talking about OSS systems. I don't mean just all Company-wide things.

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- A. And you will have to be more specific to me, because to me, all systems are operational support systems.
  - Q. We are talking about the computer investment and the OSS computer investment, the items that we've been talking about, and I'm not as proficient as you are, so I can't identify them all.
- 8 Let me think about this a minute. If by Α. 9 mechanizing a process that increases our ability to --10 I can't think of anything that would be other than 11 those infrastructure types of systems that I was 12 talking about. If, for example, the repair technicians 13 get a faster computer, I would think that that would 14 have a positive impact on their end-user customers that 15 call in for that. If a manual process gets mechanized, 16 it would have to have a benefit because it would 17 probably result in faster response times, more 18 information at the fingertips, that sort of thing. So I guess what I'm saying, is it a direct 19 20 benefit? Does it result in a particular product that
- they can now order and put on their line? Maybe or maybe not, but is it an indirect benefit because it causes increased customer service and maybe some bill and track history and that sort of thing? I'm sure it does. I can't think of an instance other than those

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1 infrastructure kinds of systems that wouldn't have some 2 benefit to customers. That's the whole reason we 3 exist.

MS. SMITH: That's all I have. Thank you.

JUDGE BERG: Dr. Gabel?

CROSS-EXAMINATION

7 BY DR. GABEL:

- 8 Q. Good morning, Ms. Brohl. I notice on your 9 first page of your direct testimony you say that you 10 manage regulatory issues involving U S West operational 11 support systems. How long have you been in that 12 position?
- 13 A. I have been in this position for about three 14 years. I have been in our information technologies 15 organization since about 1980.
- Q. In that current position, you testified before this Commission in Phase 3 on OSS issues, and in that position, did you have the opportunity to review the submission by U S West witness Dean Buhler in Phase 20 2?
- 21 A. Somewhat, yes. It's been some time.
- Q. I'm going to hand you Mr. Buhler's testimony. It's his direct testimony, and I want to ask you, and I will give everybody a copy, ask you to turn to DWB-1. That's his first exhibit. I would also like to ask

- that you look at Exhibit C-101, which, I believe, is similar in format to what Mr. Buhler submitted.
  - A. Yes.
- Q. I'd like you to focus on what Mr. Buhler had anticipated being your 1999 expenses and contrast them with what you reported as your actual expenses. I guess my first question is, am I correct that Mr. Buhler anticipated that your 1999 expenses would be lower than your 1998 expenses?
- 10 A. You're asking me if the total number under 11 the 1997 expense column is less than the total column 12 in the 1998 expense column?
- Q. No. I'm asking is it a fair characterization that Mr. Buhler anticipated that the total expenses under the 1999 column would be less than the total in 16 1998?
  - A. Yes. At that time, he did.
- Q. Could you explain for me why the amounts that you are reporting in your, what's been marked as Exhibit 101 in this docket are different by a nontrivial magnitude between what he had anticipated and what are your anticipated expenses for 1999?
- A. If you look at the date on Mr. Buhler's exhibit, it's October of 1998. That is generally around the time when our company at that time was

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starting to look into budget for the following year, identifying what kinds of projects would be associated with the following year, what were the needs and what were the regulatory requirements, that sort of thing, and not just for our wholesale systems but for all of our systems, and actually, all of our work.

Middle of October is probably the very beginning of that time frame during that process, and I'm sure that he had the best information that he had available to him. Now, as we go further into the year, and as we get further into 1999, those estimates become more refined because the projects get more refined. One of the things is there may be projects we were not going to anticipate needing to be done in 1999 when we were looking at this fourth quarter of 1998, so that to me is a very reasonable reason why they might be different.

By the same token, if you ask me now what our estimates would be for 2001, we might be able to come up with some numbers, but they would be much more precise and much more accurate as we got into 2001.

- Q. When was Exhibit C-101 prepared?
- 23 A. It was prepared in January of this year.
- Q. So the values that appear in the column 1999 are also forecasted values.

- A. Yes, they are, because at that time, we did not have the 1999 actuals available to us.
  - Q. Comparing Exhibit 101 in this docket with DWB-1 in 960369, what is noticeable is a big change in system access forecasted expenditures. Could you provide an explanation about why the forecast values changed?
  - A. I think we could probably get some insight from the systems access project descriptions, and that is Exhibit 106, and if you take a look at that, on the first page, you can see all the projects that have 1999 associated with them. So if you look at that, there is a great deal of work that we had not anticipated possibly at that time, so these are the projects that would be pretty comparable, not comparable, but would correlate pretty well to that increase in costs.
  - Q. The second area where I'd like to inquire about trying to understand is the issue of demand forecasts, and Mr. Kopta has asked you a bit about service order volumes, and this is an area where you have some familiarity, service order volumes?
  - A. Some.
- Q. And you've just responded to some questions also on this topic from Ms. Smith.
  - A. I have some knowledge. I'll qualify that.

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- Q. I also want to hand out something which I believe was from Mr. Buhler's direct testimony that's also in this package. Am I correct, Ms. Brohl, that when Mr. Buhler had prepared his testimony in Phase 2 of 960369, that was 1998?
  - A. I believe so.
- Q. And in 1998, there has been no mandate by the FCC to provide line sharing?
  - A. That's true.
- 10 Q. And in 1998, the Eighth Circuit's ordering 11 prohibition on combining unbundled network elements, 12 was that in effect at that time?
  - A. I can't remember.
  - Q. But would you accept, subject to check, that the Supreme Court's decision regarding the pricing of unbundled network elements was issued in January 1999?
    - A. I would.
- Q. So when Mr. Buhler had obtained data on anticipated quantities of orders, it would not have reflected line sharing, and it may not have reflected unbundled network element combinations; is that correct?
- A. That's correct, but I do have to clarify something. I don't believe this is part of Mr. Buhler's testimony. Let me restate this. I do

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- know this is Attachment B, but I believe this was part of the cost study. If that's the case, and that's not really my case of expertise is the cost study, so I'm going to be --
  - Q. When you can't answer, then we will just stop there, and then I may make a record requisition. I guess also, at the time in which Mr. Buhler would have and U S West would have undertaken this study in Phase 2, had the Commission reached any conclusion about if there should be separate nonrecurring charges for ordering and disconnecting?
- 12 A. I believe that that was one of the orders 13 that came out of this Commission, yes.
  - Q. Do you know if that was an order in Phase 1 or Phase 2?
- 16 A. I don't remember off the top of my head. I 17 would have to go back and look when that occurred.
  - Q. Are you familiar with the order volumes that have been used in the current cost study?
- 20 A. No.
- Q. I'll stop here and make a record request that U S West, now Qwest, provide the Bench with a
- comparison of the volumes that were used to support the cost study in Phase 2 of 960369 and show how the
- 25 volumes submitted in this proceeding had been modified

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to reflect changes that have occurred subsequent to the filing of the '98 order, and I've just identified three possible areas. One would be the line sharing, second is maybe combinations of unbundled network elements, 5 and the third, a rate structure that has charges for both connections and disconnections. JUDGE BERG: Dr. Gabel, that will be Bench Request No. 4. When you refer to "volume," could you 9

characterize what volume?

DR. GABEL: Ms. Brohl, you can make sure I'm using the right phrase. It would be a service order.

THE WITNESS: Right, service order volumes.

MS. ANDERL: And Dr. Gabel, are you

specifically referring to the numbers on the first page of this Attachment B?

DR. GABEL: Yes. Relative to the numbers I asked Ms. Million about yesterday, which was at Page 19 of Attachment B.

- (By Dr. Gabel) Lastly, I'd like to ask you, Ο. I believe I understood you to say in response to a question from Mr. Kopta that it's not possible to come up with a precise list of charges. I think that was the phrase you used, and I want to make sure I understand what you meant by that.
- Α. Actually, I think what I was referring to was

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that I didn't think there would be able to come up with a definitive exhaustive list of a correspondence between an LSR that would be issued and the number of service orders that would be issued as a result of it. We can give some guidelines, and frankly, if there are additional things that are not on this list, we'd be more than willing to go back and look at those and add them to this list and keep it updated, because 9 I understand the rationale behind the question. 10 However, some of it is situational, and we can maybe 11 put in some caveats if this situation occurs, that type 12 of thing, but I don't know that it would be possible to 13 make a completely exhaustive list. 14

- Q. When a CLEC places an LSR and it involves a disconnect of an existing retail service, is there a USOC associated with that?
  - A. Yes.
- Q. So is it possible for you to draw up a list that identifies all the USOCs to which the service order OSS charges would apply?
- A. The thing is is that there may be more than -- disconnect is one issue, and let's talk about them individually. On a connection, because it's easier to start from the connection, on the connection, there are many USOCs. There is a USOC for the class of service.

There is a USOC for each of the elements that the end-user customer would order. There is one for call-waiting, one for call-forwarding, et cetera.

There may be many, many USOCs. It depends on what the particular product and service set that that individual has ordered. So that won't have a correlation back to a service order.

Now, when we do the disconnect, there is two things that happen. Number one, when the LSR or the order is actually issued by the order issuer or the system, there is a USOC that's a disconnect USOC. However, in the systems, what has to happen is every one of those USOCs that were put in now must be taken out, so there is kind of a -- it's not a true one USOC to a disconnect order, and even if that were the case, change orders would not be able to follow that model, TNF, which are transfer to and from, wouldn't necessarily follow that order. New-connect orders wouldn't follow that model, that type of thing, so a USOC really doesn't relate to a service order.

Q. I believe you know that generally the way in which regulation works is that there is a service description and then there is a rate associated with the service description, and a customer knows they can go to a tariff and they can see, well, this is the

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charges they are going to incur.

Is there something which you can provide that really would make it clear to a customer that would really cover the universe that says, All right. These are the charges which we are authorized or may be authorized to charge?

- A. Which customer are we talking about?
- Q. The CLEC. So it's clear for what activities they incur specified charges.
- A. That's what's kind of different about this OSS cost recovery, because it's not really a product, and I believe there are tariffs in place for actual products and actual services, so when they order an unbundled loop, they understand what the recurring charge will be and what the nonrecurring charge will be.

17 That's what's different about the OSS cost 18 recovery in that there isn't a charge similar to a 19 recurring and nonrecurring charge. It just so happens 20 to be placed or assessed when the order is completed, 21 but it's not really a nonrecurring charge for that particular order, so that's what makes it kind of 22 23 difficult. If it were a product or service, that would 24 be easier to do and it would definitely be done. The 25 fact that it's a cost recovery, this is just a

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mechanism for recovering that cost. It's the one we've come up with, and it's my understanding in Ms. Million's testimony, we said if there was a better way, we are willing to look at that and are willing to 5 listen to that. This is just the way we've come up with.

- The last question. You are putting in place Ο. a mechanism to track the revenues that may be obtained through this OSS surcharge. Is there any way that the data system that's been put in place to track incoming revenues can be sort of used as a reverse process where it tells you which services will or which activities will be subject to the OSS surcharge? Is there some kind of logic statement in your information system that says -- it's a field that says, because you are using this field, we know that there has been a surcharge of \$10 on a service order?
- 18 I don't know. That's an interesting thing to Α. 19 look at. I know that we've discussed the charging 20 portion of this. We've also discussed the mechanism 21 for tracking it to insure that we stop when we need to 22 stop so we don't overrecover and that sort of thing. I 23 don't know that we've really thought of that. 24 something to think about. 25

DR. GABEL: Thank you.

### 00888 JUDGE BERG: Let's be off the record for a moment. (Discussion off the record.) JUDGE BERG: That concludes questions from 5 the Bench. We are going to follow --MS. SMITH: Your Honor, I think I may have 7 neglected to move for the admission of Exhibit 122, and I'd like to do that now. 9 MS. ANDERL: No objection. 10 JUDGE BERG: Exhibit 122 is admitted. Any 11 further cross-examination? Hearing none, Ms. Anderl, 12 would you like to ask a few questions on redirect? 13 MS. ANDERL: Yes, Your Honor, maybe just two, 14 thank you. 15 REDIRECT EXAMINATION 16 BY MS. ANDERL: 17 O. Ms. Brohl, you were asked questions by Mr. Kopta and others about whether or not Qwest's 18 19 customers might ultimately benefit from interconnection 20 facilities or other changes that Qwest might make to 21 its OSS in order to enable CLEC access. Do you recall 22 those questions? 23 I do. Α. 24 Whether or not Owest customers benefit from Q. 25 interconnection facilities or the changes to Qwest's

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1	OSS that it makes to enable CLEC access, do those
2	customers cause the costs that Qwest incurs to make
3	those changes?
4	A. Not in my opinion, no. In addition, I'd like
5	to make one statement that I wasn't able to when I was
6	asked the question. The benefit seems to be very high
7	level, a very indirect benefit as opposed to a more
8	direct benefit.
9	MS. ANDERL: I guess I just had the one.
10	JUDGE BERG: Anything further? Ms. Brohl,
11	thank you for your testimony here this morning. We'll
12	be off the record.
13	(Lunch recess taken at 12:00 p.m.)
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19	A DEED MOON CHOCKEN
20	AFTERNOON SESSION
21	(1:47 p.m.)
22	JUDGE BERG: We'll be back on the record for
23	the afternoon hearing session on Docket No. UT-003013.
24	We'll be starting this afternoon's session with the

25 cross-examination of Mr. Rex Knowles. Before we do

that, I just want to cover a few administrative matters. Ms. Anderl, I understand that there is a stipulation regarding the oral surrebuttal to Mr. Klick's testimony, which ostensibly was to be 5 presented by Mr. Thompson, as well as a stipulation regarding, Mr. Deanhardt, the recall of Mr. Thompson 7 for cross-examination on Exhibit C-43, and either one of you can handle addressing one or both of those 9 issues. 10 MR. DEANHARDT: It's all part of one big 11 package. With respect to Exhibit C-43, we have worked 12 with Qwest and are going to stipulate to the fact that 13 the fourth and fifth pages of Confidential Attachment A splitter and cost per shelf," do not reflect the analysis that supports the prices proposed by Mr. Thompson for splitter collocation in Exhibit 22. Likewise, we have reached a stipulation to the fact that Pages 3 through 7 of Confidential Attachment B to Exhibit C-43 do not reflect any analysis that is used to support the pricing set forth

14 to Exhibit 43 that are entitled "cost of connections to 15 16 17 18 19 20 21 22 in Exhibit 22, and third, a stipulation that the demand 23 assumptions that are used in the OSS cost study -- that 24 is actually misnumbered. It's the eighth page in order 25 of Confidential Attachment C that reads across the top,

1 "line-sharing OSS cost per line 05-11-00." The same 2 assumptions appear in Confidential Exhibit C-45 -- that 3 those assumptions do not include any demand assumptions 4 for future new entrants into the DSL line-sharing 5 market.

With those stipulations, and I have conferred with Mr. Butler and with Mr. Kopta, we have no further need to cross-examine Mr. Thompson on Exhibit C-43 or any other witness on Exhibit C-43, and in addition, Qwest has informed us that Mr. Thompson will not be offering any surrebuttal to Mr. Klick's testimony.

MS. ANDERL: Subject to being able to read that in the transcript, and I believe it's an accurate representation of what we agreed to, yes, that is all correct.

JUDGE BERG: Dr. Gabel, do you need any additional clarification on the stipulation that the parties have entered into, and if so, maybe that's something we could handle off the record?

MR. DEANHARDT: We'd be happy to make ourselves available for that, Your Honor.

JUDGE BERG: Even though Qwest has indicated it is prepared to respond to Records Request 10 and 15 at this time, with the Commissioners back on the Bench, I'm going to mark that for something to take up either

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   after our next break or even tomorrow morning, unless
   there is a need to do it now.
             MS. ANDERL: No.
                                Whatever is most
   convenient for the record, Your Honor.
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             JUDGE BERG: We'll take that up later. Let's
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   go off the record for a moment.
 7
              (Discussion off the record.)
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             JUDGE BERG: Mr. Knowles, will you please
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   stand and raise your right hand.
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             (Witness sworn.)
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   Exhibits for Mr. Knowles: T-150 is Direct Testimony.
12
   T-151 is Response Testimony. T-152 is Reply Testimony.
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   153 is the California PUC OSS Decision. 154 is Owest
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   DR-2. 155 is Qwest DR-3. 156 is Qwest DR-4. 157 is
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   Qwest DR-5. 158, C-158 are Qwest DR-6. C-159 is
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   Invoice #483401. 160 is CA-PUC Draft Opinion
   (9/7/2000). 161 is Inland Fence estimate (6/3/98).
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   E-162 is Errata to Response Testimony.
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             JUDGE BERG: Mr. Kopta?
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                     DIRECT EXAMINATION
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   BY MR. KOPTA:
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             Mr. Knowles, would you state your business
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   address and name for the record?
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             My name is Rex M. Knowles, and my business
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   address is 111 East Broadway, Suite 1000, Salt Lake
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   City, Utah, 84111.
             Mr. Knowles, do you have before you what's
   been marked for identification as Exhibits T-150
   through 153 and Exhibit E-162?
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              I do.
        Α.
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              Was that testimony prepared by you or under
 7
    your direction and control?
        Α.
              It was.
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              And if I asked you the questions contained in
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   the testimony exhibits, would your answers today be the
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    same as contained in those exhibits?
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              They would.
       Α.
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              MR. KOPTA: Your Honor, at this time I would
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   offer Exhibits T-150 through 153, and E-162 into the
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   record.
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              MS. ANDERL: No objection.
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              JUDGE BERG: Exhibits T-150 through 153 and
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   Exhibit E-162 are admitted.
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              MR. KOPTA: Thank you, Your Honor.
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   Mr. Knowles is available for cross-examination.
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              JUDGE BERG: Mr. Romano, would you like to go
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MR. ROMANO: Yes, please. Your Honor,

Mr. Kopta has agreed to stipulate the cross exhibits from 154 to 161, so at this time, I ask that they be

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first?

### 00894 1 moved into the record. JUDGE BERG: Any objections from the parties? Exhibit 154 through 161 are admitted. 4 CROSS-EXAMINATION 5 BY MR. ROMANO: Good afternoon, Mr. Knowles. On Page 9 of 7 your response testimony, which is marked as T-151, Lines 9 through 11, you claim there that Nextlink obtained a bid of less than \$7,000 for the construction 9 10 of 10 contiguous 100-square-foot cages? 11 With gates, yes. Α. 12 If you could please look at Exhibit 161, do Ο. 13 you have a copy of that? 14 Α. Not as marked. 15 It is the Inland Fence quote. Ο. 16 Α. Yes, I have that. 17 And there are two pages that were added to Ο. that this morning by Mr. Kopta. Do you have those 18 19 also?

So is this Exhibit 161 a quote to which you

And this quote is for the construction of 10

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Α.

Q.

Α.

refer on Page 9?

25 cages; is that right?

Yes, I do.

It is.

- A. Yes, 10 equipment cages, right.
- Q. You would agree though that Verizon does not always construct 10 cages at a time, wouldn't you?
- A. I'm not sure exactly what they are doing, but 5 I would suppose that they don't.
  - Q. Do you know if Verizon has ever constructed 10 cages at a the time in Washington?
- A. I don't know what Verizon has done. What I'm looking at here is what we have tried to get based on how when we construct cages when we provide collocation, and this is a data point that we think the Commission should look at when they are trying to determine how much a reasonable amount of construction cages should be.

Even if we did look it at it from a perspective of 10 contiguous cages, 320 feet of fencing should be an important data point the Commission should look at when determining how reasonable the costs are when we are looking at the ILECs for construction of cage.

- Q. Have you read Mr. Tanimura's rebuttal testimony, which is marked as T-320?
  - A. I have, but I don't have a copy with me.
- Q. If you've read his testimony, then would you remember reading that the average number of collocation

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- 1 cages in a Verizon central office in Washington is
  2 three?
  - A. That sounds, subject to check, that's right.
- Q. This quote is for the construction of 100-square-foot cages; is that right?
- 6 A. The quote that you are looking at on Exhibit 7 161?
  - Q. Yes.
- 9 A. Yes. It's for 10 100-square-foot cages, 10 exactly.
- 11 Q. You would also agree that CLECs don't always 12 order cages that are 100 square foot in size.
- 13 A. Of course not. That's not the point of my 14 testimony.
- Q. Attachment A to 161 is the drawing of these 16 10 cages; is that right?
  - A. That is correct.
- 18 Q. And is this particular quote for a particular 19 central office?
- A. I don't believe so. I think it was a quote that was asked to give an idea of how much it would cost to do the fencing with this configuration, and it was for the purpose of preparing for another case.
- Q. So this quote was for a hypothetical central office; is that right?

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- 1 A. This drawing is for a hypothetical central 2 office; that is correct.
  - Q. If this isn't for a particular central office, how would you know whether this arrangement would fit into a central office that Verizon would have in Washington?
- Again, I'm not trying to state that it has Α. anything to do with a particular central office that Verizon has. I'm trying to say that to install 320 9 10 square feet of linear fence with 10 gates that this is 11 the approximate price that we have been quoted to do 12 that. If you arranged them differently, had a different configuration, I'm sure that the look would 13 14 change, but again, this is just meant to be a data 15 point for the Commission to look at to have a 16 comparative.
  - Q. This quote wouldn't include costs for blueprints or architectural plans, things of that nature, would it?
- 20 A. I think this clearly states it's for 21 construction.
  - Q. Do you know if this contractor would meet the insurance requirements of an approved contractor that an ILEC would use?
- 25 A. When we had this quote done, we went to the

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- 1 contractors that Nextlink uses to do all the work in 2 our own central offices. I don't know specifically 3 whether this contractor is one that had been used by 4 any particular ILEC, but it is one we use for our 5 central offices.
- 6 Q. Do you know if this quote envisions any work 7 for nonbusiness hours?
  - A. I don't know.
- 9 Q. Is it fairly typical to say that much cage 10 construction in central offices is completed during 11 nonbusiness hours, that you know of?
  - A. I'm not aware of whether it would be during or not during.
  - Q. In your testimony, you state that dust partitions are included in this quote.
- 16 A. Can you show me where you are referring to in 17 my testimony?
- 18 Q. Actually, that may be a reference to a 19 different invoice, so I apologize for that question. 20 Do you know if this includes dust partitions that would 21 be used to construct cages?
- A. Let me review once again the specifications that we had put forward. It does not appear to be one of the specifications that was requested.
  - Q. On the same page of your response testimony,

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- which is Exhibit T-151, on Lines 14 through 17, you cite there to a Qwest invoice that shows that cage construction costs are less than \$5,000; do you see that?
  - A. I do.
- Q. Do you have what's been marked as Exhibit 7 C-159? This is the invoice that is -- do you have one 8 that's marked as C-159?
  - A. I don't have one that's marked.
- 10 Q. It's a confidential exhibit so I'm hesitant 11 to mention the name of the company.
- JUDGE BERG: Can we reference the invoice number 48301?

THE WITNESS: Yes, I have that.

- Q. (By Mr. Romano) This invoice is for one particular cage construction project in one particular central office; is that right?
- 18 A. I don't know that for sure. This was not 19 Nextlink's construction that was being done. Based on 20 what is on this invoice, I don't know that I can draw 21 that conclusion completely.
- Q. But this is the invoice to which you refer on Page 9 of your response testimony; is that right?
- A. Yes, and let me go back. It only asks for one gate, so yes, it would be for just one cage.

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- 1 Q. And that would be in one particular central 2 office?
  - B A. It is.
- Q. And this is a project that took place in 5 Utah; is that right?
- 6 A. That is correct.
- 7 Q. Do you know what gauge fence material was 8 used in this project?
- 9 A. I do not.
- 10 Q. Do you know what types of lights were used in 11 this job?
  - A. I do not. All I know is that this is the specifications that U S West was using for the exact same type of collocation caging that we are asking for anyone and any kind of -- I'm assuming that if it's a good enough cage for U S West, it's probably a good enough cage for Verizon.
- 18 Q. Do you know where in the particular central 19 office this work was done?
  - A. I do not.
- Q. So you don't know how close this cage would have been to an electrical panel?
- As I just mentioned, I don't know where it would be so I don't know that.
- 25 Q. Do you know if it includes conduit from the

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- 1 light in the duplex back to the panel?
  - A. I don't know.
- Q. Do you know if anything was done to seal the floor for this project?
  - A. I do not know.
  - Q. Do you know if tile was placed in this cage?
  - A. I don't know if tile was placed in the cage, but I would be shocked if it were.
- 9 Q. But you don't know whether that was included 10 in this invoice for this job; correct?
- 11 A. No. This job does not specify that it should 12 be. All this is specifying is fencing outlets and 13 lighting and gate, so it doesn't say they are going to 14 do tile. I would imagine they are not doing tile.
- 15 Q. You don't know if any work was done for this 16 job after business hours, do you?
  - A. The invoice does not specify that it was.
- Q. And I mentioned this earlier by mistake, but this is the invoice where you refer to the fact it includes dust partitioning at Lines 15 through 17 of your response testimony, Page 9, and I'll just ask you, where is the dust partitioning element in this invoice?
- A. I do not see the dust partitioning specifically stated here, and I'm trying to remember if that was from prior testimony. I don't remember off

- 1 the top of my head.
- Q. If we turn now to Page 12 of your response testimony, which is, again, T-151, and specifically, Lines 15 through 16, there, you mention that Nextlink pays its outside contractor \$28 for splicing.
  - A. That's correct.
- 7 Q. If you could look at what's been marked as 8 Exhibit C-158, this should be the invoice upon which 9 this rate was based. I just want to confirm that's the 10 case.
- JUDGE BERG: I'll indicate this has also been identified as Qwest Data Request No. 6. There may be a succession of data requests 2, 3, 4, 5, and 6. DR-6 is Exhibit 158.
- 15 THE WITNESS: I don't think I have a copy 16 here with me.
- JUDGE BERG: Mr. Kopta will provide you with a copy.
- 19 Q. (By Mr. Romano) Just for the record, is this 20 the invoice which supports your \$28 per splice figure 21 on Page 12 of your response?
- 22 A. It is.
- Q. This is an invoice for one particular job; is 24 that right?
- 25 A. This is.

- 1 Q. And this job was in Salt Lake City, Utah; is 2 that right?
  - A. That's correct.
- Q. Specifically, it was for two splices of 144 fibers; is that right?
  - A. That's correct.
- 7 Q. Do you know what size fiber cable Nextlink 8 typically uses in its collocation cages?
- 9 A. I'm not sure I understand your question. In 10 our collocation cages?
- 11 Q. Yes. The cable that runs into your 12 collocation cables for the size of the fiber?
- 13 A. I'm not sure. Most of the collocations that 14 I'm most familiar with have been provided from Qwest 15 where they run the fiber.
- 16 Q. So you are not aware of the fact that 17 typically, 12-fiber cable is run to cages?
- 18 A. You asked if I knew what Nextlink was doing, 19 and I don't, and I don't know about -- you are asking a 20 different question, I think.
- Q. Would you have any idea whether 12-fiber cable is fairly typical in a central office to run to collocation cages?
- 24 A. That does not sound abnormal.
- 25 Q. Is it your understanding that contractors use

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- 1 different rates for splicing of greater than or less 2 than 48 fibers?
- A. My testimony says that Nextlink's quote is for \$28 a splice, and I've conferred with our engineers, and they said with the contract we are dealing with that every job you get charged \$28 per splice regardless of size or quantity.
- 8 Q. But this particular invoice is specifically 9 for 144 fibers; is that right?
  - A. It's two sets of 144 splices, so probably.
  - Q. I'm going to shift now to a subject of OSS start-up or development costs, and the first reference I'll give you is in your direct testimony, T-150, at Page 1. I just want to go through your background a little bit. Your educational background is in business administration and finance; is that right?
- 17 A. I have a bachelor's degree in business 18 administration finance law from Oregon State 19 University.
  - Q. Do you consider yourself an economist?
- 21 A. I don't.
- Q. And you are not a lawyer; is that right?
- 23 A. That is correct.
- Q. On Page 3 of T-150, you outline four principles which you believe govern cost recovery for

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- 1 CLEC access to ILEC OSS; is that right?
  - That is correct. Α.
  - Q. Your first principle is that OSS cost recovery is limited to TELRIC plus a reasonable share of forward-looking common cost; is that right?
    - That is correct.
- On Page 4 of your direct, T-150, Lines 12 Ο. through 14, you claim that the ILEC may not recover the cost it incurs to modify its existing network; is that 9 10 right?
  - That is what it says. Α.
  - In the same place of your testimony, you Q. claim that the reason for this is because the FCC has defined TELRIC as being quote, "based on the least cost most efficient network configuration and technology currently available"; is that right?
    - That was the basis for that statement.
- But you recognize, I believe, and correct me 18 19 if I'm wrong, at Page 3 of your response testimony, 20 T-151, that the Eighth Circuit Court of Appeals vacated 21 this particular provision; is that right?
- 22 Which provision in particular were you Α. 23 referring to?
- 24 The TELRIC provisions or FCC rules that you 25 cite in your direct testimony are the ones. Are those

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- the same ones that you are referring to on Page 3 of your response testimony?
- When I'm talking about what the Eighth Α. 4 Circuit had ruled?
  - Ο. Yes.
- I'm not talking about everything the TELRIC 7 rules have put in place or that the FCC said. Just the fact that the Eighth Circuit had made some ruling and opinions regarding how those costs should be 9 10 determined, but they didn't throw out everything. At 11 least that's my understanding, but as you mentioned 12 earlier, I'm not a lawyer.
  - You say on Line 8 of your response testimony, Page 3, that the FCC's TELRIC rules have once again been vacated. To what do you refer to there?
  - Again, going back to my recollection of what the Eighth Circuit said, in my nonlawyer opinion, when they vacated those TELRIC rules, they didn't vacate all of the principles of TELRIC, but they rather vacated a couple of specific areas, and therefore, the TELRIC rules have to be revisited. But I did not say that the principles that weren't vacated should be eliminated.
- 23 Would you agree that the Eighth Circuit 24 directly addressed and vacated the phrase that TELRIC 25 was based on the least cost most efficient network

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- 1 configuration and technology currently available?
  2 A. I don't recall that specifically. I remember
  3 they talked about, basically, what's there and what's
  4 not there.
- 5 Q. Have you read this Commission's 17th 6 Supplemental Order?
  - A. I have.
- 8 Q. On Page 4 of your reply testimony, which is 9 T-152, Lines 7 through 8, you claim there that the 10 Commission did not fully explain -- Page 4 of your 11 reply testimony?

JUDGE BERG: That would be T-152.

- Q. On Lines 7 through 8, I believe there is a sentence that says, "Unfortunately, the Commission did not fully explain its decision." Do you see that?
  - A. Yes, I do.
- 17 I just want to explore a little bit with you Ο. 18 what you mean by that. There is a reference in the 17th Supplemental Order which summarizes -- it's a 19 20 section in the summary and it talks about OSS transition costs, and it says, "The Commission concludes that because OSS is a network element, CLECs 21 22 23 should pay reasonable costs of modifying OSS to support 24 a competitive environment." I have a copy, if you

would like to look at it, but I just wanted to see, is

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that one of the provisions of the order that you believe is not fully explained?

> Α. It is.

- Then there is another quotation from the 17th Supplemental Order, and I'll read you this statement. It says, "Nextlink argues that the FCC's TELRIC rule prohibits the recovery of transition costs from CLECs." And let me ask you, does that sentence summarize your position in this proceeding?
- I don't know that the word "prohibit" is appropriate, and if I may clarify on both of those two points. First of all, from Nextlink's perspective, the 17th Supplemental Order addressed transition costs and transaction costs -- I believe is what GTE or Verizon is using for the nomenclature -- to a certain extent. However, given the fact that they did have a modifier in there -- it says "reasonable costs," and how those costs should be identified and recovered are things that need to continue to be looked at. From Nextlink's perspective, those are issues that should be addressed. At the time we were looking at the 17th Supplemental Order, the Eighth Circuit had not yet
- 23 ruled, so there is a change in how things are being 24 looked at. Do those reasonable costs assume to a

25 certain extent a more efficient, more advanced

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- technology, or are they completely imbedded? I don't know that that was totally explored. There are a variety of other things that are unclear in my mind as to how that should be done, and quite frankly, this is an extremely important area for CLECs and competitors trying to get in. It has huge economic impact. I think the Commission, even if it was clear to them, I think it should be revisited. It's a very important issue.
  - Q. But you would agree that the Commission decided in the 17th Supplemental Order that ILECs are allowed to recover those costs. It's just a matter of quantifying them that you are discussing now; is that right?
- 15 Α. Nextlink does not argue that Verizon and 16 Owest should be allowed to recover the costs. The 17 question has been, other people have discussed how much those costs should be. Our issue is which costs should 18 be recovered in which manner. Nextlink's perspective 19 20 is that those costs that are required to enable 21 competition, the basic platform changes that need to 22 happen, should be recovered the same way LNP is, 23 basically spread across all consumers so that we can 24 get to a point where anybody can compete.

Then the UNE prices and the costs associated

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with actual transaction costs should be incorporated on a per transaction basis. That's where the UNE costs for OSS should be recovered, from Nextlink's perspective, and the transaction charges or costs, in my opinion, are what should be included in UNE prices that are charged to CLECs.

JUDGE BERG: Hold for one moment.

Mr. Knowles, it will be easier for me to follow your responses if you can respond to a question asking for a yes or no answer with a yes or no first. It will help me place your explanation in some context.

THE WITNESS: Sure.

- Q. (By Mr. Romano) Mr. Knowles, you mentioned local number portability. You would agree, wouldn't you, there is a separate provision in the Telecom Act that governs the phone number portability and recovery of those costs?
- A. Absolutely. I think that OSS should be looked at, and you should see that the Congress had determined that that kind of cost to transition to a competitive environment should be borne by all consumers. OSS costs are no different in that they are required to enable us to get to a platform where we can compete, and they should be treated the same way.
  - Q. But they are covered by different provisions

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- 1 of the Telecom Act; isn't that right?
  - A. I believe I answered that, yes.
- Q. On Page 2 of your testimony, T-152, Lines 14 through 17, you interpret Section 252 D-1 of the Telecom Act to mean that the ILEC is not permitted to recover its OSS modification costs. Would you agree with that?
  - A. Would you ask the question again?
- 9 Q. Yes. On Page 2 of your reply testimony, you 10 interpret Section 252 D-1 to mean that an ILEC is not 11 permitted to recover its OSS modification costs; is 12 that right?
  - A. That's not what I'm stating here. I'm stating that the pricing for network elements should be different than total recovery. I never had intended to imply that costs that were legitimately incurred should not be recovered. The question is, in what form, and in this particular case, I'm discussing which costs should be recovered from the unbundled network element pricing associated with OSS, and just to differentiate, that would be different than how the cost and cost recovery mechanism should be put forward for transition costs for the OSS systems.
- Q. But don't you interpret this provision, particularly the word "providing," don't you interpret

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- that to mean that an ILEC is not permitted to recover its OSS modification costs?
- A. For the pricing for unbundled network elements, as is on Lines 14 and 15.
  - Q. So that OSS modification costs can be recovered outside of that context?
    - A. Correct.
  - Q. In your interpretation here, you've already stated you are not a lawyer, so when you interpret this provision, you are not using legal principles of statutory construction. It's just your reading of the plain language; is that right?
- 13 A. That's my understanding of the plain 14 language. 15 O. Let's go to the second principle. I
  - Q. Let's go to the second principle. I hate referring you back to your direct testimony, but that's where they were first laid out. On Page 3 of your direct, which is T-150 at Lines 4 through 5, I believe your second principle is that ILECs should recover costs to make OSS access available not from CLECs but rather from end users; is that right?
    - A. All customers, yes.
- Q. Are you aware that in the 17th Supplemental Order that the Commission, quote, "found that ILECs are entitled to recover the cost of OSS from CLECs"?

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- A. I have read the 17th Supplemental Order.
  That appears to be what it says. Although, I once
  again would reiterate that if that was the intent of
  the Commission, I think they should revisit that.
- 5 Q. Is this one of the areas where you feel the 6 decision was not sufficiently explained?
  - A. I'd have to go back and review the 17th Supplemental Order in more detail. I don't remember off the top of my head.
- 10 Q. You attached to your reply testimony a 11 decision of the California Public Utilities Commission, 12 which I believe has been marked as Exhibit 153?
  - A. I did.
  - Q. You cite to that order on Page 5 of your reply, I believe, to support the second principle about who to recover these costs from; is that right?
    - A. That is correct.
- Q. On Page 3 of your reply, starting at Line 22 and carrying over to the next page, right there, you claim that OSS modification or transition costs will be recovered from an ILEC's customers as a cost of doing business. Do you see that? Or that they are entitled to recover them?
- A. I don't believe I said, "as a cost of doing business," but yes, they are entitled to recover.

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- 1 Q. On Line 22, does it say "their costs of doing 2 business" at the bottom?
  - A. Line 22 says they are entitled recovery of their costs of doing business but not as a cost of doing business. In other words -- I want to make sure we're not trying to read more into what I'm saying here -- I'm not saying that they shouldn't be given an explicit ability to recover these costs separately from their current rates and their current costs of doing business.
  - Q. Could you explain that one more time? On the last part of that, you don't believe they should be recovered as a cost of doing business. I'm not sure I follow you on that.
- 15 My statement is that these are costs of doing Α. 16 business. The ILEC should be allowed to recover 17 prudently incurred costs of doing business. I'm not 18 saying that they should have to try to recover these 19 out of their current rates or out of some cost savings 20 that are not necessarily there. So I'm not saying they 21 should be able to get an explicit rate to recover them 22 that's different than what they are already receiving from customers. 23
- Q. On Page 8 of your reply, T-152, Lines 15 through 20, there, you mention that gateways enable

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- 1 ILECs to shield proprietary information and other 2 competitively sensitive data from unauthorized access. 3 Do you see that?
  - A. I do.
- Q. But you would agree, wouldn't you, that there would be no need to shield data if access to the ILECs OSS wasn't required, wouldn't you?
  - A. Of course.
- 9 Q. Moving on to your third principle, which is 10 cited back on Page 3 of your direct, T-150, Lines 6 11 through 8, there, I believe your third principle is 12 that to the extent the ILECs are entitled to recover 13 OSS development costs from CLECs alone that CLECs 14 should be entitled to recover the same costs from 15 ILECs; is that right?
  - A. Yes.
  - Q. On Page 8 of your direct, T-150, Lines 8 through 17, there you cite reciprocal compensation is the only circumstance in which the FCC addressed CLEC cost recovery.
    - A. Yes, I see that.
- Q. Again, here you would agree, wouldn't you, that there is a specific provision of the '96 Act that governs ILEC compensation of CLECs for reciprocal compensation for the exchange of traffic?

- A. Yes.
- Q. You would agree that there is no similar provision providing for compensation of CLECs for OSS development costs, wouldn't you?
- 5 A. I don't recall a specific reference to that, 6 no.
- Q. In fact, there isn't any statute or Commission order that requires CLECs to develop OSS interfaces, is there?
- 10 A statutory requirement is not there, unless, 11 of course, you want to actually provide a competitive telephone service, and the whole Act envisions 12 13 competitive local phone companies building their own 14 OSS. If you didn't have your own OSS costs, then there 15 is nothing that the ILECs would have to open up theirs 16 to, because if you don't have a gateway, you don't have 17 OSS. There is no ability for that transaction, so they 18 don't explicitly state it, but it's implicitly 19 required.
- Q. Is there any statutory requirement or Commission rule that you are aware of that requires CLECs to order electronically?
- A. I don't recall specifics, but I certainly know there are definitely economic differences in some Commission-ordered cost dockets between manual and

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- nonmanual. I am also aware there are realities associated with volumes and efficiencies that make it completely unworkable to have manual processes do the kind of quality and volumes that are needed to have 5 meaningful competition.
- On the page before, Page 7 of your direct, Lines 17 through 20, there, you refer, particularly on Line 20, to the fact that the CLECs have, quote, "the 9 same type of costs that the ILEC does, and if the ILEC 10 is entitled to recover, then the CLECs should be as 11 well"; is that right?
  - Α. That is correct.
- 13 You've read Exhibit 153, that California decision; right? 14
  - Α. Yes.
- 16 In that decision, do you remember the passage Ο. 17 which states that ILECs' OSS modification costs are, 18 quote, "different than costs incurred by CLECs. The 19 ILEC must incur these costs for the benefit of the 20 CLEC"?
- 21 Can you point me to where that is? Α.
- 22 Yes. It's Page 14. It's towards the bottom Ο. 23 of the page. There are no line numbers.
- 24 A. Can you point to me specifically which 25 sentence? I found the general area.

- Q. It's about the sixth line down of the last paragraph. It says, "These sorts of costs are different than costs incurred by CLECs."
  - A. I see that sentence.
- 5 Q. "The ILEC must incur these costs for the 6 benefit of the CLEC."
- A. Yes, and it continues to say, "By virtue of the ILEC's control over essential bottleneck facilities and related processes." Yes, I see that.
- Q. In making this decision, are you aware that back on Page 8 that the California Commission considered and rejected the arguments similar to the ones you are making here; specifically, that implementation costs are merely costs of doing business in a new competitive environment and are no different than the new types of costs?
- 17 A. I'm sorry. Page 8 of what?
  - Q. Page 8 of this same decision, Exhibit 153.
- 19 A. That's the discussion of the parties' 20 positions?
- 21 Q. Yes.
- A. And where are you saying that the Commission stated that position?
- Q. About midway through that second paragraph, the Commission restates the position that about the

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- 1 third sentence or so it begins, "The coalition claims 2 that ILECs' implementation costs are merely costs of 3 doing business." Do you see that?
  - A. I see that. I'm trying to figure out how that relates to what we are talking about.
  - Q. The latter part of the sentence says, "and are no different from the types of costs that their competitors must incur to get started."
    - A. I see where you are reading.
  - Q. But then later after considering that position, the Commission ruled that the ILEC must incur different types of costs than CLECs on this same subject of OSS implementation and precluded recovery for CLECs of the same costs.
  - A. I was not participating in the California proceeding. I'm not exactly sure what they are saying, what they were trying to get to, but I don't think they were talking about the costs necessarily being different but perhaps the impetus for incurring those costs would be different.

The ILECs are doing it because of legal requirement because they are the bottleneck facility holders. The competitive companies are doing it to try to take advantage of the competitive opportunities and get into the market. So that would be the difference I

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- 1 would have read into this.
- Q. Back on Page 7 of your response testimony, 3 T-151, Lines 10 through 12, there you state that the 4 Commission should presume that CLEC's costs are equal to the ILEC's costs; is that right?
  - A. That is what it says.
  - Q. Do you do any empirical analysis to support that presumption?
    - A. I did not.
  - Q. On Page 6, the previous page of the same testimony, on Lines 8 through 13, you claim there that a third party audit is necessary to verify the accuracy of the ILEC's OSS development costs; do you see that?
    - A. Yes, I do.
- Q. Does that mean that you are not confident in the ability of this Commission to scrutinize these costs given the discovery that is allowed to take place in a proceeding?
  - A. What are you trying to say?
- Q. I'm just asking why you believe an audit is necessary given this proceeding, which is to review those costs.
- A. With the caveat that I haven't had a chance to go into this into too much detail, I have reviewed some of the costs from the cost studies that have come

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- through, and I don't know that anybody can take what was provided there and come to the conclusions that everything was prudently incurred expenses. They appear to be highly summarized data points.
  - Q. But you would agree in a proceeding like this, discovery is available to all the parties to ask questions about the data, wouldn't you?
    - A. It is, indeed.
- 9 MR. ROMANO: I have no more questions, Your 0 Honor.
- 10 Honor. 11 JUDGE BERG: Mr. Anderl?
- MS. ANDERL: Thank you, Your Honor.
- 13 CROSS-EXAMINATION
- 14 BY MS. ANDERL:
  - Q. Good afternoon, Mr. Knowles.
- 16 A. Good afternoon.
- Q. Let me be sure that I understand your testimony correctly. Is it correct that when you discuss OSS cost recovery, the only OSS cost recovery that you are talking about in your testimony is the OSS cost recovery identified in Ms. Million's testimony and is not the OSS cost recovery that Qwest is seeking for line sharing?
  - A. I'm not addressing line sharing.
- 25 Q. At all.

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- A. At all.
- Q. With regard to the overall level of OSS costs that Qwest is seeking to recover through the mechanisms proposed in this docket, absent line-sharing OSS, does Nextlink take issue with the overall level of cost recovery proposed?
- A. We have not reviewed it, so we do not have a position one way or the other.
- 9 Q. Has Nextlink developed an alternative 10 recovery mechanism to the one proposed by Qwest and set 11 it forth anywhere in your testimony?
  - A. By "alternative recovery mechanism," are you talking about the specific application to service orders or lines?
    - Q. Right.
- A. We have not. We think that the California Commission probably took the right approach at doing that. They had stated that there should be an all end-user surcharge. The parties after that, of course, went and negotiated a different settlement and found a way to recover those, and that's probably the way it should happen here as well.
- Q. When you say "all end-user surcharge," do you mean all the ends users of the ILEC or of all of the ILEC and all CLECs, or can you identify the universe

1 for me?

- A. The California Commission actually determined that all end users, ILEC end users and CLEC end users, should be required to put a surcharge on their bills to recover costs that the ILEC incurs for transition costs, or implementation costs, as they refer to it, and that those moneys would then be remitted to the ILECs.
- Q. So would Verizon put a surcharge on its bill for Qwest cost recovery?
- A. The way that the California Commission did that, they would not. You would only be -- the ILEC in any particular area would determine their costs, and whoever is providing competitive services in that same area would remit the surcharge to the customers they have in that area.

So for instance, if Nextlink was a competitive provider in both Verizon and Qwest territory, we would be recovering two separate rate elements, one in the Qwest areas, one in the Verizon areas, and they would be remitted to the appropriate ILEC, and the only reason that Verizon would be remitting anything to Qwest would be if there is some competitive activity in the Owest ILECs territories.

Q. Have you estimated for purposes of this

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- 1 docket what the level of that charge would be if such a 2 charge were proposed or imposed or agreed to?
  - A. I have not.
- 4 Q. Have you discussed your proposal with Public 5 Counsel?
- 6 A. I have not.
- 7 Q. You don't know if Public Counsel would 8 support or oppose such a proposal?
  - A. I don't.
- 10 Q. Have you discussed your proposal with TRACER?
- 11 A. I have not.
- 12 Q. Let me ask a foundational question. Do you 13 know who TRACER is?
  - A. I am aware of who they are, yes.
- Q. Have you discussed your proposal with TRACER or with Mr. Butler?
- 17 A. I have not.
- 18 Q. You don't know whether they would support or 19 oppose such a proposal?
- 20 A. I'm only representing Nextlink's position, 21 correct.
- Q. Mr. Knowles, let me ask you, and I know you
- 23 are not here to talk about line sharing, but I'm going 24 to ask you something anyway. Are you familiar with the
- 25 term "line splitting"? And I know you have not been in

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the hearing room the past several days, but it's been used quite a bit.

- I am familiar with the term. Α.
- What do you understand that to mean? Ο.
- That a single line or loop, the loop is split Α. so that you can have a voice portion and a data portion 7 on the same loop, and the splitting is where that point takes place.
  - And you understand line splitting to mean Ο. specifically the instance where the loop is leased by a CLEC as opposed to retained by the ILEC, and then that the high frequency portion in both instances for either instance is used by a data LEC to provide a data service?
  - I have never thought of it in terms of different providers. I've thought of it in terms of the loop being used for two different purposes and being split for the purposes, regardless of who the providers are with, either or both of those services.
- 20 Mr. Knowles, you talk in your testimony --21 and I don't think you need a reference and I hope you 22 don't because I don't know where it is off the top of 23 my head -- about cage construction costs, and I think 24 I'd reference you to the invoice that Mr. Romano was talking to you about in terms of your testimony that

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- 1 Qwest's data showed cage construction possible for 2 under \$5,000. Do you remember that?
  - A. I recall.
  - Q. Do you understand that cage construction specifically is one of the items that Qwest allows CLECs to self provision?
    - A. I understand that is the case.
  - Q. Has Nextlink ever requested or taken the opportunity to self provision cage construction in a collocation in a Qwest central office?
    - A. Nextlink has not.
  - Q. With regard to the invoice that you looked at, do you have any understanding of what type of a gate was used in the four-by-ten gate that's referenced there on the invoice? Was it a swing gate or some other kind of a gate?
- JUDGE BERG: I think we are going to have to refer to an exhibit number here.
- MS. ANDERL: I'm talking specifically about Exhibit C-159. No, I'm not. I apologize. It's the one that Qwest provided.
- THE WITNESS: It's the one with invoice number 483401.
- MS. ANDERL: Yes.
- JUDGE BERG: That's invoice C-159. There was

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- also an invoice attached to Confidential Exhibit 158, and there was the Inland Fence estimate, Exhibit 161.
- (By Ms. Anderl) I'm speaking about the invoice for the cage construction that you originally 5 obtained in the Utah proceeding, and that, I believe, is Exhibit C-159. Do you have that before you?
- I do. Α. And I was specifically asking you about the Ο. 9 gate that's referenced in there, and if your copy has been faxed as many times as mine, you might find it difficult to read, but do you see a reference to a 11 12 four-foot-by-ten-foot gate?
  - Yes. It says one four-foot-by-ten-foot gate.
  - Q. Do you know what kind of a gate that was?
  - All I have is what's here, so I don't know Α. any more detail than that.
- 17 Are you aware of what the types of gates that 18 Qwest is installing recently in collocation cages? 19
  - Α. No.
- 20 Ο. Mr. Knowles, I don't know if you have this 21 document. Do you have Barbara Brohl's testimony 22 available to you?
- 23 I have back there. Α. 24 JUDGE BERG: Mr. Kopta, can you provide a 25 copy?

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              MR. KOPTA: Yes.
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              MS. ANDERL: Mr. Kopta, I'm going to ask
   about Exhibit 101, which is BJB-1.
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              THE WITNESS: I have that.
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              (By Ms. Anderl) Have you reviewed that
        Ο.
    document prior to coming into the hearing room today?
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              If I did, it would have been very briefly.
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              Can you identify on that document,
        Ο.
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   Mr. Knowles, anyplace where there are costs associated
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    with OSS modifications for resale?
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              I cannot see anything that's listed as resale
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    in this specific document; correct.
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              Mr. Knowles, you talked with Mr. Romano a
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    little about the 17th Supplemental Order.
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        Α.
              Yes.
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              I take it you're somewhat familiar or quite
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    familiar with that document.
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              I have read it.
        Α.
19
        Ο.
              And you are familiar with Qwest's proposal
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    for OSS cost recovery in this docket; is that right?
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              Yes.
22
              Is there anything in Owest's proposal for OSS
        Ο.
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   cost recovery in this docket that you believe is
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   inconsistent with the Commission's requirements or
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allowances as set forth in the 17th Supplemental Order

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- 1 regarding OSS cost recovery?
  - A. As I mentioned earlier, there were some areas in the 17th Supplemental Order that I found to be somewhat ambiguous, and based on that, it's hard for me to tell, so I don't know.
- Q. But there isn't anything in Qwest's proposal that you could point to or direct me to in either 8 Ms. Brohl's testimony or Ms. Million's testimony?
- 9 A. That would neither confirm it or otherwise, 10 correct. There is nothing in her testimony or in your 11 proposal that I have seen that is either, depending on 12 how you read the 17th Supplemental Order, that states 13 that it's contrary to or consistent with the 17th 14 Supplemental Order.
  - Q. To the extent that the 17th Supplemental Order says that ILECs are entitled to recover the cost of OSS from CLECs, is Qwest's proposal consistent with that particular phrase from the 17th Supplemental Order?
- A. It certainly does look like Qwest is trying to get the money from the CLECs. The question I guess I have is which of those costs should be identified as the unbundled network element costs subject to CLEC recovery versus which ones are the transition costs, which I would again state should be treated separately

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- 1 and differently.
- Q. Mr. Knowles, are you familiar with Qwest's IMA-GUI and or IMA-EDI interfaces?
  - A. Vaquely.
  - Q. Do you know whether Qwest's retail services representatives use those interfaces? When I say "retail service representatives," I mean the service representatives who service Qwest end-user customers.
- 9 A. To my knowledge, the IMA-GUI and EDI were -10 I don't know whether they use them internally or not.
  11 I know that they are the gateway avenue that the CLECs
  12 have been provided to get access to those systems. I
  13 don't know what U S West does internally.
- 14 Q. Do you know whether or not Nextlink uses 15 either one of those?
- 16 A. It's my understanding that we either use or 17 try to use both, not always successfully. Sorry, I 18 couldn't resist.
- 19 Q. This silence is of great benefit to you, 20 Mr. Knowles, because it means I'm eliminating 21 questions, so try not to take advantage of me.
- 22 A. Touche.
- MS. ANDERL: Your Honor, I may have one or two more, but if I may have a minute to consult.
- JUDGE BERG: We'll hang around the Bench

00931 1 until you do.

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MS. ANDERL: It's correct that I have no more questions.

JUDGE BERG: Dr. Gabel, any questions?
CROSS-EXAMINATION

6 BY DR. GABEL:

- 7 Good afternoon, Mr. Knowles. I would like to Ο. ask you to first turn to Exhibit 152, which is your 9 reply testimony, Page 4, Lines 2 to 4, really, 3 to 4, 10 where I just want to quote part of the sentence: 11 "Mr. Spinks states in his direct testimony in this 12 docket that the ILECs are already recovering their OSS 13 transition costs from their ratepayers." Are you in 14 agreement with Mr. Spinks on this? Do you disagree, or 15 do you have no opinion?
  - A. I haven't done any analysis, so I would have no basis for opinion other than just stating what he had said.
- 19 Q. Turning to Exhibit 151, which is your
  20 response testimony, if I could ask you to turn to Page
  21 6, at Lines 8 through 11, you state, "The Commission
  22 cannot determine that accuracy and propriety of Qwest's
  23 and Verizon's embedded OSS development calls for a
  24 third party audit verifying the accuracy of those costs
  25 and their allocation to activities reasonably related

1 to OSS developments."

If such an audit was undertaken and the auditor reported back that these were, indeed, transition costs incurred by the ILECs -- I want to make sure I understand -- what are you proposing would be the way in which those costs would be recovered? Are you supporting a surcharge at that point on all retail users in the state?

- A. I'm supporting what California had decided to do, which is a surcharge on all -- it's not my initial position, but I'm willing to support that position of what California had done, which is an all-customer surcharge.
- Q. On the topic of California, if I could then ask you to turn to that decision, which is Exhibit 153, Page 31, the findings of fact. Paragraphs 18, 19, and 20 state that an audit was undertaken by Coopers and Lybrand of Pacific's costs. Do you know if a similar audit was undertaken for GTE?
- A. If I remember the order correctly, GTE had not gone through the same -- I'm just going by my memory of this order, but my recollection is that GTE had not had any kind of an audit.
- Q. So this audit that was undertaken by Coopers and Lybrand was done at the initiative of Pacific

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- 1 rather than at the initiative of the Commission.
  - A. Yes, that's my understanding.
  - Q. If this commission were to consider requiring such an audit be undertaken of Verizon's and Qwest's costs, do you have any thoughts on how such an audit would be paid for?
  - A. I believe that cost should be included into the rest of the transition costs that be identified here and should be recovered through whatever mechanism is determined by the Commission is appropriate.
  - Q. Are you aware of any state that has ordered an audit of the reported transition costs?
  - A. I am not aware of any state that has done that. Although, I only know of two states that have actually come through and ordered. Well, California and what this commission has done in the 17th Supplemental Order, and that was interim, so I don't even have a final on that one.
- 19 Q. I guess lastly on this one topic, do you have 20 any sense of what would be the cost of undertaking such 21 an audit?
- A. I don't. Although, I'm assuming since Pacific Bell did that at their own initiative that it must have been a reasonable amount or they wouldn't have done that themselves without even being required

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1 to do it.

- Q. I said I was going to leave this topic, but if such an audit was to be undertaken, would you agree that it would have had a benefit to users of operating systems in all 14 of the U S West service territories?
- A. If I recall U S West testimony, it sounded like everything was done on a 14-state basis, and therefore, if you do an audit, you do an audit of the whole thing, so benefit would accrue to all 14 states.
- 10 Q. And for Verizon, or really GTE, that would 11 mean 28 states?
  - A. I'll take your word as to how many states they are in.
  - Q. Would you have any suggestions on how the cost of an audit which has benefits beyond the State of Washington could be recovered from the other states that may benefit if such an undertaking was required?
    - A. Did you say for Verizon?
    - Q. For Verizon or for Qwest.
- A. I haven't given that as much thought. I know that for Qwest things have happened through the regional oversight committee. I'm not familiar with any similar type of organization with Verizon though.
- Q. May I again ask you to turn to Exhibit 151, your response testimony. I want to give you a page

number. I'll just have to come back. As I recall in your response testimony, you had a proposal along the lines that if the ILECs are authorized to charge you for using their OSS systems that there should be some reciprocal mechanism.

A. Correct, and the point specifically that I was making on that one is there are certain areas where we believe that the ILEC has a requirement or should have a requirement to order from the CLECs, and specifically interconnection facilities and interconnection trunks.

At this point, every ILEC that I've dealt with has required all trunk ordering and processing to be entered from the CLEC side and sent to the ILEC side, regardless of whether those are for terminating CLEC traffic to the ILEC or the ILEC traffic to the CLEC, so they basically come to a point where they've not had to use our OSS, quote, unquote, because they refused to put the orders, and they've required us to have that responsibility, and without doing it, customers can't call if you don't have the appropriate trunking, so the CLECs have basically been strong-armed into taking on that function.

Q. So from the Commission, what are you seeking in this docket?

- A. On that specific issue, I think it's appropriate that if we are the ones that are required to place the ILEC orders on their behalf, it's ridiculous that not only do we have to do the work to do that, but we also have to pay them for the recovery of the OSS costs that they are putting in, but they are not reciprocating and paying to us for when they need to order stuff.
- 9 Q. Also in your response testimony, Exhibit 151, 10 may I ask you to turn to Page 8. At Line 2, you state 11 any OSS charges should be on a per LSR basis as Verizon 12 has proposed and at a level no higher than the rate 13 Verizon has proposed. Why did you add this caveat that 14 the rate should be no higher than what Verizon has 15 proposed?
- 16 What Nextlink is concerned about, what we are Α. 17 trying to quard against is having the OSS recovery 18 charge turn into a competitive barrier, a block to 19 getting in. The LSR charge is something that's very 20 specific. We know how it's going to be applied. 21 aren't going to order a loop and end up with five different costs associated. It's one loop, one LSR, we 22 23 get one cost, so that's an important concept.
- The second part is the total rate. If is becomes a rate that is so high that it becomes an

- impediment because we have to pass that cost along to our consumers, then it's a serious issue on our side to be able to have a competitive offering. As U S West states, it's not the rate so much that matters but it's how long it's in effect that will reflect the different recovery mechanism. So what my proposal is is to make sure we don't have that rate be too high, but if there is more costs to be recovered, let the recovery mechanism work longer.
  - Q. In your response testimony, may I now ask you to turn to Page 14, Line 18. You state here that Qwest provided data in response to a Nextlink information request that in an average of over seven CLECs collocated in each Qwest central office in which at least one CLEC is collocated in Washington.
    - A. Correct.
    - Q. Do you have a copy of that response with you?
  - A. There are two responses that we use to derive that number, and I do have them with me.

MR. KOPTA: For the record, they are among the data request responses that have been marked as cross exhibits by Qwest or had initially wanted to be. We had then designated them as cross exhibits for Mr. Thompson, and I believe they are Exhibits C-28.

THE WITNESS: Which one is that one?

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MR. KOPTA: That's the confidential attachment, one page with the small little chart up in the corner, and Exhibit 23, the calculation is in Nextlink's response to U S West Data Request, and 5 perhaps Ms. Anderl can help me on which one that is since I don't have it in front of me. 7 MS. ANDERL: I'm sorry, Mr. Kopta. you looking for? 9 MR. KOPTA: The data request of Qwest to 10 which Nextlink responded that described how the 11 calculation was made on the number of --12 MS. ANDERL: That's Exhibit 156. 13 MR. KOPTA: Thank you. 14 (By Dr. Gabel) Mr. Knowles, were you in the 15 room earlier this week when there was some discussion 16 about the number of actual physical entrance facilities 17 that come into the building as opposed to the number of 18 collocators? Ms. Anderl can correct me if I'm wrong 19 here, but I believe it was Mr. Thompson who made a 20 statement that there were three physical collocators 21 and there were three cageless collocators who were 22 using special access rather than physical facilities. 23 Is that a correct representation? 24 MS. ANDERL: It's not sounding quite right if

you will just give me a minute.

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MR. KOPTA: My recollection, and perhaps they can correct this, this was some cross-examination that I had done of Mr. Thompson, I believe, in response to a question about Qwest's assumptions that Mr. Thompson 5 testified that the cost studies assume that the three caged collocation CLECs would use entrance facilities into the Qwest building, but that based on the study that Qwest had done of the 41 central office 9 collocations that were cageless that those had not 10 involved entrance facilities through the cost study 11 method as opposed to the tariff, so Owest's assumption 12 was that the cageless collocation would not use 13 entrance facilities.

MS. ANDERL: Mr. Kopta has that correct.

- Q. (By Dr. Gabel) I would just like to ask your reaction to that, Mr. Knowles?
- A. I have not performed any studies or reviewed this. It does not surprise me that there are some collocators that do and some that do not have entrance facilities. I'm somewhat surprised if they are taking the position that if you are cageless, you never have that, and if you are caged, you always have it. That doesn't seem to be appropriate.
- Q. I'm not sure I accurately represented
  Thompson's statement about separation between caged

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- 1 and cageless.
  - A. I do agree that there would be some with and some without entrance facilities.
  - Q. That would, therefore, affect the average number of collocators, so that when you calculated a number of seven, were you implicitly assuming they were all physically entering the building?
  - A. For the purpose of entrance facility, you have to look at how many have entrance facility. One other note that I would add to this is the number that have currently been installed or were to be installed by the time frame this was done is not the end of it. I would expect that demand will continue, and from what I understand, it's not only continuing, it's growing, in my discussions with Qwest personnel.
  - Q. Turning in your response testimony to Page 15, Lines 4 through 10, here you are discussing cable racking, and I would like to ask you, have you received any additional information about this subsequent to the filing of your response testimony?
- A. We have received response just before the hearing, if I recall correctly, but I haven't had a chance to really review it in detail, so I can't make any assessments based on it.
- 25 Q. Then still at Page 15 around Line 19, you

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l refer to some collocation workshops in Utah. Has there been any subsequent development on this topic?

- A. The next workshop isn't scheduled until the middle of September, and I haven't heard anything independent of that.
- Q. Lastly, at Page 16, Line 17, you refer to a Qwest data response which says that the Company is in the process of gathering the data and will supplement this response when information is available. Have you received any additional data?
- 11 A. I have to look at which one this was at. I 12 don't recall seeing it, but we did receive some just 13 before the hearing, and I don't know whether it was 14 included or not.

DR. GABEL: Thank you.

JUDGE BERG: We are going to break until 3:45 at which point we will see if the Commissioners have questions to be followed by redirect and further cross. We'll be off the record.

(Recess.)

JUDGE BERG: Mr. Knowles, I will remind you that you remain under oath. Madam Chair, any questions? Any questions, Mr. Kopta, any redirect? Ms. Anderl, do you want to go for more cross?

MS. ANDERL: Yes. I do have a couple of

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1 additional questions.

## FURTHER CROSS-EXAMINATION

BY MS. ANDERL:

- Q. Mr. Knowles, did I hear you correctly when you were talking about how the OSS cost recovery charges should be applied that as between charges per service order or charges per LSR, it would be your preference to see them on a per LSR basis?
  - A. That is what I stated.
- Q. Is it your understanding based on the evidence you've seen in this proceeding that a single LSR could result in multiple service orders?
- 13 A. That's my understanding of what Qwest has 14 stated.
  - Q. And also that it could result in one service order just depending on what was contained on the LSR?
    - A. That's my understanding.
- 18 In your view, if a CLEC were to submit an LSR 19 which contained orders for unbundled network elements 20 which would result in 20 service orders, is it fair for 21 that CLEC to pay the same OSS cost recovery charge, the 22 same dollar amount, as a CLEC would pay if that CLEC 23 submitted an LSR that resulted in only a single service 24 order, and don't ask me to repeat that because I didn't 25 have it written down.

- 1 A. How do you define "fair"? If you want to 2 talk fair, I've got a lot of things I can say.
- Q. Just tell me if you believe that that is the right way to go.

  A. I think that the cost, and I'm talking about
  - A. I think that the cost, and I'm talking about the cost from the transactional perspective as opposed to the transition perspective, so for transitional costs, I think those costs should be borne based on the use of the OSS systems to the extent that that can be determined predictably and consistently and applied that way.

There are a few things that we have to go through here because you have a fair issue, and you also have a what-you-can-do issue, but I do agree that they should be assessed based on usage of the systems. However, not to go on too long, but systems are controlled by the ILECs, and that's something the CLECs don't have any control over. If we provide one LSR, we control that. We don't know whether that will be 10 or 20 or 30 service orders. Predictability is important.

- Q. Do you have any opinion on whether the number of service orders that are processed through the systems also reflect usage of the system in any way?
- A. I'm not as familiar with the systems. What I'm basing on is what we would provide to Qwest or to

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- 1 Verizon from what our systems would do and how many 2 LSRs that would generate. I don't know Qwest's or 3 Verizon's systems internally to that degree.
- Q. Mr. Knowles, one other question, and I did discuss this with your counsel, if he's sold you down the river. There is a document that was identified as a potential cross-examination exhibit for Ms. Brohl that was not used because it was a WorldCom exhibit and Ms. Hopfenbeck isn't here, but it is Exhibit 121 and C-121. I'll just make sure everybody has a copy available to them.
- MS. ANDERL: Make I approach the witness, 13 Your Honor?

JUDGE BERG: Yes. 15 O. (By Ms. Anderl)

- Q. (By Ms. Anderl) Mr. Knowles, do you recognize that document as a Nextlink data request and Owest or U S West response to that data request?
  - A. It does appear to be that.
- 19 Q. In that request, Nextlink asked for a 20 breakdown of costs for the projects identified in some 21 of Ms. Brohl's exhibits; is that correct?
- 22 A. Just a moment. That is what it appears to 23 be, yes.
- Q. Turn to the second page of the confidential attachment for me, please, and do you see in the middle

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- of the page the identifier "BJB-04, local interconnect service OSS projects"?
  - A. I do.
  - Q. You've identified interconnection costs as some of the ones with which you particularly take issue as being included for recovery solely from the CLECs; is that correct?
    - A. That is one, yes.
- 9 Q. To the extent that these costs identified 10 under BJB-04 are those same interconnect costs with 11 which you take issue, would removal of those costs from 12 the Qwest proposal address your concerns that 13 interconnect costs were inappropriately being recovered 14 from CLECs?
  - A. That would appear to do that portion of it. Although, what I really want is the ILEC's to start ordering interconnection service for us.
- Q. I understand. Do you see any other -- and I know you've not had a real chance to review this so I don't mean this to be unfair. Do you see any interconnection costs or costs that you would potentially identify as being interconnection related anywhere else on this document with which you would take issue?
- 25 A. I do not see anything that would appear to

## 00946 be, but I haven't had a chance to look for that with that in mind. MS. ANDERL: Your Honor, I'd move the 4 admission of Exhibit 121 and C-121. 5 MR. KOPTA: No objection. 6 JUDGE BERG: Hearing no objection, the 7 Exhibit No. 121 and C-121 are admitted. 8 MS. ANDERL: Thank you, Your Honor. That 9 concludes my questions. 10 JUDGE BERG: Mr. Kopta? 11 MR. KOPTA: Thank you, Your Honor. 12 REDIRECT EXAMINATION BY MR. KOPTA: 13 14 Mr. Knowles, would you reference Exhibit Q. 15 C-159, which is the Invoice No. 483401? Mr. Romano asked you a question about dust partition in the 16 17 construction of this particular cage. Do you recall that discussion with him? 18

A. I do.

- Q. In your testimony, however, you state that dust partition or your understanding is that a dust partition is enclosed or is included in this construction. Would you explain the basis of that?
- A. Certainly. My expectation is that U S West was having this done for a specific central office

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facility in Utah, and the quote was to have this fence and this collocation area furnished and installed, and my understanding is customary practice to furnish and install this type of equipment within a central office facility would entail having dust partitioning.

- Q. Do you also recall that in response to a question from Ms. Anderl that you stated that Nextlink has not constructed its own cages in Qwest central offices?
  - A. I do recall that, yes.
  - Q. Why?
- 12 Α. Nextlink started about four years ago, and we 13 have been constructing collocations for some time 14 though. The majority of them have happened four, 15 three, two years ago. As we were trying to 16 determine -- there was a couple of factors involved. 17 One is speed to market. That was absolutely critical 18 for Nextlink, and getting collocation cages up and 19 running in the most timely manner at that time was the 20 biggest priority.
  - Secondly, when we looked at the quotes we received from U S West at that time, we could not determine, based on the way the prices were lumped together, how much the cage would cost, how much it would save. They had at that time cage conditioning,

air conditioning, all those things lumped together. We had no idea, and in order to determine with more specificity, which we had no ability to do until cost dockets finally got to that point, but it would have potentially delayed our entry into the market, which was not a reasonable outcome for us.

- Q. As far as the speed to market aspect, is it your testimony that Qwest could construct a cage more quickly than Nextlink could arrange to have a cage constructed?
- A. I don't know if that's the case. All I'm saying is if we tried to go outside of the processes that were already in place for U S West that that typically became an individual case basis project, which historically has taken more time for us to resolve.
- Q. You also discussed with Dr. Gabel the costs for which you're proposing that CLECs should also be reimbursed if the ILECs receive reimbursement from CLECs for OSS cost modifications. Do you recall that discussion?
  - A. Yes.
- Q. In your discussion, you were just talking about local interconnection trunks. Is that the only circumstance in which you would anticipate that such

reciprocal reimbursement would be appropriate? No. There is a more general issue at stake, which is the ILECs have put together gateways to get access to their systems. By virtue of those gateways, 5 the CLECs are required to have gateways of their own. We incur the exact same costs or similar analogous costs on our side of the fence to develop gateways. They develop gateways on their side. We're not having direct interface to the systems. We don't have a 9 10 terminal that would go directly into the Qwest system 11 sitting at our Nextlink office. They have a gateway. 12 We have to develop a gateway. So if we are paying for 13 our gateway implementation costs or transition costs, 14 which we have to do because we need them to get access 15 and we have to pay for their costs to get their systems 16 in place, we end up paying for double those costs, in 17 essence, and it becomes a significant burden. 18 MR. KOPTA: Thank you. Those are all my 19 questions. 20 JUDGE BERG: All right. Mr. Knowles, that 21 concludes our questions. I appreciate your presence and your testimony here today. Let's stay on the 22 record. Mr. Deanhardt, who will be your first witness? 23 24 MR. DEANHARDT: Mr. Zulevic, Your Honor. 25 JUDGE BERG: Mr. Zulevic, please come up. At

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- this time, I will ask the reporter to insert into the record those exhibits identified and the exhibit numbers associated with those exhibits on the exhibit list which has been provided. That would be Exhibits 5 T-170 through Exhibit 177. T-170 is Direct Testimony (MZ-1T). 7 Line Sharing on Copper (MZ-2). T-172 is Response Testimony (MFZ-3T). 173 is Basic CO Arch. for Line 9 Sharing-MDF (MFZ-4). 174 is Basic CO Arch. for Line 10 Shar.-Relay Rack (MFZ-5). 175 is Basic CO Arch. for 11 Line Sharing-Collo (MFZ-6). 176 is Line Sharing Service Workpaper (MFZ-7). 177 is Splitter Shelf and 12 13 Tie Cable Layout (MFZ-8). 14 Mr. Zulevic, if you will remain standing and 15 raise your right hand. 16 (Witness sworn.) 17 JUDGE BERG: Go ahead, Mr. Deanhardt. 18 DIRECT EXAMINATION 19 BY MR. DEANHARDT: 20 Mr. Zulevic, could you please state your name 21 and business address for the record? 22 Yes. My name is Michael Zulevic, and my
  - Colorado.
    Q. Mr. Zulevic, do you have in front of you

address is 8413 East Jameson Circle, Englewood,

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- copies of your testimony and the associated exhibits in this docket, which have been marked Exhibits No. T-170 through 177?
  - Yes, I do. Α.
- 5 Q. Have these exhibits been prepared by you or under your control?
  - Yes, they have. Α.
- 8 Ο. Do you have any corrections to make to 9 anything in your testimony?
- 10 Yes, I do. This is in Exhibit T-172, which 11 is my response testimony. This would be on Page 9. 12 There is a chart on the top of Page 9 which some of the 13 numbers need to be corrected.
  - O. Do you have changes to make to the row that is marked "overhead rack and planning"?
    - Α. Yes, I do.
    - What are those changes? Ο.
- 17 18 In the first column which is designated "MDF, Α. splitter collocation," the number should be .5 instead 19 20 of 1, and in the next column to the right under "common 21 area, splitter collocation for the splitter," that 22 number should be changed from 1 to .5. In that same row of "overhead rack planning," the last column 23 24 entitled "splitter in collect collocation space," that 25 number should also be changed from 1 to .5.

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- 1 Q. Do you also have changes to make in the 2 "operations group" row on this chart?
- A. Yes. I have one change in that row, and it's in the first column, which is labeled "MDF splitter collocation," and that number should be changed from 2 to 1.5.
- 7 Q. Are there any other changes to make to this 8 chart?
  - A. No, there are not.
- 10 Q. Can you please explain why these changes are 11 necessary?
  - A. Somehow, my testimony showed rounded figures rather than to the half hour, as I related to Mr. Klick for purposes of his testimony.
- 15 Q. So do these figures in your testimony now 16 correspond to those in Mr. Klick's testimony?
  - A. Yes, I believe they do.
- 18 Q. Are there any other changes to make anywhere 19 else in your testimony?
- 20 A. No, there are not.
- Q. If I asked you the questions contained in your testimony today, subject to the changes that we just made to Exhibit 172, would you respond to those questions in the same way today?
- 25 A. Yes, I would.

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             MR. DEANHARDT: Your Honor, I would move for
   the admission of Exhibits T-170 through 177 as
   corrected.
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             MS. ANDERL: No objection.
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              JUDGE BERG: Exhibits T-170 through 177 are
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   admitted.
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             MR. DEANHARDT: Your Honor, I tender
   Mr. Zulevic for cross-examination.
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             JUDGE BERG: Ms. Anderl?
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             MS. ANDERL:
                           Thank you, Your Honor.
11
                       CROSS-EXAMINATION
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   BY MS. ANDERL:
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       O. Good afternoon, Mr. Zulevic.
14
       Α.
             Good afternoon, Mr. Anderl.
       Q. Can you state for the record what your job
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16
   duties and responsibilities are very briefly?
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             My job duties at Covad now are to deal with
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   special initiatives that the corporation undertakes
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   throughout the country that are involved with network
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   deployment. My primary duties right now deal with the
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   national deployment of line sharing.
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             You're testifying today on behalf of both
       Q.
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   Rhythms and Covad; is that correct?
24
             That's correct.
       Α.
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But you are employed by Covad.

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Q.

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- A. That's correct.
- Q. Did Rhythms give any direction or guidance as to what they wanted you to do in your testimony in this docket?
- 5 A. We have had discussions ongoing from the time 6 that line sharing really came about, and we have many 7 of the same interests and concerns relative to the end 8 result.
- 9 Q. Am I correct that your testimony is only 10 about collocation for line sharing?
- 11 A. I don't know that I could define it quite 12 that narrowly.
  - Q. I don't want to lock you in, but there were a couple of major issues that the Commission had set for hearing in Part A, and I just want to be clear that you are not talking about cost recovery for the OSS for line sharing in your testimony, are you?
    - A. That's correct.
- 19 Q. And you don't discuss nonrecurring charges in 20 your testimony, do you, the actual charges?
  - A. Not the actual charges, no.
- Q. You don't talk about physical collocation generally as opposed to physical collocation for line sharing; is that correct?
- 25 A. I speak about all types of collocation.

- Q. So would it be correct to say that your testimony is only about collocation with a certain emphasis on line sharing?
  - A. I think again it goes a little bit beyond that. Rather than just collocation, I think it also encompasses some of the engineering aspects that go beyond that to a certain extent, not just collocation.
- 8 Q. Covad is one of the parties to the 9 line-sharing agreement that was attached to both 10 Ms. Brohl and Dr. Cabe's testimony; is that right?
- 11 A. I believe that's the case if it's the one I'm 12 familiar with, yes.
- MR. DEANHARDT: I'm not sure Mr. Zulevic has seen what's attached to Ms. Brohl's testimony.
- MS. ANDERL: But the record established yesterday it was the same document as the one that was attached to Dr. Cabe.
- 18 MR. DEANHARDT: He wasn't here, so that's the 19 hesitation.
- Q. (By Ms. Anderl) Have you reviewed Dr. Cabe's testimony in preparation for testifying here today?
- 22 A. Not in any great detail, no.
- Q. You defined the term "line sharing" in your testimony. Do you also have an understanding of the term "line splitting"?

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- The terms have been used interchangeably in Α. many cases.
- Would you accept for purposes of our Q. discussion today that line sharing is what a DLEC would 5 do with an ILEC, and that line splitting is what two CLECs or a CLEC and DLEC would do on a loop?
  - I've heard that distinction made, yes. Α.
- Is that reasonable for you to accept that for 8 Ο. purposes of our conversation today? 9 10
  - Α. Yes, it would.
- 11 Thank you. You talk in your testimony about the quote, unquote, "home run copper configuration" and 12 the "fiber-fed configuration"; do you recall that? 13
  - Yes, I do.
- 15 In your Exhibit 171, you show figures or you Ο. 16 have figures that show all four configurations; is that 17 right? I'm sorry, three configurations on home run 18 copper and one on the fiber fed.
  - Yes, that's correct. Α.
- 20 And all of these have to do with line 21 sharing; is that right?
- 22 Yes, they do. Α.
- Now, Figure 4 is attached to your testimony 23 Ο. 24 as a part of Exhibit 171, but I believe you said in your testimony, and I just want to clarify this is

- still your position, that Figure 4 was included as simply illustrative because the configuration has not been finalized or even discussed in Washington?
- A. Yes, that's generally the reason for having it in there. This is another form of line sharing that the FCC is currently addressing in a notice of proposed rule making.
- Q. Is it correct that the only differences between Figures 1, 2, and 3 is the splitter location and then any attendant necessary architectural differences associated with the splitter being in a different location?
  - A. Yes, that's essentially correct.
- Q. Is it your testimony that it is technically feasible for the splitter to be located in any of these three locations?
  - A. Yes, it is.
- Q. Let's look at Figure 1 for a moment where the CLEC appears to be the one who owns the splitter and has that splitter in its collocation cage. Is that a correct representation of what's shown in Figure 1?
  - A. Yes, it is.
- Q. If the CLEC wants that configuration in a particular central office, is there anything that prevents the CLEC from obtaining that configuration?

- Are you asking from a technical perspective Α. is there anything?
  - Let's ask first from a technical perspective.
- Technically, there should be no limitation of 5 using this type of configuration. It does require an additional BSO cable in order to return the voice back to the ILEC's network, but there are no limitations, really, from an engineering perspective.
- 9 Is that cable shown as the dotted line with 10 the word "voice" on each of the two pieces of the 11 dotted line?
  - Yes, that's correct. Α.
- 13 Is there anything that Owest does that would 14 prevent the CLEC from obtaining that configuration as 15 opposed to a technical matter? 16
  - Well, does or may do. Α.
  - Let's stick with does. Ο.
- 17 18 Definitely, we do have to have cooperation Α. 19 from the ILEC in order to provision this type with 20 respect to the designation of the pairs that are going 21 to be used for that particular type of configuration, 22 and also I believe there are certain things within the 23 contract, the interconnection agreements, that have 24 been negotiated that address this particular 25 configuration and address the concerns of both parties.

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- Q. With regard to Figures 2 and 3, looking at those, is it correct that Figure 2 shows line sharing where the splitter is located in a common area?
  - A. Yes, that's correct.
- 5 Q. And that Figure 3 shows line sharing where 6 the splitter is located on the frame?
  - A. Yes, that's correct.
- Q. When the splitter is located in the common 9 area, as shown on Figure 2, is that generally referred to as a splitter in a bay, or can it be referred to distinguish it from the splitter on the frame?
  - A. That would be one of the distinctions here, yes. It would be on a relay rack or bay rather than mounted on an MDF or directly in the collocation arrangement.
- Q. Mr. Hubbard agreed with Mr. Deanhardt that bays and relay racks could be used synonymously. Would you agree with that as well?
  - A. Absolutely.
- Q. I do want to ask you some questions that touch on that line-sharing agreement that I've referenced. If you feel more comfortable, I would ask your counsel to provide you with a copy of it; although, I don't know that you will need it.

  MR. DEANHARDT: Counsel would feel more

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- 1 comfortable.
- JUDGE BERG: Mr. Deanhardt, are you going to

3 present the witness with the signed version?

- MR. DEANHARDT: Yes, Your Honor. I'm going to present him with Exhibit 192 to Mr. Cabe's testimony.
- 7 Q. (By Ms. Anderl) Would you go ahead and turn 8 to Paragraph 7, Mr. Zulevic?
  - A. I've got it.
- 10 Q. Is it correct that each of the three 11 configurations shown on Figure 1, Figure 2 and Figure 3 12 of Exhibit 171 are configurations that are explicitly 13 set forth in Paragraph 7 of the line-sharing agreement 14 that you've just been provided with?
- 15 A. If you can give me just a moment to review, 16 please. Yes, it appears to.
- 17 Q. Is it your understanding that that 18 line-sharing agreement allows the CLEC to choose any 19 one of the three configurations in a particular central 20 office?
- 21 A. I'm sorry, that allows the ILEC?
- 22 Q. The question was a CLEC.
- 23 A. Yes, that's my understanding.
- Q. Are you familiar with line-sharing collocation as it's occurring in the State of

- 1 Washington?
- 2 A. Yes, I am.
- Q. Is your familiarity with regard to Covad's arrangements with Qwest or Rhythms or both or neither or more? I just realized there were a lot of options there.
  - A. Yes.
- 8 Q. So you are familiar with Covad configurations 9 in Washington?
- 10 A. Yes, I am.
- 11 O. And with the Rhythms' configurations?
- 12 A. Yes.
- Q. And which other carriers' configurations are you familiar with?
- 15 A. I have seen the configurations of Northpoint.
- 16 Q. Are you aware of any other carriers in 17 Washington that are obtaining collocation for line
- 18 sharing in Qwest's central offices?
- 19 A. Yes. There are several others that are.
- 20 Q. Can you identify who those are?
- 21 A. New Edge is one. I believe Jato.
- Q. Are there any Qwest central offices in
- 23 Washington, to your knowledge, that have the splitter
- 24 located as shown in Figure 1, which is in the CLEC
- 25 collocation area?

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- MR. DEANHARDT: Ms. Anderl, it may help if he's actually seen or aware -- I guess the objection is vague, but I'm wondering, are you asking him if he's seen it, or if he is aware if it's being done like this?
- MS. ANDERL: That's a fair distinction. The first question is whether or not he's aware if it's being done, and if he's not, then of course he hasn't seen it.
  - Q. (By Ms. Anderl) Are you aware of whether or not there are any Qwest central offices in Washington that have the splitter located as shown in Figure 1?
  - A. I assume that would be other than Qwest's own equipment, which is kind of the same thing with the integrated splitter. I assume you are talking about data CLECs.
  - Q. Qwest isn't a CLEC, is it? It's become a territory in Washington.
    - A. Not at this time, no.
- Q. So it doesn't have a CLEC collocation arrangement as shown on this diagram, does it?
- A. That's true. I have not actually seen Rhythms', but my understanding is that this is the application they are using in the State of Washington. The only splitters I have actually seen in the central

- l office in the U S West provided splitter bay were those of Covad and Northpoint.
  - Q. That gets to my next question, which is the splitter configuration shown in Figure 2 of Exhibit 171 where the splitter is in the common area. Do you have that one in front of you?
    - A. Yes, I do.
- 8 Q. Was it just your testimony that Covad and 9 Northpoint have that configuration in Qwest central 10 offices in Washington?
  - A. Yes, it is.
  - Q. What about Figure 3, are you aware of whether or not there are any Qwest central offices in Washington where the splitter is located as shown in Figure 3 of Exhibit 171?
  - A. No. I have not seen any in the State of Washington, only in the State of Colorado, but I've only had an opportunity to visit three different central offices in the State of Washington and actually take a look at how it was configured.
  - Q. So let's be really clear about this. You said you hadn't seen any or absent having seen any, are you aware of whether or not there are any as shown in Figure 3; in other words, have you been told?
    - A. I don't have any direct knowledge of that in

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- the State of Washington. Again, there are two collocators in the State of Colorado that Qwest has mounted these types of splitters on a frame, but I'm not aware of any in Washington State.
- 5 Q. Let's talk about that one, even though it's
  6 not currently being utilized, to your knowledge, in
  7 Washington so let's continue to look at Figure 3. Is
  8 it correct that in this type of configuration, the
  9 splitter could also be mounted on an intermediate
  10 distribution frame as opposed to the main distribution
  11 frame, and it would still be called framed-mounted
  12 splitter collocation?
  - A. Yes, that's correct.
  - Q. Is it also correct that framed-mounted splitter collocation uses a relatively small 16-port splitters?
    - A. Yes, that's correct.
- 18 Q. Is that in comparison to a 96-port splitter 19 that is generally what is used in the bay-mounted 20 splitter configuration as shown in Figure 2?
- A. Yes. Those are the correct number of ports on the two types. The distinction has to be made though that with the frame-mounted splitter, you don't have any need to have any connecting blocks for any of the cross connects because those are built in directly

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to the splitter, so even though you only have 16-port capability within that frame-mounted splitter, you also eliminate the need to have three cross-connect blocks that are exactly the same size as the entire 16-port splitter. So not only do you have that, but you also eliminate the need to have a relay rack to mount those splitters on, so there are definitely some tradeoffs.

- Q. Thank you, Mr. Zulevic. That was maybe a little more than I asked for, but that's fine. That's a good explanation. So if I'm doing my math correctly, you would need 16-port splitters on a frame to be the equivalent capacity, as it were, to a 96-port splitter mounted in a bay.
  - A. Yes, that's correct.
- Q. How many customers can a provider serve on a 16-port splitter?
  - A. One customer per port.
- Q. So would it be correct to say that each port provides a dedicated connection for the customer?
- A. I guess you could say that it would be dedicated as long as you have the splitter capability associated with that customer's line, yes.
- Q. Sure, that's fine. Going back to some information we heard earlier, I believe that we've talked about there either being 12 or 14 shelves in a

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- bay; is that correct, and you weren't here. How many shelves are there in a bay?
- A. How many of the 96-port splitter shelves can 4 you put in a seven-foot bay?

  5 O. That's a very good question. You've phrased
  - Q. That's a very good question. You've phrased it better than I had. Could you tell me?
  - A. You can physically mount 14 in a standard seven-foot bay.
- 9 Q. You state that in your opinion, the most 10 efficient splitter configuration is to have the 11 splitter on the horizontal side of the MDF; is that 12 correct?
  - A. Yes, that's correct.
  - Q. And that explanation you gave me a moment ago involving connecting blocks that you do or don't need, is that the basis for that opinion?
- 17 That's part of it. Another part of it is the 18 fact that with that single splitter positioning on the frame, it greatly simplifies the ability or the need to 19 20 cross connect. In other words, where your frame 21 attendant would normally have to go in multiple places to make the cross connects to provide a line-shared 22 23 service, using that frame-mounted splitter, all the 24 cross-connect points are right in front of them in the 25 same place, which greatly simplifies that process.

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- Q. Is it your testimony then that it is the most efficient configuration for purposes of provisioning line sharing?
  - A. Yes, it is.
  - Q. Is it your opinion that it is also the most efficient configuration for provisioning POTS service in a central office where multiple services, including POTS and line sharing, are being provided?
    - A. I'm sorry. Could you restate, please?
  - Q. Let me ask you this. Space on the frame is needed for the provisioning of POTS service as well, isn't it?
  - A. On the frame. Sometimes there are multiple frames within the central office. You definitely need to have some type of frame capacity in order to provision POTS service.
  - Q. That would be either on the main distribution frame or the COSMIC frame, generally?
    - A. Yes, that's correct.
- Q. What happens if in a particular central office there is either a COSMIC frame or a main distribution frame and the ILEC begins to run out of space on that main distribution frame. What's required to add capacity to a main distribution frame?
  - A. A main distribution frame is made up really

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of kind of a matrix of iron work that allows you to mount connecting blocks on it, so if you do have to add to a mainframe, it's a matter of getting the additional iron work and then just attaching it to the existing framework and building additional capacity to the extent you would require over the forecast period.

- Q. Is that similar to what it takes to construct an additional bay or relay rack?
- A. Actually, if you were to run out of relay rack space within a central office, you could actually incur some additional costs than you would with just adding a mainframe. There are some similarities in that each one requires additional floor space, but in the case of adding additional relay rack capacity, generally, you have to add more in the way of ladder racking and other support type materials than you would with just the basic main frame construction required.
- Q. But I suppose the particular costs in any individual central office would depend on the physical circumstances that were present in that particular central office; is that right?
  - A. Yes, that's fair.
- Q. You state on Page 112 of Exhibit T-170, your direct testimony -- I don't know if you need to reference it, but you certainly may. In any event, you

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state that if a determination is made that a
   frame-mounted splitter cannot be implemented, then the
   CLEC should be able to select an alternative but that
   pricing should remain at the least-cost level or the
   frame-mounted splitter level. Is that a correct
   characterization of your testimony?
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              Could you point me to a line, please?
       Α.
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       Ο.
             At Line 22.
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             MR. DEANHARDT: Actually, Your Honor, I think
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   we have the bad copy problems again. Mr. Zulevic, on
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   your copy, I believe it should be on Page 14 beginning,
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   I think, on Line 24.
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              THE WITNESS: I think I may be okay.
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             MS. ANDERL: It's the question and answer
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   right below the diagram in your testimony. Figure 1
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   that's actually in the body of your testimony.
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             THE WITNESS: We are talking about T-170,
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   Page 12, and I've got Line 22. It says, "As with the
   previous arrangement, the CLEC should be allowed to
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   choose."
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             MR. BUTLER:
                          Your Honor, may I approach the
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   witness?
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             JUDGE BERG: Yes, please do.
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              THE WITNESS: Regardless of what arrangements
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the ILEC is ultimately willing -- line-sharing costs

- should be based on the most efficient method?

  Q. (By Ms. Anderl) Yes, and then the sentence
  after that, you don't have to read it aloud, but if you
  will read it to yourself, and really all I had done is
  attempted to restate or paraphrase the testimony to
  you, and I was asking you if it was a correct
  characterization as follows: If a frame-mounted
  splitter cannot be implemented, then the CLECs should
  be able to select an alternative, but that pricing
  should remain at the least cost level.
  - A. Yes, and what I would like to say is the characterization wasn't exactly accurate. If we are denied the ability to mount it on the MDF, use the frame-mounted splitters, that would be my assumption that we would be able to mount one in a bay-mounted or relay-rack-mounted capability within 25 feet of the frame, and that would also be a least-cost alternative that would be acceptable. What this gets to is that mounting at 150 or 200 feet away and then having to cable back and forth would be an unreasonable alternative.
  - Q. So if in a particular central office the frame or bay-mounted -- I'm sorry. The bay-mounted configuration is the one that's implemented, and it is, in fact, more than 25 feet away from the frame, Covad

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would not be willing to pay any costs associated with it being a further distance away from the frame; is that correct or not?

- Yes, essentially that's correct. 5 did have an opportunity to review three installations here in the State of Washington, and the first one I reviewed at the Renton central office was exactly per our recommendation. However, the other two, the splitter was placed in an area that added an additional 9 10 100 to 150 feet of cable that would not have been 11 necessary had they been placed closer to the mainframe, 12 and in reviewing that, there was plenty of space 13 available within that 25-foot distance from the 14 mainframe that these splitters could have been placed, 15 and that's the thing that I don't believe we should 16 have to pay for.
  - Q. Mr. Zulevic, can you identify for me which other two central offices you did review in Washington?
    A. Certainly. It was the Kent-Meridian Central

Office and the Kent-Ulrich Central Office.

Q. You state in your testimony that you assume line sharing in 96-line increments, and yet I thought I recalled seeing early on in your testimony that you wanted there to be port-at-a-time splitter availability. Have you abandoned that request for

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- port-at-a-time splitter availability for now?
- No. I wouldn't really want to abandon any technically feasible configuration that gives us options of providing service. That's one we request to 5 provide at some point in the future.
  - But your assumption for purposes of this docket doesn't reflect the port-at-a-time splitter availability; is that correct?
  - That's correct. What we did and what I was asked to do in support of Mr. Klick's analysis was to benchmark it on a 96-port capability so we could have more of an apples by apples comparison.
    - What are the apples there? Ο.
    - Α. Ports.
  - Q. It seems to me that in Exhibit T-172, which is your response testimony, starting at Page 2, you've tried to be pretty clear that your recommendations are based on a forward-looking central office. Is that a correct characterization of your testimony?
- 20 Α. Yes, it is, forward-looking but also 21 realistic.
- And essentially, you've set forth three Ο. 23 criteria that underlie assumptions in a forward-looking 24 central office. Is that also correct?
  - Α. Could you please point me to where you are

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1 referencing?

- Q. I'm looking at the bottom of Page 2 on that exhibit going to the top of Page 3. That paragraph has sentences in it that start first, second, third.
  - A. The characteristics? Yes, I see that.
- Q. Are there any other characteristics that you had in mind when you developed the assumptions for forward-looking central office that you might have provided to Mr. Klick that you didn't include in your testimony?
  - A. Nothing specific comes to mind.
  - Q. Are you aware of any central offices, Qwest central offices in Washington that have been built since the Telecom Act passed in February of 1996?
    - A. No, I'm not.
- Q. Can you identify any Qwest central offices in Washington that as they are currently configured would meet your first criteria of having been designed by a wholesaler to support many users in a variety of services?
- A. There are, yes. There are some that I can characterize in that way. For instance, the Kent-Meridian Central Office is one of the newer ones that has been built, and it has a single MDF configuration which doesn't have some of the

restrictions on it that some of the older central offices have that were designed in primarily a single carrier environment.

- Q. Wouldn't the Kent-Meridian Central Office have been designed in a single local carrier environment?
- A. It was built in one. I'm just saying that it has the basic characteristics that I would look for in a multicarrier environment, and the primary thing I'm talking about here has to do with the COSMIC frame capability and some of the limitations that places on the distribution of cross-connect capabilities.
- Q. Any others that come to mind that specifically meet the first criteria of having been designed to support many users in a variety of telecommunications services?
- A. No. Again, and I don't want to misrepresent the Kent-Meridian office. I know it was designed well before 1984 even, but I'm saying that it has those characteristics that would support a multicarrier environment much better than some of the older ones.
- Q. The three characteristics that you list here in the testimony that we've been talking about were your recommendations or assumptions that you provided to Mr. Klick based on these three characteristics?

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- A. Yes, generally speaking, they were.
- Q. So is it correct to say that the assumptions that you provided to Mr. Klick are assumptions about a forward-looking central office?
  - A. Yes. I would say that they are assumptions having to do with the forward-looking central office. Again, just because the central office was not built with a wholesale or multicarrier environment in mind doesn't mean that it cannot be configured in such a way as to efficiently provide services in a multicarrier environment.
  - Q. In some instances, would configuring a central office to efficiently provide services in a multicarrier environment involve changes to the way the central office looks today?
- 16 A. Yes, there would have to be some changes 17 made, but the degree of changes in many cases would not 18 be significant.
  - Q. Did any of the information that you provided to Mr. Klick assume any of the changes that would have to be made in a central office to configure it so that it could efficiently provide services in a multicarrier environment?
- A. I'm sorry.
- 25 MS. ANDERL: Could I have that read back?

1 (Question on Page 977, Lines 7 through 11, 2 read by the reporter.) 3 THE WITNESS: Yes. In general, the 4 information having to do with mounting the splitters on 5 frames being the most forward-looking and efficient, 6 that type of thing, yes, I did furnish that to 7 Mr. Klick.

- Q. Did you provide Mr. Klick any information with regard to any assumptions that might be necessary with regard to labor time or materials that might be required to reconfigure a central office to accommodate the forward-looking design that you've described?
- A. Actually, what I just described would not require any real redesign. It's just a matter of usage of the existing frame for mounting the splitters as looking at the most forward way of doing it.
- Q. So it's your testimony that the only change that would need to be made to any Qwest central office in Washington to make it forward-looking is to mount the splitters on the frame?
- A. Again, what I'm trying to do here and the information that I've provided to Mr. Klick is based upon how to use the existing network in the most efficient way and in the most forward-looking way to completely redesign the network getting back to maybe

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that scorch note concept with TELRIC and all of that and tearing it down and rebuilding it. That was not the approach I took at all in talking to Mr. Klick about how this information should be used. It's based 5 upon using currently available technologies, in using the base that's available in most every central office to make it usable in a multicarrier environment.

- You stated in your testimony that the COSMIC Ο. frame is not forward-looking in a multicarrier 10 environment; is that correct?
  - Yes, it is. At this time, I would say that that's true because of the fact that it was developed primarily as a way of cross connecting cable pairs to central office equipment in order to provide plain old telephone service, and although there is a way of adding panels to the modules that would allow for what I would consider a more forward-looking application, at this time, the general concept is primarily a single carrier environment POTS type use.
- 20 Isn't it correct that many of the Qwest 21 central offices in Washington use COSMIC frames? 22
  - Yes, that's correct. Α.
- 23 And I think we've already discussed that all 24 of them were designed and built in essentially a 25 single-carrier environment with regard to local

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1 service.

- A. Yes, that's correct.
- Q. So is it correct from what I just understood from you that in order to use the COSMIC frame in a way you believe is a forward-looking application, there would need to be some modifications to the COSMIC frame?
- A. Yes, there would have to be some, but they wouldn't be modifications as such. It would more be installing modules that would be used by the CLECs for cross-connect purposes rather than just the traditional cable pair to central office equipment. In fact, in my negotiations and meetings with Bell South, they are actively pursuing that type of a solution so that they can minimize the need for additional cross connects.
- Q. In the information that you provided to Mr. Klick, are there any assumptions in that information with regard to adding panels or installing modules on a COSMIC frame?
  - A. No, there are not.
- Q. Exhibit T-172, Page 7, on Line 20, and hopefully I think we do have the same pagination on this one, is it a correct characterization of your testimony that in certain limited environments, the use of an intermediate distribution frame, or IDF, is

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1 efficient?

- A. There are places where an IDF makes sense, yes. Primarily in a multi-floor central office where you have a need to get a lot of service between the floors, sometimes an immediate distribution frame is a more reasonable way of engineering it.
- Q. Is it correct that none of the information that you provided to Mr. Klick includes assumptions about the use of an intermediate distribution frame?
- A. Yes, that's a correct assumption. The number of multiple floor central offices is pretty small if you take a look at the entire network.
- Q. Do you know how many of the Qwest central offices in Washington are multiple floor?
- 15 A. No, I don't have an exact number, but my 16 experience would say somewhere around eight percent, 17 maybe.
  - Q. Of the central offices?
  - A. I would say so.
- Q. Do you know how many lines those central offices would serve out of the total?
- A. Well, that would be a little more difficult. I would guess it would be somewhat greater, maybe 10 percent of the total lines, maybe.
- 25 Q. Multifloor central offices are generally in

## 00980 the urban areas; is that correct? That's correct. Α. 3 Q. So for example, Seattle main has multiple 4 floors? 5 Α. Yes, that's correct. 6 As does the Bellevue-Sherwood office? Ο. 7 Yes. Α. 8 And the Seattle-Duwamish office also has Q. 9 multiple floors? 10 Α. That's correct. 11 And does the Spokane Riverside office have Ο. 12 multiple floors? 13 Yes, it does. Α. 14 Q. I hope this line of questioning does not 15 prompt Mr. Deanhardt to read off all the single floor 16 offices on redirect. 17 So do I. Α. 18 MR. DEANHARDT: I will try to avoid it. 19 What about the Seattle-Elliott office, are Q. 20 you aware if there is central office equipment on 21 multiple floors in that office?

I'm not sure if it's on multiple floors.

know the Elliott office is a multiple purpose office

that combines administrative as well as switching

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equipment.

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- Q. I kind of figured you would know that, and that's fine. When you were in Minnesota, Mr. Top asked you if you had ever installed a splitter, and you said you have not. Have you had a chance to do so since then?
- A. No, I haven't had an opportunity. However, as I stated in Minnesota, I believe I have installed many pieces of equipment that are very similar.
- 9 Q. Is there a big difference between installing 10 a splitter at the customer premises and installing a 11 splitter in the central office?
  - A. We don't install splitters at the customer premise for line sharing.
  - Q. I understand. You made a reference in your direct testimony to the installation of the splitter at the customer premise is expensive and time consuming, so that's why I asked you that. If you would reference Page 6 of Exhibit T-170.
- MR. DEANHARDT: Ms. Anderl, that's the
  testimony that we are going to be on different pages.
  MS. ANDERL: If you get Roman Numeral Section
  and then go up a couple of questions above that.
- 23 MR. DEANHARDT: Mr. Zulevic, in your copy, I 24 believe it begins on Page 6, the question that
- 25 Ms. Anderl refers to begins on Line 21, and the

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- 1 testimony continues on to Page 7.
- Q. (By Ms. Anderl) And the line that I'm looking at says, "eliminates the requirement for an expensive and time consuming splitter installment at the customer premise."
- 6 A. I think I had the wrong exhibit. This is 7 T-170?
  - O. Yes.
- 9 A. This is in the discussion about the different 10 types of technologies, the G.Lite?
  - Q. Yes.
  - A. Yes. With the advent of the G.lite technology, we no longer have a requirement to place a splitter which then makes line sharing a way to get service to more residential customers.
- Q. So when you referenced expensive and time-consuming splitter installation at the customer premise, you were not talking about anything that Covad does?
- A. What I was talking about there was that you no longer have a need to necessarily roll a truck out there. Regardless of the actual time it takes to install it, just that alone is a considerable savings.
- Q. Mr. Deanhardt and Mr. Hubbard had quite an extensive conversation about cables, and I'm going to

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- wade in there for a minute or two. What they talked about was the difference between a 100-pair cable and four 25-pair cables with connectorized ends. Do you kind of have that general scenario in your mind?
  - Α. Yes, I do.
  - Do you have an understanding of what cable and configuration Qwest is currently using in its central offices in Washington with regard to the splitter connections?
- 10 Α. I know that at the Renton Central Office that 11 I went to, they use the 25-pair cable.

MS. ANDERL: That's all I have. Thank you.

13 JUDGE BERG: Ms. McClellan, I know we may not be able to finish your cross-examination this

14 15 afternoon, but why don't we get started and see where

16 we wind up.

17 MS. McCLELLAN: I might be able to finish it. 18

I don't have very much after Ms. Anderl's cross.

CROSS-EXAMINATION

20 BY MS. McCLELLAN:

I want to start off and just make sure I Ο. understand something you testified to just a minute ago. Back in your direct testimony, Exhibit T-170, on 24 Page 14, and I believe that you and I have the same 25 pagination, and this is referencing back to a sentence

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1 on Line 22. It's the question underneath the Figure 1,
2 "Should costs and pricing be based on MDF splitter
3 method."

MR. BUTLER: It would be Page 12, Line 13. Q. If I understood your answer to the question from Ms. Anderl correctly, it is not your position that if the CLEC obtains line sharing where the splitter would be, say, in their collocation area, that they should not ultimately pay what it would cost if the splitter was on the MDF? Did I understand that is not your position?

- A. If the splitter is located in the CLEC's collocation area, those would be entirely different costs than they would be if they were located either on the mainframe or in a relay rack adjacent to it.
- 16 I just wanted to make sure I understood that. 17 Going to Exhibit T-172, your responsive testimony, and 18 I'm going to be starting on Page 2, and I'm mainly 19 going to be focusing on the question beginning at Line 20 23. In this question, you mentioned your experience 21 working in U S West's central offices. Have you ever 22 worked in or with a GTE central office or a Verizon 23 central office?
- A. I have never, no. I have never worked in one; although, I have worked with Verizon, GTE in

- building out quite a number of collocations in their central offices.
  - Q. In this question where you are discussing a forward-looking central office, do you use the term "forward-looking" synonymous with "hypothetical"?
    - A. Absolutely not.
  - Q. And are you aware of any Verizon central office actually configured in the method you described on these two pages, meaning the three criteria you discussed with Ms. Anderl?
  - A. I'm trying to recall. It's been awhile since I've been in the Verizon central offices, but there is one that -- I can't think of the name of it. Manor -- I can't recall the name of it, but it does have many of the same general characteristics as the office I was speaking about earlier in the Qwest territory, the Kent-Meridian office. Manor Way, I believe was the name of it.
- 19 Q. And that would be the only one that you are 20 aware of?
- A. That's the one that comes to mind right now.
  Again, I haven't been in all of them in the State of
  Washington. I've been in probably six or eight of
  them, but in many cases, I've only been able to go into
  the separate collocation area that Verizon has

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- established for collocators.
- Can you tell me which central offices you've been in, or if you can't remember off the top of your 4 head --
- 5 Α. Kirkland, Juanita, Casino. There are about four or five others, but I don't recall the names right 7 now.
- Some of these questions you went through with Ο. 9 Ms. Anderl but you focused on Qwest, so I'm going to 10 ask you now for Verizon. Are you aware of any Verizon 11 central offices that have been built in Washington 12 since 1996?
- 13 No, I'm not. Α.
  - Q. Prior to 1996, generally, how many entities used Verizon central offices, or at that time, GTE?
    - I really don't know. Α.
- 17 In general, since your experience is with U S Ο. 18 West, in general, how many entities used a U S West central office prior to 1996? 19
- 20 Α. At least two in many cases.
- 21 Would they both be providing local service? Q.
- 22 Probably not, no. Α.
- 23 So generally, only one carrier was providing Ο. central service out of the central office? 24
- 25 Α. Yes, I would say that's correct.

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- Q. Still on Exhibit T-172 on Page 9, and this is the page that has your chart with your estimates of manpower requirements, I believe it's your testimony that these are just estimates of what these manpower requirements would be.
- A. Yes. These are estimates based on my experience in engineering and planning central office environments.
  - Q. And would be for U S West?
  - A. Yes, that's correct.
- 11 Q. There is no itemization here of activities 12 that are included in each of these functions. Did you 13 create one?
  - A. I'm sorry. Did I create one?
- 15 Q. Yes.
- 16 Α. In general, some assumptions had to be made 17 about what would normally fall into those categories, 18 so this was based, I believe, on the categorization 19 that was made with an AT&T cost study or model that was 20 developed that outlined certain steps, so I made some 21 assumptions as to how those would apply to U S West 22 based upon my experience in dealing with central office 23 engineering.
- Q. What model was that? Would that be the AT&T and CCM model?

- I don't recall the exact name of it, but that Α. could be it.
- Q. Would that be AT&T's model developed to model collocation costs?
  - Yes. I believe that was the initial intent. Α.
- 6 Is that model based on a hypothetical central Ο. 7 office?
- Α. I don't believe it's a hypothetical central 9 office. I don't really know all of the underlying assumptions that actually go into the development of 10 11 that particular cost model. Again, what I was asked to 12 do was take a look at what engineering functions would 13 have to take place in order to provide splitter 14 functionality, and the categories that were used in 15 that particular study were the ones that I generally 16 related to this particular chart.
- 17 You personally did not conduct any type of 18 time and motion studies to develop these estimates? 19
  - No, I did not. Α.
- 20 Ο. Did anyone under your direction perform such 21 a study?
- 22 Α. No.
- 23 To your knowledge, were these estimates based Ο. 24 on GTE or Verizon central office?
- 25 Α. No. These were not specifically designed for

- really U S West or Verizon. These are from my knowledge and experience the engineering steps that would have to be required to engineer anything in a central office environment. From ILEC to ILEC, there will be some differences depending on just exactly what type of systemization and so forth that they happen to have.
- 8 Q. Turning to Page 8, at Line 9, the question, 9 "What other information did you provide to Mr. Klick 10 that led to the development of this testimony," you 11 state that Bell Atlantic has publicly announced plans 12 to install 14 splitter shelves in a standard relay 13 rack. Do you see that?
  - A. Yes, I see that.
  - Q. What's the source of that information?
- 16 A. I believe our attachments to my testimony, 17 and these were passed out at a line-sharing coalition 18 or a joint work group that Bell Atlantic put together 19 earlier this year.
- Q. Let's turn to Exhibit 176, which is 21 Attachment D to your testimony.
- 22 A. I have that.
- Q. What's the source of this work paper?
- A. That's where it came from. This is the document that I base my testimony on.

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- Q. And this work paper was not filed in this proceeding by Verizon or Qwest; correct?
  - A. No, that's correct.
- Q. And it wasn't introduced by Verizon to support any of its cost studies or pricing proposals; correct?
  - A. Not that I'm aware of.
- 8 Q. It's pretty much unrelated to any pricing 9 proposal put forth by Verizon in this proceeding; 10 right?
  - A. No, I would disagree. This definitely gives the basis for what the capability is, a seven-foot relay rack. It very clearly demonstrates you can very easily put 10 96-port splitter shelves within a seven-foot bay, so I think it's very relevant.
  - Q. But I guess the dollar amounts on this document are not related in any way to any pricing or costing proposal put forth in this proceeding.
- 19 A. Absolutely. The purpose of having this as an 20 exhibit was to demonstrate the number of 96-port 21 shelves that can physically be installed in a 22 seven-foot bay.
- Q. I think you might have already told me the answer to this but just to make sure the record is clear, did this docket come from an administrative

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1 proceeding in another state?

- A. My understanding is that this came out of some proceeding in the State of New York. It wasn't given any real source as to where the study was used, but I'm assuming it was in New York because that's where the collaboratives were held.
- Q. So this could have been part of an exhibit to someone's testimony?
  - A. It probably could have been.
- 10 Q. Do you have any idea if it is a confidential 11 exhibit?
  - A. No, I don't believe it is confidential. It was freely handed out by Bell Atlantic at that collaborative, and there is nothing on it that indicates it is confidential. My assumption would be no.
- Q. Give me one moment. If we could go back to your chart on Page 9 of Exhibit T-172, do you have any idea of what margin of error there could be for these estimates?
- A. I don't know that I could place a real number on it. I can say that after having reviewed that even further, I think in some cases I was overgenerous with the times I allocated for some of the functions.
  - Q. So margin of error could be as high as 20

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00992
   percent?
              I may have overestimated by 20 percent, but I
   don't think that I have underestimated in any case by
   that amount. Again, I tried to be very reasonable and
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    generous with these time frames.
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              MS. McCLELLAN: I have nothing further.
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    Thank you.
              JUDGE BERG: Dr. Gabel?
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                       CROSS-EXAMINATION
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   BY DR. GABEL:
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           Good afternoon, Mr. Zulevic. I just want to
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    ask you about two different areas. First, in your
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   response testimony, which is Exhibit 172, at Page 7,
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   Lines 15 through 22, since we may not have the same
   pagination, this is the question: "Why don't the
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   configurations you propose use that intermediate
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    distribution framed referred to by Mr. Hubbard?"
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   you see that testimony?
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        Α.
              Yes.
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              MR. DEANHARDT: Just for your information, I
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   think with Exhibit 172 we all do have the same
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   pagination.
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              You recognize that in large multifloor
        Ο.
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   central offices that there is a need for intermediate
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25 distribution frames.

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- 1 A. Yes, that's correct.
- Q. How do the time estimates developed by you reflect this need?
- A. The time estimates with respect to the engineering times that I've included?
  - O. Yes.
- 7 A. I didn't really feel that there was a 8 significant difference in the time estimates that would 9 be required in a multiple or IDF type environment 10 versus a normal environment where you have a single 11 floor, for instance. I didn't specifically split those 12 out and look at them individually.
  - Q. If we look at the table that's on top of Page 9, "manpower requirements for planning engineering," is it your position that the time required for overhead rack planning would be the same in a single floor environment as in a multifloor central office?
- 17 18 I don't know that there would be significant 19 differences. There would be some additional time 20 required to take a look at the access requirements to 21 get you between floors, opening the cable, the hole and that sort of thing. But again, looking at the number 22 23 of those that we would probably be looking at, I didn't 24 feel it was significant enough to include as a real 25 serious variation.

- Q. And the number meaning the number of wire centers where you would encounter multiple floors at the central office.
  - A. Yes, that's correct.
  - Q. Ms. Anderl asked you about the multiple floor central offices that are part of the Qwest network. Are you aware to the degree to which there are multiple floor central offices in the Verizon network?
  - A. From what I've seen, there are far fewer in the Verizon area because more of their offices serve smaller communities than U S West, so from what I've seen, there are fewer.
    - Q. Then turning to the second topic, do I correctly understand your testimony to be that you believe that in a forward-looking central office the splitters would be placed within 25 feet of the main distribution frame if they were on a bay, your Configuration No. 2?
      - A. Yes, that's correct.
- Q. I believe in some response testimony, and I don't remember which witness, but one witness made a proposition that I would like your reaction to, and that is ideally, everybody would like to be probably within 25 feet of the main distribution frame in the sense that probably interexchange carriers might want

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to be near there, and it's a central distribution point in the central office, so is it really feasible for all equipment that wants to gain access to that main distribution frame to be within 25 feet of the MDF? 5 No. Actually, as you point out, everybody can't be within 25 feet. The thing that has to be looked at is the type of equipment that you are 7 actually placing in that central office, and then you 9 make a technical determination as to whether or not 10 distance is a sensitive issue with respect to that 11 particular type of equipment, and with respect to DSL 12 equipment, it is extremely distance sensitive in that 13 you can go 18 kilofeet with ADSL service, so again, as I mention in my direct testimony, every additional foot 14 15 of cable that you place within the central office is 16 one foot less reach that you can get out to serve 17 customers with. 18 DR. GABEL: Thank you. I have no further 19 questions. 20 JUDGE BERG: Mr. Deanhardt, let me go back to 21 Ms. Anderl and Ms. McClellan for any cross. 22 Mr. Deanhardt, any redirect? 23 MR. DEANHARDT: Can I consult for one second, 24 Your Honor? JUDGE BERG: Yes, sir.

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              (Pause in the proceedings).
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             MR. DEANHARDT: I have nothing.
              JUDGE BERG: Mr. Zulevic, that concludes
   cross-examination in your testimony. Thank you for
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   being a witness in this proceeding.
              We have a few matters to take care of on the
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   record before counsel leaves. I don't think it's
   necessary for the Commissioners to remain on the Bench.
   Ms. Anderl, I'd like to get on the record Qwest's
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   responses to Data Requests 10 and 15 that we had
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   answers for, and let me double check my list. Yes,
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   Record Request 10 and Record Request 15, I understand,
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   Owest has responses?
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             MS. ANDERL: That's correct, Your Honor.
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   Your Honor, with regard to Record Request No. 10, we
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   can confirm that the engineering identified on Exhibit
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   22 is on a per order basis as opposed to the per shelf
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   or other basis that had been a cause for questioning.
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   It was Mr. Deanhardt's question. I wanted to make sure
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   it was, in fact, responsive. I believe that it is.
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              JUDGE BERG: I'll let you check that off with
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   him off the record, and if we need to elaborate any
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   further, we can do that tomorrow.
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             MS. ANDERL: With regard to No. 15, Staff's
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   understanding on the sizing of the cable was correct,
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   and Mr. Hubbard represents that he had misunderstood
   whether 1/0 was larger or smaller than 4/0, so in fact,
   1/0 is smaller than 4/0.
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              CHAIRWOMAN SHOWALTER: What about 500; is it
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   bigger?
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                          It's bigger than both of them.
             MS. ANDERL:
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             CHAIRWOMAN SHOWALTER: So 500 was the
 8
   outlier.
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             MS. ANDERL:
                          Yes.
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             CHAIRWOMAN SHOWALTER: So probably if the
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   question were answered again, it would have to be
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   everything smaller except one outlier.
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             JUDGE BERG:
                          So the size of the wire
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   corresponds to the increase in price.
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             MS. ANDERL: As shown on that one exhibit,
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         I can't remember the number, but the RS means
   yes.
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   data.
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              JUDGE BERG: Off the record for a moment.
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              (Discussion off the record.)
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             MS. ANDERL: We would also like to request
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   that a decision be rendered as to whether or not
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   Mr. Reynolds needs to stand cross-examination or if the
   parties want to stipulate his testimony in and one
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   cross-examination exhibit we've agreed to with Staff.
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   I just wanted to confirm that neither Your Honor or
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00998
 1 Dr. Gabel or the Commissioners had any questions for
    Mr. Reynolds. He is, however, available tomorrow to
    testify as well.
    JUDGE BERG: Dr. Gabel has one question, maybe, a question and a half, 1.5 questions, so I would
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    say why don't we also address Mr. Reynolds early in the
 7
    schedule tomorrow along with Mr. Inouye.
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               MS. ANDERL: Thank you.
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               JUDGE BERG: All right. With that, we'll be
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    adjourned.
                (Hearing adjourned at 5:30 p.m.)
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