

**PUBLISHED**

**UNITED STATES COURT OF APPEALS**

**FOR THE FOURTH CIRCUIT**

AT&T COMMUNICATIONS OF VIRGINIA,  
INCORPORATED,  
Plaintiff-Appellant,

and

MCI TELECOMMUNICATIONS  
CORPORATION, a Delaware  
corporation; MCIMETRO ACCESS  
TRANSMISSION SERVICES OF VIRGINIA,  
INCORPORATED, a Virginia  
Corporation,  
Plaintiffs,

v.

BELL ATLANTIC-VIRGINIA,  
INCORPORATED; HULLIHEN WILLIAMS

No. 98-2131

MOORE, in his official capacity as  
Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; I. CLINTON  
MILLER, in his official capacity as  
Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; THEODORE  
V. MORRISON, JR., in his official  
capacity as Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; STATE  
CORPORATION COMMISSION,  
Commonwealth of Virginia,  
Defendants-Appellees,

and

RICHARD CULLEN, Attorney General  
of Virginia,  
Intervenor-Defendant,

and

FEDERAL COMMUNICATIONS  
COMMISSION,  
Party in Interest.

MCI TELECOMMUNICATIONS  
CORPORATION, a Delaware  
corporation; MCIMETRO ACCESS  
TRANSMISSION SERVICES OF VIRGINIA,  
INCORPORATED, a Virginia  
Corporation,  
Plaintiffs-Appellants,

and

AT&T COMMUNICATIONS OF VIRGINIA,  
INCORPORATED,  
Intervenor-Plaintiff,

v.

No. 98-2147

BELL ATLANTIC-VIRGINIA,  
INCORPORATED; HULLIHEN WILLIAMS  
MOORE, in his official capacity as  
Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; I. CLINTON  
MILLER, in his official capacity as  
Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; THEODORE  
V. MORRISON, JR., in his official  
capacity as Commissioner of the

Commonwealth of Virginia State  
Corporation Commission; STATE  
CORPORATION COMMISSION,  
Commonwealth of Virginia,  
Defendants-Appellees,

and

RICHARD CULLEN, Attorney General  
of Virginia,  
Intervenor-Defendant,

and

FEDERAL COMMUNICATIONS  
COMMISSION,  
Party in Interest.

MCI TELECOMMUNICATIONS  
CORPORATION, a Delaware  
corporation; MCIMETRO ACCESS  
TRANSMISSION SERVICES OF VIRGINIA,  
INCORPORATED, a Virginia  
Corporation; AT&T  
COMMUNICATIONS OF VIRGINIA,  
INCORPORATED,  
Plaintiffs-Appellees,

No. 98-2196

v.

BELL ATLANTIC-VIRGINIA,  
INCORPORATED,  
Defendant-Appellant.

and

HULLIHEN WILLIAMS MOORE, in his  
official capacity as Commissioner  
of the Commonwealth of Virginia

State Corporation Commission; I.  
CLINTON MILLER, in his official  
capacity as Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; THEODORE  
V. MORRISON, JR., in his official  
capacity as Commissioner of the  
Commonwealth of Virginia State  
Corporation Commission; STATE  
CORPORATION COMMISSION,  
Commonwealth of Virginia,  
Defendants.

and

RICHARD CULLEN, Attorney General  
of Virginia,  
Intervenor-Defendant.

and

FEDERAL COMMUNICATIONS  
COMMISSION,  
Party in Interest.

Appeals from the United States District Court  
for the Eastern District of Virginia, at Richmond.  
James R. Spencer, District Judge.  
(CA-97-629-R)

Argued: June 8, 1999

Decided: December 15, 1999

Before MICHAEL, Circuit Judge; Malcolm J. HOWARD,  
United States District Judge for the Eastern District of  
North Carolina, sitting by designation; and  
Jerome B. FRIEDMAN, United States District Judge  
for the Eastern District of Virginia, sitting by designation.

Affirmed in part, reversed in part, and remanded by published opinion. Judge Michael wrote the opinion, in which Judge Howard and Judge Friedman joined.

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## COUNSEL

**ARGUED:** David Lee Lawson, SIDLEY & AUSTIN, Washington, D.C., for Appellants. Robert A. Dybing, SHUFORD, RUBIN & GIBNEY, Richmond, Virginia; Warner F. Brundage, Jr., BELL ATLANTIC-VIRGINIA, INC., Richmond, Virginia, for Appellees. **ON BRIEF:** David Carpenter, Stephen F. Smith, SIDLEY & AUSTIN, Washington, D.C.; James C. Roberts, George A. Somerville, Dabney J. Carr, IV, MAYS & VALENTINE, L.L.P., Richmond, Virginia; John J. Langhauser, Wilma R. McCarey, AT&T COMMUNICATIONS OF VIRGINIA, INC., Oakton, Virginia; Donald B. Verrilli, Jr., Maureen F. Del Duca, Jodie L. Kelley, JENNER & BLOCK, Washington, D.C.; Thomas F. O'Neil, III, William Single, IV, Matthew B. Pachman, MCI WORLDCOM, INC., Washington, D.C., for Appellants. Michael D. Lowe, BELL ATLANTIC-VIRGINIA, INC., Richmond, Virginia; James C. Dimitri, William H. Chambliss, Robert M. Gillespie, STATE CORPORATION COMMISSION OF VIRGINIA, Richmond, Virginia; Anthony Gambardella, WOODS, ROGERS & HAZLEGROVE, Richmond, Virginia, for Appellees. Philip D. Bartz, Acting Assistant Attorney General, Helen F. Fahey, United States Attorney, Mark B. Stern, Charles W. Scarborough, Appellate Staff, Civil Division, UNITED STATES DEPARTMENT OF JUSTICE, Washington, D.C.; Christopher J. Wright, General Counsel, John E. Ingle, Deputy Associate General Counsel, FEDERAL COMMUNICATIONS COMMISSION, Washington, D.C., for Amicus Curiae.

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## OPINION

MICHAEL, Circuit Judge:

After Congress enacted the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56, codified at 47 U.S.C. § 251 et seq. (the Act),

AT&T Communications of Virginia, Inc. (AT&T) and MCI Telecommunications Corp. and MCImetro Access Services of Virginia, Inc. (collectively, MCI) tried to enter the local telephone market in Virginia served by Bell Atlantic-Virginia, Inc. (Bell Atlantic), an authorized monopoly prior to the Act. When AT&T and MCI were unsuccessful in negotiating all of the terms and prices for access to Bell Atlantic's network and services, the parties went to arbitration before the Virginia State Corporation Commission (SCC), as the Act allows. Next, AT&T and MCI sought review of the arbitration by suing Bell Atlantic and the SCC commissioners in district court. Bell Atlantic cross-claimed, also seeking review on certain issues. The issues are (1) whether AT&T and MCI may use the switching function of their remote switching modules collocated on Bell Atlantic's premises, (2) whether Bell Atlantic has a duty to renegotiate (for the benefit and use of MCI) licenses on intellectual property contained within Bell Atlantic's network, (3) whether MCI should be allowed access to Bell Atlantic's dark fiber, (4) whether Bell Atlantic must provide certain directory publishing services to AT&T at cost-based rates, and (5) whether the SCC used the proper methodology in setting wholesale prices for retail services. The district court resolved the issues on cross-motions for summary judgment. We now have the case on appeal, and for the reasons that follow, we affirm in part, reverse in part, and remand.

I.

In a related opinion filed today, GTE South, Inc. v. Morrison, \_\_\_ F.3d \_\_\_, No. 98-1887 (4th Cir. Dec. 15, 1999), we explain how the Act sets a course for restructuring local telephone markets:

The breakup of AT&T in the early 1980s brought competition to the long distance telephone market. The local market, however, has been a different story. Until the passage of the 1996 Act, state utility commissions continued to regulate local telephone service as a natural monopoly. Commissions typically granted a single company, called a local exchange carrier (LEC), an exclusive franchise to provide telephone service in a designated area. Under this protection the LEC built a local network -- made up of elements such as loops (wires), switches, and transmission facilities -- that

connects telephones in the local calling area to each other and to long distance carriers.

The 1996 Act brought sweeping changes. It ended the monopolies that incumbent LECs held over local telephone service by preempting state laws that had protected the LECs from competition. See 47 U.S.C. § 253. Congress recognized, however, that removing the legal barriers to entry would not be enough, given current technology, to make local telephone markets competitive. In other words, it is economically impractical to duplicate the incumbent LEC's local network infrastructure. To get around this problem, the Act allows potential competitors, called competing local exchange carriers (CLECs), to enter the local telephone market by using the incumbent LEC's network or services in three ways. First, a CLEC may build its own network and "interconnect" with the network of an incumbent. See id. § 251(c)(2). Second, a CLEC may lease elements (loops, switches, etc.) of an incumbent LEC's network "on an unbundled basis." See id. § 251(c)(3). Third, a CLEC may buy an incumbent LEC's retail services "at wholesale rates" and then resell those services to customers under its (the CLEC's) brand. See id. § 251(c)(4).

The Act details procedures for allowing a CLEC access to the incumbent LEC's facilities and services. The CLEC first makes a request to the incumbent for interconnection or for access to its network or services. Thereafter, both parties must negotiate in good faith in an effort to reach agreement on terms and conditions (including price) of access. See id. §§ 251(c)(1), 252(a)(1). If negotiations fail-- it is hard to see how they would not -- either party may petition the state utility commission to arbitrate open issues. See id. § 252(b). The terms imposed by the state commission in arbitration must "meet the requirements of section 251 . . . including the regulations prescribed by the [FCC] pursuant to section 251." Id. § 252(c)(1). The Act includes general standards for a state commission to use in arbitrating open price (or rate) issues. See id. §§ 251(c), 252(d). Finally, the Act authorizes any party aggrieved by the arbitration deci-

sion of a state commission to bring an action in federal district court to determine whether the arbitration decision "meets the requirements of" §§ 251 and 252. See id. § 252(e)(6).

Id. at \_\_\_\_ (footnote omitted).

On August 8, 1996, the FCC (pursuant to § 251(d)(1) of the Act) issued an order and rules, including rules governing pricing, to implement the local competition provisions of the Act. See In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, 11 F.C.C.R. 15499 (1996) (First Report and Order). After the rules were challenged in petitions for review filed in several circuits, the proceedings were consolidated and assigned to the Eighth Circuit. See 28 U.S.C. § 2112(a). The Eighth Circuit first stayed the FCC's pricing rules before their effective date, see Iowa Utils. Bd. v. FCC, 109 F.3d 418, 427 (8th Cir. 1996), and then vacated the rules in July 1997, holding that state utility commissions, not the FCC, had exclusive authority to make pricing decisions under the Act. See Iowa Utils. Bd. v. FCC, 120 F.3d 753, 800 (8th Cir. 1997), aff'd in part, rev'd in part sub nom. AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 119 S. Ct. 721 (1999). On January 25, 1999, the Supreme Court reversed this part of the Eighth Circuit's judgment, holding that the FCC had jurisdiction to issue "rules to guide the state-commission judgments." AT&T Corp. v. Iowa Utils. Bd., 525 U.S. at \_\_\_\_, 119 S. Ct. at 738. Although the Supreme Court remanded for consideration of substantive challenges to the pricing rules, these rules became effective when the Supreme Court issued its judgment. And although the Supreme Court invalidated one of the FCC rules governing access to unbundled network elements, see Iowa Utils. Bd., 525 U.S. at \_\_\_\_, 119 S. Ct. at 736, other (non-pricing) rules relating to local competition have been in effect since October 15, 1996. See Iowa Utils. Bd., 109 F.3d at 427.

In this case, AT&T and MCI were unsuccessful in negotiating interconnection agreements with Bell Atlantic (the incumbent LEC) to cover their entry into Virginia's local telephone market. In July 1996 AT&T petitioned the SCC to arbitrate the unresolved issues. Shortly thereafter, AT&T's petition was consolidated with a petition filed by MCI, and the SCC proceeded to arbitrate the open issues.

After the SCC's arbitration decisions were incorporated into interconnection agreements between Bell Atlantic and each of the CLECs, the CLECs (AT&T and MCI) sued Bell Atlantic and the SCC commissioners in district court, alleging that certain of the SCC's determinations violated the Act. Bell Atlantic filed a cross-claim because it objected to different SCC rulings.

The SCC (and the district court) resolved the issues now contested as follows. First, the SCC denied AT&T and MCI the right to use the switching functions of their collocated remote switching modules (RSMs), although the RSMs may be used for interconnection and access to unbundled network elements. Second, the SCC determined that Bell Atlantic, in providing access to its network elements, is not required to negotiate and obtain license modifications from its third-party vendors to allow MCI use of intellectual property embedded in Bell Atlantic's network. Third, the SCC determined that Bell Atlantic was not required to allow MCI access to its (Bell Atlantic's) dark fiber, that is, fiber optic transmission cable that has been installed but not activated. (The district court dismissed the claim underlying issue two and granted summary judgment for Bell Atlantic and the SCC commissioners on issues one and three. AT&T and MCI appeal.) Fourth, the SCC required Bell Atlantic to provide certain directory publishing services to AT&T at cost-based rates, instead of tariff rates. (The district court granted summary judgment to AT&T and the SCC commissioners on this issue, and Bell Atlantic cross-appeals.) Fifth, the SCC decided that wholesale prices (for services the CLECs will resell) should be determined by assuming that the incumbent LEC, Bell Atlantic, will leave the retail market altogether. (The district court granted summary judgment to AT&T, MCI, and the SCC commissioners on this issue, and Bell Atlantic cross-appeals.)<sup>1</sup>

We will address the issues after we summarize the standard of

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<sup>1</sup> MCI also appealed the SCC's refusal to compel Bell Atlantic to provide its directory assistance database for Bell Atlantic customers in Washington, D.C., and Maryland. In addition, Bell Atlantic cross-appealed the SCC's order requiring it to give MCI actual possession of its directory assistance database for Virginia, instead of merely granting read-and-use access. MCI and Bell Atlantic settled these issues prior to oral argument.

review. The district court's grant of summary judgment is reviewed de novo. We also review de novo the SCC's interpretations of the Act, and we accord no deference to the state commission's interpretations. Finally, we review the SCC's factfindings under the substantial evidence standard. See GTE South, Inc. v. Morrison, \_\_\_ F.3d \_\_\_ (4th Cir. 1999).

## II.

AT&T and MCI argue that the SCC and the district court erred in deciding that AT&T and MCI cannot use the switching function of RSMs (remote switching modules) that they place, or collocate, at Bell Atlantic's premises. We agree with AT&T and MCI.

The SCC did correctly determine that Bell Atlantic must allow AT&T and MCI to collocate RSMs because this equipment is necessary for interconnection and access to unbundled network elements. The SCC went on to hold, however, that the switching capability of collocated RSMs must be disabled. This holding was erroneous.

An RSM has an important, although limited, switching capability. It can perform a local call routing function when one customer served by a loop connected to the RSM calls another customer who is also connected to that same RSM. This limited switching function avoids the more costly and inefficient routing of the call to a distant main switch and back. Bell Atlantic uses this local call routing function on its own RSMs, taking advantage of the attendant operating and cost efficiencies. Under the SCC's order AT&T and MCI cannot use this switching function on their RSMs placed in Bell Atlantic's premises. This puts AT&T and MCI at a competitive disadvantage. The question, of course, is whether the Act and the FCC's implementing rules require the elimination of this disadvantage.

Section 251(c)(6) of the Act requires Bell Atlantic, as an incumbent LEC, to allow new entrants, such as AT&T and MCI, to collocate at Bell Atlantic's premises any equipment that is "necessary for interconnection or access to unbundled network elements" on terms and conditions that are "nondiscriminatory." 47 U.S.C. § 251(c)(6). While the Act requires that the collocated equipment be "necessary" for one of the two specified purposes (interconnection or access to

network elements), the equipment is not rendered "unnecessary" because it can perform other functions such as switching. See First Report and Order at ¶ 579 ("necessary" simply means that the equipment is "used" or "useful" for interconnection or access to unbundled network elements). Because the RSMs are used for interconnection and access, they are necessary and must be collocated, as the SCC determined.

AT&T and MCI argue, however, that a discriminatory term was imposed on the collocation here because they cannot use their RSMs for a different function, switching, and that deprives them of efficiencies available to Bell Atlantic, the incumbent LEC. The question therefore is a narrow one: is it a discriminatory condition of collocation to require that the switching function of the CLECs' collocated RSMs be disconnected.

The Act sets the general standard -- "nondiscriminatory" -- for collocation terms, see 47 U.S.C. § 251(c)(6), and leaves the details to FCC rulemaking. But the FCC rules are also fairly general. The First Report and Order does make clear that the "nondiscrimination" standard is meant to be a strict one and that an incumbent LEC, such as Bell Atlantic, cannot impose on CLECs less favorable terms of interconnection or access to unbundled network elements than it (the LEC) enjoys. See First Report and Order at ¶¶ 217-18. The SCC did not interpret the First Report and Order to permit AT&T and MCI to use the switching function of their collocated RSMs, even though Bell Atlantic could use their RSMs for that very purpose.

Fortunately, we do not have to decide whether the SCC interpreted the First Report and Order properly. The FCC has issued a clarifying rule, effective June 1, 1999, that resolves the collocation issue before us: "an incumbent LEC may not place any limitations on the ability of requesting carriers to use all the features, functions, and capabilities of equipment collocated [for interconnection or access to unbundled network elements], including, but not limited to, switching and routing features." 47 C.F.R. § 51.323(c) (1999).<sup>2</sup>

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<sup>2</sup> The rule does provide that an incumbent LEC is not required "to permit collocation of equipment used solely for switching or solely to provide enhanced services." 47 C.F.R. § 51.323(c) (1999).

The revised rule plainly requires Bell Atlantic to allow AT&T and MCI to use their collocated RSMs for switching and routing. The district court's judgment to the contrary is reversed, and we instruct that court to remand to the SCC for it to amend the necessary instruments to conform to 47 C.F.R. § 51.323(c).

### III.

According to MCI, the SCC erred by failing to require Bell Atlantic to negotiate and obtain license modifications from its third-party vendors that would allow MCI to use intellectual property embedded in Bell Atlantic's network. Because we hold that Bell Atlantic must use its best efforts to renegotiate modifications, a remand is necessary on this issue.

Much of the hardware and software that make up Bell Atlantic's network is licensed from third-party patent and copyright holders. If MCI uses unbundled elements in that network, as the Act gives it the right to do, it will be exposed to potential intellectual property infringement claims. Meanwhile, Bell Atlantic, which holds licenses for that intellectual property, faces no such liability. MCI argues that this disparity in conditions of access discriminates against it in violation of § 251(c)(3) of the Act. Therefore, MCI argues, Bell Atlantic must renegotiate its licensing agreements to permit use by CLECs.

The SCC rejected this argument. Instead, it required Bell Atlantic (1) to indemnify MCI against third-party intellectual property claims arising from its use of any network equipment or software acquired by Bell Atlantic in the future; (2) to allow MCI the protection of any indemnities given by Bell Atlantic's vendors to cover intellectual property, but only to the extent those indemnities flow through to third parties; and (3) to notify MCI of any pending or threatened intellectual property claims. The district court dismissed MCI's challenge to the SCC's order, concluding that MCI lacked standing.

We disagree with both the SCC and the district court. The standing question presents little difficulty. Again, MCI seeks to invoke its statutory right to access to unbundled network elements on nondiscriminatory terms. See 47 U.S.C. § 251(c)(3). According to MCI, the SCC imposed terms that do not allow MCI equal access to Bell Atlantic's

network: Bell Atlantic's use of the intellectual property is protected by third-party licensing agreements, but MCI's use is not. Unequal access is a statutory injury that is sufficient to confer standing on MCI. See Linda R.S. v. Richard D., 410 U.S. 614, 617 n.3 (1973) ("Congress may enact statutes creating legal rights, the violation of which creates standing, even though no injury would exist without the statute.").

The Act imposes the duty on Bell Atlantic, as an incumbent LEC, to provide "access to network elements on an unbundled basis . . . on rates, terms, and conditions that are just, reasonable and nondiscriminatory." 47 U.S.C. § 251(c)(3). "Nondiscriminatory," in turn, means access on the same terms and conditions that Bell Atlantic itself enjoys. See 47 C.F.R. 51.311(b) (1999); First Report and Order at ¶ 218. The interconnection agreement approved by the SCC fails to satisfy this requirement in one respect: although it grants MCI access to Bell Atlantic's network, it discriminates because it does not provide MCI equal license to use the intellectual property embedded in that network. This part of the agreement leaves MCI with several unsatisfactory options. First, it can use the network elements without obtaining licenses, risking infringement suits. Second, it could attempt to independently negotiate for licensing, also an untenable option. Only Bell Atlantic knows which of its licensing agreements might be implicated by the lease of network elements. In addition, the lease rate set by the SCC already accounts for licensing fees paid by Bell Atlantic, so any additional fees paid by MCI to third parties would constitute double payment. Third, MCI might limit itself to using only network elements that are not subject to licenses from third parties. Even if this option provided some access, it would not be access on equal footing with Bell Atlantic. The SCC's resolution of the intellectual property issue therefore discriminates under the meaning of the Act. Moreover, the resolution is inconsistent with the Act's purpose of fostering competition by removing barriers to entry in the local telephone market.

As a result, we conclude that the Act requires Bell Atlantic to attempt to renegotiate its existing intellectual property licenses to cover use by MCI. Cf. In the Matter of Implementation of Infrastructure Sharing Provisions in the Telecommunications Act of 1996, 12 F.C.C.R. 5470 at ¶ 70 (1997) (requiring that incumbent LECs renego-

tiate terms of intellectual property licenses when necessary to satisfy the infrastructure sharing requirements of 47 U.S.C. § 259). In those negotiations, Bell Atlantic must exercise its best efforts to obtain licensing for CLECs on the terms that it has obtained for itself.<sup>3</sup> We recognize that negotiations might not be successful in every instance. If negotiations fail, we do not interpret § 251(c)(3) to impose an absolute duty to provide identical licensing terms in the case of existing agreements. Cf. First Report and Order at ¶ 313 (interpreting § 251(c)(3) to require equal access rather than absolute equality of treatment to allow for "rare circumstances where it is technically infeasible for an incumbent LEC to provision access or elements that are equal-in-quality"). Still, there must be a duty to negotiate. Otherwise, the Act's goal -- competition in local telephone markets -- would be ignored.

The district court's dismissal of the intellectual property licensing claim is reversed. On this issue, the district court is directed to enter summary judgment for MCI, granting it relief to the extent we have specified.<sup>4</sup> This issue will then be remanded to the SCC.

#### IV.

MCI argues that the SCC and district court erred in denying it access to Bell Atlantic's "dark fiber," that is, transmission cable that has been laid but is not attached to the electronics required to "light" it. MCI says the Act entitles it to use the dark fiber because, without it, its ability to provide local telephone service is impaired. This issue must be remanded to the SCC for further proceedings.

The Act requires that an incumbent LEC allow new entrants access to unbundled elements of the incumbent's network. See 47 U.S.C.

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<sup>3</sup> Because the cost of renegotiating license agreements would be part of the cost of providing the network element, Bell Atlantic would be entitled to compensation for its efforts. See 47 U.S.C. § 252(d)(1).

<sup>4</sup> See Nat'l Coalition for Students with Disabilities Educ. & Legal Defense Fund v. Virginia, 152 F.3d 283, 293 (4th Cir. 1998) (observing that when facts are uncontroverted, court of appeals may direct entry of an order awarding summary judgment to a party whose motion below was denied).

§ 251(c)(3). According to the FCC rules in effect when the SCC and district court rendered their decisions, a nonproprietary network element had to be made available if "the failure to provide access to such . . . element[ ] would impair the ability of the [CLEC] seeking access to provide the services that it seeks to offer." Id. § 251(d)(2)(B). See 47 C.F.R. 51.317(b)(2) (1997). MCI wants to lease Bell Atlantic's dark fiber, splice in its own electronics, and then deploy its own network technology and design. Before the SCC, MCI argued that without access to Bell Atlantic's dark fiber, it would be left with two non-competitive options: (1) laying its own fiber in the ground, an expensive and time-consuming effort, or (2) leasing Bell Atlantic's "lit" fiber, bundled with Bell Atlantic's electronics. The SCC rejected this argument without comment, and the district court affirmed. The district court found that while MCI had "introduced evidence that dark fiber is necessary in its provision of local services," denial of access would "inconvenience," but not impair, the company's ability to provide local telephone service.

Before we reach the impairment issue, we consider a more fundamental objection that Bell Atlantic has made to MCI's demand for dark fiber. Bell Atlantic claims that dark fiber is not a network element at all. And if it is not a network element, the company has no obligation to grant the CLECs access to it. A "network element" is "a facility or equipment used in the provision of a telecommunications service." 47 U.S.C. § 153(29)(emphasis added). Seizing on "used," Bell Atlantic argues that this word requires that the equipment be in actual use, not merely capable of being used. Since dark fiber is equipment that (currently) is not being used, it is not a network element, according to Bell Atlantic.

Like every other court that has heard this argument, we reject it. See, e.g., US West Communications, Inc. v. Jennings, 46 F. Supp.2d 1004, 1018-19 (D. Ariz. 1999); MCI Telecommunications Corp. v. BellSouth Telecommunications, Inc., 40 F. Supp.2d 416, 425 (E.D. Ky. 1999). First, it places undue weight on "used," a word commonly appearing in definitions. For example, according to Webster, a hammer is a "hand tool consisting of a solid head set crosswise on a handle and used for pounding." Webster's Third New International Dictionary 1025 (1981)(emphasis added). We doubt that a hand tool becomes a hammer only when someone starts to pound with it. Sec-

ond, Bell Atlantic's narrow interpretation conflicts with the Supreme Court's acknowledgment that "network element" is broadly defined. See Iowa Utils. Bd., 525 U.S. at \_\_\_\_, 119 S. Ct. at 734. Third, an interpretation of network element that includes dark fiber is in harmony with Congress's express goal of fostering competition to promote more efficient, cheaper, and better phone service. See H.R. Rep. No. 104-204 at 89 (1995). If CLECs can lease incumbents' dark fiber, they can use their own electronics to deploy newer, more efficient technologies instead of remaining captive to the existing network architecture. Each of these factors counsels in favor of construing "used" to include equipment and facilities, such as dark fiber, that are part of the network, even though they may not be in actual use when the access request is made.

It is a closer question whether MCI's ability to provide local service will be impaired without access to Bell Atlantic's dark fiber. As the district court recognized, MCI presented the SCC with evidence that dark fiber is "necessary" for it to provide the service. MCI's evidence tended to show that denial of access to dark fiber would force it either to incur substantial costs by laying its own wire or to tie itself to Bell Atlantic's electronics, thereby restricting its ability to deploy its own network design. An SCC expert confirmed the value of dark fiber to MCI, testifying that while "dark fiber is a pure cost savings . . . , there are many other reasons for MCI to use dark fiber." Despite this evidence, the district court concluded that other unbundled network elements (Bell Atlantic's lit fiber and electronics) were available to MCI and that use of these alternative elements would inconvenience rather than impair MCI.

Section 251(d)(2)'s language concerning impairment of service does not directly qualify the right to access granted by § 251(c)(3). Rather, in light of the general duty under § 251(c)(3) to provide access "at any technically feasible point," § 251(d)(2) directs the FCC to consider whether particular proprietary network elements are necessary and whether denial of access to particular nonproprietary network elements would impair service. Thus, § 251(d)(2) "requires the FCC to apply some limiting standard, rationally related to the goals of the Act." Iowa Utils. Bd., 525 U.S. at \_\_\_\_, 119 S. Ct. at 734-35. When the SCC and the district court made their decisions in this case, the FCC had interpreted the impairment of service standard as fol-

lows: service "would [be] impair[ed]" if "the failure of an incumbent to provide access to a network element would decrease the quality, or increase the financial or administrative cost of the service a requesting carrier seeks to offer, compared with providing that service over other unbundled elements in the incumbent LEC's network." First Report and Order at ¶ 285. See also 47 C.F.R. 51.317(b)(2) (1997). If this rule still provided the applicable standard, we would be inclined to reverse outright and say that MCI must have access to the dark fiber. However, in Iowa Utilities Board the Supreme Court vacated a related FCC rule, 47 C.F.R. § 51.319 (1997), which had specified particular network elements that the FCC deemed "necessary" for providing local telephone service. Iowa Utils. Bd., 525 U.S. at \_\_\_, 119 S. Ct. at 734-36. In vacating this rule, the Court rejected the FCC's interpretation of "impaired" in paragraph 285 of the First Report and Order, holding that:

the Commission's assumption that any increase in cost (or decrease in quality) imposed by denial of a network element renders access to that element "necessary," and causes the failure to provide that element to "impair" the entrant's ability to furnish its desired services is simply not in accord with the ordinary and fair meaning of those terms.

Id. at \_\_\_, 119 S. Ct. at 735 (emphasis added). Although the Court did not provide an alternative definition of "impaired," the exchange between the majority and the dissent provides some guidance. Rejecting Justice Souter's suggestion that the absence of a ladder may impair someone's ability to change a light bulb, even if he had access to "a chair, a milk can, or eight volumes of Gibbon," id. at \_\_\_, 119 S. Ct. at 739 (Souter, J., dissenting), the majority said that impairment was better illustrated by "the presence of a ladder tall enough to enable one to do the job, but not without stretching one's arm to its full extension. A ladder one-half inch taller is not, 'within an ordinary and fair meaning of the word,' 'necessary,' nor does its absence 'impair' one's ability to do the job." Id. at \_\_\_, 119 S. Ct. at 735 n.11. Similarly, the Court noted that a one-percent decrease in anticipated profits resulting from denial of access to a network element would not constitute an "impairment" under the terms of the statute. Id. at \_\_\_, 119 S. Ct. at 735.

We understand the Court's illustrations to mean that de minimis decreases in the quality of service or de minimis increases in the cost of providing service do not require that an incumbent provide access to a particular network element. When denying access to an unbundled network element has more than a de minimis effect, however, the Act requires that access be provided. Accord, MCI v. Bell Atlantic, 36 F. Supp.2d 419, 425 (D.D.C. 1999)(interpreting Iowa Utilities Board to mean that "a market entrant must demonstrate something more than a minor decrease in quality or rise in costs"). Thus, we are confronted with the following issue: if MCI is denied access to dark fiber, will MCI experience more than a de minimis effect on the quality of its service or the cost of providing it.

On the record before us, we are unable to make that determination. We have no explicit findings of fact from the SCC. The district court's conclusion that access to dark fiber was "necessary," but that the denial of access was only an "inconvenience," rested on an erroneous application of a vacated standard. The record itself contains no estimates of the added cost to MCI to provide service without Bell Atlantic's dark fiber. Nor does the record contain any details about the disadvantages resulting to MCI if it cannot use its own electronics. We have only conclusory statements about the cost and service advantages that use of the dark fiber would bring to MCI. This void is understandable because the record was created under a standard that required only some impairment, without regard to degree. On remand, however, further evidence will be necessary.

For these reasons, we vacate the district court's judgment on the dark fiber issue. The district court will remand this issue to the SCC. The SCC should determine whether MCI, if denied access to Bell Atlantic's dark fiber, will experience more than a de minimis increase in costs or decrease in the quality of its service to customers.

V.

On cross-appeal Bell Atlantic claims that the SCC erred in requiring it to provide certain directory publishing services to AT&T at cost-based rates. Bell Atlantic argues that these services are not network elements, which means that it can charge AT&T the tariff rate, that is, the retail rate charged to Bell Atlantic customers. We reject

Bell Atlantic's argument and affirm the district court's judgment upholding the SCC on this issue.

Bell Atlantic, as part of its local service, provides customers a free listing in the white pages of the company's telephone directory. Other directory publishing services (additional white pages listings and the non-listing and non-publication of numbers) are provided at additional tariff rates. It is undisputed that a CLEC, such as AT&T, would need to offer these features to be competitive in the local telephone market. The question here is the price (tariff or cost-based) at which the incumbent has to make these services available. If these directory publishing services qualify as "network elements," they must be made available at cost-based rates. See 47 U.S.C. § 252(d)(1).

The Act says that the term "network element" "includes features . . . that are provided by means of [a] facility or equipment, including subscriber numbers [and] databases . . . used in the . . . provision of a telecommunications service." 47 U.S.C. § 153(29). This is a broad definition. The FCC's implementing rules provide that network elements encompass the "features, functions, and capabilities of the switch," which provide customers with "a telephone number, directory listing, dial tone, signaling, and access to 911, operator services and directory assistance." First Report and Order at ¶ 412 (emphasis added). The Supreme Court has recognized that the Act's definition of "network element" is broad and that a network element need not be "part of the physical facilities and equipment used to provide local phone service." Iowa Utils. Bd., 525 U.S. at \_\_\_, 119 S. Ct. at 734 (upholding FCC's determination that operator services and directory assistance are network elements).

The one free listing in the white pages is indisputably a "directory listing" and therefore a network element. It is a network element because it is a feature used in providing (through the company's facilities) telephone service. If the basic directory listing is a network element, it stands to reason that the other directory services -- additional listings and the non listing and non-publication of numbers -- must also be network elements. As the SCC points out, additional white pages listings are necessary to local telephone service because many customers (spouses with different surnames, for example) require additional listings. In addition, some customers prefer non-listed or

non-published numbers for reasons of privacy or security. A CLEC that had to acquire these features at tariff rates before providing them to customers would be at a competitive disadvantage in the local market. The Act's definition and the FCC's interpretation of the term "network element" are broad enough to include the additional directory services. The SCC and the district court were therefore correct to count these services as network elements that Bell Atlantic must provide to AT&T at cost-based prices. We affirm on this issue.

VI.

Bell Atlantic also argues on cross-appeal that the SCC erred in its methodology for determining the wholesale prices Bell Atlantic may charge AT&T and MCI for its retail telecommunications services. The district court upheld the SCC's approach. We considered this same issue in GTE South, Inc. v. Morrison, \_\_\_ F.3d at \_\_\_, and we affirm on our reasoning there. Id. at \_\_\_.

VII.

To summarize, (1) we hold that AT&T and MCI may use the switching functions of their RSMs collocated on Bell Atlantic's property; the district court will remand this issue for the SCC to see that the necessary instruments are amended; (2) we hold that Bell Atlantic must use its best efforts to renegotiate its intellectual property licenses on network hardware and software to allow use by MCI; the district court will remand to the SCC for appropriate proceedings on this issue; (3) we hold that dark fiber is a network element, and the district court will remand to the SCC for further proceedings on whether MCI will be impaired at more than a de minimis level if it does not have access to Bell Atlantic's dark fiber; (4) we affirm the portion of the district court's judgment upholding the SCC's determination that Bell Atlantic must provide the identified directory publishing services to AT&T at cost-based prices; and (5) we affirm the portion of the district court's judgment that upholds the SCC's methodology for setting wholesale prices for retail telecommunications services.

AFFIRMED in part, REVERSED in part,  
and REMANDED