

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

ARB 91

In the Matter of the Petition of Electric)	
Lightwave, Inc., for Arbitration of)	
Interconnection Rates, Terms, and Conditions)	ARBITRATOR'S
with GTE Northwest Incorporated, Pursuant to)	DECISION
the Telecommunications Act of 1996.)	

Procedural History

On October 7, 1998, Electric Lightwave, Inc. (ELI), filed a petition with the Public Utility Commission of Oregon (Commission) to arbitrate a contract for network interconnection with GTE Northwest Incorporated (GTE) pursuant to 47 USC §§251 and 252 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 (Act). GTE filed a response to the petition on November 2, 1998.

Prehearing conferences were held to establish a procedural schedule on October 23 and November 12, 1998. Opening testimony was filed November 30, 1998. Reply testimony was filed January 4, 1999.

On January 11, 1999, a third prehearing conference was held. At the conference the parties agreed to stipulate the prefiled testimony and exhibits into evidence, waive the scheduled hearing, and submit briefs on the outstanding issues. Opening briefs were filed on January 25, 1999. Reply briefs were filed on February 1, 1999.

Statutory Authority

This proceeding is conducted pursuant to 47 USC §252(b). The standards for arbitration are set forth in 47 USC §252(c):

In resolving by arbitration under subsection (b) any open issues and imposing conditions upon the parties to the agreement, a State commission shall--

- (1) ensure that such resolution and conditions meet the requirements of section 251, including the regulations prescribed by the [Federal Communications] Commission pursuant to section 251;
- (2) establish any rates for interconnection, services, or network elements according to subsection (d); and
- (3) provide a schedule for implementation of the terms and conditions by the parties to the agreement.

On August 8, 1996, the Federal Communications Commission (FCC) issued its *First Report and Order*, promulgating rules pursuant to 47 USC §§251 and 252. 47 CFR § 51.100 *et seq.*¹ On October 15, 1996, the U. S. Court of Appeals, Eighth Circuit stayed operation of the FCC rules relating to pricing and the “pick and choose” provisions.²

On July 18, 1997, the Eighth Circuit issued an order vacating several of the FCC rules.³ On October 14, 1997, the Court entered an order on rehearing vacating additional FCC rules.⁴ The Eighth Circuit decisions were thereafter appealed to the U. S. Supreme Court. On January 25, 1999, the Supreme Court issued a decision holding that the FCC rules, with the exception of §51.319, are consistent with the Act.⁵

Issues in Dispute

GTE and ELI request that the Commission resolve three disputed issues:

¹ *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket 96-98, First Report and Order No. 96-325, 11 FCC Rcd 15499, Appendix B (1996) (hereafter, *First Report and Order*).

² *Iowa Utilities Board v. Federal Communications Commission et al*, Case Nos. 96-3321 *et seq.* (8th Cir, October 15, 1996) (hereafter, *Iowa Utils. Bd.*) A temporary stay was previously entered by the Court on September 27, 1996. The FCC rules subject to the stay were 47 CFR §§51.501-515 (inclusive), 51.601-611 (inclusive), 51.701-717 (inclusive), the default proxy range set forth in the order for line ports, and 51.809. On November 1, 1996, the Eighth Circuit modified the stay to allow §§51.701, 51.703, 51.717 to remain in effect.

³ The Court vacated 47 CFR §§51.303, 51.305(a)(4), 51.311(c), 51.315(c-f), 51.317 (vacated only to the extent this rule establishes a presumption that a network element must be unbundled if it is technically feasible to do so), 51.405, 51.501-51.515 (inclusive, except for 51.515(b)), 51.601-51.611(inclusive), 51.701-51.717 (inclusive, except for 51.701, 51.703, 51.709(b), 51.711(a)(1), 51.715(d), and 51.717, but only as they apply to CMRS providers), 51.809; *First Report and Order*, ¶¶101-103, 121-128, and 180. The Court also vacated the proxy range for line ports used in the delivery of basic residential and business exchange services established in the FCC Order on Reconsideration, dated September 27, 1996. *Iowa Utils. Bd.*, 120 F.3d 753, 818, fn 38 (8th Cir 1997).

⁴ On rehearing, the Eighth Circuit also vacated §51.315(b) of the FCC rules.

⁵ *AT&T Corp. vs. Iowa Utilities Board*, ___ U. S. ___ (1999).

Issue No. 1 – Should GTE and ELI compensate each other for the cost of transporting and terminating traffic exchanged between their networks that terminates to Internet Service Providers (ISPs)?

This issue concerns the appropriate jurisdictional assignment and compensation arrangements for Internet traffic routed over interconnection trunks between GTE and ELI. This traffic is originated by end users, switched through to Internet Service Provider (ISP) gateways, routed to the Internet backbone, and continues on to the World Wide Web (hereafter referred to as ISP traffic).

Section 251(b)(5) of the Act imposes a duty upon all local exchange carriers to establish reciprocal compensation arrangements for the transport and termination of telecommunications. The FCC rules relating to reciprocal compensation are set forth in 47 CFR, Subpart H, §§51.701-51-717. *See also, First Report and Order* at ¶¶1027-1118.

GTE Position. GTE takes the position that ISP traffic is interstate in nature and therefore not subject to the reciprocal compensation requirements applicable to local traffic. GTE witness Howard Jones testified that Internet traffic differs from local exchange traffic. In a typical local exchange call, the end user dials seven or ten digits to reach another end user within the local exchange. In that situation, the entire transmission path, all of the equipment and all information exchanged, remain within the geographic boundary of the local exchange.

On the other hand, when an end user completes a typical dial access connection to an Internet information destination, a seven or ten digit call is originated by the end user's telephone service through the end user's modem to an aggregation modem at an ISP location. The aggregation modem extends the call, in an analog or digital signal stream, into Transmission Control Protocol/Internet Protocol (TCP/IP) packet stacks, which are then transmitted across telecommunications facilities to the ultimate information source web server or host device. According to Mr. Jones, the connection is established between the end user modem and web/host server; intermediate logins and/or search functions do not affect this result.⁶

GTE contends that Internet connections are interstate in nature because the transmission path for this traffic ends out of state in the vast majority of cases. Mr. Jones states that a typical Internet call may pass through as many as four National Access Points for domestic connections and an additional number of access points for international connections. For example, almost all traffic generated by America Online, Inc., customers passes through Fairfax, Virginia prior to connection. In the case of other

⁶ The ISP aggregation modems feed traffic to IP routers that direct traffic to other IP routers in a hierarchical pattern until the host or information repository server is accessed. Although there may be as many as 20-50 IP routers in a given transmission path, they do not affect or alter the content of the transmission. It is also possible to access various devices for search or traffic address referencing, but these do not alter the ultimate information connection from a computer user's modem to the web/host server.

providers, the interconnection points with the Internet web backbone(s) may be even more numerous.

GTE dismisses the “two call” theory relied on by ELI to claim that Internet calls are local. According to Mr. Jones, an ISP modem does not functionally terminate one transaction with the end user modem and begin another transaction as queries are launched to the Internet. Since no information or interactive service exists at the ISP modem (including user login databases or home pages), no transaction can occur at the ISP modem. A user who has only reached the ISP modem has not completed a transmission path to a place where information services could be obtained. Traffic that goes between the user modem and the ISP modem is strictly limited to “handshake” and software comparisons that allow for the exchange of technical parameters needed to construct a path from the user modem to a point beyond the ISP modem.⁷

Mr. Jones maintains that the ISP modem is performing a function analogous to a customer PBX or premise key system that transfers calls from interstate private line/special access networks into the local exchange. In order to accommodate this interstate access use of the local exchange network, the FCC instituted a special access surcharge for these private lines. This is known in the industry as the “leaky PBX” issue. The witness asserts that the difference between “leaky PBX” calls and internet modem access to interstate backbone networks is the order of magnitude. “Leaky PBX” calls are expected to amount to a small fraction of the total calls on the private line. Modem access calls must “leak” to internet backbones to yield the user any value or information. Mr. Jones further explains that the ISP modem has no information services function, but is inserted in the transmission path as early as possible by the ISP to reduce the capacity required to be carried to the servers or ultimate destination of the user.

In the event the Commission concludes that ISP traffic is local, GTE argues that recognition must be given to the fact that a significant portion of ISP traffic to local directory numbers does not actually route to ISP modems located within the local calling area. Mr. Jones observes that traffic to seven digit dialed numbers of ISPs is often hauled to distant sites for connection to ISP “mega modem” equipment. While the user perceives that his call is locally attached to an ISP modem, it can be attached to an ISP modem hundreds of miles or several states away.

GTE acknowledges that the practice of transporting dialed traffic across toll and state boundaries is not universal, but Mr. Jones notes that the volumes involved are significant enough to warrant Commission concern and action. Thus, the Commission may wish to ascertain whether ISP calls actually route to ISP modems geographically located within the local calling area. Traffic that does not attach to local call scope ISP

⁷ Mr. Jones states that the first point is usually a path to the security server for login. The end user is not at rest or connected solely to the ISP modem during any part of the Internet session. Successive searches or connections to different web sites do not tear down the transmission path all the way back from one web site to the ISP modem and then set up a new path to a new web site. The routers within the Internet handle this activity.

modems should not be eligible for reciprocal compensation because these services are then interstate or intrastate interLATA traffic.

GTE states that its position regarding the jurisdictional nature of ISP traffic is consistent with FCC and judicial decisions, including the recent FCC order dealing with GTE's proposed asymmetric digital subscriber line (ADSL) service.⁸ In that order, the FCC stated:

(We) conclude that the communications at issue here do not terminate at the ISP's local server, as some competitive LECs and ISPs contend, but continue to the ultimate destination or destinations, very often at a distant Internet web site accessed by the end user.⁹

GTE witness Steven J. Pitterle acknowledges that the FCC's ADSL order does not apply to dial up access to the Internet. He maintains, however, that the rationale for determining jurisdictional control of ADSL services applies equally to dial up Internet access. Mr. Pitterle emphasizes that the ADSL order reaffirms the "concept of end-to-end transmission to determine jurisdiction" and specifically rejects the "two call" theory of Internet traffic suggested by ELI:

We disagree with those commenters who argue that, for jurisdictional purposes, an end-to-end ADSL communication must be separated into two components: an intrastate telecommunications service, provided in this instance by GTE, and an interstate information service, provided by the ISP. As discussed above, the Commission analyzes the totality of the communication when determining the jurisdictional nature of a communication.¹⁰

ELI Position. ELI contends that traffic terminated to ISPs is local traffic subject to reciprocal compensation. According to ELI witness Timothy Peters, there are two distinct transactions involved in securing access to the Internet via dial up access. The first is a local call to the ISP. The second transaction involves access to the Internet or other information service, which is performed by the ISP, not the LEC terminating the call. The second transaction may involve interstate communication or it may be merely intrastate long distance or local communication. That transaction falls under the enhanced service provider classification and is separate from the local call between the end user and the ISP. Mr. Peters claims that adding this second transaction to the local call to the ISP does not convert the entire call into an interstate call.

⁸ *In the Matter of GTE Telephone Operating Companies*, GTOC Tariff No. 1, GTOC Transmittal No. 1148, Memorandum Opinion and Order, CC Docket No. 98-79 (rel. October. 30, 1998) (hereafter the "ADSL order").

⁹ *Id.* at para 19.

¹⁰ *Id.* at para 20.

ELI disputes GTE's claim that the FCC "has moved very close" to GTE's position that ISP traffic is interstate. Mr. Peters emphasizes that the ADSL order specifically states that the FCC has not made any determination concerning whether ILECs should be required to pay reciprocal compensation when they exchange Internet traffic with competitive LECs:

This Order does not consider or address issues regarding whether local exchange carriers are entitled to receive reciprocal compensation when they deliver to information service providers, including Internet service providers, circuit-switched dial up traffic originated by interconnecting LECs.¹¹

In addition, Mr. Peters emphasizes that the ADSL order clearly states that the decision to categorize ADSL service as interstate hinges on the fact that the service is a dedicated, high-speed connection to ISPs. He states that the *MTS/WATS Market Structure Order* relied on by the FCC to reach this conclusion does not apply to switched services such as dial up telephony.¹² Thus, it is premature to predict how the FCC will ultimately rule on the jurisdictional nature of switched services to ISPs, much less how local exchange carriers should compensate each other if the FCC finds ISP traffic is interstate in nature.

ELI recommends that this issue be resolved consistent with the Commission's decision in docket ARB 1 involving U S WEST Communications, Inc. (USWC) and Worldcom Technologies, Inc. (formerly known as MFS Communications Company, Inc.).¹³ In that case, the Commission concluded that ISP traffic is local traffic subject to reciprocal compensation. Mr. Peters observes that several other state regulatory commissions have reached the same result.

Decision – Issue No. 1. This issue must be resolved in favor of ELI. The identical issue was addressed by the Commission in Order No. 96-324 issued in the USWC/Worldcom arbitration. That Order states that all traffic originated and terminated by enhanced service providers is local traffic subject to reciprocal compensation payments. Internet service providers fall within the category of enhanced service providers.¹⁴

¹¹ *Id.* at para 2 and 29.

¹² Mr. Peters points out that the FCC concluded GTE's ADSL service is a mixed-use, special access service "like the point-to-point private line service high volume telephony customers purchase for direct access to IXCs' networks." Under the "ten percent" rule adopted in the *MTS/WATS Market Structure Order*, the FCC may assert jurisdiction over a mixed-use special access service if more than a de minimis amount of traffic is interstate in nature. See, *MTS and WATS Market Structure, Amendment of Part 36 of the Commission's Rules and Establishment of a Joint Board*, 4 FCC Rcd 5660 (1989).

¹³ Order No. 96-324, Appendix A at 12-13.

¹⁴ *ADSL order* at para 7.

The Commission's decision regarding ISP traffic was sustained by the U. S. District Court in *U S WEST Communications, Inc. v. Worldcom Technologies, Inc.*¹⁵ The Court held:

The question before this court is whether the reciprocal compensation provisions in the Agreement violate the Act or a binding FCC regulation. They do not.¹⁶

In making this finding, the Court specifically acknowledged the FCC's ADSL order. The Court held:

Historically, both [Congress and the FCC] have promoted the growth of the Internet and opposed efforts to force Internet users and ISPs to pay what critics contend is a fairer share of the costs of Internet service. In recent months the FCC has hinted at a possible shift in policy that would affect reciprocal compensation for calls made to ISPs, *see, e.g.*, FCC Order No. 98-292 (October 30, 1998), p. 1-2, but to date that has not occurred. . . . US West may ask the PUC to revisit this issue if the FCC alters its policy.¹⁷

I agree that the Commission should revisit this issue if the FCC makes a more definite shift in policy regarding the jurisdictional nature of Internet traffic. Until that time, all such traffic should be treated as local in nature and subject to reciprocal compensation payments consistent with the decisions of the Commission and the Court.¹⁸

GTE raises the concern that some calls from end users to ISPs are actually routed to ISP modems located outside the local calling area. GTE contends that traffic that does not attach to local call scope ISP modems should not be eligible for reciprocal compensation because these services are properly interstate or intrastate interLATA toll calls. Because the record in this case does not discuss the methods used to distinguish local calls from toll calls, there is no way to know whether there are problems identifying this type of traffic. Assuming the traffic can be identified, it should be possible to ascertain whether calls from end users are directed to ISP modems located within the local exchange calling area. To the extent that calls to ISP providers are not directed to an ISP modem within the local calling area, they are not local calls and should not be eligible for reciprocal compensation.

¹⁵ *U S WEST Communications, Inc. v. Worldcom Technologies, Inc.*, Civil No. 97-857-JE, Opinion and Order, December 10, 1998, at 12-13.

¹⁶ *Id.* at 13.

¹⁷ *Id.* at 12-13.

¹⁸ It is significant that numerous other state commissions have also concluded that ISP traffic is local in nature and subject to reciprocal compensation. ELI states that all of these decisions have been sustained on appeal to Federal District Court. ELI Opening Brief at 6-7, fn 3.

Issue No. 2 – Should separate compensation arrangements apply to ISP traffic?

GTE Position. If the Commission concludes that ISP traffic is local, GTE proposes that the parties use bill and keep arrangements¹⁹ on an interim basis for that traffic. Normal local traffic -- that is, non-ISP traffic -- would still be subject to the minute of use MOU compensation structure agreed to by GTE and ELI during negotiations. If the Commission finds that bill and keep arrangements are unacceptable, GTE recommends that compensation for ISP traffic be based on flat rate, per trunk charges.

GTE witness Dr. Edward Beauvais recommends against adopting usage based reciprocal compensation rates for ISP traffic in this arbitration. He contends that it is economically inefficient to charge end user customers flat rates for local service and require local exchange carriers to pay reciprocal compensation for terminating minutes on a measured usage basis. Under flat rate structure, the marginal price seen by the customer originating a call is zero, yet the cost of providing that call is composed of the production costs plus compensation costs. This automatically results in prices being set below the incremental cost of providing the end-to-end call and creates efficiency losses for the economy as a whole. It also produces financial losses to the company providing the originating calls under a flat rate and substantial “gaming” opportunities for the company receiving the terminating compensation.

In the absence of measured rates for local service,²⁰ Dr. Beauvais contends that the proper short run approach is to implement intercompany compensation arrangements that follow the price structure in place for end users for that type of call. Thus, if end user customers are billed on a flat rate basis for local calls, the compensation for traffic exchanged between carriers should also be on a non-traffic sensitive basis. Dr. Beauvais maintains that this approach is necessary to avoid the economic efficiency distortions described above.

In keeping with his observation that non-traffic sensitive intercompany compensation structures correspond with existing end user rate structures, Dr. Beauvais recommends using bill and keep arrangements for intercompany compensation in the short term.²¹ GTE argues that bill and keep is appropriate as an interim measure because

¹⁹ Section 51.713(a) of the FCC rules defines bill and keep arrangements as “those in which neither of the two interconnecting carriers charges the other for the termination of local telecommunications traffic that originates on the other carrier’s network.”

²⁰Dr. Beauvais would not object to usage based pricing for intercompany compensation if end user rates were also imposed on a measured basis. GTE does not request that the Commission adopt measured local rates in this case, however.

²¹ Dr. Beauvais would not recommend a bill and keep compensation mechanism if measured rates were in place for local service. In those circumstances, bill and keep would not provide any incentive for dynamic efficiency in the marketplace and its implicit zero marginal price would lead to overconsumption of services. Usage based charges would be preferable in that instance. Dr. Beauvais also cautions that bill and keep is not practical long run solution unless the flat rate local rate structure is maintained and strict enforcement is maintained between interexchange access and local interconnection. Since bill and keep has

they will not distort customer decisions by sending customers inappropriate economic signals as would a usage based compensation mechanism. GTE witness Steven Pitterle also argues that bill and keep is the most appropriate and equitable solution because it will “maintain a consistent relationship between the lack of revenues received by GTE for Internet calls (since higher volume end users predominantly select GTE’s flat rate service) and potential compensation payments made to ELI.” He asserts that such an approach provides the Commission with time to consider longer term solutions, including alternative cost recovery mechanisms for GTE’s compensation costs.²²

As a second option, GTE proposes that the Commission adopt a flat rate compensation mechanism for the exchange of ISP traffic between carriers. GTE witness R. Kirk Lee states that flat rate compensation is more appropriate for ISP traffic than MOU compensation because most GTE customers using the Internet pay flat rates for basic local services. Under a usage based compensation arrangement, the payments made to competitive carriers for terminating traffic are unlimited and may exceed the fixed revenue collected by GTE from the end user customer. Mr. Lee maintains that it is unreasonable to expect GTE to pay more out in reciprocal compensation than it receives in revenue from customers originating the traffic.²³

In addition to the expense associated with reciprocal compensation, Mr. Lee states that ISP traffic increases GTE's costs dramatically because additional network facilities must be constructed to handle increased traffic flow caused by Internet usage. A study conducted for GTE by Hewlett Packard Company found that ISPs use between 3-10 times the switch resources used by all the other subscribers on the switch. As a result, Mr. Lee claims that GTE is forced to incur additional capital costs for switch ports, trunks, facilities and processing capability that are not built into GTE’s current retail rate structure. Unless GTE is provided with a mechanism to recover these costs, it will send an improper message to the telecommunications market, encouraging competitors to make uneconomic decisions and creating disincentives for facilities based competition.

To arrive at its flat rate calculation, GTE uses its Local Measured Service (LMS) usage costs, expressed on a flat rate per trunk basis, as a proxy for ELI's cost of

the effect of creating a zero marginal price for each originating and terminating minute, it would lead to the inefficient overconsumption of access services in the long run. It would also promote dynamic inefficiency, since carriers would have little incentive to employ new lower cost technologies if they can continue to use interconnecting carrier facilities for a zero price.

²² According to Dr. Beauvais, the optimal long-run compensation policy for originating and terminating traffic between and/or among certified telecommunications carriers is a comprehensive, usage based, “originating responsibility” plan. Such a plan would not rely on customer identity, jurisdictional classification, or technological differences in supplying telecommunications services. It would also require that the end user ultimately be billed for all calls. If compensation costs are on a minute of use or per call basis, the end user should see a rate structure reflecting those cost characteristics for economic efficiency purposes.

²³ Mr. Lee contends that this revenue loss scenario is exacerbated by the fact that basic service rates have historically been priced below cost and have been supported by contributions from toll and access services.

terminating ISP traffic in Oregon. GTE's calculation uses the average monthly minutes of local voice traffic as a starting point. GTE's LMS usage costs are based on the building block costs filed by GTE in docket UM 874, now pending before the Commission.

GTE's calculations assume that an Internet subscriber will be online for an average of 30 minutes per day, 30 days a month, for a total of 900 minutes per month.²⁴ This results in Internet bound traffic being attributed 68 percent of the per line terminating traffic costs, or \$0.92 per month. At 900 minutes per month per Internet subscriber, a trunk filled to average capacity (i.e., 9,000 MOUs per month)²⁵ could carry the equivalent traffic of 10 subscribers. Multiplying \$0.92 by 10 subscribers yields a rate of \$9.20 per trunk per month.

ELI Position. ELI recommends that the Commission adopt a MOU reciprocal compensation mechanism consistent with the decision in USWC/Worldcom arbitration and other Commission arbitration proceedings. If a future binding decision is rendered that such traffic should be treated differently, ELI states that the interconnection agreement can be modified pursuant to Sections 31 and 32 of the agreement.²⁶

ELI raises several objections to GTE's proposal to impose bill and keep or flat rate compensation arrangements for ISP traffic. First, ELI maintains that GTE has not

²⁴ This estimate is based on the HP study noted above, as well as studies completed by independent sources, such as America Online, Inc. (AOL). The HP study, conducted in Southern California in August 1997, found that the average call holding time for ISPs was greater than 23 minutes. All of the large ISPs studied had average call holding times between 20 and 30 minutes. With the continued growth of the Internet, GTE expects average holding times to have grown since the HP study was conducted. Mr. Lee states that this assumption was subsequently confirmed by AOL, who in May 1998, stated that Internet usage had tripled since it began offering an unlimited flat rate subscription plan. Before the flat rate plan, the average AOL user stayed online for 7 hours each month. After the introduction of the flat rate plan, that figure jumped to 23 hours per month. This equates to an average hold time of 46 minutes for each subscriber call to AOL, the largest Internet access provider in the country. Based on these studies, Mr. Lee maintains that a 30 minute average hold time for Internet calls is reasonable and conservative.

²⁵ According to Mr. Lee, GTE's internal studies show that this number may be closer to only 7,500 minutes per trunk for ISP traffic. However, he states that an average of 9,000 minutes is a widely accepted industry number that was originally used in the regulatory arena by the FCC in the Local Transport Restructure, Docket No. 91-213. Mr. Lee asserts that 9,000 minutes per trunk is a conservative estimate of usage per trunk.

²⁶ Section 31 of the interconnection agreement provides that the interconnection agreement "shall at all times be subject to changes, modifications, orders, and rulings by the Federal Communications Commission and/or the applicable state utility regulatory commission to the extent the substance of this Agreement is or becomes subject to the jurisdiction of such agency." Section 32 of the agreement provides "GTE and ELI further agree that the terms and conditions of this Agreement were composed in order to effectuate the legal requirements in effect at the time the Agreement was produced. Any modifications to those requirements that may be prescribed by final and effective action of any federal, state, or local governmental authority will be deemed to automatically supercede any terms and conditions of this Agreement. Notwithstanding this section, neither Party waives any rights it otherwise has to dispute any action taken or not taken by the other Party in reliance on this section 32."

presented any evidence to show that there is any difference in cost between terminating traffic to ISPs and terminating traffic to non-ISPs. Mr. Peters asserts that the telecommunications network functions required to terminate ISP traffic are no different from the functions required to terminate local calls of any other end user customer. Applying a flat rate compensation mechanism to ISP traffic and an MOU based mechanism to non-ISP traffic will inevitably result in different levels of compensation for indistinguishable types of traffic.

Mr. Peters states that there is nothing inherently wrong with using a properly calculated flat rate port charge for reciprocal compensation purposes. However, aside from the fact that GTE's proposal applies only to ISP traffic, Mr. Lee's testimony indicates that it is also designed to link "reciprocal compensation expense with its associated costs and the revenues received from local ratepayers." Mr. Peters maintains that the revenues GTE receives from its local ratepayers are unrelated to the cost of terminating traffic to ISP customers.

ELI maintains that this arbitration proceeding is not an appropriate forum to examine the cost estimates and assumptions underlying GTE's flat rate compensation proposal. Mr. Peters points out that GTE's calculations incorporate cost estimates from studies that have not been adopted by the Commission. He further emphasizes that the Commission has previously determined that GTE's prices for interconnection and unbundled network elements shall be based on the costs and prices approved for USWC until such time as GTE-specific costs and prices are approved. *See e.g.*, OPUC docket UM 351, Order No. 96-283 at 8-10. While GTE-specific cost estimates are currently under review in OPUC docket UM 874, no GTE-specific interconnection and unbundled network element costs or prices have been approved to date.

ELI disputes several of the input assumptions included in GTE's flat rate proposal. For example, GTE's calculation attributes 68 percent of line terminating traffic "costs" to ISP-bound traffic based on estimates of average hold times of calls to ISPs. Even if these hold time estimates are accurate, Mr. Peters claims that it is inaccurate and misleading to characterize this as an assignment of cost. He asserts that the adjustment proposed by Mr. Lee "has nothing to do with the cost of terminating traffic to ISPs as opposed to terminating traffic to non-ISPs." Mr. Peters further maintains that GTE has not shown how it would separate ISP traffic from non-ISP traffic. Accordingly, there is no explanation of how GTE's proposed flat-rate trunk charges would apply.

Mr. Peters also emphasizes that GTE's opposition to MOU based compensation structure is inconsistent with positions the company has taken in other proceedings regarding reciprocal compensation. He points out that GTE has advocated MOU based compensation in prior Commission proceedings, notwithstanding the existence of a flat-rate retail rate structure. Mr. Peters further alleges that GTE has consistently opposed both bill and keep and flat-rate compensation mechanisms until now.

Decision – Issue No. 2. For the reasons stated by Dr. Beauvais, I am inclined to agree with GTE that intercompany reciprocal compensation arrangements should be examined

in the near future to determine whether such arrangements should be revised to correspond with retail rate structures authorized by the Commission. It is possible that usage based reciprocal compensation payments may have revenue impacts upon originating carriers where end user customers pay flat local service rates. While it may be economically efficient to implement measured rates for local service, such an outcome is highly unlikely in Oregon given the existing statutory scheme and long standing regulatory policy favoring flat rate local service. That being the case, the most likely approach to deal with this issue is consider reciprocal compensation arrangements that correspond with the prevailing flat rate retail rate structure.

While intercompany compensation arrangements should be reevaluated at some point, I agree with ELI that it is inappropriate to adopt separate reciprocal compensation rates for ISP traffic in this proceeding. There are a number of reasons for this decision:

(a) GTE has not shown there is any difference in cost to terminate ISP traffic as opposed to non-ISP traffic. Absent such a showing, it is difficult to justify applying one compensation rate to ISP traffic and another compensation rate to non-ISP traffic. It is also difficult to reconcile GTE's proposal with §252(d)(2)(A) of the Act and §51.705 of the FCC rules, which contemplate that rates paid by telecommunications carriers for transport and termination of traffic will be based on cost.

GTE asserts that ISP traffic requires the construction of additional network facilities to handle increased traffic flows, thereby dramatically increasing its costs. It is difficult to attach much weight to this claim because the costs alleged by GTE have not been identified or quantified in detail. In order to demonstrate that ISP traffic is responsible for additional costs, GTE must make a more comprehensive showing concerning its network operations and costs. I cannot conclude that ISP traffic imposes greater costs than other types of traffic based on the evidence presented in this proceeding.

Furthermore, some of the additional costs identified by GTE may not be eligible for recovery through termination rates. According to Mr. Lee, ISP traffic is responsible for major capital expenditures for "switch ports, trunks, facilities and processing capability."²⁷ The FCC has concluded that non-traffic sensitive costs, such as the costs of loops and line ports associated with local switches do not constitute "additional costs" that are appropriately recovered through termination rates. *First Report and Order* at ¶1057. It is unclear from the record whether any of the costs identified by Mr. Lee include such non-traffic sensitive costs.

(b) GTE has not substantiated its claim that it will incur losses unless a separate compensation structure is adopted for ISP traffic.²⁸ Specifically, GTE has not shown that ELI has a disproportionately greater number of ISP customers than GTE or that GTE

²⁷ GTE Exhibit/5, Lee/7.

²⁸ *Id.* at 3.

customers generate a significantly greater amount of Internet traffic for termination by ELI than *vice versa*. Absent such a showing, the harm alleged by GTE must be considered speculative.

Moreover, I agree with ELI that the revenue concerns identified by GTE are not relevant for purposes of establishing reciprocal compensation rates for transport and termination of local exchange traffic. As emphasized above, the relevant consideration is the cost of transporting and terminating traffic.²⁹ See e.g., 47 CFR §51.705, *First Report and Order* at ¶¶1054-1058.

(c) There is no basis in the record for adopting the bill and keep arrangements recommended by GTE. Section 51.713(b) of the FCC rules authorizes state commissions to impose bill and keep arrangements where there is evidence that traffic between interconnecting carriers is roughly balanced and is likely to remain so.³⁰ Subsection (c) of that rule provides that state commissions may presume that traffic between carriers will be balanced unless the presumption is rebutted.

Since is no evidence in the record concerning the traffic between ELI and GTE, there is no basis upon which to conclude that ISP traffic between those carriers will be in roughly in balance. Nor is it appropriate in this case to presume that traffic will be in balance. Indeed, GTE has proposed using a different compensation structure for ISP traffic precisely because of its concern that ISP traffic will *not* be balanced; *i.e.*, that GTE customers will originate a greater volume of traffic to ELI's ISP customers than *vice versa*. GTE cannot ask the Commission to presume a traffic balance for purposes of implementing bill and keep when the principal reason for requesting that compensation approach stems from its claim that traffic will be imbalanced.

Even if there were evidence showing that ISP traffic between ELI and GTE is balanced, GTE has not explained why bill and keep arrangements should be applied only to ISP traffic and not all of the traffic exchanged between those carriers.

GTE correctly observes that the Commission approved bill and keep arrangements as an interim reciprocal compensation method in docket ARB 2, an arbitration proceeding involving USWC and TCG Oregon. However, the facts in that case were different from those presented here. To begin with, the record in ARB 2 was sufficient to persuade the Commission that traffic was likely to be in balance. As noted above, there is no evidence in this record concerning the traffic exchanged by ELI and GTE. Second, the Commission approved bill and keep arrangements for the exchange of

²⁹ Even if it were proper to consider revenue considerations, there is not enough information in the record to justify singling out ISP traffic for reciprocal compensation arrangements. GTE has indicated that ISP traffic creates a potential for revenue erosion, but it is entirely possible that other types of local exchange traffic may generate similar concerns. This underscores the need for a more comprehensive examination of GTE's network operations and traffic.

³⁰ Interim bill and keep reciprocal compensation arrangements were adopted by the Commission in dockets CP 1, 14, and 15. See Order No. 96-021 at 52-61.

local traffic between USWC and TCG because it was consistent with intercompany compensation arrangements for *all local traffic* between ILECs and competitive carriers pursuant to Commission Order No. 96-021. GTE's bill and keep proposal in this case applies only to ISP traffic, not to all local traffic exchanged by ELI and GTE. Furthermore, the interim bill and keep compensation arrangements mandated in Order No. 96-021 have been terminated by the Commission.

(d) GTE did not provide any workpapers or studies to substantiate the cost data³¹ used in its flat rate compensation proposal. The cost methodology and estimates used by GTE are currently under review by the Commission in docket UM 874. Those studies and cost estimates should not be used until GTE has demonstrated that they are fair and reasonable.

In its brief, GTE states that it would use costs and prices approved by the Commission in docket UM 844 in order to allay concerns regarding the use of costs and prices based on the UM 874 methodology. GTE's proposal may ease concerns relating to specific cost inputs, but there are a number of other assumptions incorporated in GTE's flat rate calculation that are not adequately explained in the record. For example, GTE uses local measured service costs, expressed on a flat rate per trunk basis, as a proxy for ELI's cost of terminating ISP traffic in Oregon. That may be a reasonable assumption, but there is nothing in the record to support that conclusion.³² Likewise, GTE's assumptions regarding Internet usage are based on outside studies that are not included in the record and cannot be reviewed for reasonableness. Similar questions are raised by other input assumptions included in the flat rate calculation.

(e) The ramifications associated with adopting separate reciprocal compensation arrangements for ISP traffic have not been adequately explored in this proceeding. For example, it is unclear whether such arrangements will significantly disadvantage ELI *vis a vis* other telecommunications carriers that do not have separate compensation rates for ISP traffic.³³ There is also a significant possibility that imposing different reciprocal compensation rates for ISP traffic may translate into retail rate changes for ISPs and their customers. These concerns indicate that it is more appropriate to evaluate such issues in a proceeding where all types of traffic can be examined and other interested parties be heard from. The record in this case is not sufficiently comprehensive to permit a fully informed decision regarding the consequences of GTE's proposal.

³¹ Even if GTE had produced the studies to support its UM 874 cost estimates, it is doubtful there would have been enough time to adequately review GTE's cost methodology and input data because of the limited time to complete this arbitration proceeding.

³² Indeed, Mr. Lee's decision to use GTE's LMS costs as proxy for ELI's cost of terminating ISP traffic seems to be inconsistent with Mr. Jones claim that "GTE's costs are not a suitable proxy for determining the actual costs of ELI for the transport and termination of telecommunications traffic." Cf. GTE Exhibit/5, Lee/4 and GTE Exhibit/3, Jones/11.

³³ Of course, the reverse might be true if ELI customers terminated more Internet traffic on GTE's network. As noted, there is no information in the record regarding the amount of Internet traffic terminated by either carrier.

For these reasons, I find that GTE's proposal to adopt a separate reciprocal compensation structure for ISP traffic should not be adopted in this proceeding. The usage based MOU reciprocal compensation rates otherwise agreed to by the parties shall be used for the transport and termination of local telecommunications traffic by GTE and ELI.

Issue No. 3 –What rate should be used to compensate ELI for the use of its switch?

As noted above, §251(b)(5) of the Act imposes a duty on LECs to establish reciprocal compensation arrangements for the transport and termination of telecommunications traffic exchanged with other telecommunications carriers. To be just and reasonable, such arrangements must provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier. In addition, the costs must be based on a reasonable approximation of the additional costs of terminating the calls. *See*, Section 252(d)(2)(A).

ELI and GTE disagree over the rate that should be used to compensate ELI for use of its switch when it terminates local traffic originated by GTE customers. ELI contends that it is entitled to compensation at the rate established for tandem interconnection. GTE, on the other hand, contends that traffic terminated by ELI should be compensated at the end office switching rate.

ELI Position. Mr. Peters emphasizes that ELI and GTE have very different network configurations. GTE's network, like other ILEC networks, is characterized by hierarchical switching centers arranged in a "hub and spoke" configuration. GTE's end offices are the termination point of the loops that connect end user customers to the network. These end offices, in turn, are connected to a tandem switch, which allows customers served by different end offices to communicate with each other.³⁴ A local call that ELI delivers to GTE at one of its tandems is switched at the tandem, transported to the serving end office, switched again at the end office, and terminated to the end user.

In contrast, ELI's network deploys a single switch that is connected to a fiber optic network comprised of interlocking rings. End users are connected to this network either directly or through ILEC facilities. A local call that GTE delivers to ELI at an interconnection point is routed over the network to the ELI switch, where it is switched once and routed to the ELI end user. Mr. Peters testified that ELI's network covers the same geographic area as GTE's tandem but uses fewer switches and more transport than GTE's "hub and spoke" network.

Although ELI believes that its network configuration serves its customers more efficiently, Mr. Peters states that this does not necessarily translate into lower costs to

³⁴ If sufficient traffic exists between end offices, GTE may also deploy direct trunking between end offices.

terminate local traffic. He proposes that the interconnection agreement require symmetrical compensation, consistent with the approach taken by this Commission, the FCC,³⁵ and other state commissions. Symmetrical compensation assumes that ELI and GTE incur the same costs to transport and terminate local traffic regardless of the fact that different network architectures are employed.

Because ELI's switch covers the same geographic area as GTE's tandem switch, Mr. Peters maintains that it is entitled to compensation at the rate GTE receives when it terminates calls within its tandem coverage area. Mr. Peters contends that this conclusion is required by §51.711(a)(3) of the FCC rules which provides:

Where the switch of a carrier other than an incumbent LEC serves a geographic area comparable to the area served by the incumbent LEC's tandem switch, the appropriate rate for the carrier other than an incumbent LEC is the incumbent LEC's tandem interconnection rate.

Section 51.711(a)(3) was vacated by the Eighth Circuit, but was reinstated by the U. S. Supreme Court in its January 25, 1999 decision. Mr. Peters points out that several state jurisdictions have adopted the FCC's approach.

GTE Position. GTE contends that ELI should be compensated at the end office switching rate when it terminates local traffic originated by GTE customers. Mr. Jones explains that ELI's switch does not perform the same functions as GTE's tandem switch.

Tandem switches perform two basic functions: First, they concentrate traffic from multiple incoming trunk groups with a common destination point and then switch that traffic to a single outgoing trunk group to the common destination.³⁶ Second, tandem switches perform only trunk to trunk switching. This allows more efficient use of the transport network than establishing direct trunk groups between end points where there is insufficient demand to economically justify a direct group.

Unlike tandem switches, end office switches do not perform trunk to trunk switching, but instead support a number of functions that tandems do not perform, such as line appearances, line to line switching, line to trunk switching, and trunk to line switching. Mr. Jones emphasizes that ELI's customers are connected to the line side of their switch, regardless of where those customers are located geographically. As a result, ELI's switch only functions as an end office switch.

³⁵ Section 51.713 of the FCC rules requires symmetrical compensation with limited exceptions. *See also*, *First Report and Order* at ¶¶1085-1090.

³⁶ This also provides a means of combining traffic originating from subtending end offices to multiple destinations over a single trunk group and then switching that traffic to the proper destination at the tandem switch.

Decision – Issue No. 3. This issue was addressed by the Commission in the USWC/Worldcom arbitration proceeding.³⁷ In that case, the interconnecting carrier, Worldcom, operated a fiber ring network configuration similar to that described by ELI in this case. The Arbitrator concluded that tandem rate treatment should be adopted.

In Order No. 96-324, the Commission reversed the Arbitrator’s decision. The Commission concluded that allowing tandem rate treatment for Worldcom’s switch “did not comport with §252(d)(2) of the Act” because it “would not provide for mutual and reciprocal recovery of costs and would not lead to just and reasonable terms and conditions for reciprocal compensation.”³⁸ It further held that “the Act requires the classification of a switch [to] be determined by functionality, not mere geographic scope of service” and agreed with USWC that the functions performed by Worldcom’s switch were not similar to those performed by the ILEC’s tandem switches.

The evidence presented in this case is consistent with the Commission’s findings in the USWC/Worldcom arbitration. The testimony of GTE witness Jones indicates that the switch used in ELI’s fiber ring network -- like the switch used by Worldcom -- functions differently from a tandem switch. Nevertheless, compliance with §51.711(a)(3) of the FCC rules requires that ELI’s position be adopted.

At the time the USWC/Worldcom decision was rendered, §51.711(a)(3) was inoperative, having been stayed by the Eighth Circuit. The Eighth Circuit’s subsequent decision to vacate that rule was reversed by the Supreme Court in its January 25, 1999 decision, meaning that §51.711(a)(3) is once again in effect. That rule clearly states that non-incumbent carriers should be compensated at the tandem switch rate if their switch serves a geographic area comparable to the ILEC’s tandem switch. Mr. Peters’ testimony that ELI’s switch serves a geographic area comparable to GTE’s tandem switch was not challenged by GTE. That being the case, ELI is entitled to compensation at the tandem rate in accordance with the FCC rule.

GTE challenges this interpretation in its brief, arguing that paragraph 1090³⁹ of the *First Report and Order* contemplates that the tandem rate should be used only as a

³⁷ Order No. 96-324 at 4-5.

³⁸ *Id.* at 4.

³⁹ Paragraph 1090 of the *First Report and Order* states:

We find that the “additional costs” incurred by a LEC when transporting and terminating a call that originated on a competing carrier’s network are likely to vary depending on whether tandem switching is involved. We therefore conclude that states may establish transport and termination rates in the arbitration process that vary according to whether traffic is routed through a tandem switch or directly to the end office switch. In such event, states shall also consider whether new technologies (e.g., fiber ring or wireless networks) perform functions similar to those performed by an incumbent LEC’s tandem switch and thus, whether some or all calls terminating on the new entrant’s network should be priced the same as the sum of transport and termination via the incumbent LEC’s tandem switch. Where the interconnecting carrier’s switch serves a geographic

proxy for the non-incumbent carrier's costs and that functional considerations must also be taken into account. Although the paragraph 1090 does make reference to using the tandem rate as a proxy, §51.711(a)(3) unequivocally states that the tandem rate is "the appropriate rate" in circumstances such as those presented in this case. The language in paragraph 1090 may be reconciled with language of §51.711(a)(3) by concluding that the functions performed by a non-incumbent's switch are relevant only where the evidence shows that the non-incumbent's switch does not serve a geographical area comparable to that of the ILECs tandem switch. On the other hand, if the non-incumbent's switch covers a comparable area, §51.711(a)(3) requires that the tandem rate be used.

ELI has also proposed that the interconnection agreement provide for symmetrical reciprocal compensation. Section §51.711 requires that rates for the transport and termination of local telecommunications traffic shall be symmetrical except in limited circumstances not applicable here. Accordingly, the interconnection agreement shall provide for symmetrical compensation.

Arbitrator's Decision

1. The interconnection agreement between GTE and ELI shall specify that the transport and termination of ISP traffic exchanged by ELI and GTE is subject to reciprocal compensation.
2. The reciprocal compensation arrangements included in the interconnection agreement between GTE and ELI shall be symmetrical in accordance with 47 CFR §51.711 and assessed on a minutes of use basis. Separate reciprocal compensation arrangements shall not be implemented for ISP traffic.
3. The interconnection agreement between GTE and ELI shall specify that ELI will receive compensation at the tandem switch rate for use of its switch in accordance with 47 CFR §51.711(a)(3).
4. Within 30 days of the date of the Commission's final order in this proceeding, ELI and GTE shall submit an interconnection agreement consistent with the terms of this decision.

area comparable to that served by the incumbent LEC's tandem switch, the appropriate proxy for the interconnecting carrier's additional costs is the LEC tandem interconnection rate.

5. As provided in OAR 860-016-0030(10), any person may file written comments within 10 days of the date this decision is served.

Dated at Salem, Oregon, this 12th day of February, 1999.

Samuel J. Petrillo
Arbitrator