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March 17, 2000

Ms. Blanca Bayó
Director, Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
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RECORDS AND REPORTING
MARCH 17 PM 4:46
DIVISION OF RECORDS

Re: Docket No. 991534-TP

Dear Ms. Bayó:

Intermedia Communications Inc. ("Intermedia") has on this date filed with the Commission the direct testimony of Edward L. Thomas in Docket No. 991534-TP, containing Exhibits ELT-4, 5, 6, and 7, which, pursuant to Rule 5-22.006(5), Florida Administrative Code, Intermedia files with a claim of confidentiality.

A copy of this letter, which we ask you to file in the captioned docket, is enclosed. Please mark it to indicate that such claim has been made and the original letter was filed as requested.

Sincerely,

Charles J. Pellegrini
Charles J. Pellegrini

- AFA _____
- APP _____
- CAF _____
- CMLJ _____
- CTR _____
- EAG _____
- LPG _____
- MAS _____
- OPC _____
- RRR _____
- SEC _____
- WAW _____
- OTH _____

cc. Ms. Marlene Stern, Florida Public Service Commission
Ms. Nancy White c/o Ms. Nancy Sims, BellSouth Telecommunications, Inc.

This claim of confidentiality was filed by or on behalf of a "teleco" for Confidential DN 03458-00. The document is in locked storage pending advice on handling. To access the material, your name must be on the CASR. If undocketed, your division director must obtain written EXD/Tech permission before you can access it.

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FPSC-RECORDS/REPORTING

**INTERMEDIA COMMUNICATIONS INC.
DIRECT TESTIMONY OF EDWARD L. THOMAS
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 991534-TP**

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, TITLE, AND THE**
2 **NATURE OF YOUR POSITION WITH INTERMEDIA COMMUNICA-**
3 **TIONS INC. ("INTERMEDIA").**

4 **A.** My name is Edward L. Thomas. I am employed by Intermedia as
5 Director-Voice Planning and Deployment. My business address is 3625 Queen
6 Palm Drive, Tampa, Florida 33619. I am responsible for engineering the moves,
7 adds, and changes of the telecommunications switching requirements within the
8 Intermedia voice network. This includes ordering and placing central office
9 equipment, ordering and placing circuit groups between various exchanges,
10 network capacity management and network traffic management. I have worked in
11 the telecommunications industry for thirty-five years. Before employment with
12 Intermedia, I worked for GTE for twenty-nine years in several management
13 capacities.

14 I have attended Kent State University and Wooster (Ohio) College, and
15 completed numerous technical training courses and seminars.

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEED-**
17 **ING?**

18 **A.** I am appearing before the Commission as a technical witness to present evidence
19 describing the telecommunications networks that Intermedia deploys in the state
20 of Florida. My testimony will support Intermedia's position that it bills BellSouth
21 for the transport and termination of traffic on Intermedia's Florida networks that is
22 originated by BellSouth end users using the correct rate under the parties'
23 interconnection agreement.

1 **Q. HOW DOES AN INTERCONNECTING CARRIER, SUCH AS**
2 **INTERMEDIA, ESTABLISH INTERCONNECTION WITH AN**
3 **INCUMBENT LOCAL EXCHANGE CARRIER ("ILEC"), SUCH AS**
4 **BELLSOUTH?**

5 **A.** In interconnection arrangements, since end users of the interconnecting carriers
6 and end users of the ILECs in the same local calling area will call each other, the
7 carriers exchange local traffic according to reciprocal compensation obligations as
8 specified in federal law and as defined in interconnection agreements. To do this,
9 interconnecting carriers, such as Intermedia, purchase "interconnection trunks"
10 from ILECs, such as BellSouth, which are used to connect the interconnecting
11 carriers' networks from their points-of-presence ("POPs") or switches to the
12 ILECs' tandem switches or end offices in the same local calling area. Tandem
13 switches are used to provide the initial interconnection to and from the
14 interconnecting carrier. When traffic volumes warrant the establishment of direct
15 end office trunk groups, the end office groups are established as "Primary High
16 Usage" groups, with the tandem groups the "final routes" between the tandem
17 switches and the interconnecting carrier under overflow conditions. End users are
18 directly connected to end offices by means of loops. I illustrate this schematically
19 in Exhibit ELT-1.

20 **Q. IN AN ILEC'S NETWORK EMPLOYING TANDEM SWITCHES, HOW**
21 **DOES AN INTERCONNECTING CARRIER, SUCH AS INTERMEDIA,**
22 **ESTABLISH INTERCONNECTION?**

23 **A.** Aside from direct trunking to the ILEC's end office, there are two network
24 architectures commonly deployed to establish interconnection with an ILEC's
25 network employing tandem switches. These enable interconnecting carriers to
26 deliver traffic originating on their networks to end users served by ILEC end
27 offices subtending tandem switches and to terminate traffic on their networks

1 originated by those same ILEC end users. The first of these is called "Single
2 Tandem Access" or "STA," which I illustrate in Exhibit ELT-2. In this
3 architecture, the interconnecting carriers route traffic to and from ILEC end users
4 using direct trunks to each tandem switch within the local calling area. The
5 second of these is called "Multiple Tandem Access" or "MTA," which I illustrate
6 in Exhibit ELT-3. It is sometimes referred to as "Single Point of
7 Interconnection." In this architecture, interconnecting carriers establish
8 interconnection with the ILEC's tandem switches in the LATA, and the end
9 offices subtending them, by means of direct connection only to one of the tandem
10 switches typically, or, at minimum, to less than all of them.

11 **Q. AS AN INTERCONNECTING CARRIER, WHAT INTERCONNECTION**
12 **ARCHITECTURE IS INTERMEDIA'S PREFERENCE?**

13 **A.** It is Intermedia's preference to direct trunk to the ILEC's end office where traffic
14 volumes are sufficient. In fact, in most cases some serving areas, including
15 Miami, Intermedia is interconnected with BellSouth largely in this way. Direct
16 trunk groups are designed to operate efficiently during periods of peak load.
17 Typically, however, they will become congested in these periods and overflow to
18 the tandem switch trunk group, or "final route." When congestion occurs, the
19 traffic overflow is "alternate routed" to the tandem switch to which the end office
20 is homed. However, in the event that the tandem switch lacks capacity to
21 accommodate the overflow, traffic blockage results.

22 **Q. WHEN TRAFFIC BLOCKAGE RESULTS, WHAT RECOURSE DOES**
23 **THE ORIGINATING CARRIER HAVE?**

24 **A.** There is no immediate recourse, except that it is sometimes possible to reroute
25 blocked calls over interLATA access trunks at higher cost. The overflowed calls
26 otherwise simply are not completed. In these circumstances, new service orders
27 may have to be held for an unreasonably long period of time until the blockage

1 can be alleviated, even though ILECs have the duty under federal law to provide
2 interconnecting carriers access to their networks on a nondiscriminatory basis. In
3 fact, Intermedia has experienced these problems persistently on some of
4 BellSouth's networks

5 **Q. WHAT IS EVENTUALLY DONE TO RELIEVE SUCH BLOCKAGES?**

6 **A.** The interconnecting carrier experiencing the blockage may augment the direct
7 trunk if the traffic overflow is great enough or it may request the ILEC to provide
8 "alternate routing" by whatever means practicable and consistent with service
9 quality standards. MTA, or, rather, what has come to be called MTA, is one such
10 means by which congested traffic may be "alternate routed." STA is another; it is
11 preferred where traffic volumes are sufficient. MTA especially is not, however,
12 an efficient use of network facilities, since calls transported over MTA
13 architectures are switched many more times than if they were to be transported
14 over direct trunks to the called party's end office. It is worth noting that the
15 implementation of "alternate routing" of traffic originating on the interconnecting
16 carrier's network, such as MTA, requires a great deal of coordination between the
17 ILEC and the interconnecting carrier. That is not a requirement where the ILEC
18 deploys "alternate routing" to relieve congestion of traffic originating on its
19 network that is destined to the interconnecting carrier's end users or traffic
20 originating on the interconnecting carrier's network that has been successfully
21 trunked to the ILEC's tandem switch. In fact, where the ILEC, on its initiative,
22 resorts to alternative routing under those circumstances, it is transparent to the
23 interconnecting carrier.

24 **Q. PLEASE DESCRIBE INTERMEDIA'S NETWORK ARCHITECTURES**
25 **THAT INTERCONNECT WITH BELL SOUTH'S NETWORK IN**
26 **FLORIDA.**

1 A. Intermedia is interconnected with BellSouth's networks in Jacksonville, Orlando
2 and Miami. These interconnection arrangements are illustrated schematically in
3 Exhibits ELT-4, 5 and 6, respectively.

4 **Q. DO INTERMEDIA'S INTERCONNECTION ARRANGEMENTS WITH**
5 **BELLSOUTH IN FLORIDA CONSIST OF ALTERNATIVE ROUTING**
6 **INCLUDING MTA?**

7 A. In Jacksonville and Orlando, Intermedia's interconnection arrangements with
8 BellSouth consist of alternative routing, including trunking that bears the
9 attributes of what we are here calling MTA.

10 **Q. DESCRIBE INTERMEDIA'S INTERCONNECTION ARRANGEMENT IN**
11 **ORLANDO AND ITS DEVELOPMENT.**

12 A. Intermedia turned up its Orlando DMS-100 local switch in January 1997. It is
13 interconnected to BellSouth's Magnolia and Colonial tandem switches by means
14 of one-way reciprocal trunks for the exchange of local traffic. In addition, it is
15 interconnected to the Magnolia tandem switch, but not the Colonial tandem
16 switch, by means of a two-way transit, or transient, trunk. Transit trunks are used
17 to carry traffic from other carriers than the interconnecting or incumbent carrier,
18 outbound 800-type traffic not destined for either the interconnecting or incumbent
19 carrier, and wireless traffic. BellSouth, apparently seeking to minimize
20 disruptions to its network, required that a transit trunk not be provisioned to the
21 Colonial tandem switch. Thus, when an end user who is a subscriber of another
22 interconnecting carrier that is direct trunked to the Colonial tandem switch places
23 a call to an Intermedia end user, the call is routed through the Colonial tandem
24 switch to the Magnolia tandem switch and then on to Intermedia's switch. This
25 routing arguably meets the characteristics of what we are referring to in this
26 proceeding as MTA. It is important to see that this architecture was put in place
27 at the very outset of Intermedia's local service presence in Orlando fully 18

1 months before the MTA amendment to the July 1996 Intermedia-BellSouth
2 interconnection agreement that is in issue in this proceeding and at the insistence
3 of BellSouth, not at the request of Intermedia.

4 **Q. DESCRIBE INTERMEDIA'S INTERCONNECTION ARRANGEMENT IN**
5 **JACKSONVILLE AND ITS DEVELOPMENT.**

6 **A.** Intermedia turned up its DMS-100 switch in Jacksonville in January 1997. It is
7 interconnected to BellSouth's Clay Street and San Marcos tandem switches by
8 means of one-way reciprocal trunks for the exchange of local traffic. In addition,
9 it is interconnected with the Clay Street, but not with the San Marcos, tandem
10 switch by means of a two-way transit trunk. Intermedia interconnected initially
11 with the Clay Street tandem switch and then, in April 1997, with the San Marcos
12 tandem switch by means of a one-way outgoing (from Intermedia to BellSouth)
13 trunk group in order to establish the expanded local calling area for Intermedia
14 end users. As the case of the Colonial tandem switch in Orlando, BellSouth
15 required that Intermedia not interconnect with the San Marcos tandem switch by
16 means of a transit trunk, creating, therefore, here as well a traffic routing scheme
17 arguably having MTA characteristics.¹ Once again, it is important to see that this
18 architecture was put in place (before the MTA amendment and) at BellSouth's
19 insistence.

20 **Q. DID INTERMEDIA PREFER TO INTERCONNECT WITH THE**
21 **COLONIAL AND SAN MARCOS TANDEM SWITCHES BY MEANS OF**
22 **A TRANSIT TRUNK.**

23 **A.** Everything considered, Intermedia was indifferent. The task of traffic
24 management would have been made easier with transit trunks to the Colonial and
25 San Marcos tandem switches. With no transit trunks to these switches, the

¹ On March 11, 1998, Intermedia ordered a two-way transit group to the San Marcos tandem switch as an insurance measure. This group has never carried traffic.

1 network is more efficient, which is to say that the risk of underutilizing trunk
2 capacity is less.

3 **Q. IS THERE A BENEFIT TO INTERMEDIA WHERE MTA IS**
4 **DEPLOYED?**

5 **A.** While it is not always to be preferred, MTA does heighten the probability of call
6 completion in periods of high circuit usage. In addition, it reduces Intermedia's
7 investment to some extent.

8 **Q. HOW DOES ONE PROPERLY INTERPRET THE MTA AMENDMENT**
9 **THAT BELLSOUTH EXECUTED WITH INTERMEDIA ON JUNE 3,**
10 **1998?**

11 **A.** Ms. Gold discusses the interpretation of the MTA Amendment in detail in her
12 testimony in this proceeding. From an operations perspective, however, I can say
13 that Intermedia interprets the MTA Amendment as a contractual vehicle making
14 MTA available to Intermedia under certain terms and conditions. The MTA issue
15 was not addressed in the parties' 1996 interconnection agreement, nor in the July
16 1997 amendments that followed it. As time passed, BellSouth began experiencing
17 acute congestion problems that it apparently determined would require resolution
18 by means of MTA, while recognizing that it did not have a contractual basis for
19 deployment. Thus, the MTA Amendment sets forth the terms and conditions
20 under which Intermedia may elect deployment of MTA to alleviate traffic
21 congestion. It first requires Intermedia to request MTA and then BellSouth to
22 provide MTA in response to the request. I refer to numbered paragraph 1 of the
23 Amendment. The rates set out in Attachment A of the Amendment accordingly
24 are invoked, jurisdiction by jurisdiction, only upon Intermedia's request for MTA
25 in a particular jurisdiction, BellSouth's provisioning of MTA in that jurisdiction,
26 and Intermedia's acceptance of MTA in that jurisdiction. When one understands
27 the history of Intermedia's interconnection with BellSouth, no rational case can be

1 made that the Amendment has some other purpose and that the Attachment A
2 rates are otherwise effectuated to supersede the rates in Attachment B-1 of the
3 parties' 1996 agreement.

4 **Q. HAS INTERMEDIA REQUESTED THAT BELLSOUTH DEPLOY MTA**
5 **IN FLORIDA?**

6 **A.** No. There can be no question about that. In my capacity, I am charged with
7 resolving traffic problems and I would have participated in any such decision to
8 request MTA as a resolving mechanism. No circumstances have yet arisen in
9 Florida to cause us to even consider such a request. As I have testified, even
10 though in Jacksonville and Orlando the interconnection architectures in place
11 would appear to have some of the attributes of MTA, that is the case because
12 BellSouth imposed a network topology requirement that had that result, and not
13 because Intermedia requested those arrangements. Furthermore, in Miami, there
14 is not even a suggestion that MTA is deployed.

15 **Q. WHAT IS YOUR UNDERSTANDING OF THIS DISPUTE BETWEEN**
16 **INTERMEDIA AND BELLSOUTH?**

17 **A.** It is very simple, as I understand it. The Florida Public Service Commission has
18 determined that BellSouth must pay Intermedia reciprocal compensation for
19 transporting and terminating local traffic originating on BellSouth's network,
20 including traffic destined to ISPs, under the parties' interconnection agreement.
21 Although BellSouth has appealed the Commission's ruling, it began to pay
22 reciprocal compensation to Intermedia for Florida traffic when both the
23 Commission and the federal court rejected its efforts to stay the Commission's
24 order. However, it made payments (and continues to make payments) on the basis
25 of the rate that it insisted had become effective by reason of the MTA
26 Amendment, and not on the basis of the rate required for reciprocal compensation

1 under the original agreement.² The rate on the basis of which BellSouth has
2 chosen to pay Intermedia is less than one-fifth of the correct rate. Intermedia has
3 contested BellSouth's position on the matter of the correct reciprocal
4 compensation rate from BellSouth's very first payment. BellSouth has invoked
5 and applied to Florida traffic the rate for MTA even though the conditions that
6 would be necessary for it to do so have not been met. Intermedia has not
7 requested MTA deployment in Florida. Hence, it became necessary for
8 Intermedia to bring a complaint to this Commission, seeking redress of
9 BellSouth's breach of the agreement.

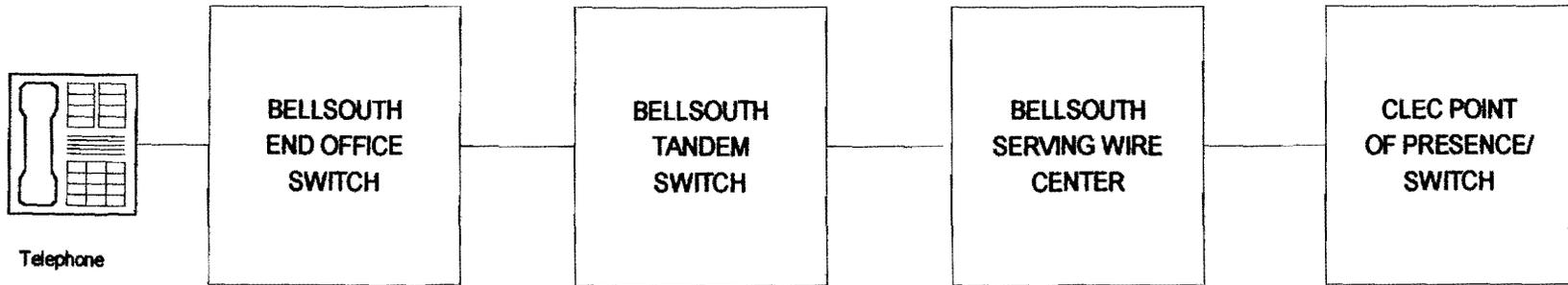
10 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

11 **A.** Yes, it does.

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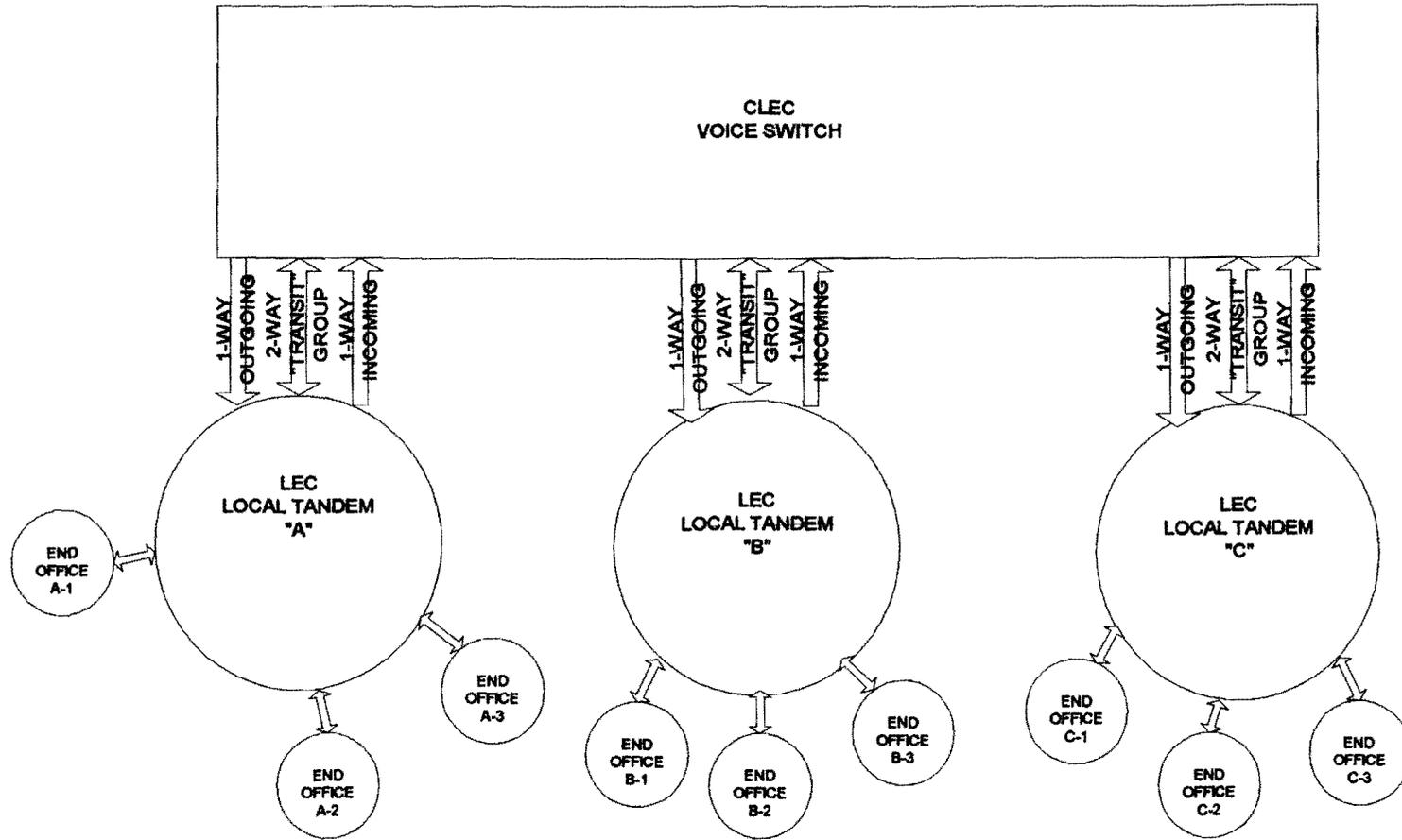
²BellSouth claims that the effective rate for reciprocal compensation is \$.002 per MOU, although the MTA Amendment specifies an end office switching rate (the rate BellSouth appears to believe is applicable to this traffic) of \$.0175 per MOU. I understand that BellSouth explains this away as an "error" of some kind.

TYPICAL INTERCONNECTION OF CLEC AND BELLSOUTH CALL FLOW



Single Tandem Architecture

File #: C/BS_TANDEM/MTA1

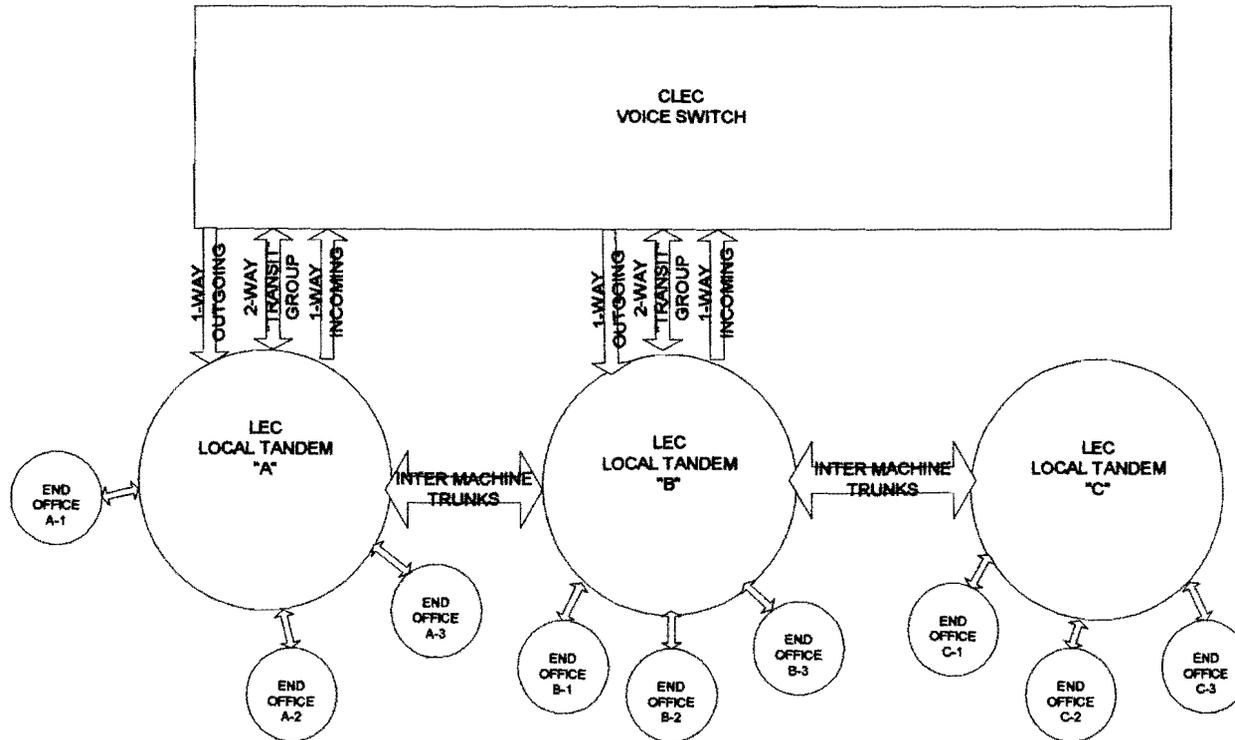


SingleTandem Architecture:

Single Tandem Architecture: In this scenario there would be trunk groups established between the CLEC and every LEC tandem. There would be no routing of the CLEC traffic between tandems. The single route between the LEC and office and their homing tandem and on to the CLEC would be the only route for this traffic. This would apply for both directions of traffic.

Multiple Tandem Architecture

Filed as: C/85_TANDEM/MTA2



Multiple Tandem Architecture:

Outward direction: Referring to the above drawing and assuming a CLEC customer dials a number that resides in LEC "End Office A-1", the call would normally transverse the network (assuming there are no direct end office trunks) via "LEC Tandem B". From there the call would be routed to "LEC Tandem A" to terminate to the LEC End Office A-1 which is naturally sub-tended by it's local home tandem "LEC Tandem A".

Inward direction: Again, referring to the above drawing a customer in LEC End Office A-1 dials a number that resides in the CLEC exchange. Normally the call will go from LEC End Office A-1 to LEC Tandem A and from there over the trunk group between the LEC Tandem A to the LEC Tandem B and from there over the established LEC Tandem B to CLEC trunk group.

Assuming there is a blockage situation between LEC Tandem B and the CLEC, and assuming the CLEC has circuits between other LEC Tandems then the LEC may route the call between LEC Tandem B and LEC Tandem A on Inter-Machine Trunks. When received at LEC Tandem A there would be routing in place to pass the call to the CLEC on the LEC Tandem A/CLEC trunk group. This would hold true on both directions of traffic

R E D A C T E D

JACKSONVILLE
INTERMEDIA-DMS

R E D A C T E D

ORLANDO
INTERMEDIA-DMS

R E D A C T E D

MIAMI
INTERMEDIA-DMS

R E D A C T E D

**INTERMEDIA'S
FLORIDA VOICE
NETWORK**
**(Note: This drawing
does not show out of
state connections)**

CERTIFICATE OF SERVICE
Docket No. 991534-TP

I HEREBY CERTIFY that a true and correct copy of the foregoing was served by hand delivery* or by Federal Express overnight delivery** this 17th day of March, 2000 upon the following:

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