BEFORE THE ILLINOIS COMMERCE COMMISSION

Docket No. 06-0029

Rebuttal Testimony of Marvin Nevels
On Behalf of AT&T Illinois

AT&T Illinois Exhibit 2.1

April 18, 2006

PUBLIC

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SCHEDULES

Schedule MN-2

REBUTTAL TESTIMONY OF MARVIN NEVELS

ON BEHALF OF AT&T ILLINOIS

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Marvin Nevels. My Work address is 308, S. Akard St, Dallas TX 75202

Q. ARE YOU THE SAME MARVIN NEVELS THAT SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING ON FEBRUARY 1, 2006?

A. Yes.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my Rebuttal Testimony is to address the fiber-based collocation issues that are raised in the testimony of CLEC witness Mr. Joseph Gillan.[1] Mr. Gillan addresses whether, under the FCC's rules on wire center impairment, both CLECs in a collocation-to-collocation arrangement can be counted as fiber-based collocators. He contends that a DS3 facility that connects such collocators is not "comparable" to a fiber transmission facility because only facilities with at least 3 DS3's of capacity qualify as "comparable" to fiber. He also contends that AT&T Illinois cannot count both collocators because only one of them "operates" a fiber transmission facility that

[1] CLEC Coalition Ex. 1.0 ("Gillan Direct").

"terminates" in and "leaves" the wire center. As I will show, Mr. Gillan's arguments are not supported by the FCC's *TRRO* and should be rejected.

I also comment on the testimony of Staff witness Dr. James Zolnierek as it pertains to these issues.[2]

Q. DO YOU HAVE ANY PRELIMINARY OBSERVATIONS REGARDING MR. GILLAN'S TESTIMONY?

A. Yes. Mr. Gillan focuses heavily on collocation-to-collocation arrangements. AT&T Illinois only documented one collocation-to-collocation arrangement in Illinois, and this arrangement did not affect the impairment status of any of the wire centers that AT&T has designated as non-impaired to date. This is because even in the one wire center where there is a collocation-to-collocation arrangement, there are enough other fiber-based collocators that even if only one of the carriers in the collocation-to-collocation arrangement were counted, the wire center would still meet the standard for non-impairment. These issues therefore will not affect the designation of any of the specific wire centers at issue here. I address the collocation-to-collocation issues, however, because they could make a difference in some future wire center designation.

[2] Staff Ex. 1.0 ("Zolnierek Direct").

III. DISCUSSION

Q. CAN YOU SUMMARIZE THE DISPUTE BETWEEN THE PARTIES?

A. In my Direct Testimony I address the disputed issues in the manner established in the disputed issues list provided by CLECs to AT&T Illinois. Dr. Zolnierek also addressed the issues in this manner. Although there are some differences between the issue statements and the numbering used by AT&T Illinois and Staff, the differences are not significant. The testimony of AT&T Illinois and Staff, therefore, address the issues in this docket in an organized way. Mr. Gillan, for some reason, does not use the CLEC-designated issues list at all. His failure to do so injects unnecessary confusion into this proceeding and makes it more difficult than it needs to be for the Commission to understand the issues in this proceeding. I will attempt to compensate for Mr. Gillan's shortcomings by addressing the issues he raises according to the established disputed issues list.

Q. WHAT ARE THE ISSUES THAT MR. GILLAN RAISES?

A. Mr. Gillan and the CLECs try to pick apart the FCC's definition of a fiber-based collocator in order to minimize the number of fiber-based collocators, even when their interpretation is contrary to the FCC's intent. Based on the testimony of Mr. Gillan, it appears that there are two areas of dispute that fall under two Fiber-Based Collocator ("FBC") issues:

ISSUE 1 - COMPARABLE TRANSMISSION FACILITIES

What facilities qualify as "comparable transmission facilities" under the definition of "FBC" in 47 CFR §51.5?

Mr. Gillan contends that a "comparable transmission facility" must be at least 3 DS3s, so that a CLEC that uses coaxial cable to cross-connect to another carrier's fiber facilities to leave the wire center do not satisfy the FCC's rule. As I explain below, Mr. Gillan is incorrect on this point.

ISSUE 2 – COLLO TO COLLO CROSS-CONNECTIONS

How should the phrase "terminates at a collocation arrangement within the wire center" (47 CFR §51.5) be construed and implemented? In particular, must a carrier counted as an FBC have fiber facilities that enter and exit its collocations? Under what circumstances, if any, should carriers cross-connected with another carrier be counted

Here, Mr. Gillan argues that a carrier must possess optronics to "operate" a fiber- optic cable or comparable transmission facility. I demonstrate below why this is incorrect from a network engineering perspective.

Q. CAN YOU PROVIDE A DIAGRAM TO ASSIST IN YOUR DISCUSSION OF THESE ISSUES?

A. Yes. Schedule MN-2 depicts a collocator (Collocator #2) that has a coaxial collocation-to-collocation connection between itself and another collocator (Collocator #1). As depicted, a coaxial collocation-to-collocation connection can be utilized to access Collocator #1's fiber facilities which leave the wire center.

A. ISSUE 1 - COMPARABLE TRANSMISSION FACILITIES

What facilities qualify as "comparable transmission facilities" under the definition of "FBC" in 47 CFR §51.5?

Q. WHAT IS THE DISPUTE UNDER THIS ISSUE?

A. In lines 965-968 of his Direct Testimony, Mr. Gillan states "…in order for a transmission facility to be considered comparable to fiber-optic cable, it must at least be capable of carrying 3 DS3s of capacity, outside, at typical interoffice distances (i.e. several miles)."

Q. DO YOU AGREE WITH MR. GILLAN'S ARGUMENT?

A. No.

Q. PLEASE FIRST DISCUSS THE ISSUE OF WHAT QUALIFIES AS A "COMPARABLE TRANSMISSION FACILITY".

A. Mr. Gillan claims that Collocator #2 in a collocation-to-collocation arrangement does not have a transmission facility that is "comparable" to a fiber transmission facility. Rather, he argues, a facility must have at least 3 DS3's worth of capacity to be deemed comparable to fiber.

Q. WHAT IS A DS3 LEVEL OF TRANSMISSION CAPABILITY?

A. As discussed in my Direct Testimony, a DS3 is equivalent to 672 simultaneous voice-grade telephone calls. With appropriate equipment, however, the 672 voice-grade equivalent lines leaving the central office can be used to serve many times more than that.

For example, most digital loop carriers ("DLCs")[3] deployed today will allow concentration of 4:1 or higher. This equipment allows many subscribers to share the same trunk facilities, similar to what switches have done for decades. With a 4:1 concentration ratio, 672 trunks leaving the office could support 2,688 subscriber lines that are obtained from AT&T Illinois to serve end-users from that central office. This is a large capability and should be considered to be a comparable transmission facility when utilized in conjunction with another carrier's fiber-optic facilities. Dr. Zolnierek of the Staff of the Illinois Commerce Commission recommends treating a DS3 facility as comparable to fiber in making wire-center designations.[4]

Q. PLEASE EXPLAIN THE MAIN FLAWS IN MR. GILLAN'S ARGUMENT.

A. The first problem with Mr. Gillan's argument is that a facility with 3 DS3's of capacity is an OC-3, and OC-3s are *always* made of fiber. Thus, the CLECs would redefine "comparable to fiber" to simply mean "fiber."[5] That approach would nullify the FCC's rule and its intent to allow non-fiber facilities to be counted. Another problem with the argument is that it ignores the details of a collocation-to-collocation arrangement. In such an arrangement, Collocator #1 already has a fiber interoffice transmission facility and Collocator #2 uses that facility by connecting to Collocator #1 with a DS3 or greater. The only time the "comparable to fiber" issue could even conceivably come into play is

[3] A digital loop carrier derives multiple channels from a single distribution cable running from a central office to a remote site.
[4] Staff Ex. 1.0, at 26-27.
[5] The CLECs do admit that fixed-wireless arrangements are comparable to fiber, but otherwise exclude any non-fiber facilities.

in deciding whether the DS-3 or greater connection from Collocator #2 somehow disqualifies the overall transmission path (DS3 connection plus fiber interoffice facility) from being counted. On this point, however, the Commission can rely on the FCC's finding – which the CLECs do not challenge – that a fixed-wireless transmission arrangement counts as "comparable" to fiber. No one disputes that fixed-wireless transmission arrangements can operate at the DS3 level. Since that is true, there is no reason to count them under the FCC's rule but not count fiber facilities that happen to be accessed via an intra-office DS3. As noted above, such a facility can serve a very large number of customers.

Q. DOES FIXED-WIRELESS OPERATE AT SPEEDS GREATER THAN 1 DS3?

A. Yes. Fixed-wireless, or microwave radio systems, typically are used with capacities that start at a DS-3 level, or higher capacity.

Q. IS AT&T ILLINOIS' POSITION INCONSISTENT WITH ITS OWN ENGINEERING GUIDELINES AND INDUSTRY STANDARDS, AS MR. GILLAN CLAIMS (AT 45-46)?

A. No. Mr. Gillan correctly quotes my testimony stating that AT&T Illinois would not use coaxial cabling solely for interoffice transmission. However, Mr. Gillan leaves out the fact that a coaxial cable can be used in conjunction with fiber facilities that leave the wire center. This classification would be consistent with the FCC's interpretation of a fiber-based collocator, and is not inconsistent with AT&T Illinois' engineering guidelines.

B. ISSUE 2 – COLLO TO COLLO CROSS-CONNECTIONS

How should the phrase "terminates at a collocation arrangement within the wire center" (47 CFR §51.5) be construed and implemented? In particular, must a carrier counted as an FBC have fiber facilities that enter and exit its collocations? Under what circumstances, if any, should carriers cross-connected with another carrier be counted.

Q. WHAT IS THE DISPUTE UNDER THIS ISSUE?

A. Mr. Gillan argues (at 37) that a cross-connected CLEC does not "operate" the transmission facility that leaves the wire center and therefore cannot satisfy the FCC's definition of "Fiber Based Collocator". Mr. Gillan is wrong on this point.

Q. PLEASE DISCUSS THE ISSUE OF WHICH CARRIER "OPERATES" A FIBER-OPTIC CABLE OR COMPARABLE TRANSMISSION FACILITY.

A. Mr. Gillan claims that Collocator #2 in a collocation-to-collocation arrangement does not "operate" a fiber or comparable facility because Collocator #2 may not own any optronics equipment connected to the facility. Gillan at 36. But nothing in the FCC's rules or the *TRRO* requires a carrier to own optronics in order to "operate" the relevant transmission facility. And the control that Collocator #2 exercises meets any reasonable definition of "operate." As I have depicted in Schedule MN-2, Collocator #2 has multiplexing equipment that aggregates traffic and transmits it over a coaxial cable at a DS3 level of transmission. Collocator #2 makes engineering and market entry determinations in deciding whether and when to lease fiber-optic cable capacity, the amount of fiber-optic cable capacity, the type of cross-connect facility that it will use, the capacity of that cross-connect, and the type and quantity of its own facilities to place in

its collocation arrangement. Collocator #2 can test its facility from its collocation arrangement in the instant wire center to the other end of the circuit in a distant location in the same manner that Collocator #1 can test its equipment. Collocator #2 can "turn off" the system by terminating the cross-connect facility or the lease or purchase arrangement for capacity on the fiber-optic cable.

Q. DO THESE CAPABILITIES MEET MR. GILLAN'S DEFINITION OF "OPERATING" A TRANSMISSION FACILITY?

A. Yes. Mr. Gillan claims that a carrier can "operate" a transmission facility only if it installs the optronics connected to the facility, because only then can it "determine the capacity of the system and its operating characteristics." Gillan at 33, 37. But a carrier does not need to install its own optronics to do that. As I just explained, Collocator #2, through its selection and control of a cross-connect facility, determines the capabilities of transmission it uses and also determines the operating characteristics of that transmission path.

Q. MR. GILLAN CLAIMS (AT 38-39) THAT A COLLOCATION-TO-COLLOCATION ARRANGEMENT IS NOT COMPARABLE TO VERIZON'S CATT ARRANGEMENT THAT THE FCC DISCUSSED. IS HE CORRECT?

A. No. In discussing fiber-based collocation arrangements, the FCC stated that "the collocation arrangement" could "include less traditional collocation arrangements such as Verizon's CATT fiber termination arrangements." *TRRO*, ¶ 102. As I discuss in my Direct Testimony, the Verizon CATT arrangement allows all collocated carriers to

connect to fiber interoffice transmission facilities brought into the central office by another carrier. The FCC said that such collocation arrangements "count" as fiber-based collocation, and as a practical matter the kind of collocation-to-collocation arrangement I have discussed is no different. Mr. Gillan disputes this, but fails to draw any distinction between the two situations. Instead, he simply claims that the FCC never explicitly said that "every carrier that is cross-connected to a CATT arrangement should be counted." Gillan at 898-899. That ignores the plain import of the *TRRO*. The FCC said that collocated carriers connected to a CATT arrangement *do* count as fiber-based collocators, and it made no exception to exclude any such carriers.

Q. MR. GILLAN CLAIMS (AT 40) THAT A CATT ARRANGEMENT IS DISTINGUISHABLE BECAUSE IT INVOLVES INDIVIDUAL FIBER STRANDS SPLICED TO DIFFERENT COLLOCATION ARRANGEMENTS. DOES THAT MAKE A DIFFERENCE?

A. No. In both the collocation-to-collocation arrangement I have discussed and in the CATT arrangement, the important feature is that the collocated carrier has exclusive, dedicated use of the capacity that it obtains on the fiber. This is just as true whether the fiber is spliced directly to the collocator or whether the collocator is cross-connected to the fiber via DS3 or greater – in either case it controls a dedicated, high-capacity interoffice transmission path for serving its customers.

Q. IN THE EXAMPLE YOU HAVE BEEN USING, IS COLLOCATOR #2'S ABILITY TO OFFER SERVICES DIMINISHED BY NOT HAVING THE OPTRONICS IN ITS ARRANGEMENT?

A. No, not at all. Collocator #2 controls the use of the facility with respect to the size of the signal it requires to meet the needs of its customers, whether or not the related optronics are part of its proprietary network. The effect is that the size of the signal is determined and created by equipment that is controlled and operated by Collocator #2. By placing a coaxial or fiber-optic cable between itself and Collocator #1, the signal is able to leave the central office without interruption or interference on Collocator #1's fiber-optic cable. Thus, Mr. Gillan's emphasis on whether the collocated CLEC actually owns the optronics that connect to fiber is misplaced and irrelevant.

Q. ARE THERE ANY OTHER PROBLEMS WITH MR. GILLAN'S EMPHASIS ON WHICH CLEC OWNS THE OPTRONICS?

A. Yes. As Ms. Chapman discusses in her Rebuttal Testimony, the FCC has emphasized that its non-impairment thresholds should rely on readily available data that ILECs already possess. When AT&T Illinois conducts a physical inspection of a central office for fiber-based collocators, it cannot tell - standing outside the collocation case - whether a carrier has optronics in that cage or is connecting to optronics in another CLEC's cage. In fact, we cannot tell what goes on inside the cages at all – all we can see is the facility connecting the cages, which we can determine to be DS3 or fiber. Mr. Gillan's proposal, however, would require ILECs to seek information (probably confidential information) from CLECs about their network configuration, which is precisely the kind of discovery-driven process the FCC wanted to avoid.

Q. THE CLECS ALSO CONTEND THAT COLLOCATOR #2 DOES NOT OPERATE A TRANSMISSION FACILITY THAT "TERMINATES" IN THE CENTRAL OFFICE. GILLAN AT 39. PLEASE RESPOND.

A. Collocator #2 obviously operates a transmission facility that terminates in its collocation space – the combined DS3-fiber facility running from its space to Collocator #1 and then out of the central office. This is a straightforward point, but the CLECs claim that a fiber interoffice facility can terminate only once, *i.e.*, at Collocator #1's space. That argument again ignores the nature of a collocation-to-collocation arrangement. The transmission path at issue for Collocator #2 is the capacity that it obtains on Collocator #1's fiber via the DS3 connection, and the termination point of that path is in Collocator #2's space.

Q. NEXT, MR. GILLAN IMPLIES (AT 37-38) THAT COLLOCATOR #2 MAY NOT BE COUNTED AS A FIBER-BASED COLLOCATOR BECAUSE THE FACILITY THAT CONNECTS IT TO COLLOCATOR #1 DOES NOT "LEAVE" THE WIRE CENTER. PLEASE RESPOND.

A. Mr. Gillan makes the same error here as he does regarding the meaning of "terminate". When looking at an arrangement that has utilized a collocation-to-collocation connection, Mr. Gillan singles out the cabling between the two arrangements and sees it as a discrete transmission route that begins and ends at those two locations. He fails to acknowledge that the collo-to-collo connection is a just a small segment of an uninterrupted transmission route; in other words, he fails to look at the transmission facility as a whole. In fact, however, Schedule MN-2 shows that all of the cabling and equipment, from

points A through J in Schedule MN-2, make up the comparable transmission facility.[6] By tracing these points it is clear that Collocator #2 "operates" a comparable transmission facility that terminates within its arrangement (at point A) and "leaves the wire center" (at point J).

Q. PLEASE EXPLAIN WHAT YOU MEAN BY SAYING THAT MR. GILLAN DOESN'T LOOK AT THE TRANSMISSION FACILITY AS A WHOLE?

A. Mr. Gillan singles out the cabling between the two collocation arrangements that I have depicted in Schedule MN-2. For ease of understanding I have identified this section of cabling as being between points C and D on Schedule MN-2. AT&T Illinois refers to this cabling as collocation-to-collocation cabling.

Q. PLEASE EXPLAIN WHICH PIECES OF THE NETWORK REPRESENTED IN SCHEDULE MN-2 MAKE UP A COMPARABLE TRANSMISSION FACILITY.

A. All of the cabling and equipment, from points A through J in Schedule MN-2, make up the comparable transmission facility. By tracing these points one can see that Collocator #2 "operates" a comparable transmission facility that terminates within its arrangement (at point A) and "leaves the wire center" (at point J).

Q. DOES MR. GILLAN AGREE WITH AT&T ILLINOIS THAT COLLOCATION-TO-COLLOCATION ARRANGEMENTS THAT UTILIZE A FIBER

[6] As seen in Schedule MN-2, the coaxial cable is connected to the fiber-optic terminal in Collocator #1's arrangement. Upon reaching the fiber optic terminal, the electrical DS3 signal is converted to an optical signal and "leaves the wire center" on the fiber-optic entrance facility owned by Collocator #1.

CONNECTION MEET THE FCC'S DEFINITION OF A FIBER-BASED COLLOCATOR?

A. Yes. In lines 768-772 of his Direct Testimony, Mr. Gillan acknowledges that there are times that a carrier will lease dark fiber from another carrier. The way that a carrier would accomplish this is by establishing a collocation-to-collocation connection between itself and another carrier who has a fiber-optic cable that terminates within its arrangement and leaves the wire center. Mr. Gillan tries to graft an IRU requirement onto this situation, but there is no support for such a requirement in the FCC's rules.

Q. DID STAFF WITNESS DR. ZOLNIEREK DISCUSS THE SUBJECT OF COUNTING CARRIERS AS FIBER-BASED THAT ARE CROSS CONNECTED WITH OTHER CARRIERS?

A. Yes he did. In lines 476-479 of his Direct Testimony Dr. Zolnierek recommends that it is reasonable and consistent with the *TRRO* to count cross-connected CLECs as fiber-based collocators under the FCC's rule.

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Q. **********

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********** **[END CONFIDENTIAL]**

IV. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESIMONY?

A. Yes it does.