

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

Petition by DIECA Communications, Inc.)
d/b/a Covad Communications Company for)
Arbitration of Interconnection Rates, Terms,)
and Conditions and Related Arrangements) Docket No. 020960-TP
with Verizon Florida Inc. Pursuant to)
Section 252(b) of the Telecommunications)
Act of 1996)

**REBUTTAL TESTIMONY OF
ALICE B. SHOCKET AND
DONALD E. ALBERT
ON BEHALF OF
VERIZON FLORIDA INC.**

SUBJECT: ISSUE NOS. 41- 49

FEBRUARY 20, 2003

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1 **REBUTTAL TESTIMONY OF ALICE B. SHOCKET**
2 **AND DONALD E. ALBERT**

3
4 **Q. ARE YOU THE SAME ALICE B. SHOCKET AND DONALD E.**
5 **ALBERT WHO TESTIFIED PREVIOUSLY IN THIS PROCEEDING?**

6 A. Yes.

7

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of our rebuttal testimony is to respond to several
10 statements in the joint testimony of Covad's witnesses concerning dark
11 fiber.

12

13 **Q. MS. EVANS AND MR. CLANCY CLAIM THAT “[T]O DATE, IN OVER**
14 **30 APPLICATIONS FOR DARK FIBER SUBMITTED TO VERIZON,**
15 **EACH AT A COST OF \$150, VERIZON RESPONDED THAT THERE**
16 **WERE NO AVAILABLE FACILITIES. IN SHORT, VERIZON’S**
17 **STONEWALLING TACTICS HAVE BEEN 100% SUCCESSFUL AT**
18 **DENYING COVAD ACCESS TO ITS DARK FIBER.”**
19 **(EVANS/CLANCY JOINT DIRECT TESTIMONY AT 44). WHAT IS**
20 **YOUR REACTION TO THIS STATEMENT?**

21 A. We are puzzled by it. This is a Florida arbitration proceeding. Covad
22 has not submitted any Dark Fiber Inquiries in Florida. Therefore,
23 Covad's claim that Verizon has engaged in “stonewalling tactics” in
24 Florida is clearly wrong.

25

1 Moreover, we have reviewed Verizon's records and have found that to
2 date, Covad has submitted fewer than 30 Dark Fiber Inquiries to
3 Verizon's operating affiliates in other states (in particular, in former Bell
4 Atlantic jurisdictions), all in 2001. Of those Dark Fiber Inquiries, fewer
5 than one-third were rejected because there was no dark fiber available
6 on the routes that Covad requested. In addition, the routes identified by
7 Covad for these requests were among the most frequently requested
8 and heavily utilized in the states where Covad filed its requests.
9 Furthermore, these inquiries often were for routes that overlapped in
10 part, meaning that a lack of facilities in one of the common segments
11 would result in no fiber available for both inquiries. The remaining
12 inquiries were rejected not because there was no dark fiber on the route,
13 but because there was no direct route available between the requested
14 termination points and the dark fiber route between the two points would
15 require cross connections at intermediate offices. At the time that those
16 requests were submitted, Verizon's operating affiliates in those states
17 did not offer intermediate office routing. However, as indicated in
18 Verizon's Direct Testimony, Verizon now offers intermediate office
19 routing in Florida, and has proposed language for the interconnection
20 agreement to accommodate such requests. Covad's reliance on
21 outdated information concerning Dark Fiber Inquiries submitted in other
22 states under different contract terms has no relevance to this
23 proceeding, and the Commission should disregard it.

24

25 **Q. COVAD'S WITNESSES CLAIM THAT THE FCC DEFINITION OF**

1 **DARK FIBER INCLUDES TERMINATED AND UNTERMINATED**
2 **FIBER (EVANS/CLANCY JOINT DIRECT TESTIMONY AT 40). IS**
3 **THAT YOUR UNDERSTANDING?**

4 A. No. The description of dark fiber as “terminated” and “unterminated”
5 used by COVAD is vague and ambiguous. Our Direct Testimony
6 includes three generalized configurations that occur in Verizon’s network
7 that could be referred to as “unterminated” dark fiber. In each of these
8 three configurations Verizon would normally have to engineer, place,
9 and/or splice additional loop fiber optic cables from the “unterminated”
10 end(s) of the fiber optic cable to an accessible terminal(s), and then
11 perform fiber strand acceptance testing.

12
13 Although we are not lawyers, it is our understanding that, in the FCC’s
14 Wireline Competition Bureau’s handling of the ATT-WCOM-Verizon
15 Virginia arbitration, the Bureau did not require the ILEC (Verizon
16 Virginia) to perform splicing in the field (the outside plant portion of the
17 network).¹

18
19 **Q. COVAD’S WITNESSES CLAIM THAT SPLICING FIBER IS “SIMPLE**
20 **AND SPEEDY” (EVANS/CLANCY JOINT DIRECT TESTIMONY AT**
21 **41) AND THAT “TERMINATION OF FIBER IS A SIMPLE AND**
22 **SPEEDY TASK” (EVANS/CLANCY JOINT DIRECT TESTIMONY AT**
23 **40). DO YOU AGREE?**

¹ *Virginia Arbitration Order ¶¶ 451-453, 457* (“We do not require Verizon to splice new [dark fiber] routes in the field. . .”).

1 A. No. There are numerous steps or procedures followed by Verizon when
2 splicing two strands of its fiber together. Typically, Verizon's
3 underground fiber optic cables are joined (spliced) together in a
4 manhole, whereas aerial fiber optic cables are joined (spliced) together
5 at a telephone pole. To perform a fusion splice on fiber optic cables
6 (which, as we explained in our Direct Testimony, is the method used for
7 splicing the glass strands in fiber optic cables), Verizon uses a splicing
8 truck, which essentially is a mini-laboratory "clean room" environment on
9 wheels. When entering an underground manhole to perform a fiber
10 optic splicing operation, Verizon routinely encounters and must resolve
11 a number of safety and quality control concerns before any splicing can
12 begin. These concerns include time needed to establish a safe work-
13 area for Verizon's technicians (as well as pedestrians and motorists),
14 which usually involves setting up traffic cones and signs, coordinating
15 traffic management measures with the local police department, purging
16 the manhole of any standing water, ventilating the manhole for fresh air-
17 flow; and testing the manhole for the presence of gas. After preparing
18 the manhole for safe entry, Verizon's technicians then pull the ends of
19 the fiber optic cables (to be fused together) out of the manhole and
20 place them in the splicing truck. Next, the outer protective sheaths of
21 the cables are permanently removed and the "inside" fiber ribbons (each
22 ribbon contains 12 glass fiber strands) are cleaned and prepared for
23 splicing. At this point in the process, the two fiber ribbons (to be fused
24 together) are placed into the fusion splicing machine, which measures
25 the intensity of light flowing across the gap between the two fiber ends,

1 adjusts the alignment of the fibers using micro-stage movements, and
2 then activates an electric arc that melts the glass ends, thereby welding
3 them together permanently.

4
5 Upon completion of this procedure, Verizon technicians then test the
6 optical insertion loss across the newly created splice point. If
7 transmission is satisfactory, the technicians proceed to splice the next
8 fiber ribbon. If transmission is unsatisfactory, however, due to
9 misalignment or the presence of dust and other contaminants, the
10 technicians must break the splice, cut back on the glass lengths of both
11 fiber ribbons, and repeat the procedure again. Once fusing is
12 successful, a protective “heat shrink sleeve” is then wrapped around the
13 exposed glass fibers. Completed fiber optic ribbons are then secured
14 and organized within a protective fiber optic splice tray. These
15 protective fiber optic splice trays specifically are designed to minimize
16 the future movement of fibers and maintain an acceptable bending
17 radius.² Finally, completed fiber optic splice trays are locked within a
18 protective fiber optic splice case, which is bolted together around the
19 fused splices. The newly fused cables then are lowered back into the
20 manhole and secured to their support structures within the manhole.³

21
22 **Q. COVAD’S DIRECT TESTIMONY INCLUDES AN ISSUE #42:**
23 **“SHOULD COVAD BE PERMITTED TO ACCESS DARK FIBER IN**

² If glass fibers are pinched, or bent, they no longer will be able to transmit light.
³ Maintaining an acceptable bending radius is critical during the first and this last stage of the operation to avoid service outages and damage to the fibers.

1 ANY TECHNICALLY FEASIBLE CONFIGURATION CONSISTENT
2 WITH APPLICABLE LAW?" (EVANS/CLANCY JOINT DIRECT
3 TESTIMONY AT 40) PLEASE COMMENT.

4 A. The only technically feasible method we know of to provide access to
5 dark fiber (*i.e.*, to connect Verizon's fibers to an ALEC's fibers) is at an
6 accessible terminal using fiber optic "jumper" cross-connections. This
7 allows for dark fiber services to be easily and repeatedly connected and
8 disconnected, and for adequate maintenance, testing, and network
9 reliability. In fact, the agreed-upon language in the Interconnection
10 Agreement specifically states that "Covad may not access a Dark Fiber
11 Loop, Dark Fiber Sub-Loop or Dark Fiber IOF at . . . a splice point or
12 case" and that "Verizon will not introduce additional splice points or open
13 existing splice points or cases to accommodate Covad's request."

14
15 Covad nevertheless claims that Verizon's definition of the three dark
16 fiber UNE products – Dark Fiber Loops, Dark Fiber Subloops, and Dark
17 Fiber IOF – would diminish Covad's rights to dark fiber under Applicable
18 Law.

19
20 Covad's argument, however, improperly expands the definition of the
21 dark fiber UNE. Although we are not lawyers, it is our understanding
22 that "dark fiber" is not a separate, stand-alone UNE under the FCC's
23 rules. To the contrary, dark fiber is available to a ALEC *only* to the
24 extent that it falls within the definition of specifically designated UNEs
25 set forth in 47 C.F.R. § 51.319(a) and (d) — in particular, the loop

1 network element, subloop network element, or interoffice facilities
2 (“IOF”). See 47 C.F.R. § 51.319(a) & (d). Verizon’s proposed contract
3 language allows Covad to obtain access to dark fiber loops, subloops,
4 and IOF, as those network elements are specifically defined by the FCC.
5 Covad’s proposed § 8.1.5, which purports to expand Covad’s right to
6 dark fiber beyond the loop, subloop, or IOF network elements to “other
7 technically-feasible configurations,” is inconsistent with the FCC’s
8 description of dark fiber UNEs.

9
10 In addition, Covad has proposed change to the language in § 8.1.1 by
11 deleting the word “continuous” from the definition of a Dark fiber loop.
12 This change would require Verizon to place and/or splice fiber optic
13 cables to construct new dark fiber. As discussed above, these work
14 activities are not required by the FCC. If a fiber optic strand is not
15 continuous between two accessible terminals, it cannot be used by
16 Verizon (for lit fiber optic systems), or by an ALEC (as dark fiber) without
17 performing additional construction work.

18
19 **Q. COVAD’S ALSO CLAIMS, IN ISSUE #44, THAT VERIZON SHOULD**
20 **“BE OBLIGATED TO OFFER DARK FIBER LOOPS THAT**
21 **TERMINATE IN BUILDINGS OTHER THAN CENTRAL OFFICES.”**
22 **PLEASE COMMENT.**

23 A. This issue is unclear to us. There may not be a disagreement. Verizon
24 will provide access to dark fiber loops (and sub-loops) at existing
25 accessible terminals. This includes customer premises locations and

1 huts (small equipment buildings) with accessible terminals, not just
2 central offices.

3
4 Covad's proposed modification to the definition of dark fiber loops in §
5 8.1.1 of the UNE Attachment is inaccurate and confusing. Section
6 51.319(a)(1) of the FCC's rules defines the loop network element as "a
7 transmission facility between a distribution frame (or its equivalent) in an
8 incumbent LEC central office and the loop demarcation point at an end-
9 user customer premises, including inside wire owned by the incumbent
10 LEC." 47 C.F.R. § 51.319(a)(1). Verizon's proposed contract language
11 in § 8.1.1 follows this definition, describing a dark fiber loop as unlit fiber
12 optic strands "between Verizon's Accessible Terminal, such as the fiber
13 distribution frame, or its functional equivalent, located within a Verizon
14 Wire Center [*i.e.*, a "central office"⁴], and Verizon's main termination
15 point at a Customer premises, such as the fiber patch panel located
16 within a Customer premises." Verizon Response, Attachment C at 19
17 (UNE Attachment at § 8.1.1). Covad, however, expands this definition
18 to include unlit fiber optic strands at a "Verizon Wire Center or other
19 Verizon premises in which Dark Fiber Loops terminate." *Id.* at § 8.1.1
20 (Covad's Position). In other words, Covad would define a dark fiber
21 "loop" as any dark fiber that extends between a terminal located

⁴ "Wire Center" is defined in § 2.115 of the Glossary Attachment as "[a] building or portion thereof which serves as a Routing Point for Switched Exchange Access Service. The Wire Center serves as the premises for one or more Central Offices." Furthermore, the definition of "Central Office" in § 2.20 of the Glossary Attachment states that "[s]ometimes this term is used to refer to a telephone company building in which switching systems and telephone equipment are installed." Thus, the definition of a "Verizon Wire Center" already includes any Verizon premises that houses a switch and thus acts as a "Central Office."

1 somewhere other than the central office (*i.e.*, a “remote terminal”) and
2 the customer premises. What Covad is describing, however, is not a
3 “loop” at all, but a “subloop,” which is already covered under § 8.1.2 of
4 the UNE Attachment. In particular, § 8.1.2(b) defines a dark fiber
5 subloop to include dark fiber strands “between Verizon’s Accessible
6 Terminal at a Verizon remote terminal equipment enclosure and
7 Verizon’s main termination point located within a Customer premises.”
8 Verizon Response, Attachment A at 81 (UNE Attachment § 8.1.2(b)).
9 Therefore, Covad’s proposed modification to Verizon’s proposed
10 contract language is unnecessary to provide Covad with access to dark
11 fiber at accessible terminals outside a Verizon central office, and only
12 serves to confuse the differences between a sub-loop and a loop under
13 the FCC’s rules.

14

15 **Q. COVAD’S WITNESSES STATE THAT “IT IS BURDENSOME AND**
16 **DISCRIMINATORY FOR VERIZON TO REQUIRE THAT COVAD**
17 **SUBMIT SEPARATE REQUESTS FOR EACH LEG OF A FIBER**
18 **ROUTE” (EVANS/CLANCY JOINT DIRECT TESTIMONY AT 42).**
19 **PLEASE RESPOND.**

20 A. As we describe on pages 12 through 14 of our Direct Testimony,
21 Verizon has proposed contract language where separate requests for
22 each leg of a fiber route are not required.

23

24 **Q. COVAD’S WITNESSES STATE THAT: “COVAD ONLY ASKS THAT**
25 **IT BE PROVIDED THE SAME DETAILED INFORMATION THAT**

1 **VERIZON ITSELF POSSESSES AND USES” (EVANS/CLANCY**
2 **JOINT DIRECT TESTIMONY AT 42). PLEASE COMMENT.**

3 A. As we describe on pages 19 through 22 of our Direct Testimony, dark
4 fiber inquiries and dark fiber field surveys that Verizon offers ALECs are
5 the same processes that Verizon uses, and use the same information
6 that Verizon uses to assign fibers to Verizon’s own lit fiber optic
7 systems. In addition, Verizon will create and make available to ALECs
8 fiber layout maps. This goes beyond what Verizon does for itself.

9
10 **Q. COVAD’S WITNESSES STATE THAT “VERIZON SHOULD BE**
11 **REQUIRED TO PROVIDE CERTAIN CRITICAL INFORMATION**
12 **ABOUT DARK FIBER IN A FIELD SURVEY REQUEST THAT**
13 **ALLOWS COVAD A MEANINGFUL OPPORTUNITY TO USE DARK**
14 **FIBER” (EVANS/CLANCY JOINT DIRECT TESTIMONY AT 43).**
15 **PLEASE RESPOND.**

16 A. The information Verizon provides in response to a field survey should be
17 the same for all ALECs. Verizon’s field survey information currently
18 available to ALECs is the result of various industry collaboratives,
19 Interconnection Agreement arbitrations and Section 271 proceedings in
20 other states. Covad’s request for 0.35dB/km loss at 1310 nanometers
21 and 0.25dB/km loss at 1550 nanometers is not a request for information
22 – it is a technical requirement/specification for the transmission
23 characteristics of Verizon’s fibers. As part of the field survey Verizon will
24 provide the ALEC with the total measured dB optical insertion loss for
25 the specific fibers assigned to the ALEC’s order. However, the

1 transmission characteristics for Verizon's dark fiber are provided "as is"
2 and cannot be guaranteed. Most likely the fiber optic transmission
3 characteristics will lessen over time due to accidental damage and
4 weather impacts. The ALEC needs to accommodate this reality into the
5 design of its fiber optic electronics, just as Verizon's engineers do.

6

7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 **A.** Yes.

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