

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

Neutral Tandem, Inc. and Neutral Tandem-)	
Illinois, LLC)	
)	Docket No. 07-0277
vs.)	
)	
Level 3 Communications, LLC)	

Pre-Filed Reply Testimony
of Surendra Saboo
On Behalf of
Neutral Tandem, Inc. and Neutral Tandem-Illinois, LLC

May 18, 2007

1 BEFORE THE ILLINOIS COMMERCE COMMISSION

2 REPLY TESTIMONY OF

3 SURENDRA SABOO

4 ON BEHALF OF

5 NEUTRAL TANDEM, INC. AND NEUTRAL TANDEM-ILLINOIS, LLC

6 DOCKET NO. 07-0277

7 DATE OF FILING: May 18, 2007

8
9 **Q. MR. SABOO, PLEASE STATE YOUR NAME, EMPLOYER AND TITLE.**

10 A. My name is Surendra Saboo. I am employed by Neutral Tandem, Inc. (“Neutral Tandem”)
11 as Chief Operating Officer and Executive Vice President.

12
13 **Q. HAVE YOU PREVIOUSLY OFFERED TESTIMONY IN THIS PROCEEDING?**

14 A. Yes.

15
16 **Q. WHAT IS THE PURPOSE OF YOUR REPLY TESTIMONY?**

17 A. The purpose of my reply testimony is to rebut the arguments made by Level 3’s witness,
18 Timothy Gates, regarding (1) the numerous public benefits to the Illinois
19 telecommunications network from Neutral Tandem’s presence in the State; (2) Level 3’s
20 alleged “incremental costs” caused by its connection to Neutral Tandem; and (3) the impact
21 Level 3’s threatened disconnection from Neutral Tandem would have on third party
22 carriers and the PSTN in general in Illinois.

23

24

1 **I. THE SUBSTANTIAL PUBLIC BENEFITS OF NEUTRAL TANDEM'S SERVICE**

2 **Q. MR. SABOO, DO YOU HAVE ANY GENERAL THOUGHTS ABOUT MR.**
3 **GATES' TESTIMONY?**

4 A. Yes. Mr. Gates appears to have little, if any, experience with the planning, development,
5 or engineering of telecommunications networks. Mr. Gates' testimony demonstrates, in
6 my mind, a lack of understanding on his part of fundamental networking concepts,
7 processes and procedures necessary for servicing and maintaining circuit switched
8 networks. For example, Mr. Gates does not appear to acknowledge, appreciate, or
9 understand the need for route diversity or the substantial risks associated with the
10 potential "single point-of-failure" in telecommunications networks, as described in pages
11 8-14 of my pre-filed direct testimony in this proceeding. Indeed, Mr. Gates devotes less
12 than one page of his sixty-one page testimony to this topic.

13
14 **Q. AT PAGE 59 OF HIS TESTIMONY, MR. GATES SUGGESTS THAT NEUTRAL**
15 **TANDEM DOES NOT ENHANCE THE REDUNDANCY OF THE PSTN**
16 **BECAUSE IT "GENERALLY LOCATES ITS SWITCHES IN COLLO-HOTELS**
17 **OR IMMEDIATELY ADJACENT TO SUCH FACILITIES." DO YOU AGREE?**

18 A. No. In Illinois and in other states, as Mr. Gates knows full well from his testimony in
19 other state proceedings, and as described in more detail at pages 8-14 of my pre-filed
20 direct testimony, Neutral Tandem **does not** collocate with AT&T, and Neutral Tandem's
21 tandem switches are completely separate and diverse from AT&T's tandems, providing
22 increased route diversity, survivability and resiliency among carriers. Mr. Gates also
23 attempts to minimize the breadth and diversity of Neutral Tandem's network. As shown
24 in Exhibit A, however, Neutral Tandem's network in Illinois has 4,332 DS1s and 63,195

1 DS1 miles of transport. In addition, Neutral Tandem utilizes eight different fiber
2 providers in Illinois, in order to provide redundancy and reliability to its customers in the
3 State. Neutral Tandem has invested millions of dollars developing its network
4 infrastructure in Illinois.

5
6 **Q. MR. GATES SUGGESTS IN NUMEROUS PLACES THROUGHOUT HIS**
7 **TESTIMONY THAT NEUTRAL TANDEM ONLY INTERCONNECTS WITH 16**
8 **OF THE 69 CLECS IN ILLINOIS. DO YOU AGREE?**

9 **A.** No. Neutral Tandem actually interconnects with 19 of the largest facility based carriers
10 in Illinois. In fact, there are only 26 facilities-based CLECs operating in Illinois, of
11 which only 22 are located in the LATAs served by Neutral Tandem. Neutral Tandem
12 connects with 14 of them, representing 67% of the CLEC customer base in the State.
13 Neutral Tandem also connects to the five largest wireless service providers in Illinois,
14 representing 84% of the wireless customer base in the State. Mr. Gates admits at page
15 17, footnote 4, of his testimony that he based his CLEC contentions on the Commission's
16 "Annual Report on the Telecommunications Markets in Illinois." But the CLEC figure in
17 that report has not been updated to reflect consolidations, mergers and acquisitions in the
18 industry, as well as companies no longer in business. In addition, the list of CLECs Mr.
19 Gates relies upon includes CLECs who are not facilities-based providers and who are not
20 actively providing telecommunication services in Illinois. According to the Local
21 Exchange Routing Guide ("LERG"), only a portion of the CLECs counted in the Annual
22 Report actually utilize switches to route traffic in this State. I believe the CLEC figure in

1 the LERG more accurately reflects the actual number of CLECs capable of delivering
2 traffic indirectly through Neutral Tandem in Illinois.

3
4 **Q. AT PAGE 21 OF HER TESTIMONY, LEVEL 3's SARA BAACK SUGGESTS**
5 **THAT NEUTRAL TANDEM IS RESPONSIBLE FOR TRANSITING TO LEVEL**
6 **3 ONLY 1.5% OF THE TOTAL TANDEM TRAFFIC IN ILLINOIS. IS THIS**
7 **FIGURE ACCURATE?**

8 **A.** No. Ms. Baack appears to have defined the market to include long distance tandem
9 switched *access* traffic, as opposed to simply local tandem *transit* traffic, which is at
10 issue in this proceeding. Neutral Tandem carries more than 50% of the local tandem
11 transit traffic in Illinois.

12
13 **II. LEVEL 3 DOES NOT INCUR ANY SIGNIFICANT INCREMENTAL COSTS**
14 **FOR RECEIVING TRAFFIC FROM NEUTRAL TANDEM.**

15 **Q. MR. GATES ARGUES AT PAGES 16-17 OF HIS TESTIMONY THAT LEVEL 3**
16 **WOULD INCUR ADDITIONAL COSTS IF IT RECEIVES TRANSIT TRAFFIC**
17 **FROM BOTH NEUTRAL TANDEM AND AT&T. PLEASE RESPOND.**

18 **A.** Mr. Gates' testimony is factually incorrect. During the May 7, 2007 evidentiary hearing
19 conducted before the State of Connecticut Department of Public Utility Control in a
20 similar proceeding between Neutral Tandem and Level 3, Mr. Gates admitted that
21 because he has not reviewed any "description of how Level 3 and Neutral Tandem
22 connect," he can only "speculate" about what the interconnection between the two
23 carriers entails. *See* Docket No. 07-02-29, *Petition of Neutral Tandem Inc. for*

1 *Interconnection with Level 3 Commc'ns*, Conn. Dep't of Pub. Util. Control, Tr. of
2 05/07/07 Evidentiary Hearing, at 227-28. That speculation has led him to make several
3 critical misstatements. Similarly, Mr. Gates has admitted that he has never attempted to
4 measure or quantify the costs Level 3 *in fact* incurs as a result of its interconnection with
5 Neutral Tandem. When Commissions in similar proceedings in other states have asked
6 Mr. Gates to quantify the cost Level 3 purportedly incurs to maintain interconnection
7 with Neutral Tandem, Mr. Gates has conceded that he has *no evidence quantifying* the
8 alleged costs that Level 3 supposedly incurs when terminating tandem traffic delivered by
9 Neutral Tandem. *See, e.g.* Docket No. 24844-U, *In re Petition of Neutral Tandem, Inc.*
10 *for Interconnection with Level 3 Commc'ns*, Ga. Pub. Serv. Comm'n, Tr. of 05/03/07
11 Evidentiary Hearing, at 275, 285-86.

12
13 **Q. GIVEN MR. GATES' LACK OF FAMILIARITY WITH THE**
14 **INTERCONNECTION ARRANGEMENTS BETWEEN NEUTRAL TANDEM**
15 **AND LEVEL 3, DOES HIS TESTIMONY ACCURATELY REFLECT THE**
16 **PARTIES' INTERCONNECTION ARRANGEMENTS?**

17 A. No. For example, at pages 14-15 of his testimony, Mr. Gates wrongly assumes that Level
18 3 and Neutral Tandem interconnect at the collocation space on the ILEC premises. To
19 the contrary, Neutral Tandem actually interconnects with Level 3 at Level 3's switch site,
20 not at an ILEC facility. As noted previously, despite Mr. Gates' consistent attempts to
21 suggest otherwise, Neutral Tandem **does not** collocate with the ILEC.

22

1 **Q. MR. GATES SUGGESTS AT PAGE 17 OF HIS TESTIMONY THAT LEVEL 3**
2 **BEARS UNNECESSARY COSTS BECAUSE IT MUST MAINTAIN TWO**
3 **DUPLICATIVE NETWORKS TO DIRECTLY CONNECT WITH BOTH**
4 **NEUTRAL TANDEM AND AT&T. DO YOU AGREE?**

5 **A.** No. Level 3 bears no incremental costs as a result of it maintaining direct interconnection
6 with both Neutral Tandem and AT&T. Neutral Tandem pays 100% of the transport costs
7 of delivering transit traffic on behalf of third party carriers to Level 3's switch sites for
8 termination.

9

10 **Q. WHEN YOU STATE THAT NEUTRAL TANDEM PAYS 100% OF THE COST**
11 **TO TRANSPORT TRAFFIC TO LEVEL 3, WHAT COSTS DOES THAT**
12 **INCLUDE?**

13 **A.** Neutral Tandem pays both the cost of the transport facilities to deliver traffic to Level 3
14 and the cost of the equipment necessary to complete the interconnection to Level 3. As
15 explained below, Neutral Tandem also bears the cost for the ongoing supervision and
16 maintenance of all of the transport facilities and equipment provided by Neutral Tandem
17 at Level 3's switch sites.

18

19 **Q. WHAT EQUIPMENT DOES NEUTRAL TANDEM PROVIDE AT LEVEL 3'S**
20 **SWITCH SITE TO ENABLE LEVEL 3 TO RECEIVE THIS TRAFFIC**
21 **DIRECTLY FROM NEUTRAL TANDEM?**

22 **A.** In addition to the wiring and cables linking Neutral Tandem's tandem and Level 3's
23 switch site, Neutral Tandem also provides "interconnection equipment," or electronics in

1 Level 3's switch site. The necessary "interconnection equipment" includes a fiber
2 distribution panel, fiber optic terminals, and DSX-3 panels. Two photographs labeling
3 this "interconnection equipment" are attached as Exhibit B. The photographs are actually
4 the same photographs that appear at page 15 of Mr. Gates' testimony. The two
5 photographs show the same equipment, only from different angles. Unlike when Level 3
6 interconnects with the ILEC for receipt of transit traffic, Neutral Tandem pays for all of
7 this equipment. In addition, a diagram illustrating how Neutral Tandem's
8 interconnection with Level 3 actually reduces Level 3's costs is attached as Exhibit C.

9
10 **Q. BETWEEN NEUTRAL TANDEM AND LEVEL 3, WHICH CARRIER WAS**
11 **RESPONSIBLE FOR INSTALLING AND PAYING FOR THIS**
12 **INTERCONNECTION EQUIPMENT?**

13 **A.** As both Mr. Gates and Ms. Baack have admitted in several other state proceedings,
14 Neutral Tandem pays 100% of the cost to transport traffic to Level 3's network. The
15 costs Neutral Tandem incurs include not only the cost to transport the traffic to Level 3's
16 network, but also the cost to provide interconnection equipment at Level 3's switch site.
17 In addition, Neutral Tandem incurs daily costs to supervise, monitor, and maintain this
18 equipment. Neutral Tandem monitors this interconnection equipment 24 hours a day,
19 seven days a week through its national Network Operations Center located at its
20 headquarters in Chicago. Neutral Tandem's investment in this transport and
21 interconnection equipment saves Level 3's costs that Mr. Gates admits at pages 16-17 of
22 his testimony are "substantial" and "very expensive."

23

1 **Q. DOES AT&T ALSO PAY 100% OF THE COST FOR TRANSPORT FACILITIES**
2 **AND INTERCONNECTION EQUIPMENT TO DELIVER TRANSIT TRAFFIC**
3 **TO LEVEL 3?**

4 **A.** No. Unlike Neutral Tandem, AT&T only pays a portion of the cost to transport tandem
5 traffic to Level 3's network. AT&T requires Level 3 to assume a portion of those costs
6 as well. Indeed, Mr. Gates has admitted in other state proceedings between Neutral
7 Tandem and Level 3 that, with respect to the costs associated with ILECs transporting
8 traffic to Level 3, "the parties split the cost of those interconnection facilities." See
9 Docket No. 07-02-29, *Petition of Neutral Tandem Inc. for Interconnection with Level 3*
10 *Commc'ns*, Conn. Dep't of Pub. Util. Control, Tr. of 05/07/07 Evidentiary Hearing, at
11 240-41.

12
13 **Q. IN YOUR EXPERIENCE, COULD LEVEL 3 MINIMIZE THE NUMBER OF ITS**
14 **PORTS IF IT ONLY DIRECTLY CONNECTED WITH AT&T?**

15 **A.** No. Regardless of whether AT&T or Neutral Tandem delivers tandem transit traffic to
16 Level 3, Level 3 receives the same amount of traffic. Neutral Tandem does not create
17 any additional traffic being terminated to Level 3. In addition, Neutral Tandem delivers
18 large amounts of traffic on very efficient trunk groups, thus requiring no more switch
19 ports than if the traffic were delivered by AT&T alone.

20

21

22

1 **Q. DOES LEVEL 3 HAVE ANY OTHER INCREMENTAL TRANSPORT COSTS**
2 **BECAUSE OF ITS DIRECT CONNECTION WITH NEUTRAL TANDEM?**

3 **A.** No. The only cost to Level 3 to establish connectivity with Neutral Tandem that it would
4 not otherwise incur if it only connected directly with AT&T is the cost of a co-axial cable
5 to cross-connect the Neutral Tandem provided DSX-3 panel to the Level 3 DSX-3 panel
6 and the one-time test and turn-up of the trunks. This cross-connect is illustrated in the
7 chart attached as Exhibit C. In my experience, this cost is extremely insignificant and far
8 out weighed by the enormous costs incurred by Neutral Tandem on Level 3's behalf as
9 well as the increased redundancy for traffic to Level 3's own end-customers by receiving
10 traffic from Neutral Tandem.

11

12 **Q. AT PAGE 4 OF HIS TESTIMONY, MR. GATES DESCRIBES THE "SCORES"**
13 **OF ILEC COST STUDIES HE AND HIS COMPANY HAVE REVIEWED, AND**
14 **TESTIFIES THAT HE AND HIS COMPANY "HAVE REVIEWED AND**
15 **CREATED COST STUDIES FOR ILECs, COMPETITIVE LECS ('CLECS') AND**
16 **CABLE COMPANIES." DO YOU KNOW WHETHER MR. GATES HAS**
17 **PREPARED A COST STUDY WHICH QUANTIFIES THE INCREMENTAL**
18 **COST LEVEL 3 PURPORTEDLY INCURS AS A RESULT OF CONNECTING**
19 **WITH NEUTRAL TANDEM?**

20 **A.** No. As I discussed above, Mr. Gates has admitted in other state proceedings that he
21 never has even attempted to measure or quantify the incremental costs Level 3
22 purportedly incurs to maintain interconnection with Neutral Tandem. Given Mr. Gates'
23 cost study experience, Neutral Tandem believes Level 3's failure to ask Mr. Gates to

1 conduct such a cost study here speaks volumes; *there simply are no incremental costs to*
2 *study.*

3
4 **III. THE IMPACT OF LEVEL 3'S DISCONNECTION ON THIRD PARTY**
5 **CARRIERS.**

6 **Q. BOTH MR. GATES AND MS. BAACK TESTIFIED THAT YOUR ESTIMATE**
7 **OF THE AMOUNT OF TIME NEEDED TO RE-ROUTE TRAFFIC THROUGH**
8 **THE ILEC TANDEM IS UNSUPPORTABLE. HOW DO YOU RESPOND?**

9 **A.** My experience in the industry establishes that 6 months may be necessary to re-direct the
10 traffic from all 71 switches of 19 different carriers through the ILEC tandems. In my
11 experience, a single carrier may require, on the average, 60 days to re-route some amount
12 of its traffic to a new tandem. This is what happens when Neutral Tandem's carrier
13 customers re-route traffic from ILEC tandems to Neutral Tandem. However, the process
14 often takes longer, as I discussed in pages 6-7 of my direct testimony. Moreover, I
15 anticipate that the coordination required to handle the complex move, at one time, the
16 massive amounts of traffic delivered by all nineteen carriers with whom Neutral Tandem
17 contracts in Illinois, together with the pressure on AT&T to respond to such requests,
18 particularly given the tandem exhaustion in Illinois, would significantly increase the
19 amount of time necessary to migrate this traffic, and likely would take up to 6 months.

1 **Q. AT PAGE 40 OF HIS TESTIMONY, MR. GATES STATES THAT YOU HAVE**
2 **ADMITTED IN TESTIMONY IN GEORGIA THAT IT WILL ONLY TAKE ONE**
3 **DAY TO RE-ROUTE ALL 19 CARRIERS' TRAFFIC TO THE ILEC TANDEM.**
4 **HAS HE ACCURATELY REPRESENTED YOUR TESTIMONY?**

5 A. Mr. Gates again shows his lack of experience in this field. To be sure, one small step
6 (entering routing codes in the switch) in a multi-step process may take only an hour or so,
7 but it is disingenuous to suggest the entire multi-step re-routing process can be completed
8 in the time it takes to complete that one step. Re-routing traffic to a new tandem is a
9 complex process. In my experience, when Neutral Tandem works with carriers to send
10 traffic through Neutral Tandem's tandem, on the average it takes 20 to 30 days just for
11 the multi-step re-routing order itself to be processed, assuming trunking capacity is
12 already available.

13
14 **Q. AT PAGE 12 OF HIS TESTIMONY, MR. GATES TESTIFIES THAT IT SHOULD**
15 **TAKE LESS THAN SIX MONTHS TO MIGRATE THE TRAFFIC BECAUSE**
16 **THE 19 CARRIERS LIKELY WILL NOT NEED TO AUGMENT THEIR**
17 **TRUNKS TO THE ILEC TANDEM. DO YOU AGREE?**

18 A. No. Mr. Gates' testimony is speculative and without foundation. To begin with, he has
19 admitted in similar proceedings in other states that he is "assuming" that the third party
20 carriers and the incumbents have existing interconnection facilities. *See, e.g.* Case No.
21 07-C-0233, *In re Petition of Neutral Tandem - New York, LLC for Interconnection with*
22 *Level 3 Commc'ns*, Level 3's Responses to Neutral Tandem's First Set of Document
23 Requests, N.Y. Pub. Serv. Comm'n, at 15 (April 10, 2007). Mr. Gates assumes at page

1 35 of his testimony that because “engineering principles” dictate that each carrier have
2 20% excess capacity in its trunk to the ILEC, the trunk will not need to be augmented.
3 Even if Mr. Gates is right that the carriers have 20% excess capacity, which, again, is an
4 assertion for which he has provided no proof, he has not made any showing that this extra
5 capacity is sufficient to accommodate all of the carrier’s traffic or that it would be in the
6 carrier’s interest to use this reserve capacity to accept for re-routing Level 3 traffic.
7 Indeed, Neutral Tandem has been offering services in Illinois for over three and a half
8 years, so many of its customers are currently transiting most (if not all) of their traffic
9 through Neutral Tandem.

10
11 **Q. MR. GATES TESTIFIES AT PAGE 41 OF HIS TESTIMONY THAT MOST**
12 **CARRIERS “HAVE ALTERNATIVE ROUTING PLANS,” SO IF CALLS ARE**
13 **BLOCKED FROM ORIGINATING CARRIERS TO LEVEL 3, THE CARRIERS**
14 **CAN RE-ROUTE THEIR TRAFFIC. HOW DO YOU RESPOND?**

15 **A.** Again, Mr. Gates’ testimony demonstrates a lack of understanding of how Neutral
16 Tandem’s business operates. A diagram of the traffic arrangements between an
17 originating carrier, the ILEC or Neutral Tandem, and Level 3 is attached as Exhibit D. If
18 an originating carrier’s call to Level 3 via Neutral Tandem’s tandem is blocked by Level
19 3 from terminating, the originating carrier will have no way of knowing why the call has
20 been blocked. As a result, it would be impossible for the originating carrier to use
21 alternative routing plans to automatically re-direct any blocked calls to Level 3, as Mr.
22 Gates suggests.

23

1 Q. AT PAGES 35-36 OF HIS TESTIMONY, MR. GATES FURTHER STATES THAT
2 AT&T WILL NOT NEED TO AUGMENT ITS TANDEM WHEN THE 56
3 ADDITIONAL MILLION MINUTES OF TRAFFIC CURRENTLY CARRIED BY
4 NEUTRAL TANDEM IN ILLINOIS ARE RE-DIRECTED TO ITS NETWORK.
5 DO YOU AGREE?

6 A. Mr. Gates provides no foundation for his assertion that AT&T *in fact* has sufficient
7 capacity at its tandem to handle an additional 56 million minutes of traffic per month, the
8 amount of traffic currently carried by Neutral Tandem to Level 3 in Illinois. Indeed, at
9 page 39 of his testimony, Mr. Gates admits that his assertion regarding sufficient AT&T
10 capacity is based on nothing more than rank speculation -- "In fact, there *may* be
11 sufficient capacity today." In my experience, most carriers constantly groom their
12 networks to remove any inefficient or unused capacity. Although I agree with Mr. Gates
13 that incumbent LECs carefully manage their networks based on history and traffic
14 forecasts, I also believe that this fact makes it *less* likely that the tandem switches of the
15 incumbent LECs have sufficient capacity available to handle massive amounts of new
16 traffic.

17
18 Q. AT PAGES 35-37 OF HIS TESTIMONY, MR. GATES ALSO SUGGESTS THAT
19 TANDEM EXHAUST IS NOT A PROBLEM IN ILLINOIS. DO YOU AGREE?

20 A. No. In Illinois today, third party carriers even are directing "overflow" traffic destined
21 for termination to the ILEC to Neutral Tandem because the ILEC tandem could not
22 accommodate the traffic. Moreover, as discussed in more detail at page 5 of my direct
23 testimony, Level 3's own traffic was blocked in the Summer of 2006 because of

1 insufficient capacity between the ILEC tandem and Level 3 in Chicago. Level 3 was
2 unable to accept traffic originating from AT&T (the CLEC) after SBC bought AT&T and
3 moved AT&T's traffic to the SBC (Ameritech) tandem. Neutral Tandem worked with
4 AT&T and Level 3 to quickly move the AT&T traffic back to Neutral Tandem's switches
5 until Level 3 had the time to augment their trunks with SBC; it took Level 3 four months
6 to secure that additional capacity.

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

9 **A.** Yes.

EXHIBIT A

Illinois

Neutral Tandem Transport Network

Neutral Tandem has
4,332 DS1s and 63,195 DS1-Miles of Transport

Neutral Tandem Location:
 717 S. Wells, Chicago

Level 3 Locations:
 111 N. Canal, Chicago
 200 N. La Salle, Chicago
 1305 Algonquin, Elk Grove

Level 3 Traffic:
 # of Mins: > 56,000,000 / month
 # of DS1s: 252

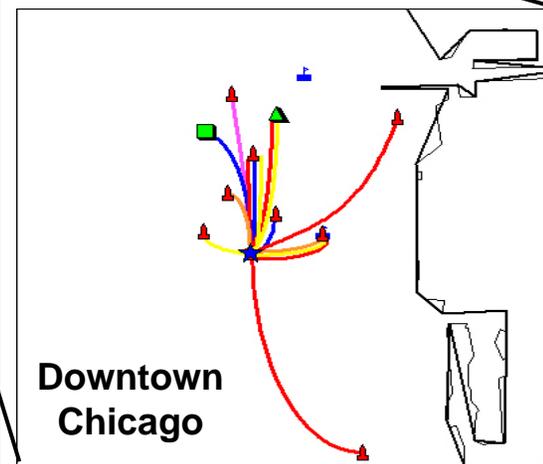
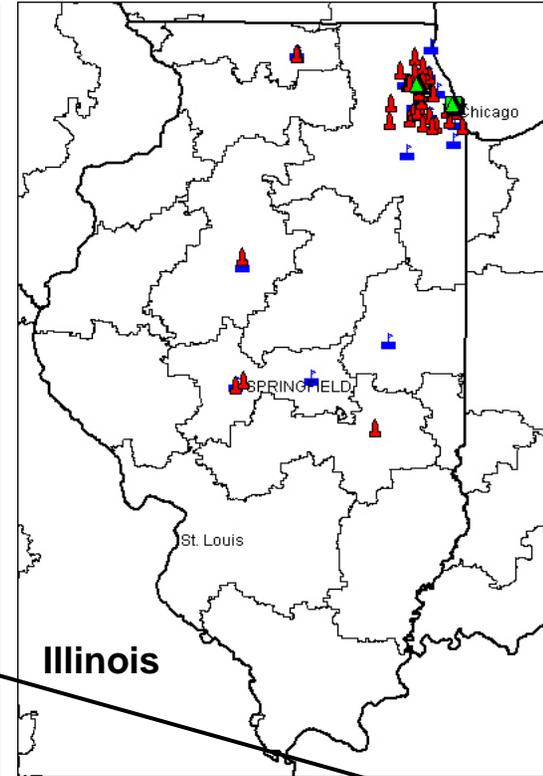
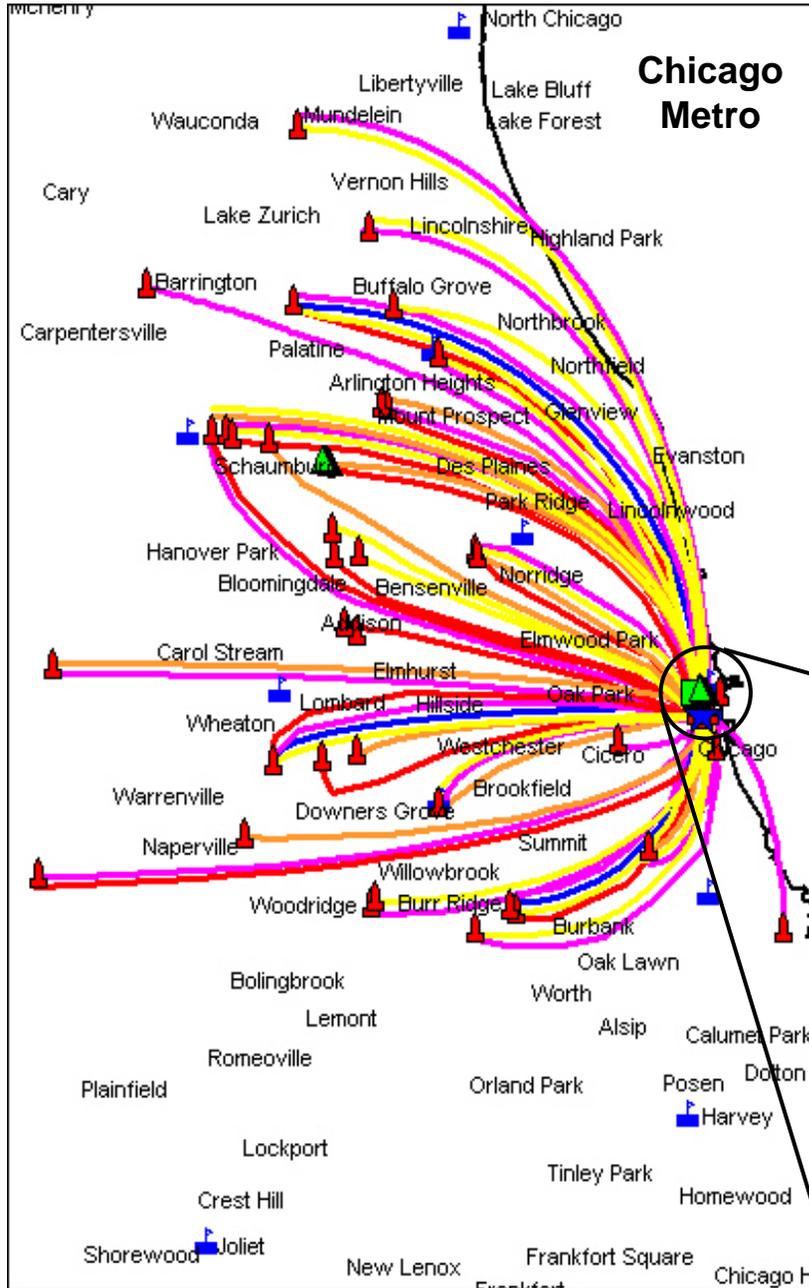
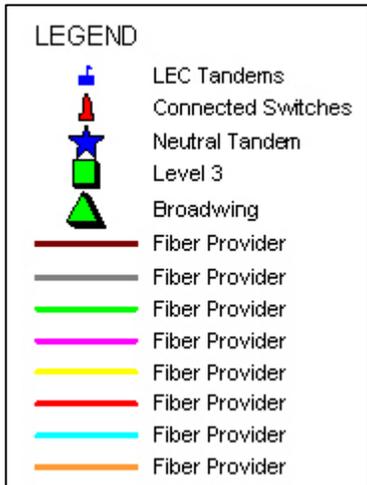


EXHIBIT B

Collocation Equipment Shown in Mr. Gates' Testimony

Same equipment as pictured on left but at a different angle

Fiber Distribution Panel

DSX-3 Panel

Fiber Optic Terminal

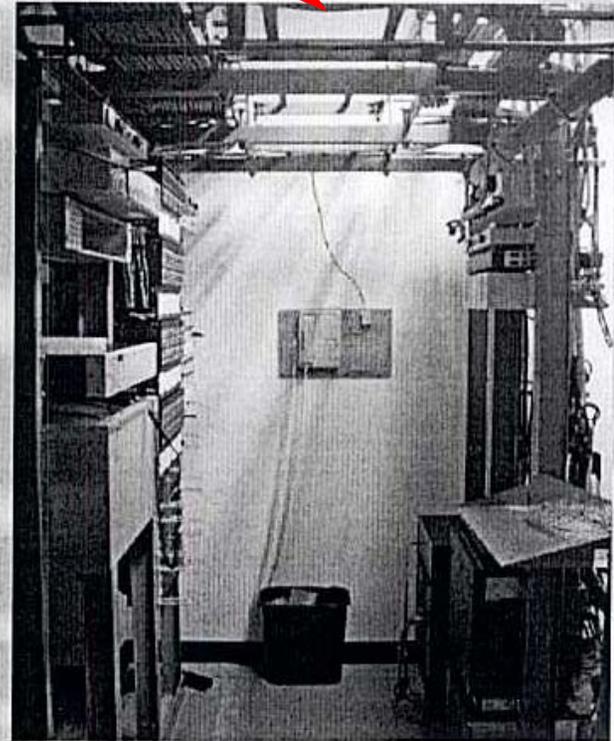
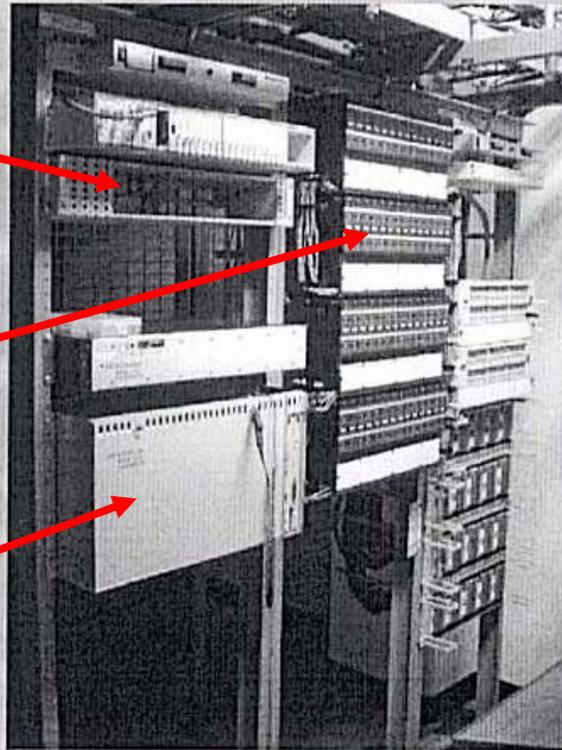


EXHIBIT C

Interconnection with Neutral Tandem Reduces Level 3's Cost

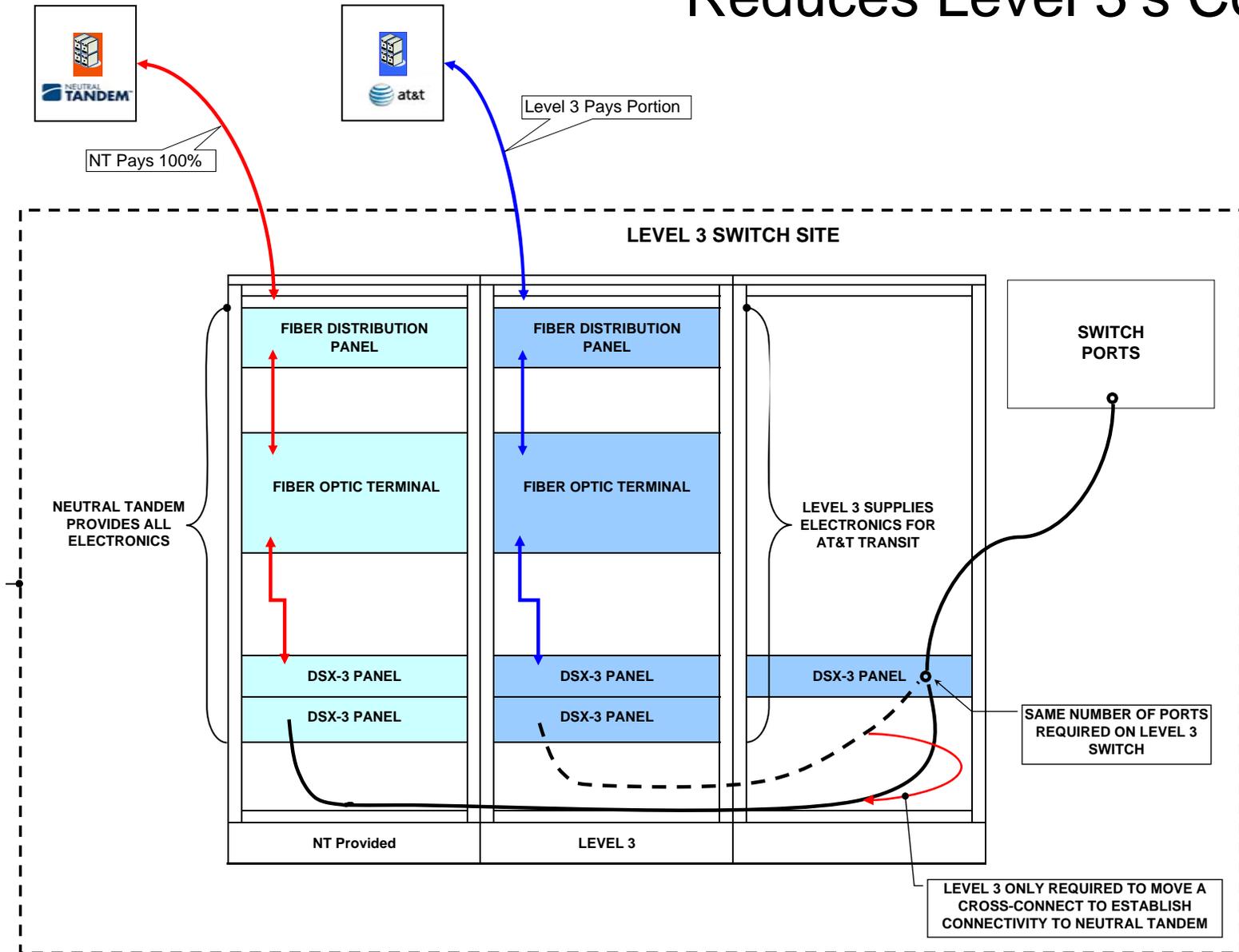


EXHIBIT D

“Calling Party Pays” Principle

Originating Carrier Responsible for Call Transport and Termination Costs

