

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**In the Matter of the Petition of Qwest
Corporation to Initiate a Mass-Market
Switching and Dedicated Transport Case
Pursuant to the Triennial Review Order**

Docket No. UT-033044

SUPPLEMENTAL REBUTTAL TESTIMONY OF

MARK L. STACY

Operational Impairment

ON BEHALF OF

WORLDCOM, INC. (MCI)

February 20, 2004

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	COLLOCATION	1
III.	LOOP PROVISIONING ISSUES.....	3
IV.	TRANSPORT IMPAIRMENT ISSUES.....	6
V.	TRANSPORT TRIGGER ISSUES.....	11

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Mark L. Stacy. My business address is 229 Stetson Drive, Cheyenne, Wyoming, 82009.

Q. ARE YOU THE SAME MARK STACY WHO FILED DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. Yes, I am. I prepared direct and rebuttal testimony on behalf of WorldCom, Inc. (hereafter "MCI").

Q. WHAT IS THE PURPOSE OF THIS SUPPLEMENTAL REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the response testimony filed by Qwest witnesses Robert J. Hubbard and Rachel Torrence. In their testimony, these witnesses made assertions to which I feel it is necessary to respond to provide the Commission with the most accurate record in this proceeding. Additionally, I will respond to the revised direct testimony filed by Qwest witness Rachel Torrence. Specifically, in this testimony I address MCI's position on collocation, loops involving IDLC, and transport.

II. COLLOCATION

Q. MR. HUBBARD TESTIFIES IN HIS RESPONSE TESTIMONY AT PAGE 5 THAT YOU COMPLAIN THAT COLLOCATION CREATES IMPAIRMENT SIMPLY BECAUSE MCI WILL BE REQUIRED TO OBTAIN COLLOCATION. IS THAT MCI'S POSITION?

A. No. That is not MCI's position, nor does it reflect my testimony. MCI understands that in a telecommunications market heavily reliant on bundled products, a company's long term viability may be negatively impacted in a scenario where it relies almost exclusively on the facilities of its primary competitor (e.g., relying on Qwest for UNE-P). Therefore, MCI is

26 committed to serving mass market customers on its own facilities where it is operationally
27 and economically viable and is fully aware that such a strategy may require collocation.

28 Contrary to Mr. Hubbard's testimony, rather than claiming that collocation itself
29 constitutes impairment, MCI is encouraging state commissions to eliminate operational and
30 economic obstacles that stand in its way in that regard. In order for MCI to move toward a
31 UNE-L deployment strategy to provide local service to mass market customers, the strategy
32 must be operationally sound and economically viable. My testimony in this proceeding is not
33 that MCI is impaired simply because it is required to collocate. Rather, I demonstrate what is
34 at stake – to both MCI and to the competitive market as a whole in Washington – if
35 collocation arrangements prove to be problematic if and when CLECs no longer have access
36 to unbundled local switching (“ULS”). If MCI and other CLECs are impaired as a result of
37 the collocation issues I discuss, MCI's customer base and the developing Washington
38 competitive telecommunications market would be placed at risk. Thus, the Commission
39 must ensure that CLECs are not impaired with regard to these issues on a going forward
40 basis. If impairment exists in a scenario where CLEC access to ULS is curtailed, MCI
41 recommends that the Commission maintain the national finding of impairment throughout all
42 telecommunications markets in the state until such time as UNE-L can realistically replace
43 UNE-P as a tool for serving mass market customers.

44 **Q. MR. HUBBARD AT PAGE 6 OF HIS RESPONSE TESTIMONY DISCUSSES**
45 **WHAT HE CHARACTERIZES AS MCI'S RELIANCE UPON HISTORIC**
46 **REFERENCES WITH RESPECT TO OBTAINING COLLOCATION. IS**
47 **THAT AN ACCURATE CHARACTERIZATION?**

48 A. No. Not only is this statement inaccurate, it is ironic since Qwest has failed to
49 acknowledge that the environment in which CLECs would be seeking loops (absent CLEC
50 access to ULS) would be dramatically different than it is today. As I have emphasized
51 previously, should ULS not be available, the potential demand for collocation would increase
52 dramatically, rendering Qwest's past and current performance in this area irrelevant. The
53 FCC's direction to state commissions to consider collocation issues on a "going forward"
54 basis, accounting for "expected growth or decline, if any, of requesting carriers' collocation
55 space needs", was intended to ensure that commissions considered the issue in the context of
56 a future scenario where ULS was not available to CLECs.¹ By relying exclusively on current
57 data, obtained during a time in which ULS is available to CLECs, Qwest has failed to
58 demonstrate that in such an environment, it would be capable of accommodating CLEC
59 needs in such a way that impairment would not occur.

60 **III. LOOP PROVISIONING ISSUES**

61 **Q. AT PAGE 7 OF HIS TESTIMONY MR. HUBBARD CLAIMS MCI IS**
62 **REALLY AFTER ELECTRONIC LOOP PROVISIONING (ELP). IS HE**
63 **CORRECT IN HIS ASSUMPTION?**

64 A. No. In the section of my testimony to which Mr. Hubbard refers, I simply
65 demonstrate how CLECs would be impaired today if they were restricted to providing service
66 using UNE-L, as compared to their ability to provide service today using UNE-P and as

¹ TRO ¶ 513.

67 compared to the service Qwest can provide to its retail customers. The Commission should
68 consider each and every option that may make UNE-L as seamless and efficient as UNE-P.
69 To that end, I have suggested options for the Commission to consider, that is, ADFs for
70 copper loops and IDLC unbundling for loops served over IDLC.² However, these proposed
71 options are just that—options. If there are other, perhaps lower cost, ways to deliver loops to
72 CLECs with the same ease and efficiency as UNE-P, MCI would be willing to consider them
73 as additional potential methods to alleviate impairment.

74 **Q. AT PAGES 8 AND 9 OF HIS TESTIMONY, MR. HUBBARD**
75 **CHARACTERIZES HAIRPINNING AS A TEMPORARY SOLUTION.**
76 **PLEASE COMMENT.**

77 A. Mr. Hubbard implicitly admits that hairpinning is technically feasible as Qwest
78 currently uses it (at least as a temporarily solution). However, Mr. Hubbard does not say why
79 this is temporary and why, if it is a feasible solution, CLECs are relegated to inferior service
80 as soon as it is available. As I pointed out in my direct testimony, Telcordia endorses
81 hairpinning as an option of IDLC unbundling, and I discussed some additional ways to make
82 it a more favorable option. However, rather than working with the parties and the
83 Commission to resolve these issues, Qwest relegates CLECs to longer provisioning time and
84 inferior service. Such recalcitrance impairs MCI and other CLECs' ability to serve mass
85 market customers using their own facilities.

² It should be noted that most ADFs on the market today employ robotic mechanisms and cannot be considered electronic provisioning

86 **Q. HOW WOULD YOU CHARACTERIZE THE REMAINDER OF MR.**
87 **HUBBARD'S TESTIMONY REGARDING LOOP ISSUES?**

88 A. I would characterize it by noting that Mr. Hubbard does not refute the conclusion I
89 reach in my direct testimony that a number of operational obstacles exist that plague the
90 UNE-L delivery strategy that do not exist for CLECs with access to ULS. These obstacles
91 include increased operational complexities, diminished quality, and increased costs compared
92 to the existing Qwest retail and/or UNE-P arrangements. These obstacles result from Qwest
93 providing loops to CLECs in a UNE-L environment which requires the separation of network
94 elements that have specifically been combined to provide service to Qwest retail customers in
95 as efficient a manner as possible. Mr. Hubbard does not refute my testimony that these issues
96 give rise to impairment.

97 **Q. WHAT DOES MR. HUBBARD STATE IN HIS TESTIMONY WITH REGARD**
98 **TO LOOP ISSUES?**

99 A. The main thrust of Mr. Hubbard's testimony in this area does not refute the point that
100 loop issues (including IDLC) cause CLEC impairment. Instead, it criticizes recommended
101 methodologies to overcome impairment that I discuss at length in my direct testimony. MCI
102 recognizes that issues exist with respect to unbundling IDLC, and I even discuss some of
103 these issues in my direct testimony. As the Commission is well aware, the
104 telecommunications industry has addressed other difficult issues in the past with relative
105 success (for example, the UNE-P process). Addressing this current set of issues is necessary
106 or CLECs will be impaired without continued access to UNE-P. It is for that reason that I
107 have acknowledged that hard work on the part of Qwest, the CLECs, and the Commission
8 will be required to enable UNE-L to become a viable strategy, and have recommended that

109 the Commission find that CLECs are impaired without access to ULS until significant
110 progress is made toward unbundling IDLC.

111 **Q. PLEASE SUMMARIZE YOUR POSITION REGARDING UNBUNDLING**
112 **IDLC?**

113 A. IDLC can be unbundled in many ways as discussed by industry bodies such as
114 Telcordia. Rather than embrace competition and work collaboratively to solve the potential
115 problems with IDLC unbundling, Qwest repeatedly points to the limitations of current
116 techniques—limitations that arise trying to separate elements that have been combined in a
117 fashion that results in optimum efficiency. This proceeding is not the appropriate forum for
118 solving the impairment problems all at once; rather it is to determine whether impairment
119 exists. I have shown, and Qwest has failed to refute, that these issues give rise to CLEC
120 impairment absent access to ULS.

121 **IV. TRANSPORT IMPAIRMENT ISSUES**

122 **Q. AT PAGE 2 OF HER TESTIMONY, QWEST WITNESS RACHEL**
123 **TORRENCE MAKES THE STATEMENT: “THE ONLY ISSUE IN**
124 **QUESTION IN THIS PROCEEDING IS THE ACCESS TO UNBUNDLED**
125 **DEDICATED TRANSPORT.” DO YOU AGREE?**

126 A. No. I am certain the Commission is fully aware that the statement is blatantly false.
127 Obviously, access to unbundled transport is only one of many issues that the Commission is
128 dealing with in the context of this proceeding.

129 **Q. ON PAGES 2 AND 3 OF HER TESTIMONY, MS. TORRENCE DISPUTES**
130 **YOUR TESTIMONY THAT THE OPERATIONAL PROCESSES AND COSTS**
131 **ASSOCIATED WITH CLEC COLLOCATION AND TRANSPORT ARE**
132 **OVER AND ABOVE THOSE INCURRED BY QWEST OR A CLEC USING**
133 **UNE-P. WOULD YOU COMMENT ON HER TESTIMONY?**

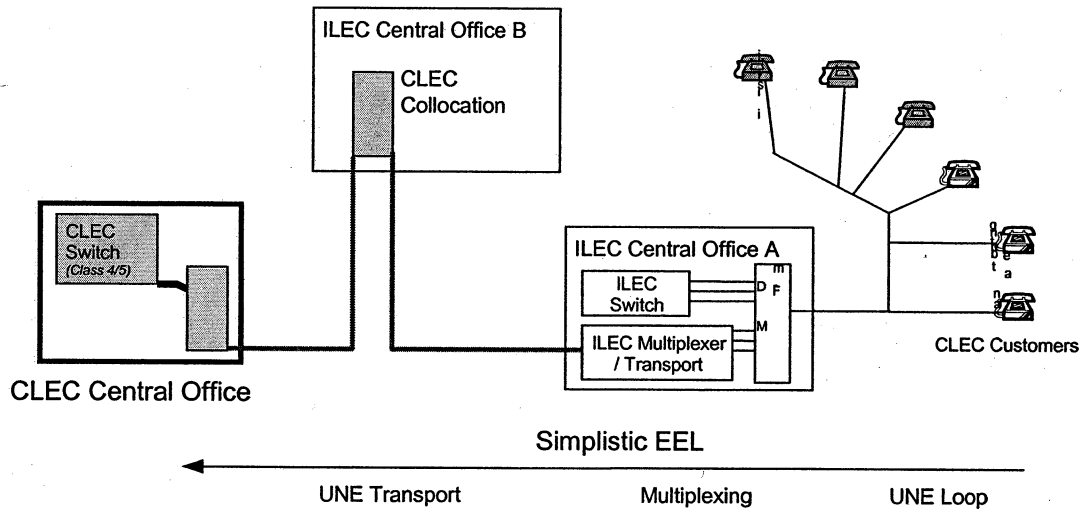
134 **A. Yes. Ms. Torrence makes this statement in reference to a short description of**
135 **collocation and transport complexities that I introduced in the first section of my testimony.**
136 **Perhaps if Ms. Torrence had considered my conclusions that CLECs costs are over and**
137 **beyond those incurred by the ILEC in the context of the fourth section of my testimony,**
138 **where I discuss these issues in greater detail, she would have been less likely to dispute them.**
139 **For purposes of clarity, in section IV of my testimony, I explain that in order for a CLEC to**
140 **access a UNE loop, it must “build out” from its own central office to each ILEC central**
141 **office, via collocation arrangements and physical transport facility placements. In order to**
142 **reach the very same customer, Qwest need only perform a single step, that is, to place a**
143 **jumper on the frame. The CLEC, therefore, incurs additional costs and performs multiple**
144 **steps in addition to the single step performed by the ILEC. Unless the collocation, transport,**
145 **and manual labor associated with these additional activities are free (and we know they are**
146 **not) the costs of the CLEC using UNE-L are obviously over and above the costs incurred by**
147 **Qwest to provide local service to its customers. Because the steps associated with a CLEC**
148 **accessing a customer via UNE-P are identical to those for Qwest, the CLEC’s UNE-L costs**
149 **are over and above those associated with serving the same customer on UNE-P.**

150 **Q. AT PAGE 3 OF HER RESPONSE TESTIMONY, MS. TORRENCE STATES**
151 **THAT YOUR TESTIMONY BETRAYS A MISUNDERSTANDING OF THE**
152 **TRO. HOW DO YOU RESPOND?**

153 A. I think that Ms. Torrence is using this inflammatory language to sidestep and confuse
154 the issue. As I noted in my direct testimony, the UNE-L framework can be considered to be a
155 very complex chain, each link of which must be procured, assigned, provisioned, and
156 maintained in order for customers to receive telephone services without disruption. Each link
157 is subject to its own issues and complications, but each link is equally important in terms of
158 providing the service. A break in any single link is a break in the chain. Any single
159 component of the service, including transport, has the potential to take the customer out of
160 service if something goes wrong. As the diagram below illustrates, transport between ILEC
161 central offices (CO) is required in order for the CLEC to reach its switch. Even if Qwest
162 provides the link in the diagram between the CLEC collocation and the CLEC switch, the
163 CLEC would not be able to reach its customer if the transport between ILEC Central Office
164 A and ILEC Central Office B was withheld (a link that Ms. Torrence readily admits is within
165 the TRO definition of dedicated transport).

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Simple EEL³



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Therefore, the statement I made in my direct testimony that “availability of and access to collocation space is meaningless in a CLEC network unless the CLEC is able to reach the end user customer’s loop and extend it to its own switch via available transport capacity”⁴ does not “betray a misunderstanding”, but rather is entirely accurate. Each link in the transport “chain” is required, and Ms. Torrence’s attempt to diminish transport’s importance in the UNE-L framework should be dismissed by the Commission.

In addition, as explained below with regard to Qwest’s view that MCI is a company that satisfies the TRO’s triggering tests on transport, I believe it is Qwest and not MCI that misapplies the FCC’s TRO definition of “transport.”

³ The diagram above depicts the transport facility from Central Office A ultimately reaching the CLEC’s Central Office via routing through the CLEC’s collocation space in Central Office B. While no operational benefit is achieved through this architecture (*i.e.*, the need for a collocation somewhere in the LATA), the FCC’s *Triennial Review Order* appears to require at least one collocation arrangement in the LATA for purposes of terminating an EEL.

⁴ Direct Testimony of Mark L. Stacy at pages 32 to 63.

177 **Q. AT PAGE 5 OF HER TESTIMONY, MS. TORRENCE CRITICIZES YOUR**
178 **TESTIMONY REGARDING CONCENTRATED EELS, SAYING THAT THIS**
179 **DISCUSSION IS IRRELEVANT. PLEASE RESPOND.**

180 A. The purpose of my testimony in this proceeding is to describe why operational,
181 network, and technological factors give rise to impairment, and to describe how CLECs
182 generally, and MCI specifically, are impaired in their effort to serve the mass market without
183 access to UNE switching. In addition, this testimony describes ways in which MCI believes
184 many of the factors leading to today's impairment can be overcome with active oversight on
185 the part of the Commission and cooperation of the industry. Concentrated EELs are one way
186 of overcoming such impairment. To that end, in my testimony, after discussing the transport-
187 related issues that could give rise to impairment, I went a step further and described how
98 EELs and concentrated EELs could be used to alleviate issues associated with both transport
189 and collocation. As I explain below, the FCC's discussion of concentrated EELs in the TRO
190 makes a continued discussion in this proceeding relevant.

191 **Q. HAS THE FCC RECOGNIZED THE APPEAL OF CONCENTRATED EELS**
192 **IN THE TRO?**

193 A. Yes, the FCC recognized the potential benefits of concentrated EELs at paragraph 492
194 of the TRO, stating: "We agree with WorldCom that DS0 EELs can minimize collocation
195 costs and increase the geographic reach of competitive LECs, thereby facilitating the
196 expansion of competition based on UNE-L strategies in some markets." Unfortunately, based
197 on the "limited record" before them, the FCC declined to establish rules requiring
198 concentration "at this time." Therefore, even though Qwest is not currently under any
199 obligation to offer concentrated EELs in Washington, it is evident that the FCC has not

200 “closed the door” on this issue. Even though the FCC has found that such a solution could
201 provide significant benefit, Qwest appears to be reluctant to work toward solutions that could
202 alleviate CLEC impairment. Therefore, after affirming the FCC’s finding that CLECs like
203 MCI are impaired without access to UNE switching functionality, the Commission should
204 begin the process, via follow-up proceedings, to address the issues generating impairment.
205 When evaluating ways to overcome the economic and operational issues related to transport,
206 MCI believes that the Commission and parties should explore how EELs could work more
207 effectively in a concentrated format, and the extent to which ordering and provisioning
208 processes specific to concentrated EELs could be used to limit some of the economic and
209 operational challenges that exist with providing transport via a UNE-L platform today.

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V. TRANSPORT TRIGGER ISSUES

211 **Q. PLEASE IDENTIFY THE ROUTES THAT MS. TORRENCE DISCUSSES IN**
212 **HER REVISED TESTIMONY.**

213 **A.** Ms. Torrence identifies the following additional routes:

- 214 • In-Direct 26 Seattle Duwamish to Seattle East (via Seattle Main)
- 215 • In-Direct 27 Seattle Duwamish to Seattle Campus (via Seattle East to Seattle
216 East)
- 217 • In-Direct 28 Seattle Duwamish to Seattle Atwater (via Seattle East to Seattle
218 Campus)
- 219 • In-Direct 29 Seattle Main to Seattle Campus (via Seattle Elliott to Seattle
220 Atwater)

- 221 **Q. DOES MCI MEET THE WHOLESALE OR SELF PROVISIONING**
222 **TRIGGERS FOR DEDICATED TRANSPORT SET FORTH IN THE TRO ON**
223 **THE NAMED ROUTES?**
- 224 A. No. MCI has reviewed these additional routes and believes that it should not be
225 considered a triggering company for the routes named by Ms. Torrence in her revised direct
226 testimony.
- 227 **Q. REFERRING BACK TO MS. TORRENCE'S CONTENTION THAT MCI**
228 **REVEALS A MISUNDERSTANDING OF THE FCC'S TRO DEFINITION OF**
229 **TRANSPORT, DO YOU BELIEVE THAT MCI HAS ANY DEDICATED**
230 **TRANSPORT AS THAT TERM IS USED IN THE TRO, ON ANY OF THE**
231 **ROUTES THAT MS. TORRENCE HAS IDENTIFIED IN HER TESTIMONY?**
- 232 A. No. Not only does MCI not qualify as a triggering company on the additional routes
233 identified in Ms. Torrence's revised direct testimony, as stated in my response testimony, but
234 MCI also does not have established dedicated transport on any of the routes Ms. Torrence has
235 identified in her testimony. MCI transmission facilities do not run directly from wire center
236 to wire center providing a non interrupted circuit path.
- 237 **Q. PLEASE DESCRIBE WHAT YOU MEAN BY MCI'S "TRANSMISSION**
238 **FACILITIES."**
- 239 A. MCI's fiber optic transmission network in the Seattle area consists of numerous fiber
240 optic rings that may be connected through MCI "nodes." These rings are configured to
241 enable MCI to provide services throughout much of the Seattle area (see Exhibit MLS-6).
- 242 **Q. EXPLAIN FURTHER WHY YOU BELIEVE THAT QWEST TESTIMONY**
243 **MISAPPLIES THE FCC'S DEFINITION OF TRANSPORT IN NAMING MCI**
244 **AS A TRIGGERING COMPANY FOR THE ROUTES SPECIFIED IN MS.**
245 **TORRENCE'S TESTIMONY.**
- 246 A. In addition to the information provided in my response testimony on this issue, it is
247 clear that Qwest does not consider MCI's local network architecture in its analysis of whether

248 MCI is a triggering company. Based on the architecture of the MCI network, circuits would
249 have to pass through at least one different node and connection point to enable a circuit to
250 connect from wire center "A" to wire center "Z". Such a configuration does not constitute
251 dedicated transport as described in the TRO.

252 **Q. CAN YOU PLEASE GIVE AN EXAMPLE OF WHAT CONNECTIONS MCI**
253 **WOULD HAVE TO MAKE IN ORDER TO PROVIDE A CIRCUIT FOR ONE**
254 **OF THE ROUTES THAT MS. TORRENCE HAS IDENTIFIED IN HER**
255 **TESTIMONY?**

256 A. Yes. I have constructed a schematic diagram to depict the necessary connections MCI
257 would have to make in order to provision a circuit from wire center Bellevue Sherwood to
258 Seattle Duwamish (In-Direct Route 18 of Ms. Torrence's revised testimony). Please refer to
259 Exhibit MLS-6.

260 **Q. WOULD YOU PLEASE EXPLAIN EXHIBIT MLS-6 IN MORE DETAIL?**

261 A. Yes. In the exhibit, I have highlighted the transmission path that could constitute a
262 connection from wire center Bellevue Sherwood to Seattle Duwamish using a dashed (red)
263 line. It is clear from this exhibit that the circuit would possibly have to traverse multiple
264 nodes within the MCI network to complete circuit continuity. In order to establish
265 connectivity, there would actually have to be manual jumpers (depicted in the diagram)
266 placed between SONET fiber termination points located at each node.

267 **Q. YOU MENTION THAT MULTIPLE CROSS CONNECTS HAVE TO TAKE**
268 **PLACE TO COMPLETE A CIRCUIT. CAN YOU DESCRIBE IN MORE**
269 **DETAIL THE CROSS CONNECT ARCHITECTURE?**

270 A. Yes. A manual cross connect has to be made at a node to connect two separate
271 SONET fiber rings together. These cross connects are done at a DSX jack panel. A coaxial

272 cable is place between two DSX jack panels to connect the two sonnet rings together.
273 Exhibit MLS-7 and Exhibit MLS-8 depict these cross connects both schematically as well as
274 in a photograph.

275 **Q. CAN YOU GIVE AN EXAMPLE OF WHAT A DEDICATED TRANSPORT**
276 **ROUTE WOULD LOOK LIKE ACCORDING TO THE TRO?**

277 A. Yes. Please refer to Exhibit MLS-9. The route depicted in red shown connecting
278 wire center "A" and wire center "Z" is a continuous fiber route without the necessity of
279 passing through a CLEC node. This route would provide continuity from wire center "A" to
280 wire center "Z" without requiring a manual connection to a separate fiber ring to complete
281 the circuit.

282 **Q. DOES MCI PROVIDE THE TYPE OF CONNECTIVITY DEPICTED IN**
283 **EXHIBIT MLS-9 ON ANY OF THE ROUTES THAT MS. TORRENCE HAS**
284 **IDENTIFIED IN HER TESTIMONY?**

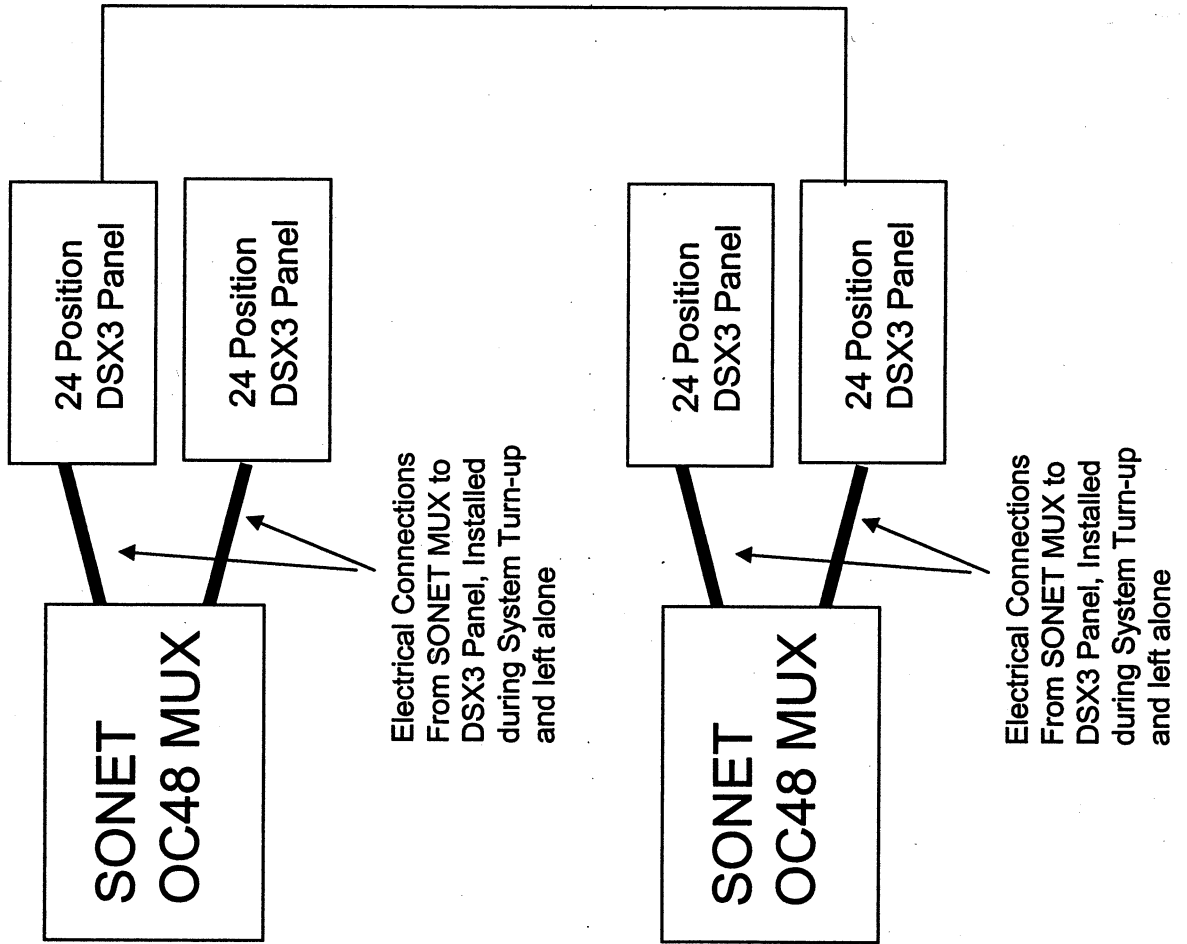
285 A. No. MCI does not have any direct, non interrupted, transport facilities between any of
286 the routes Ms. Torrence has identified.

287 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

288 A. Yes, it does.

REDACTED

Detail a Jode Site DS3 Level Cross Connects



Photograph of DSX3 Cross Connects



