

STATE: Washington  
DOCKET: UT-003013, Phase B  
Verizon Responses to First Data Requests of Joint Intervenors

**DATA REQUEST JI-22:**

Please provide all documents, including but not limited to traffic studies, network infrastructure investment documentation, engineering documentation, and case studies, on which Mr. Trimble relied for the recommendation on page 39, lines 14-16 of the Part B Direct Testimony of Dennis B. Trimble that the Commission "opt to employ 'tandem switching' costs as the appropriate surrogate costs a CLEC will incur while terminating ISP-bound traffic."

**RESPONSE:**

See Attachment D for correspondence of March 28, 2000, to Ms. Magalie R. Salas, Secretary, Federal Communications Commission, Subject: Ex Parte: Intercarrier Compensation for ISP-Bound Traffic – CC Docket No. 99-68.

Prepared by: Greg Windmiller  
Group Marketing Manager

VERIZON RESPONSE TO DATA REQUEST JI-22

**ATTACHMENT D**

W. Scott Randolph  
Director - Regulatory Matters



GTE Service Corporation

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srandolph@dcoffice.gte.com

March 28, 2000

Exhibit No. \_\_\_\_\_ (HLJ-3)  
Docket No. UT-003013, Phase B  
Page 3 of 19

Ms. Magalie R. Salas  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

**Ex Parte: Intercarrier Compensation for ISP-Bound Traffic – CC Docket No. 99-68**

Dear Ms. Salas,

On March 28, 2000, Lee Jones, Greg Windmiller, Alan Clamponcero, and myself met with Larry Strickling, Jane Jackson, Tamara Preiss, Deena Shetler, and Rodney McDonald of the Common Carrier Bureau to discuss GTE's proposed national rules for inter-carrier compensation for ISP-bound traffic. The attached documents were used in the discussions.

Pursuant to Section 1.1206(a)(1) of the Commission's rules, and original and one copy of this letter are being submitted to the Office of the Secretary. Please associate this notification with the record in the proceeding indicated above.

If you have any questions regarding this matter, please call me at (202) 463-5293.

Sincerely,

W. Scott Randolph  
Director - Regulatory Matters

cc: Larry Strickling  
Jane Jackson  
Tamara Preiss  
Deena Shetler  
Rodney McDonald



## **National Rules for Inter-Carrier Compensation for ISP-Bound Traffic**

Carriers should rely on negotiations and private dispute resolution mechanisms (e.g., commercial arbitration) to establish the appropriate compensation for Internet traffic.

The following national rules should govern these negotiations or commercial arbitrations:

- Compensation arrangements between carriers should reflect the appropriate costs of the technology and network configuration used to switch Internet traffic to ISPs.
- In most cases, CLEC switching of ISP traffic is technically trunk-to-trunk and is not consistent with the functions used to switch local calls.
- Carriers should be free to negotiate any rate structures and prices they choose, presumably reflecting the underlying costs of the technology and functions employed. Absent such cost data, rates that are consistent with the ILEC's tandem switching rates should be used, because such rates more closely reflect the costs of switching ISP traffic.
- ILEC tandem rates themselves, however, have been derived based on much lower call holding times than would typically be experienced with calls associated with Internet sessions. Thus, tandem rates may need to be adjusted to reflect these longer holding times.
- An ILEC's inability to distinguish ISP from local traffic should not preclude the application of a more cost-based rate to Internet traffic. There is no evidence that CLECs themselves cannot measure this traffic - alternatively, reasonable methods to estimate that traffic can be developed and have already been used to negotiate compensation rates.
- CLEC and ISP serving arrangements that utilize non-switched technologies, such as SS7 gateways are not entitled to any compensation.



## **National Rules for Inter-Carrier Compensation for ISP-Bound Traffic**

Carriers should rely on negotiations and private dispute resolution mechanisms such as commercial arbitration to determine the appropriate compensation that should apply to CLEC handled ISP-bound traffic. However, the FCC must define the rules applicable to negotiations and arbitrations.

GTE agrees with AT&T that national rules are necessary (*AT&T Ex Parte*, February 7, 2000 at pg. 2). Defined rules should effectively reduce costs of litigation, facilitate national entry strategies, and simplify dispute-resolution process. However, if properly tailored, they will encourage entry only where it is efficient and economical to do so and not on the basis of an artificial subsidy. These objectives can only be met, however, if real cost-based rates are put in place.

The following national rules should govern negotiated compensation rates for Internet traffic and should also be established as clear standards to be used in arbitration proceedings if negotiations fail:

- **Compensation arrangements between carriers should reflect the appropriate costs of the technology and network configuration used to switch Internet traffic to ISPs.**

Rates charged by a carrier should be based on the carrier's costs. The Act recognizes this fact in many sections, including Section 252(d)(2), which sets forth a cost-based pricing structure for local interconnection:

(A) In General, for the purposes of compliance by an Incumbent local exchange carrier with section 251(b)(5) a state commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless:

(i) such terms and conditions 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; and

(ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.

Indeed, the Commission's own rules echo the principle that a carrier's rates must be based on the carrier's costs. Rule 51.709 specifies that:

(a) In state proceedings, a state commission shall establish rates for the transport and termination of local telecommunications traffic that are structured consistently with the manner that carriers incur those costs, and consistently with the principles in 51.507 and 51.509 of this part.

Further, Section 51.507 states:

(a) Rate elements shall be structured consistently with the manner in which the costs of providing the elements are incurred.

Even CLECs acknowledge this principle. In an *ex parte* filed on February 2, 2000, Level 3 admits that if different functions and costs for terminating Internet traffic can be identified, those cost differences should be reflected in rates established by state commissions (*Level 3 Ex Parte* at 5). GTE agrees, but GTE believes this Commission should prescribe cost-based compensation rules now and not rely on state commissions. Consistent with the Commission's earlier determination that Internet traffic is predominately interstate, the Commission, and not the states, should dictate which costs should be reflected in compensation rates for Internet traffic.

- In most cases, CLEC switching of ISP traffic is technically trunk-to-trunk and is not consistent with the functions used to switch local calls.

CLEC switching of ISP traffic originating in an ILEC's exchange is essentially a trunk-to-trunk arrangement. AT&T's comments that the costs of switching this traffic "should be" substantially identical to the termination of local voice/data traffic are clearly wrong and are contradicted by its own consultant. *AT&T Ex Parte* at 4. The attached diagrams, based on direct testimony of a consultant on behalf of AT&T and several CLECs, clearly differentiate the trunk-to-trunk cost functions from basic local switching functions in a CLEC circuit switched environment used to route Internet traffic to ISPs.

Further, AT&T provides no support for its "substantially identical" cost argument. As the attached chart (labeled "Local Switching vs. Trunk-to-Trunk Switching") shows, the costs of terminating ISP-bound traffic are substantially different than for the termination of local calls. A switch primarily engineered to perform local switching functions will have a significantly higher per MOU cost than a switch primarily engineered to perform tandem or trunk-to-trunk switching functions. Compensation should therefore reflect those cost characteristics of switching functions performed, and should be applied reciprocally and symmetrically.

The Commission has previously characterized the link from an end user to an ESP as interstate access service, although ESPs are currently exempt from paying access charges (see Declaratory Ruling, at para. 16). In a typical "meet-point" situation where two LECs are involved in delivering interstate access traffic to an

IXC, one typically performs a "line to trunk" switching function while the other delivers the call to the IXC via an access tandem. In the case of the switching of ISP traffic, the CLEC often performs a function similar to that of an access tandem. In both the access charge and UNE regimes, the Commission has recognized the fundamental difference in these switching arrangements and has prescribed separate pricing structures for local and tandem switching. If compensation is to be paid on ISP-bound calls handled by CLECs, the same tandem switching rate structure should be applied to these calls as well.

- **Carriers should be free to negotiate any rate structures and prices they choose, presumably reflecting the underlying costs of the technology and functions employed. Absent such cost data, rates that are consistent with the ILEC's tandem switching rates should be used, because these rates more closely reflect the costs of switching ISP traffic.**

Again, carriers should rely on negotiations and commercial arbitration to determine the appropriate compensation that should apply to Internet traffic. However, in cases where parties cannot agree, the ILEC's tandem rate should become the "default" for circuit switched ISP bound traffic.

AT&T's proposal (*AT&T Ex Parte* at 3) to apply the same rate as local switching, as well as Level 3's suggestion (*Level 3 Ex Parte* at 4-5) that if negotiations fail, the "status quo" must be maintained, will simply perpetuate the current system of ILEC subsidization of CLEC's ISP offerings.

- **ILEC tandem rates themselves, however, have been derived based on much lower call holding times than would typically be experienced with calls associated with Internet sessions. Thus, tandem rates need to be adjusted to reflect these longer holding times.**

Parties can rely on general industry studies of typical Internet call holding times or rely on data that the CLEC may obtain from its ISP customer(s).

- **An ILEC's inability to distinguish ISP from local traffic should not preclude the application of a more cost-based rate to Internet traffic. There is no evidence that CLECs themselves cannot measure this traffic - alternatively, reasonable methods to estimate that traffic can be developed and used.**

In GTE's experience, call record detail identifying the amount of Internet and local usage for purposes of applying compensation rates can be provided by CLECs. However, if direct measurement is not possible, or the parties otherwise agree, parties should be encouraged to employ alternative approaches, such as the use of a negotiated percentage based on studied average holding times and assumed

holding times for Internet bound calls. Carriers have been successful in establishing these different approaches in negotiated agreements, including the use of "blended" rates, which reflect relative proportions of local, and Internet usage.

Thus, AT&T's claim that the local switching rate must be applied because it is not possible to distinguish local from ISP traffic is baseless. *AT&T Ex Parte* at 5. In fact, as stated above, the Act, and the Commission's own rules compel the use of a rate other than the local switching rate since the costs of switching ISP-bound traffic can be readily identified and methods do exist to separately identify or estimate Internet-bound traffic.

- **CLEC and ISP serving arrangements that utilize non-switched technologies, such as SS7 gateways are not entitled to any compensation.**

Precisely because these arrangements utilize no switching functions, per minute compensation rates should not apply.





ISP SERVING ARRANGEMENTS AND  
RECIPROCAL COMPENSATION

March 27, 2000

# Local Switching vs Trunk-to-Trunk Switching

## *Local Switching Costs:*

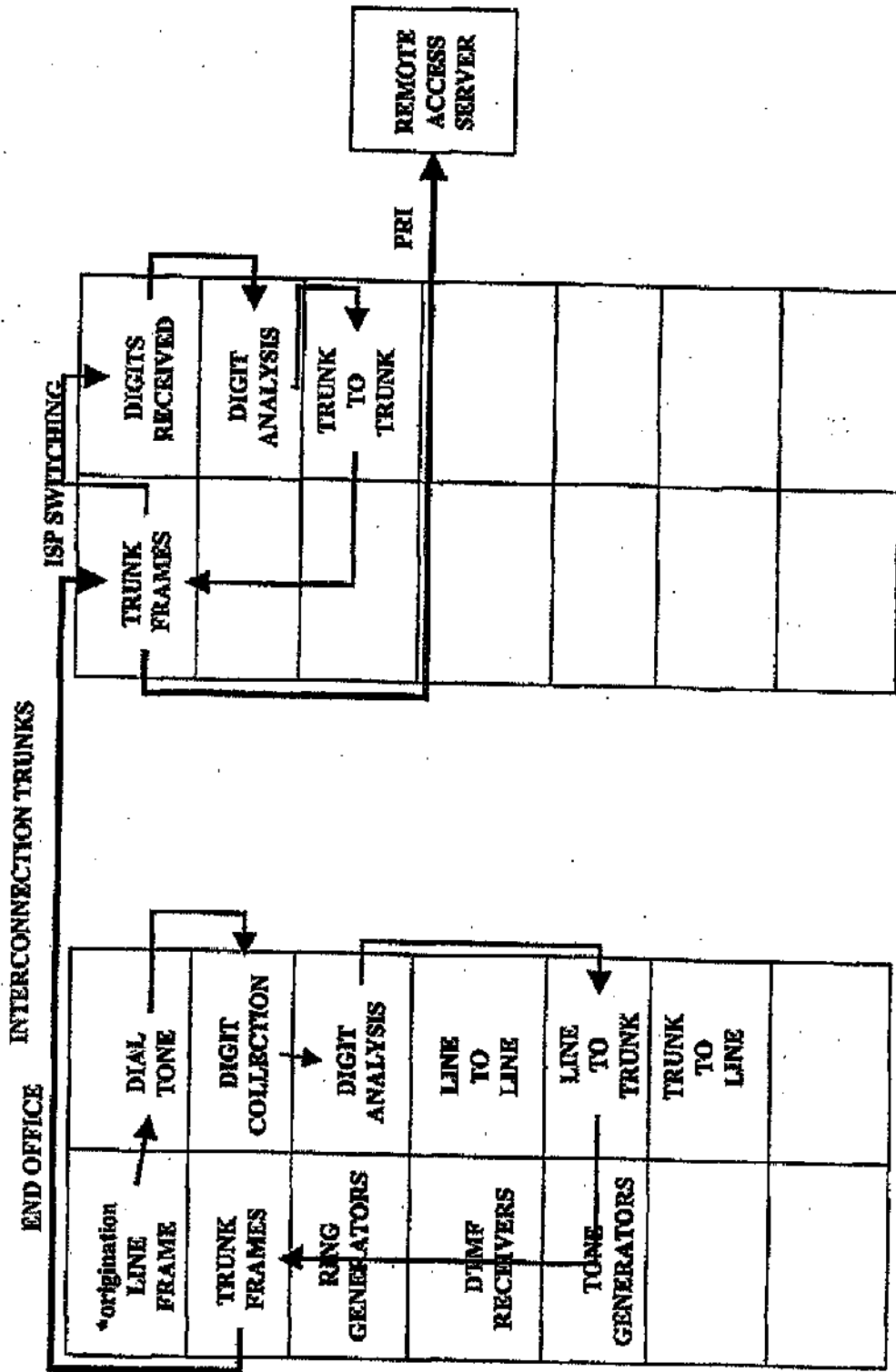
- Accounts for line-to-line, line-to-trunk and trunk-to-line functions; each function has different setup costs and a single rate is developed, representing a mix of all functions
- Investments (network path and processor) driven by line CCS
- Minimal network path sharing, based on defined line concentration ratio
- Typically engineered at 3 CCS/Line
- Dialing and ringing time engineered into the network path requirements
- Reflects attachment of peripheral (e.g., DTMF and AMA) equipment
- Processor costs driven by the traffic characteristics of relatively inefficient lines
- Local switching contract prices range between \$.004 and \$.008/MOU

## *Trunk-to-Trunk Switching Costs:*

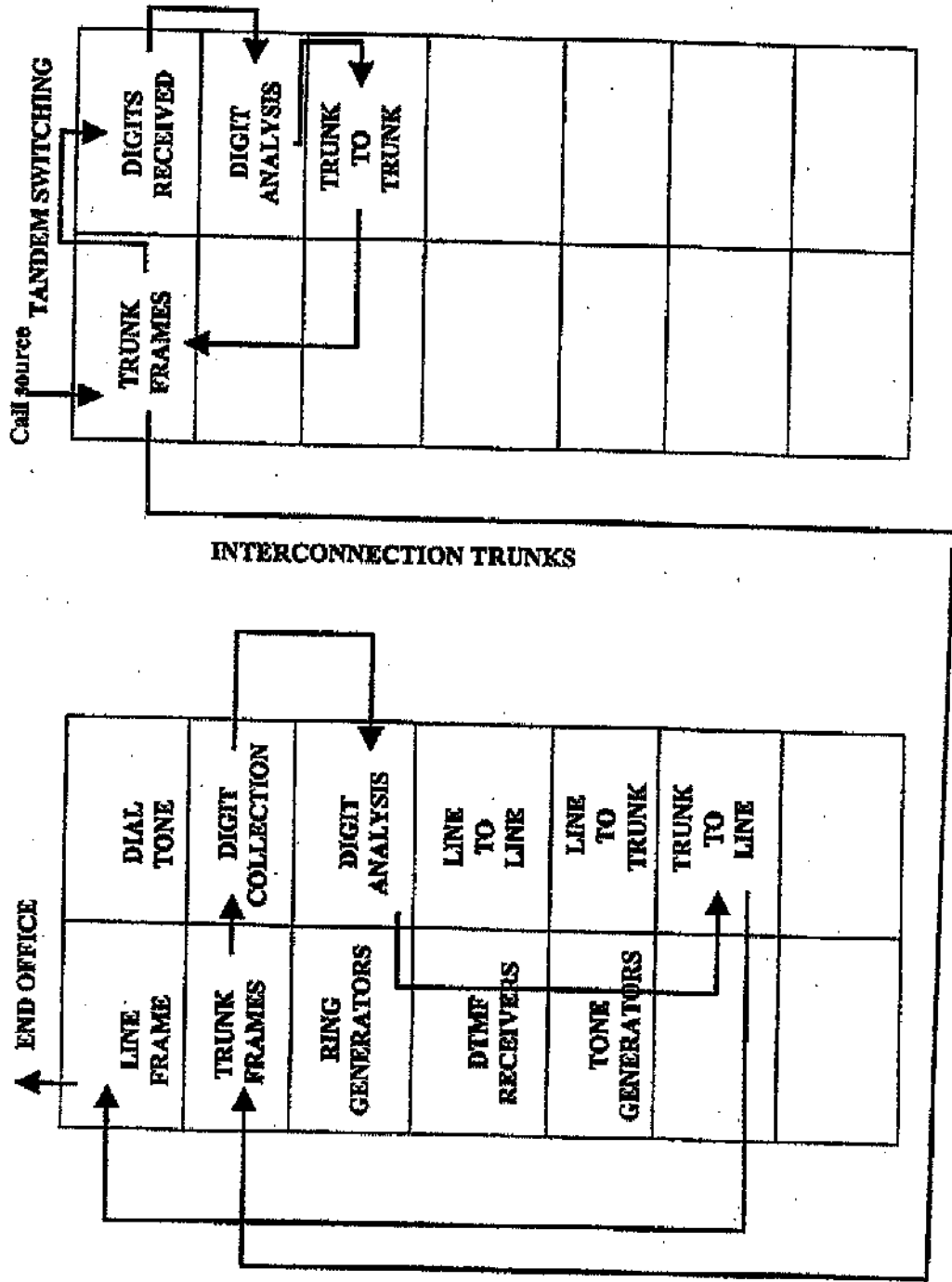
- Accounts for trunk-to-trunk switching costs only; setup costs for this switching function differ from those for local switching
- Investments driven by trunk CCS
- Trunks shared by multiple end users
- Network paths typically engineered at 28 CCS/Trunk
- Significantly more efficient than line CCS
- Dialing/ringing time not engineered into the network path requirements
- More efficient processor utilization, reflecting the higher throughput and other traffic characteristics of trunk usage
- Tandem-switching contract prices range between \$.0007 and \$.0016/MOU
- Price ranges when adjusted for a 30 minute HT are between \$.00045 and \$.0012/MOU

A switch primarily engineered to perform local switching functions will have a significantly higher per MOU cost than a switch primarily engineered to perform tandem or trunk-to-trunk switching functions. These cost relationships are also applicable in class 4/5 switches. Compensation should therefore reflect those cost characteristics of switching functions performed, and should be applied reciprocally and symmetrically.

**Originating End Office to ISP Serving Wire Center - Switching Function Blocks**



**ILEC Tandem downchain switching functions to LEC End Office**



## Local Switching vs Trunk-to-Trunk Switching

### *Illustrative SESS, Class 4/5 Office*

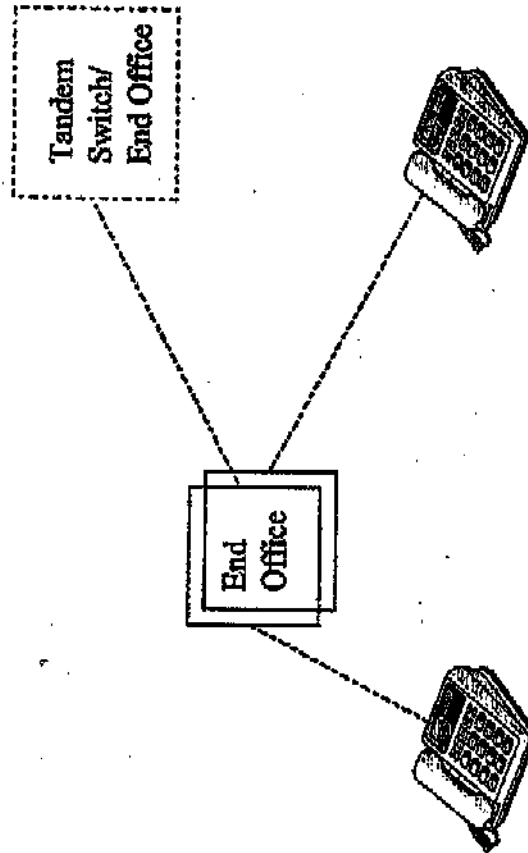
#### *UNE Local Switching Costs*

	<u>Set Up</u>	<u>Per MOU</u>
Line-to-line Switching (1/3)	\$.004359	\$.000989
Line-to-trunk Switching (1/3)	\$.006699	\$.000922
Trunk-to-line Switching (1/3)	\$.005610	\$.000922
Weighted Average	\$.005556	\$.000944
4 Minute Composite	\$.002333	

#### *UNE Trunk-to-Trunk Switching Costs*

	<u>Set Up</u>	<u>Per MOU</u>
Trunk-to-trunk Switching (100%)	\$.001730	\$.0007730
4 Minute Composite		\$.001206
30 minute Composite		\$.000831

## LOCAL SWITCHING



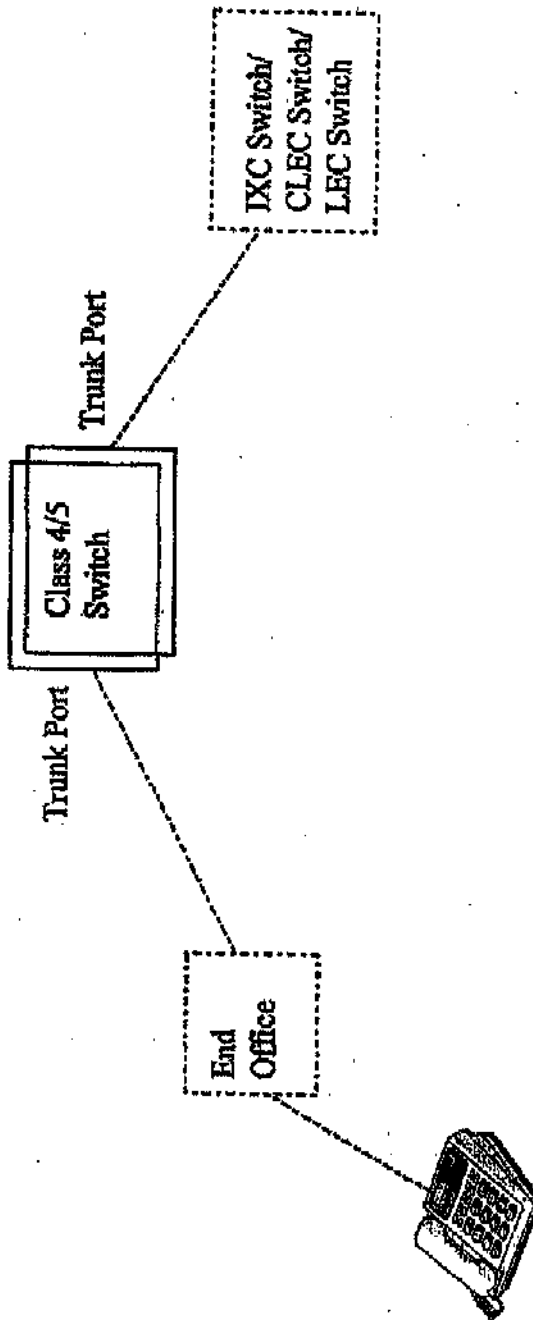
### Local Switching Costs:

- Represents a mix of line-to-line, line-to-trunk and trunk-to-line functions
- Investments (network path and processor) driven by line CCS
- Minimal network path sharing, based on defined line concentration ratio
- Typically engineered at 3 CCS/Line
- Dialing and ringing time engineered into the network path requirements
- Reflects attachment of peripheral (e.g., DTMF and AMA) equipment
- Processor costs driven by the traffic characteristics of inefficient line terminations

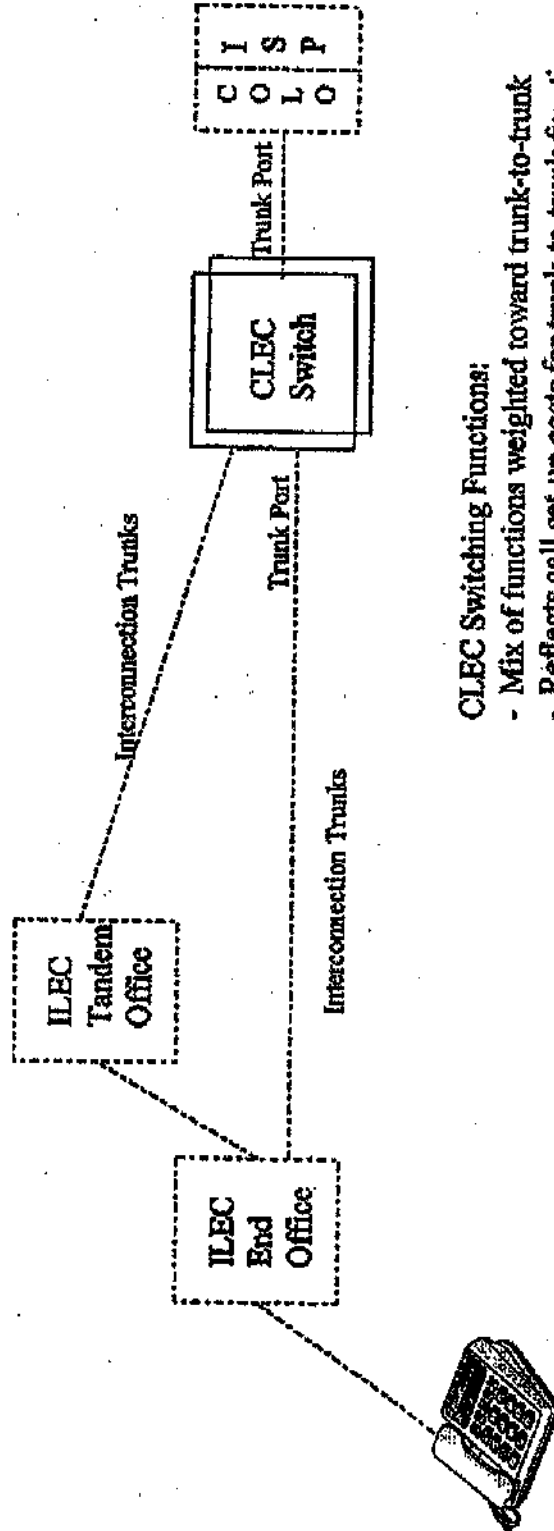
## TRUNK-TO-TRUNK SWITCHING

### Trunk-to-Trunk Switching Costs:

- Accounts for trunk-to-trunk switching costs
- Investments driven by trunk CCS
- Trunks shared by multiple end users
- Network paths typically engineered at 28 CCS/Trunk
- Trunk quantities based on P.01 Busy Hour Engineering
- Significantly more efficient than line CCS
- Dialing/ringing time not engineered into the network path requirements
- More efficient processor utilization, reflecting the higher throughput and other traffic characteristics of trunk usage



# CLEC ISP SWITCHING - ISP COLLOCATED AT CLEC CO



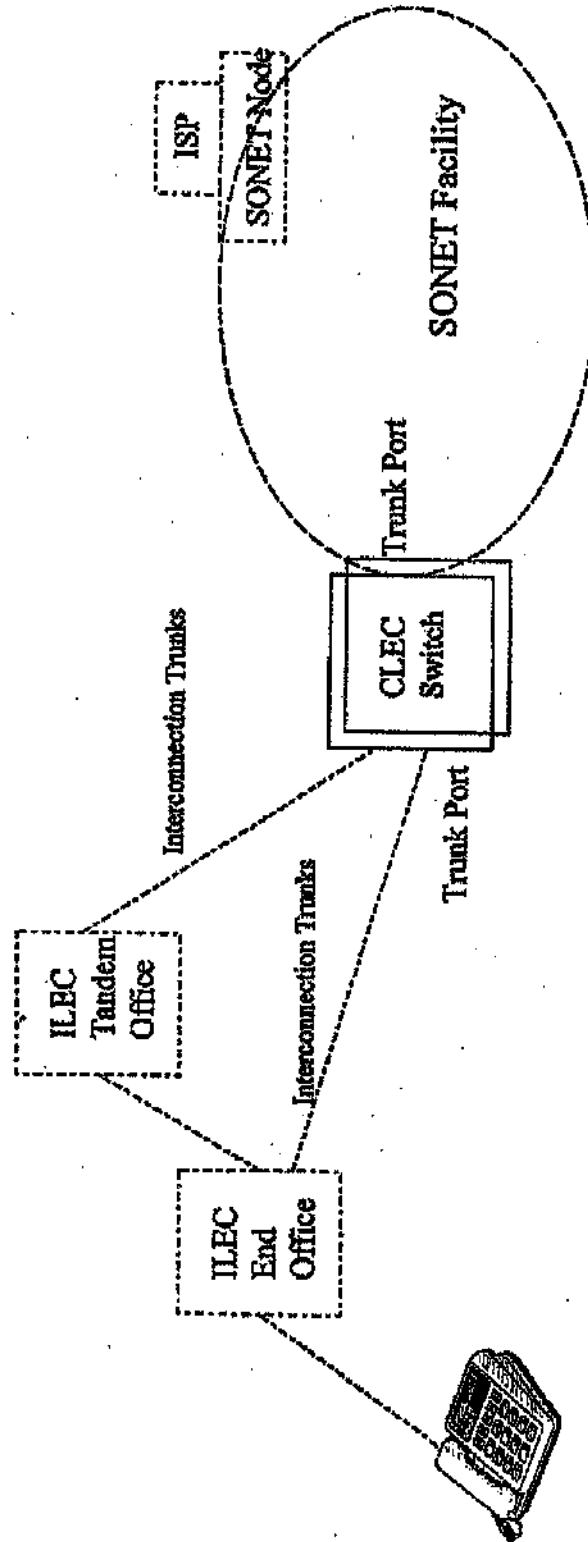
### CLEC Switching Functions:

- Mix of functions weighted toward trunk-to-trunk
- Reflects call set-up costs for trunk-to-trunk functions
- Rate proxy is the tandem-switching rate, adjusted for higher ISP holding times
- Blended rates can be used to reflect the CLEC mix of local and ISP switched traffic

Ref: Direct Testimony of Michael Starkey on behalf of AT&T Communications of Wisconsin, TCG Milwaukee, KMC Telecom, MCI WorldCom, McLeodusa Telecommunications, TDS Metrocom & Time Warner Telecom Before the Public Service Commission of Wisconsin in Case No. 05-JT-283



# CLEC ISP SWITCHING - ISP SERVED VIA ON-NET SONET NODE

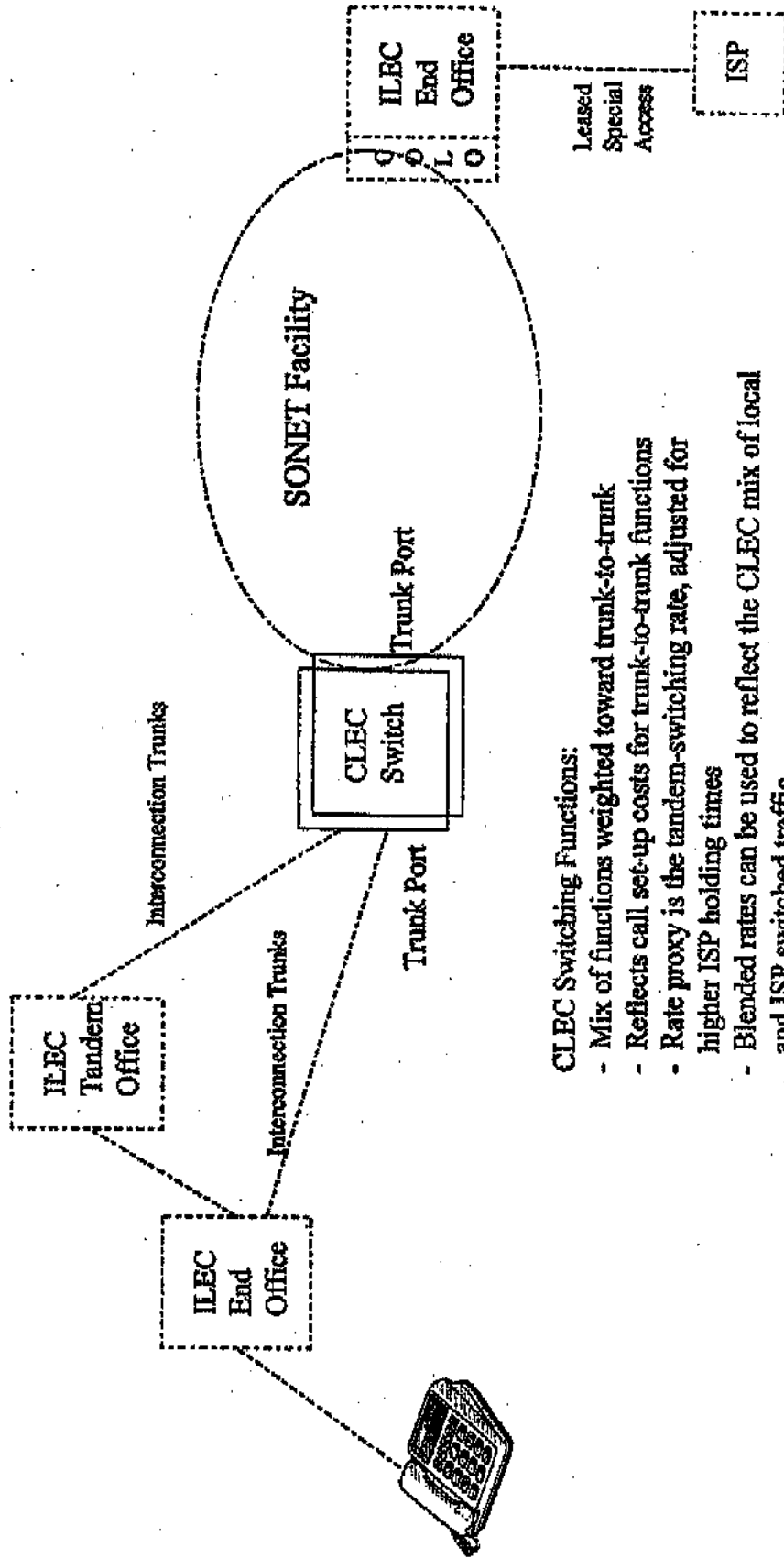


### CLEC Switching Functions:

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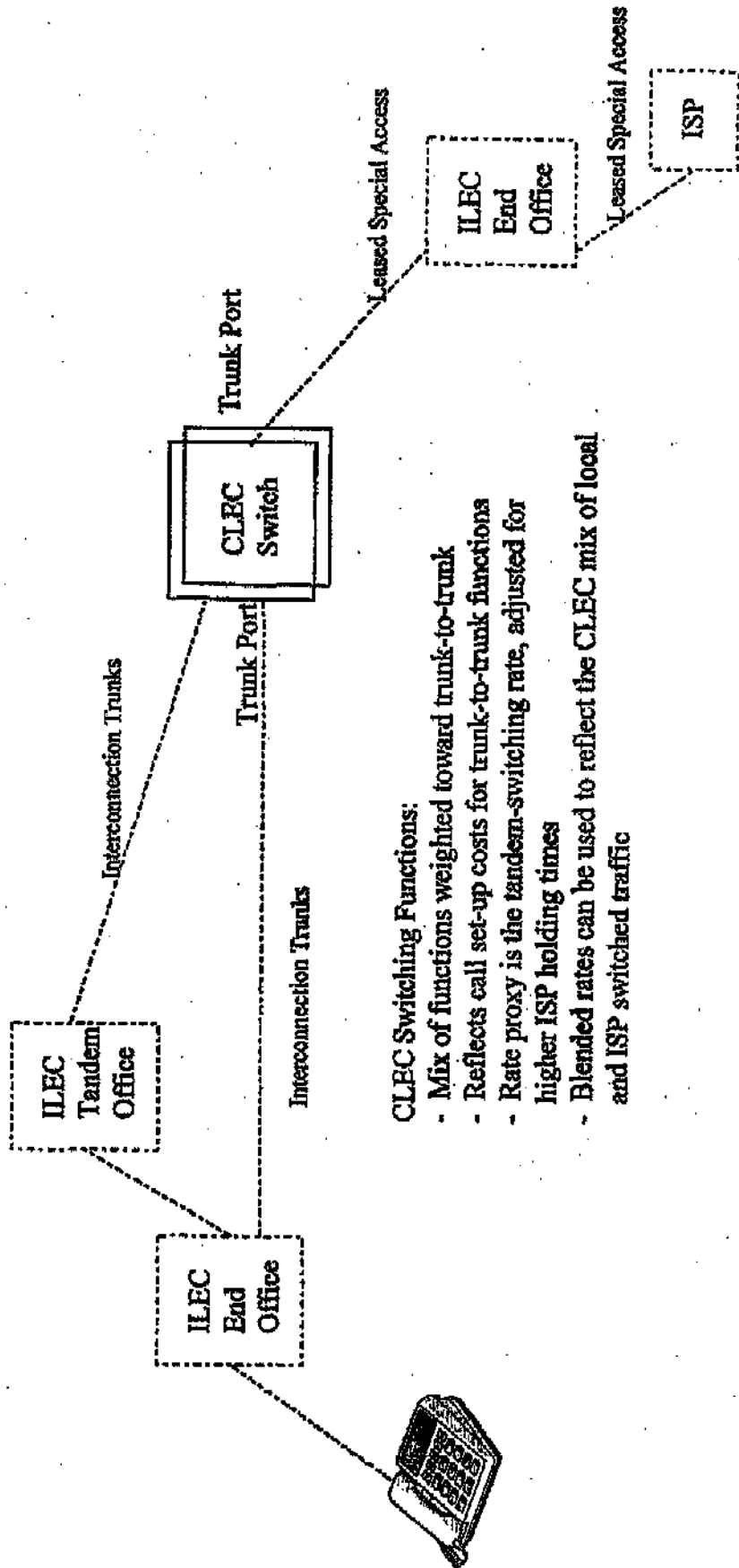
# CLEC ISP SWITCHING - ISP SERVED FROM ILEC CO VIA COLLOCATED TRANSMISSION EQUIPMENT



**CLEC Switching Functions:**

- Mix of functions weighted toward trunk-to-trunk
- Reflects call set-up costs for trunk-to-trunk functions
- Rate proxy is the tandem-switching rate, adjusted for higher ISP holding times
- Blended rates can be used to reflect the CLEC mix of local and ISP switched traffic

# CLEC ISP SWITCHING - ISP SERVED VIA LEASED SPECIAL ACCESS FACILITIES



- CLEC Switching Functions:**
- Mix of functions weighted toward trunk-to-trunk
  - Reflects call set-up costs for trunk-to-trunk functions
  - Rate proxy is the tandem-switching rate, adjusted for higher ISP holding times
  - Blended rates can be used to reflect the CLEC mix of local and ISP switched traffic