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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 950985-TP
DIRECT TESTIMONY OF
JOAN McGRATH
ON BEHALF OF TIME WARNER AXS OF FLORIDA, L.P.
AND DIGITAL MEDIA PARTNERS

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Q: FOR THE RECORD, PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: My name is Joan McGrath, and my business address is Time Warner Communications, 160 Inverness Drive West, Englewood, Colorado, 80112.

Q: ON WHOSE BEHALF ARE YOU TESTIFYING TODAY?

A: I am testifying on behalf of Time Warner AxS of Florida, L.P. ("Time Warner AxS") and Digital Media Partners ("DMP") (collectively "Time Warner").

Q: ARE YOU EMPLOYED BY THOSE COMPANIES?

A: No. My title is Manager for Interconnect Management for Time Warner Communications ("TWC"), which owns Time Warner AxS and is an affiliate of DMP.

1 Q: WHAT ARE YOUR DUTIES AT TWC?

2 A: My primary responsibilities are to provide support
3 information and research for and to act as a
4 liaison between Time Warner teams and subteams in
5 interconnection negotiations between TWC affiliates
6 and incumbent local exchange companies.

7

8 Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
9 TELECOMMUNICATIONS EXPERIENCE.

10 A: I received a Bachelor of Science degree in Business
11 Administration with emphasis in Marketing from the
12 University of Denver, Denver, Colorado.
13 Additionally, I have taken technical training
14 courses through AT&T on Electronic Switching System
15 Architecture and ISDN Overview. When my work
16 schedule permits, I also attend Master level
17 telecommunications classes at the University of
18 Denver.

19

20 My telecommunications experience includes
21 employment at U S West, an RBOC,
22 Telecommunications, Inc. (TCI), a major cable
23 company, and Teleport Communications Group (TCG),
24 an alternative local exchange company (ALEC).

1 At U S West, my responsibilities included
2 performing statistical and results analyses for the
3 small business and home personal service. At TCI,
4 my responsibilities included managing market
5 research projects for new alternative access vendor
6 (AAV) markets. At TCG my responsibilities included
7 managing the interexchange company (IXC)
8 interconnection negotiations and the RBOC
9 collocations. My resume is attached as Exhibit JM-
10 1.

11

12 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 **A:** Pursuant to Section 364.162, Florida Statutes, Time
14 Warner AxS and DMP have petitioned the Florida
15 Public Service Commission (FPSC or Commission) to
16 establish nondiscriminatory rates, terms, and
17 conditions for local interconnection with
18 BellSouth. My testimony is filed in support of
19 those petitions.

20

21 All resolutions of interconnection issues between
22 Time Warner and BellSouth should create and sustain
23 a marketplace in which local exchange competition
24 can flourish. A competitive market will provide
25 consumers with innovative services at lower prices

1 and fulfill the mandate of the Florida Legislature.
2 The only way to accomplish these objectives is to
3 treat Time Warner as a co-carrier for the provision
4 of local exchange service.

5

6 To allow Time Warner to efficiently use its network
7 to offer innovative consumer products, the
8 Commission should require the following:

- 9 • a rate structure for mutual interconnection
10 that enables Time Warner to develop an
11 efficient network, which would include bill
12 and keep for local interconnection, and
13 tariffing of interconnection rates
- 14 • efficient and cooperative network coordination
15 between BellSouth and Time Warner, which would
16 include mutual network management and design;
17 equal priority notification on outages;
18 cooperative 911 network arrangements and
19 database access; options for Time Warner's
20 interconnection points with BellSouth; access
21 of Time Warner to adequate numbering
22 resources; compensation for terminating access
23 charges to ported numbers
- 24 • access to and use of existing operator and
25 directory functions, which would include

1 access to operator services; input of
2 directory assistance and directory listings
3 provided at no charge; options for the
4 provision of directory assistance; free white
5 page/yellow page listings for Time Warner
6 customers; an information page in the
7 directory for Time Warner; directories
8 provided and distributed free of charge to
9 Time Warner customers.

10

11 **Q: ARE TIME WARNER AXS AND DMP CURRENTLY CERTIFICATED**
12 **TO PROVIDE LOCAL EXCHANGE SERVICE IN FLORIDA?**

13 **A:** Yes, Time Warner and DMP hold certificate nos. 3167
14 and 3135, respectively. On August 1, 1995, each
15 notified the Commission of its intent to provide
16 alternative local exchange service, and each is
17 authorized to provide local exchange service
18 effective January 1, 1995.

19

20 **Q: WHAT IS THE STATUS OF TIME WARNER'S NEGOTIATIONS ON**
21 **LOCAL INTERCONNECTION WITH BELLSOUTH?**

22 **A:** Time Warner began interconnection negotiations with
23 BellSouth on August 9, 1995. On the date that this
24 testimony is filed, Time Warner and BellSouth
25 remain in earnest negotiations which may result in

1 a mutually acceptable interconnection agreement.
2 Time Warner is hopeful an agreement will be
3 reached. However, as of November 20, 1995, no
4 comprehensive agreement has been reached. Until
5 such an agreement is reduced to writing, Time
6 Warner necessarily must consider all
7 interconnection issues to be unresolved.

8

9 **Q: IF TIME WARNER AND BELLSOUTH ARE STILL NEGOTIATING,**
10 **WHY HAS TIME WARNER PETITIONED THE COMMISSION FOR**
11 **ITS ASSISTANCE?**

12 **A:** Time Warner and BellSouth have not yet been able to
13 reach a comprehensive agreement. Time Warner has
14 petitioned the Commission to ensure that should the
15 negotiations with BellSouth fail, Time Warner would
16 still have a timely interconnection arrangement.
17 Such an arrangement will help Time Warner
18 prioritize its capital commitments. The company is
19 now in the position of determining whether business
20 conditions in Florida invite competition. A
21 significant part of this determination is the
22 rates, terms and conditions of interconnection with
23 the incumbent LECs, in this case BellSouth. Time
24 Warner must have an interconnection agreement with

1 BellSouth presently if it is to proceed with its
2 plan to enter the Florida market.

3

4 **Q: WHAT IS LOCAL INTERCONNECTION?**

5 **A:** Interconnection is the ability of two local
6 exchange service providers to connect their
7 networks to provide service. This allows customers
8 from one company's network to communicate with
9 customers from another company's network.
10 Interconnection encompasses an array of technical
11 issues, as well as compensation arrangements needed
12 for two or more local exchange providers to connect
13 their networks. Interconnection also includes the
14 provision of service provider number portability,
15 coordinated network design and architecture, the
16 arrangement of signaling, the transfer of
17 information, access to data bases and billing
18 information, and many other detailed coordination
19 requirements. Equitable interconnection is
20 necessary to ensure that consumers will benefit
21 from local competition.

22

23 **Q: WHY IS LOCAL INTERCONNECTION SO IMPORTANT TO TIME**
24 **WARNER?**

1 A: Without nondiscriminatory interconnection with
2 BellSouth, Time Warner will be unable to
3 ubiquitously serve its potential customers.

4

5 Q: WHAT KIND OF ENVIRONMENT IS TIME WARNER FACING AS
6 IT ENTERS THE LOCAL EXCHANGE TELECOMMUNICATIONS
7 MARKET?

8 A: Time Warner is entering an environment
9 characterized by the overwhelming dominance of one
10 monopoly LEC, BellSouth. In each of its local
11 exchanges BellSouth has nearly 100% of the market,
12 a ubiquitous network, brand identity and loyalty,
13 and control over essential facilities that Time
14 Warner needs in order to begin competing. For
15 competition to be sustainable, facilities-based
16 providers--companies which invest in, own, and
17 operate switches and networks--must be able to
18 provide service. To do so, ALECs such as Time
19 Warner must make large investments in their own
20 networks and must also connect those networks with
21 that of the ubiquitous incumbent LEC, in this case
22 BellSouth, which stands to lose market share
23 (although not necessarily revenues) by such
24 interconnection. Thus, BellSouth will have little
25 self-interest or economic incentive to enter into

1 interconnection arrangements that are economically
2 viable and technically efficient for the new
3 entrant.

4
5 As unknowns to customers in the marketplace, Time
6 Warner must build brand loyalty by providing better
7 service at lower prices in order to gain market
8 share. If consumers perceive the service Time
9 Warner provides to be in any way inferior to that
10 of BellSouth, Time Warner will not be able to
11 attract and keep customers. This will be true even
12 if the perceived deficiency is caused by the
13 operating systems, practices, or interconnection
14 offerings of BellSouth. Without nondiscriminatory
15 and equal interconnection to BellSouth's networks
16 by Time Warner, customers are denied the very real
17 benefits of competition--technological innovation
18 and lower prices.

19

20 **Q: IN DECIDING INTERCONNECTION ISSUES, SPECIFICALLY**
21 **THE RATES, WHAT FACTORS SHOULD THE COMMISSION TAKE**
22 **INTO ACCOUNT TO RENDER A POLICY DECISION THAT**
23 **PROMOTES COMPETITION FOR CONSUMERS?**

24 **A: There are several factors:**

1 • First, the Commission should consider that the
2 only way Time Warner can reach all consumers
3 today is through BellSouth's ubiquitous
4 network. Although the LECs argue that having
5 to serve everyone everywhere is a burden, they
6 gain marketing benefits from a ubiquitous
7 network. (AT&T exploited a similar
8 circumstance in its advertising during the
9 early years of toll competition.) Because of
10 LEC ubiquity, every entrant that wants to do
11 business must interconnect with the LEC.

12 • Second, the Commission should consider the
13 impact of various rate structures and levels
14 on the development of competition and
15 promotion of customer choice and innovative
16 technology.

17
18 It is my understanding that the Commission's
19 objective is to ensure the availability of the
20 widest range of consumer choice at the best
21 price. The absolute best way to provide
22 consumers with superior, innovative local
23 exchange service and the lowest price is to
24 provide consumers with choices.

- 1 • Third, interconnection arrangements should
2 create incentives for competitive
3 infrastructure development. Sustainable
4 competition will only develop if competitors
5 do not have to rely exclusively on the LEC for
6 the provision of service. Interconnection
7 arrangements should encourage companies to
8 invest in plant and drive facilities-based
9 competition.
- 10 • Fourth, interconnection arrangements should
11 promote technological innovation. The
12 Legislature has directed the Commission to
13 exercise its jurisdiction to encourage not
14 only consumer choice of new providers, but
15 also to encourage the introduction of new
16 services. The price structure for
17 interconnection should not be tied to price
18 structures which force a new market entrant
19 such as Time Warner to subsidize the
20 inefficiencies of the incumbent LECs or
21 duplicate the incumbent LECs' pricing
22 structures.
- 23 • Fifth, interconnection rates should not
24 include a contribution to universal service.
25 Interconnection compensation arrangements

1 should promote the introduction of
2 competition. Universal service is oriented
3 toward protecting customers where competition
4 does not occur. Including a contribution to
5 universal service in interconnection rates
6 will discourage competition, therefore
7 resulting in a greater need for universal
8 service funding. These concepts are very
9 different, and should not be treated together.
10 • Sixth, service provider number portability is
11 necessary for Time Warner to compete. In
12 surveys, customers have told Time Warner that
13 they value retaining their local telephone
14 number. Remote call forwarding, the only
15 currently viable option for temporary number
16 portability, is an inferior technology. As a
17 result of some of the shortcomings of remote
18 call forwarding for temporary number
19 portability, Time Warner experiences longer
20 call set-up times, customer confusion, and
21 loss of the availability of some custom
22 calling features. These problems can be a
23 perceived drawback for consumers considering
24 using Time Warner.

1 Further, because toll calls lose their
2 identity when they arrive at the BellSouth
3 switch on the way to Time Warner's switch,
4 Time Warner would lose terminating access
5 charge revenues on calls to ported numbers.
6 The parties to the stipulation in the number
7 portability docket (No. 950737-TP) agreed that
8 compensation issues such as the loss of
9 terminating access charges to ported numbers
10 would be a subject of interconnection
11 negotiations. The Florida Commission should
12 set prices for interconnection which take into
13 account the service deficiencies and lost
14 revenue resulting from the use of remote call
15 forwarding for temporary number portability.
16 Having true number portability is essential to
17 Time Warner's being able to do business.

18

19 **Q: WHAT ARE THE APPROPRIATE RATE STRUCTURES,**
20 **INTERCONNECTION RATES, AND OTHER COMPENSATION FOR**
21 **THE EXCHANGE OF LOCAL TRAFFIC BETWEEN TIME WARNER**
22 **AND BELLSOUTH?**

23 **A:** The most appropriate arrangement for the exchange
24 of local traffic is a bill and keep arrangement.

1 Q: WHAT IS BILL AND KEEP?

2 A: Bill and keep is the local interconnection
3 arrangement most often employed between incumbent
4 LECs today in Florida. With bill and keep the two
5 networks connect at some agreed-upon point, and
6 each company bears the cost of its network, keeping
7 the revenues it generates, and not charging the
8 other company to use its network. Bill and keep is
9 a payment in kind for local interconnection, thus,
10 meeting the statutory requirement that it cover
11 costs.

12

13 Q: WHY DO YOU RECOMMEND A BILL AND KEEP ARRANGEMENT?

14 A: There are a number of reasons why I recommend a
15 bill and keep arrangement.

16 • First, a bill and keep arrangement is
17 reciprocal, thus acknowledging that all
18 participants are co-carriers. Competing local
19 exchange carriers should be treated as co-
20 carriers in light of the fact that the
21 necessity for interconnection is mutual once
22 an entrant signs up its first customer. In
23 this case, once Time Warner gains its first
24 customer, both BellSouth and Time Warner will
25 have a mutual need for services from the other

1 if each is to offer its customers the ability
2 to reach all telephone subscribers served by
3 the other local service provider.

4 • Second, bill and keep is certainly the least
5 cost method of compensation for terminating
6 traffic, and thus, is the approach most likely
7 to help drive local exchange rates as low as
8 possible for customers.

9 • Third, bill and keep will minimize the
10 opportunity for incumbent LECs to use the
11 compensation mechanism to impose unnecessary
12 and anti-competitive costs upon Time Warner.
13 Thus, it is the method least likely to result
14 in new, unnecessary barriers to entry.

15 • Fourth, bill and keep is neutral in terms of
16 both the technology and architecture that Time
17 Warner might choose to adopt. Opening the
18 local exchange to entry and developing local
19 exchange competition benefits Florida
20 residents with competition between different
21 technologies and different architectures. If
22 the compensation arrangements for terminating
23 traffic force new providers to choose inferior
24 technology or architecture, then a primary
25 benefit of entry will be reduced or

1 eliminated. Such a result would not be in the
2 public interest.

3

4 **Q: HOW DOES BILL AND KEEP ELIMINATE COSTS THAT ACT AS**
5 **A BARRIER TO ENTRY?**

6 A: Once there is local competition, the amount of
7 compensation owed to one network would be offset by
8 the amount owed to the other. Unless there are
9 significant distortions between networks, the
10 traffic between networks tends to be in balance
11 over time. BellSouth has proposed an access
12 charge-based structure, which requires measuring
13 terminating local traffic even though today it
14 cannot measure the termination of local exchange
15 traffic. Developing and implementing such a
16 measurement and billing system could greatly
17 increase the incremental cost of the switching
18 function for terminating traffic, which BellSouth
19 would likely pass along to its customers, or to
20 Time Warner. These costs add a significant and
21 unnecessary burden to local exchange service, when
22 it can only be justified at best for a brief period
23 of time.

1 Measuring also imposes other costs on local
2 exchange service, costs that would fall more
3 heavily on Time Warner than on BellSouth. Another
4 set of costs that would be imposed if compensation
5 for terminating local traffic were charged for on a
6 per minute or per message basis is the cost of
7 measuring equipment and establishing a billing
8 system for use by the entrants. Moreover, based on
9 the experience of IXCs, the billing for carrier
10 access charges poses additional unnecessary costs
11 in the form of auditing and verification. Carrier
12 access bills have been sufficiently in error that
13 interexchange companies have found it cost
14 effective to hire people full time to audit and
15 resolve billing disputes. Auditing costs are
16 ongoing and may exceed the benefit gained by the
17 additional revenues. These costs ultimately fall
18 on basic local exchange customers, with no benefit
19 to them.

20

21 **Q: WHY DID YOU REFER TO THE DEVELOPMENT OF MEASUREMENT**
22 **AND BILLING SYSTEMS FOR THE INCUMBENT LECS?**
23 **INCUMBENT LECS NOW MEASURE AND BILL FOR LOCAL**
24 **CALLS. WHY WOULD THEY HAVE TO DEVELOP ANY NEW**
25 **MEASUREMENT AND BILLING SYSTEMS?**

1 A: While it is true that BellSouth can and does
2 measure and bill for some, but not all of its local
3 exchange traffic, the measurement systems it uses
4 for that purpose cannot be used to measure
5 terminating local exchange traffic. The current
6 measurement systems were not developed with local
7 competition in mind and cannot distinguish today
8 between local and toll calls.

9

10 Q: **HAVE ANY OTHER STATES ADOPTED BILL AND KEEP?**

11 A: Yes. Bill and keep is gaining approval in key
12 states that have addressed interconnection issues.
13 The California PUC recently adopted interim local
14 competition rules that include bill and keep.
15 (*See, Initial Rules for Local Exchange Service*
16 *Competition in California, California Public*
17 *Utilities Commission, Docket No. R 95-04-043/I 95-*
18 *04-044, Section 7: Interconnection of LEC and CLEC*
19 *Networks for Termination of Local Traffic, page 10*
20 *[July 24, 1995].*) A Michigan Public Service
21 Commission decision also adopts bill and keep if
22 the traffic is in balance within five percent.
23 (*See, Opinion and Order, In the matter of the*
24 *application of City Signal, Inc., Case No. U-10647,*
25 *pages 19-30 [February 27, 1995].*) Recently the

1 Connecticut Commission also adopted bill and keep.
2 (See, DPUC Investigation into the Unbundling of the
3 Southern New England Telephone Company's Local
4 Telecommunications Network, State of Connecticut
5 Department of Public Utility Control, Docket No.
6 94-10-02, pages 63, 70, 71 [September 22, 1995].)
7 Also, the Washington Utilities and Transportation
8 Commission recently ordered bill and keep until a
9 database number portability solution is reached.
10 Thereafter, unless proven otherwise,
11 interconnection rates will be cost based. (See,
12 Fourth Supplemental Order Rejecting Tariff Filings
13 and Ordering Refiling; Granting Complaints, in
14 Part, Washington Utilities and Transportation
15 Commission; Docket Nos. UT-941464, UT-941465, UT-
16 950146, UT-950265, pages 29-33 [October 31, 1995].)
17 Also, the Texas Public Utility Regulatory Act of
18 1995, Title III, Subtitle J, Section 3.458,
19 requires that in the absence of a mutually agreed
20 compensation rate, bill and keep shall apply for a
21 period of nine months.

22

23 **Q: WHAT METHOD OF INTERCONNECTION HAS BELLSOUTH**
24 **OFFERED TO TIME WARNER?**

1 A: BellSouth has offered a per minute of use, access
2 charge-based scenario that differentiates the price
3 of interconnection depending on where Time Warner
4 interconnects. For example, if Time Warner
5 interconnects at a BellSouth tandem, the price for
6 Time Warner is higher than if Time Warner
7 interconnects at a BellSouth end office.

8

9 Q: WHAT IS WRONG WITH THIS APPROACH?

10 A: There are several problems with this approach:

- 11 • First, switched access charge levels in
12 Florida today are loaded with contribution.
13 Using switched access charges for local
14 interconnection is inconsistent with the need
15 for local interconnection rates to be
16 separated from universal service. High
17 interconnection rates will increase the risk
18 to new entrants such as Time Warner and hinder
19 their ability to compete.
- 20 • Second, a usage sensitive interconnection rate
21 measurement is administratively burdensome and
22 expensive, and makes no sense in light of data
23 from other states, which indicate that the
24 traffic flow back and forth between LEC and
25 ALEC networks tends to even out over a

1 relatively short time. Based on EAS traffic
2 studies, the same tends to be true in LEC
3 local interconnection arrangements today. The
4 unnecessary costs to Time Warner under a
5 usage-based compensation arrangement would
6 inhibit its competition in the local market.
7 • Third, BellSouth's interconnection proposal
8 reflects BellSouth's network architecture
9 inefficiencies. Time Warner should not be
10 forced to pay for the inefficiencies of
11 BellSouth's network design.

12
13 **Q: IF THE COMMISSION REJECTS A BILL AND KEEP**
14 **ARRANGEMENT, WHAT INTERCONNECTION ARRANGEMENT WOULD**
15 **YOU RECOMMEND?**

16 **A:** If the Commission rejects a bill and keep approach,
17 I recommend an interconnection charge that is
18 equally applied to BellSouth and Time Warner in a
19 nondiscriminatory fashion and which requires that
20 BellSouth, the holder of the bottleneck monopoly,
21 pass an imputation test. Imputation ensures that
22 BellSouth cannot use its bottleneck monopoly
23 facilities to impose rates on its competitors that
24 are not also imposed on BellSouth. For example,
25 the use of switched access rates for termination of

1 local traffic instead of a bill and keep approach
2 would create an intolerable price squeeze. The
3 only way for the Commission to avoid a price
4 squeeze and not preclude competitive entry would be
5 to require BellSouth to impute into its local
6 exchange rates the same rates it charges Time
7 Warner. I would like to reiterate my
8 recommendation to institute bill and keep for local
9 interconnection. The value of this compensation
10 arrangement is reflected in its adoption by states
11 throughout the country.

12

13 **Q: IF THE COMMISSION SETS RATES, TERMS, AND CONDITIONS**
14 **FOR INTERCONNECTION BETWEEN TIME WARNER AND**
15 **BELLSOUTH, SHOULD BELLSOUTH TARIFF THE**
16 **INTERCONNECTION RATE(S) OR OTHER ARRANGEMENTS?**

17 **A:** Yes. Tariffing implies a generally available
18 offering which can be purchased by like customers
19 under the same circumstances. Tariffs are
20 appropriate for monopoly services such as
21 interconnection.

22

23 **Q: HOW SHOULD THE NETWORKS OF TIME WARNER AND**
24 **BELLSOUTH BE INTERCONNECTED PHYSICALLY?**

1 A: To protect consumers and encourage the development
2 of competition, physical interconnection should be
3 done in the most efficient manner. To this end,
4 interconnection should be permitted wherever
5 reasonably possible, rather than being arbitrarily
6 limited. In addition, signaling networks need to
7 be interconnected and need to pass sufficient
8 signaling information so that all of the services
9 possible with today's technology can be offered to
10 all customers.

11
12 Based on the types of interconnection available
13 today, interconnection is possible at several
14 points. For example, interexchange companies
15 interconnect with the LEC either at their own
16 points of presence or at the switch of the LEC.
17 Incumbent LECs often interconnect with each other
18 at a "meet point" (frequently at a company
19 boundary), which is a division of ownership of a
20 trunk connecting two switches owned by different
21 companies. In addition, I recommend that
22 collocation be made available at a reasonable cost.
23 In this context it is reasonable that Time Warner
24 should have the flexibility to interconnect at a
25 BellSouth end office, tandem, or other mutually

1 agreed upon point in the network--whichever is more
2 efficient.

3

4 **Q: BELLSOUTH HAS PROPOSED RATES WHICH DIFFERENTIATE**
5 **THE PRICE BETWEEN CONNECTING AT A BELLSOUTH TANDEM**
6 **VERSUS AT A BELLSOUTH END OFFICE. WHAT EFFECT DOES**
7 **THIS HAVE ON TIME WARNER?**

8 **A:** BellSouth, like other incumbent LECs, has a network
9 that has evolved over many years to become what it
10 is today--a series of end offices and tandems
11 interconnected in various ways (and not necessarily
12 efficiently). Most customers are served by
13 switches which are relatively close to the
14 customers. If the network were redesigned today
15 from scratch, its design would most likely be more
16 efficient.

17

18 Differential rates for tandems versus end offices
19 do not encourage efficient network design. For
20 example, assume that Time Warner places only a
21 single switch, using longer "loop" plant to reach
22 its customers than does BellSouth. The total cost
23 to Time Warner for terminating a BellSouth local
24 call may or may not be less than BellSouth's cost
25 for terminating a Time Warner local call. Time

1 Warner may have more loop costs, and less switching
2 and transport costs than BellSouth.

3
4 If the interconnection rate structure is designed
5 so that the only costs Time Warner can recover in
6 its local interconnection tariff are switching and
7 interoffice transport costs, Time Warner will be
8 handicapped relative to BellSouth, and may be
9 prevented from recovering all of its costs
10 regardless of whether those costs are less than or
11 equal to BellSouth's costs. Particularly in the
12 early stage of local competition, Time Warner will
13 mostly be terminating calls from customers of
14 BellSouth rather than from its own customers.

15
16 Because of Time Warner's inability to recover its
17 costs using its preferred architecture, it will
18 have an incentive to try to mirror the architecture
19 of BellSouth, even if this were not the most
20 efficient architecture. Such a result would be
21 very bad for the public, because it would reduce
22 the dynamic efficiency benefits from entry. Time
23 Warner should not be constrained by BellSouth's
24 rate design from developing its network as
25 efficiently as possible.

1 Q: HOW DO BELLSOUTH'S PROPOSED COLLOCATION RATES
2 AFFECT TIME WARNER?

3 A. BellSouth's proposed rates charged for collocation
4 have the ability to create an effective barrier to
5 entry for Time Warner. Time Warner understands
6 that the expenditures it makes for entry into the
7 telecommunications market cannot easily be
8 recovered should its market entry fail. However,
9 the greater the level of investment that would be
10 unrecoverable if entry were unsuccessful (potential
11 loss for the investor), the higher the barrier to
12 entry. If the potential loss is higher, Time
13 Warner's investors will expect greater returns to
14 make the investment a reasonable risk. The higher
15 expected returns will increase the cost of doing
16 business.

17
18 For example, collocation-related investment for
19 Time Warner includes the capital required to build
20 to BellSouth central office, equipment costs, and
21 the BellSouth rate elements applied to Time Warner
22 for collocation (floor space, power, cabling,
23 conduit, etc.). The costs for collocation are
24 either nonrecurring or monthly recurring, and as a
25 result are nonrecoverable if market entry does not

1 succeed. To encourage competition, the rates for
2 collocation should be as close to cost as possible.

3

4 **Q: HOW SHOULD NETWORK MANAGEMENT AND DESIGN BE HANDLED**
5 **BETWEEN BELLSOUTH AND TIME WARNER?**

6 A: BellSouth and Time Warner should cooperatively work
7 to install and maintain reliable interconnected
8 telecommunications networks. Such cooperation
9 benefits both companies and their respective
10 customers. A cooperative effort will include, but
11 not be limited to, the exchange of appropriate
12 information concerning network changes that impact
13 services to the local service provider, maintenance
14 contact numbers, and escalation procedures. To
15 ensure that service quality is maintained, the
16 Commission should develop an expedited mediation
17 and resolution procedure, and should fine companies
18 which behave in an anticompetitive manner.

19

20 **Q: WHAT ARE THE IMPLICATIONS FOR THE ASSIGNMENT OF NXX**
21 **CODES?**

22 A: The North American Numbering Plan (NANP) Guidelines
23 used by BellSouth today do not allow Time Warner to
24 acquire more than one NXX code prior to the
25 exhaustion of the code assigned to Time Warner's

1 first switch. This is true, even if more NXX codes
2 were needed to provide the detailed billing
3 information necessary to distinguish local and toll
4 calls. BellSouth today is the NANP administrator
5 for its region. The consensus in the industry is
6 the NANP administration function should be
7 relegated from the incumbent LECs to a neutral
8 administrator. There will be a significant time
9 lag before this occurs. This Commission should be
10 cognizant of the ability of BellSouth to
11 disadvantage competition by using the NANP
12 Guidelines as an excuse to thwart the entry of Time
13 Warner. Time Warner needs multiple NXX codes for
14 purposes of intercompany compensation.

15
16 In those environments where new entrants are
17 required to abide by the existing incumbent LEC
18 exchange boundaries (which dictate whether a call
19 is currently considered local or toll) for purposes
20 of intercompany compensation, there are important
21 implications regarding the number of NXX codes
22 required by, and allocated to, every facilities-
23 based ALEC. By way of assisting in the
24 understanding of the implications of this issue, I
25 have attached, as Exhibit JM-2, a series of

1 schematics showing how it would be impossible to
2 properly characterize a call as local or toll
3 unless Time Warner is permitted to acquire more
4 than one NXX code. To the extent this Commission
5 requires a usage-based intercompany compensation
6 plan which maintains the current distinction
7 between local versus toll, this Commission should
8 also not tolerate BellSouth delaying or denying the
9 assignment of NXX codes, which Time Warner would
10 legitimately require for proper tracking of usage
11 for intercompany compensation.

12

13 Time Warner recognizes the requirement for multiple
14 NXXs risks the potential for NXX code exhaust. A
15 solution to this problem is LATAwide intercompany
16 compensation. This would eliminate the need to
17 distinguish between existing local and toll calls
18 for intercompany compensation, and would provide
19 adequate flexibility to Time Warner for developing
20 its marketing plans outside of BellSouth's market
21 strategy.

22

23 **Q: HOW DOES REMOTE CALL FORWARDING FOR NUMBER**
24 **PORTABILITY AFFECT TIME WARNER'S ABILITY TO COLLECT**
25 **ACCESS REVENUES?**

1 A: All incoming calls to Time Warner customers who
2 keep their BellSouth local telephone numbers would
3 go through the BellSouth tandem and/or the end
4 office containing the old telephone number. When a
5 toll call comes to that ported number from an IXC
6 or another LEC, it goes to the BellSouth end
7 office, is translated to the Time Warner office
8 number, and continues to that Time Warner customer.
9 Normally on terminating toll calls, the local
10 service provider would receive access charge
11 revenues from the toll provider. With a ported
12 number, however, the call loses its identity as a
13 toll call when it gets to BellSouth central office,
14 even though it continues on to Time Warner's
15 office. If nothing is done to compensate for this,
16 BellSouth would pay Time Warner according to
17 whatever local interconnect arrangement is in
18 effect, and Time Warner would lose its switched
19 access charge revenues. The loss of these revenues
20 impedes competitive entry: not only does it
21 produce revenue losses for Time Warner, it also
22 provides an undeserved windfall to BellSouth.
23
24 The solution to restoring these revenues is for
25 BellSouth to be able to measure this traffic, or

1 develop a surrogate for estimating it, and to remit
2 the correct switched access charges to Time Warner.
3 If this cannot be accomplished, an alternative is
4 to reduce the price for some other element of
5 interconnection to offset BellSouth's revenue
6 windfall.

7

8 **Q: WHAT ARE THE APPROPRIATE TECHNICAL AND FINANCIAL**
9 **ARRANGEMENTS WHICH SHOULD GOVERN INTERCONNECTION**
10 **BETWEEN TIME WARNER AND BELLSOUTH FOR THE DELIVERY**
11 **OF CALLS ORIGINATED AND/OR TERMINATED FROM CARRIERS**
12 **NOT DIRECTLY CONNECTED TO TIME WARNER'S NETWORK?**

13 **A:** For intraLATA calls (both local and toll), Time
14 Warner should be allowed to transmit traffic
15 through the BellSouth tandems to other
16 telecommunications provider end offices also
17 subtending the BellSouth tandems (for example,
18 cellular company, other ALEC, or IXC). Further,
19 BellSouth should allow two collocated ALECs to
20 direct connect within the BellSouth tandem, without
21 going through the tandem switch (a "hotel"
22 connection), charging only for rates applied for
23 collocation, and not for switched access. It is
24 not efficient to exhaust BellSouth's tandem switch
25 prematurely, nor to impose a switching cost on

1 other providers when no switching is needed. This
2 would encourage efficient network utilization and
3 encourage competition. On local calls, bill and
4 keep should still apply.

5
6 On intraLATA toll calls, if a LATAwide termination
7 structure is not used, the intraLATA Modified
8 Access Based Compensation Plan (MABC) used between
9 LECs in Florida today should apply. Under the MABC
10 plan, the originating LEC bills its end user for
11 the toll call, and pays the terminating LEC
12 switched access charges. Where another LEC serves
13 as an intermediary, the intermediary LEC is paid
14 tandem switching and transport as well.

15
16 On interLATA toll calls, IXC traffic exchanged
17 between the BellSouth tandem and Time Warner should
18 be handled using industry Meet Point Billing
19 procedures. This acknowledges the participation of
20 each local service provider in the provision of
21 access.

22
23 **Q: WHAT ARE THE APPROPRIATE TECHNICAL AND FINANCIAL**
24 **REQUIREMENTS FOR THE EXCHANGE OF INTRALATA 800**
25 **TRAFFIC WHICH ORIGINATES FROM A TIME WARNER**

1 **CUSTOMER AND TERMINATES TO AN 800 NUMBER SERVED BY**
2 **OR THROUGH BELLSOUTH?**

3 A: Competition will only develop if the exchange
4 procedure recognizes the role of both companies in
5 completing the call. The company originating the
6 800 call should send the originating call record to
7 the 800 number owner in order for it to bill the
8 end user. 800 calls originating from Time Warner
9 should be routed to its signal control point (SCP)
10 where a query is launched to the service switching
11 point (SSP). A bill record should be generated by
12 the SSP provider which will be sent to the 800
13 number owner, so it can bill the 800 end user
14 customer. Time Warner should bill BellSouth
15 originating switched access charges and an 800
16 query charge. Depending on the contractual
17 arrangement, companies may also charge for record
18 provisioning.

19

20 **Q: WHAT ARE THE APPROPRIATE TECHNICAL ARRANGEMENTS FOR**
21 **THE INTERCONNECTION OF TIME WARNER'S NETWORK TO**
22 **BELLSOUTH'S 911 PROVISIONING NETWORK SUCH THAT TIME**
23 **WARNER'S CUSTOMERS ARE ENSURED THE SAME LEVEL OF**
24 **911 SERVICE AS THEY WOULD RECEIVE AS A CUSTOMER OF**
25 **BELLSOUTH?**

1 A: Public safety concerns dictate that Time Warner's
2 customers must have the same level of access to
3 reliable 911 service as Southern Bell's customers.
4 A high level of 911 service can only be achieved
5 through a cooperative effort of the local 911
6 coordinator, the incumbent 911 tandem provider
7 (BellSouth), and Time Warner. Thus, BellSouth must
8 configure its 911 tandem to recognize industry
9 standard 911 signaling for the traffic originating
10 from Time Warner's switches. BellSouth should
11 designate a single point of contact for
12 coordination of installing, testing, and ongoing
13 911 and E911 operations. All parties should work
14 together toward deploying redundant, reliable,
15 standard facilities. To maintain standardization,
16 Time Warner should be able to utilize the same type
17 of facilities as are in place from other end
18 offices. Resolving alternate routing and overflow
19 situations should also be a cooperative effort
20 between Time Warner and BellSouth.

21
22 Also, BellSouth should be required to provide Time
23 Warner with reference data to assist in the
24 configuration of interconnected dedicated 911
25 trunks and to ensure that 911 calls are correctly

1 routed. This should be available to all ALECs,
2 LECs, and BellSouth, on a nondiscriminatory tariff
3 basis. BellSouth should also provide Time Warner a
4 list consisting of each county in Florida that
5 subscribes to 911 and E911, and the E911 conversion
6 date for those counties converting. Further,
7 BellSouth should offer the same level of priority
8 restoration to Time Warner's 911 trunks as it does
9 its own; BellSouth should provide information on
10 scheduled outages that would affect 911 service at
11 least 48 hours in advance; and BellSouth should
12 notify Time Warner immediately if an unscheduled
13 outage occurs.

14

15 **Q: WHAT PROCEDURES SHOULD BE IN PLACE FOR THE TIMELY**
16 **EXCHANGE AND UPDATING OF TIME WARNER CUSTOMER**
17 **INFORMATION FOR INCLUSION IN APPROPRIATE E911**
18 **DATABASES?**

19 **A:** To satisfy critical public safety concerns,
20 BellSouth and Time Warner should operate according
21 to the same standards. BellSouth should be
22 required to cooperate with Time Warner to ensure
23 that the Time Warner's customer data is in the
24 proper format for inclusion in the 911 Automatic
25 Location Identification (ALI) database. Customer

1 data, specifically the street addresses, are edited
2 against a database referred to as the master street
3 address guide (MSAG) to ensure the uniform listing
4 of street addresses. The MSAG provides emergency
5 personnel a consistent reference for every address
6 which may call for emergency service. Thus,
7 BellSouth must either make the MSAG available to
8 Time Warner, or cooperate in the editing of Time
9 Warner's customer data against the MSAG for
10 inclusion in the ALI database(s). BellSouth should
11 also be required to permit Time Warner access to
12 the same mechanized systems BellSouth uses to edit
13 customer data against the MSAG. This should be
14 available as soon as possible.

15

16 **Q: HOW SHOULD REPAIR SERVICE ARRANGEMENTS BE**
17 **DEVELOPED?**

18 **A:** In the new multi-provider environment, each
19 participating company must notify other telephone
20 companies of outages and troubles. Otherwise, it
21 would be impossible to isolate and clear a problem
22 in one part of a multi-provider network. To this
23 end, BellSouth should develop mechanized systems
24 for network monitoring to which other providers
25 have access. Further, notification and repair

1 procedures in the event of outages must be
2 coordinated between BellSouth and Time Warner. To
3 ensure competition, Time Warner's high quality
4 service must not suffer because of a lack of
5 adequate repair procedures.

6

7 **Q: WHAT ARE THE APPROPRIATE TECHNICAL REQUIREMENTS FOR**
8 **OPERATOR TRAFFIC FLOWING BETWEEN TIME AND BELL SOUTH**
9 **INCLUDING BUSY LINE VERIFICATION AND EMERGENCY**
10 **INTERRUPT SERVICES?**

11 **A:** There are three scenarios for Time Warner to
12 provide operator services. Time Warner could self-
13 provide, hire a third party vendor, or hire
14 BellSouth. In either the first or second scenario,
15 Time Warner's only connection to BellSouth would be
16 an inward trunk from Time Warner's local switch to
17 the BellSouth operator services switch. This
18 connection would enable a Time Warner operator to
19 contact a BellSouth operator when a local Time
20 Warner customer requires busy line verify/interrupt
21 of a BellSouth line. Conversely, if a BellSouth
22 subscriber has a need to verify/interrupt a Time
23 Warner line, an inward trunk arrangement needs to
24 be made available to Time Warner's operator service
25 provider. Time Warner's operator service provider

1 should be able to verify/interrupt Time Warner
2 lines without connecting to BellSouth. If Time
3 Warner selects BellSouth as the provider, operator
4 services trunking will be required between Time
5 Warner's local switch and the BellSouth operator
6 switch to perform all operator service functions.
7 Operator services are one aspect of a full array of
8 local telephone services which new entrants such as
9 Time Warner must be able to offer if they are to
10 compete with LECs such as BellSouth.

11

12 **Q: WHAT ARE THE APPROPRIATE ARRANGEMENTS FOR THE**
13 **PROVISION OF DIRECTORY ASSISTANCE SERVICES AND DATA**
14 **BETWEEN TIME WARNER AND BELLSOUTH?**

15 **A:** A comprehensive directory assistance database
16 benefits everyone--BellSouth, Time Warner, and end
17 user consumers. For the customers' benefit,
18 BellSouth should be required to carry Time Warner's
19 listings (including updates) in its DA database at
20 no charge to Time Warner. Such a charge would
21 limit competition.

22

23 Directory Assistance can be provided by entities
24 other than BellSouth. Thus, BellSouth should be
25 required to offer at least three options for the

1 provision of directory assistance service. First,
2 BellSouth should provide a resale option, where
3 Time Warner would simply utilize BellSouth's
4 directory assistance service for Time Warner's
5 customers. Second, BellSouth should provide a
6 database access option. Under this arrangement,
7 Time Warner would use its own operators, who would
8 be able to "access" the BellSouth database to
9 obtain listing information. Third, BellSouth
10 should provide a database purchase option at an
11 appropriate cost-based price. These options will
12 allow Time Warner to choose the most efficient
13 arrangement for the provision of directory
14 assistance service.

15

16 **Q: UNDER WHAT TERMS AND CONDITIONS SHOULD BELL SOUTH BE**
17 **REQUIRED TO LIST TIME WARNER'S CUSTOMERS IN ITS**
18 **UNIVERSAL WHITE AND YELLOW PAGES DIRECTORIES AND TO**
19 **PUBLISH AND DISTRIBUTE THESE DIRECTORIES TO TIME**
20 **WARNER'S CUSTOMERS?**

21 **A:** A unified white pages directory is of great value
22 to consumers, businesses, and local service
23 providers. Time Warner is willing to provide its
24 customer listings to BellSouth. In exchange for
25 providing this valuable asset, BellSouth should

1 provide a single line white page listing for Time
2 Warner's customers at no charge to either Time
3 Warner or the end user. BellSouth will benefit
4 from the additional Time Warner listing by having a
5 comprehensive directory to sell to directory
6 providers.

7

8 For business customers, BellSouth should also
9 provide a single line yellow page listing at no
10 charge as well. Just as Time Warner will do,
11 BellSouth should be required to ensure accuracy and
12 timeliness in these listings. Additional revenues
13 will be realized when BellSouth sells its listings
14 to its yellow pages affiliate. Also, BellSouth
15 will have the opportunity for additional revenues
16 by selling yellow page ads to Time Warner's
17 customers.

18

19 BellSouth should also provide a user
20 guide/informational insert to Time Warner to be
21 published in both the white pages information
22 section and the yellow pages sections, at no charge
23 to Time Warner. The purpose of the informational
24 section of the phone book is to assist customers
25 with their telephone services, in a readily

1 accessible manner. For this information to be
2 complete and for the telephone book to not provide
3 BellSouth an undeserved market advantage,
4 information on Time Warner (and other ALECs) should
5 be included.

6
7 BellSouth should be required to provide and deliver
8 directories to all customers (of both BellSouth and
9 Time Warner) in the same manner and recycle the
10 directories at no charge to Time Warner. Any costs
11 BellSouth incurs for these functions will be
12 recovered through directory advertising BellSouth
13 gains from Time Warner's business customers.

14

15 **Q: WHAT ARE THE APPROPRIATE ARRANGEMENTS FOR THE**
16 **PROVISION OF BILLING AND COLLECTION SERVICES**
17 **BETWEEN TIME WARNER AND BELLSOUTH, INCLUDING**
18 **BILLING AND CLEARING CREDIT CARD, COLLECT, THIRD**
19 **PARTY CALLS AND AUDIOTEXT CALLS?**

20 **A:** There are numerous intercompany arrangements
21 necessary for the proper billing of services in a
22 multiple provider environment, most of which are
23 already in existence between BellSouth and other
24 telecommunications providers today. All of the
25 arrangements benefit not only BellSouth's

1 customers, but also Time Warner (and other
2 providers') customers. For example, Time Warner
3 must be able to validate credit card or third party
4 calls where the customer is a BellSouth customer.
5 This is accomplished through a line identification
6 database (LIDB), to which Time Warner must have
7 access under reasonable terms and conditions. For
8 efficiency's sake, BellSouth should treat Time
9 Warner the way it treats other LECs today in the
10 clearing of such fund transfers, through standard
11 industry procedures and systems.

12

13 **Q: WHAT ARRANGEMENTS ARE NECESSARY TO ENSURE THE**
14 **PROVISION OF CLASS/LASS SERVICES BETWEEN TIME**
15 **WARNER'S AND BELL SOUTH'S NETWORKS?**

16 **A:** To ensure fully functional networks between Time
17 Warner and BellSouth, Time Warner's point codes
18 (end office addresses) need to be translated in all
19 BellSouth end offices that support CLASS/LASS
20 features. Likewise, the point code of BellSouth
21 end offices need to be translated in Time Warner's
22 switch. In addition, both STP pairs (Time Warner's
23 and BellSouth's) must be translated to allow an
24 exchange of messages between end offices. Finally,

1 BellSouth should offer unbundled elements of its
2 SCP for use by Time Warner.

3

4 **Q: PLEASE SUMMARIZE YOUR TESTIMONY.**

5 A: Time Warner has petitioned the Commission because
6 negotiations have not yet been fruitful. Although
7 Time Warner and BellSouth remain in earnest
8 negotiation, Time Warner must have certain
9 resolution of all interconnection issues in order
10 to enter the market. Further, Time Warner requires
11 that a complaint process be available to resolve
12 prospective issues that may develop as details are
13 worked out and networks are actually connected.

14

15 For Time Warner to have a reasonable chance to
16 compete so that consumers receive the benefits of
17 local competition, Time Warner believes that the
18 Commission should adopt a bill and keep approach
19 for local interconnection. Bill and keep
20 represents payment in-kind and thus covers
21 BellSouth's cost for interconnection.

22

23 Further, Time Warner requests a rate structure that
24 encourages the following:

25 • efficient network design by Time Warner

- 1 • options for interconnection points by
- 2 Time Warner in BellSouth's network
- 3 • cooperative network management and design
- 4 by Time Warner and BellSouth
- 5 • access for Time Warner to adequate
- 6 numbering resources
- 7 • compensation to Time Warner for
- 8 terminating access charges to ported
- 9 numbers
- 10 • tariffing of interconnection rates by
- 11 BellSouth
- 12 • options for access by Time Warner to
- 13 BellSouth's operator services
- 14 • input of directory assistance and
- 15 directory listings by BellSouth provided
- 16 at no charge to Time Warner
- 17 • options by Time Warner for the provision
- 18 of directory assistance from BellSouth
- 19 • free white page/yellow page listings in
- 20 BellSouth directories for Time Warner
- 21 customers
- 22 • an information page for Time Warner in
- 23 the BellSouth directory

- 1 • directories provided and distributed free
2 of charge to Time Warner customers by
3 BellSouth
- 4 • directory affiliates of BellSouth
5 marketing their yellow pages to Time
6 Warner's customers;
- 7 • equal priority notification on outages by
8 BellSouth and Time Warner
- 9 • cooperative 911 network arrangements and
10 database access between BellSouth, Time
11 Warner, and the 911 coordinator, with
12 equal prioritization and notice in the
13 case of outages.

14 In short, the Commission should develop a structure
15 that encourages competition by making Time Warner's
16 cost to do business viable.

17

18 **Q: DOES THIS COMPLETE YOUR TESTIMONY?**

19 **A: Yes, it does.**

SUMMARY

A Professional with 8 years experience and increasing responsibility in creating, managing and facilitating market assessments and business development for telecommunications projects. This hands-on approach to implementing effective research and feasibility studies includes mastery of:

Analysis and Planning
Meeting demanding time and performance requirements
Developing innovative, cost saving procedures
Communicating effectively at all levels
Building effective teams

SUCCESSSES**Managerial**

- Created and directed team of routing engineers and analysts who developed business plans and networks for 23 cities.
- Redesigned the interconnection process, reducing the collocation interval from 12 months to 90 days or less.
- Developed corporate market assessment process.

Financial

- Decreased costs of carrier interconnection through negotiations by \$100,000.
- Developed qualitative analysis for operational and capital budgets.

Innovative

- Developed non-linear approaches to market analysis which reduced time to implementation.
- Created analysis of revenue, expense and sales raising understanding of resource relationships which increased annual revenues.
- Increased productivity of InterExchange Carrier Interconnection through effective process development.

**BUSINESS
EXPERIENCE**

1993 to
Present

TCG, Denver, Colorado
Network Planning & Interconnection
Manager

Create and manage the TCG InterExchange Carrier Interconnection process nationally. Liaison among long distance carriers and TCG cities. Evaluate and forecast capacity requirements. Negotiate nationwide carrier contracts.

Network Development

Manager

Developed market assessments and network designs for new cities. Created business plans with capital of \$9-22 Million which met board approval. Liaison among corporate clientele, including cable companies and long distance carriers. Managed technical and non-technical individuals.

BUSINESS EXPERIENCE

1990 to 1993 TCI, Denver, Colorado
**Business Development
 Senior Analyst**
 Managed planning and execution of TCG market research projects for new access cities and acquisitions. Assessed feasibility of recommendations for existing cities. Critical assessment of VCTV project, research for healthcare and education over broadband networks.

**Business Development
 Corporate System Administrator**
 Developed fair market pricing strategies and created operational budgets in excess of \$1 Million. Audited and clarified global carrier accounts. Provided implementation support and training for new city field offices.

**Marketing
 Corporate Customer Service Specialist**
 Developed customer service program and pricing data base. Analysed product and pricing of switched and common carrier telecommunications services. Facilitated customer surveys, promotional campaigns, materials and events for business to business services.

1987 to 1990 US WEST Communications, Denver, Colorado
**Small Business and Home Personal Services
 Market Analyst**
 Performed statistical and results analysis for telemarketing center of revenue, expense, sales, product projections and forecasting.

**Small Business and Home Personal Services
 Telecommunications Specialist**
 Sold business lines and trunks, foreign exchange lines, WATS, 800, Centron, remote call forwarding, custom calling services, voice mail and information services. Evaluated case study of Hispanic market, test marketing for voice mail and custom ringing services.

EDUCATION

University of Denver, Denver, Colorado
 Bachelor of Science in Business Administration, 1977

**1994 to
 Present** Masters of Science in Telecommunications

TECHNICAL TRAINING

#5 Electronic Switching System Architecture
 #5 Electronic Switching System ISDN Overview

**Exhibit JM-2
to the Testimony of
Joan McGrath
On behalf of Time Warner Communications of Florida**

Narrative to Exhibit JM-2

Base Schematic "A"

The TWC franchise area (also assumes this area will be the footprint for switched services) is bounded by the solid heavy line. The theoretical NXX code of 473 has been assigned to the TWC switch in this example.

Existing LEC A (usually an RBOC) exchange area is bounded by the dotted lines, and in this example assumes two exchanges are owned by LEC A, with any traffic between the two exchanges considered as toll traffic.

Please note that LEC A owns the tandem which serves its own end offices and those of LEC B, and which would also serve TWC's switch.

Existing LEC B (usually a smaller independent LEC, or ILEC) exchange area is bounded by the dotted/dashed line, and this diagram assumes one exchange is owned by LEC B, with any traffic between it and the 576 switches of LEC A exchanges considered as EAS traffic and with any traffic between it and the 331 switch of LEC A considered as toll traffic.

Base Schematic "B"

This diagram depicts the overlap areas of TWC's footprint on the existing exchange boundaries of LEC A and LEC B.

Diagram 1

TWC customer B places a call to LEC A customer D. Both customers lie within the existing exchange boundary of LEC A. The call can be identified as a local call and local traffic intercompany compensation applies.

Diagram 2

Customer A places a call to Customer B.

- Before ALEC entry, LEC customer A would pay a toll charge to call LEC customer B.
- After ALEC entry, TWC customer A places a call to TWC customer B, both of whom lie within TWC's franchise and are switched entirely within TWC's system. TWC may, or may not choose to charge toll to customer A. No intercompany compensation involved.

Narrative to Exhibit JM-2 (continued)

Diagram 3

TWC Customer B places a call to LEC Customer C. Assumes TWC has only one NXX code = 473.

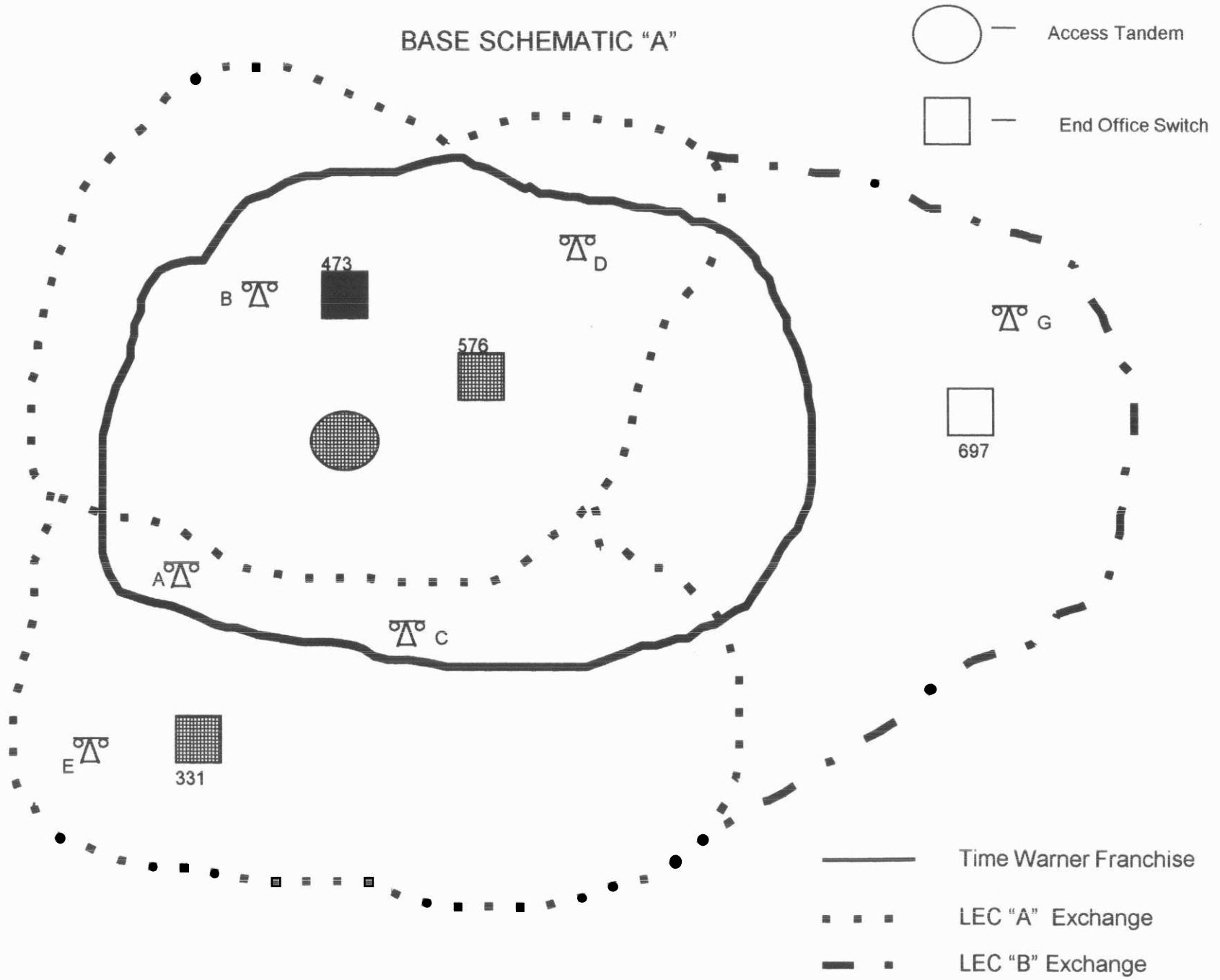
- Before ALEC entry, LEC customer B (NXX=576) would pay a toll charge to call customer C (NXX=331).
- After ALEC entry, TWC customer B (NXX=473) places a call to LEC customer C, and the call is handled by both TWC & LEC A.
- LEC A would charge full intrastate access rates to TWC to complete the call if TWC is acting as a toll carrier for Customer B. If TWC is not acting as a toll carrier, then both TWC and LEC A would charge full intrastate access rates to the toll Carrier.
- Under reciprocity, TWC would charge full intrastate access rates to LEC A for a call from customer C to customer A if LEC A is acting as a toll carrier for Customer C. If LEC A is not acting as a toll carrier, then both TWC and LEC A would charge full intrastate access rates to the toll Carrier.

Diagram 4

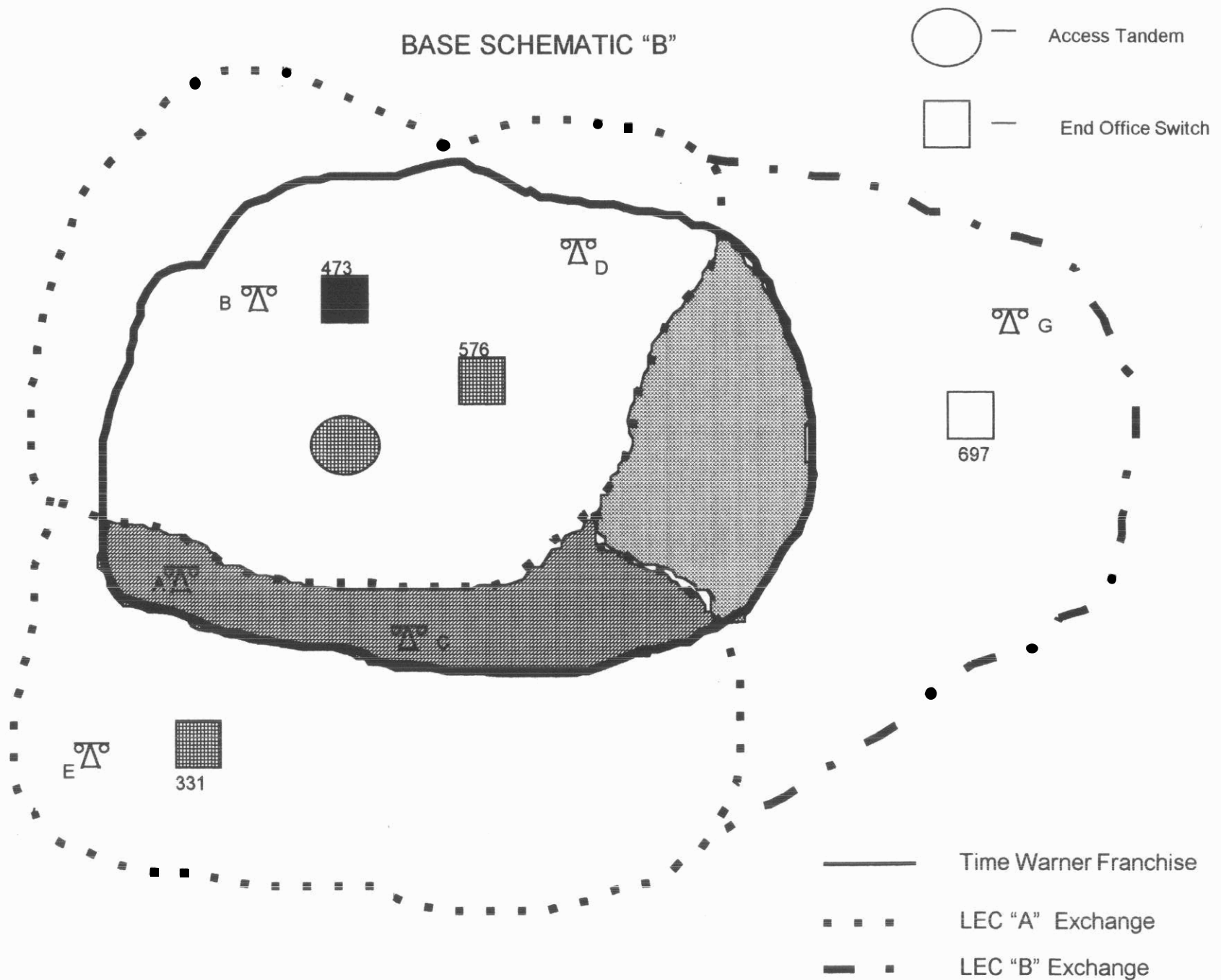
TWC Customer A places a call to LEC Customer C. Assumes TWC has two NXX codes: 473 & 235.

- Before ALEC entry, LEC customer A (NXX=331) would pay a local charge to call customer C (NXX=331).
- After ALEC entry, TWC customer A places a call to LEC customer C, both of whom lie within TWC's franchise, and the call is handled by both TWC & LEC A. Under the default paradigm of the LECs, LEC A would want to charge full intrastate access rates to TWC because it could not determine if the call was originating at TWC customer B (which would have been a toll call), or at TWC customer A (which would have been a local call).
- Assigning an NXX code of 235 to TWC customers lying within the shaded area allows the incumbent LEC's recording and billing systems to know that this is a local call, and that local traffic intercompany compensation applies.
- Under reciprocity, TWC would charge local traffic intercompany compensation rates to LEC A for a call from customer C to customer A.

BASE SCHEMATIC "A"



BASE SCHEMATIC "B"



○ — Access Tandem

□ — End Office Switch

— Time Warner Franchise

· · · LEC "A" Exchange

- · LEC "B" Exchange

Diagram 1

TWC serves Customer B
LEC A serves Customer D

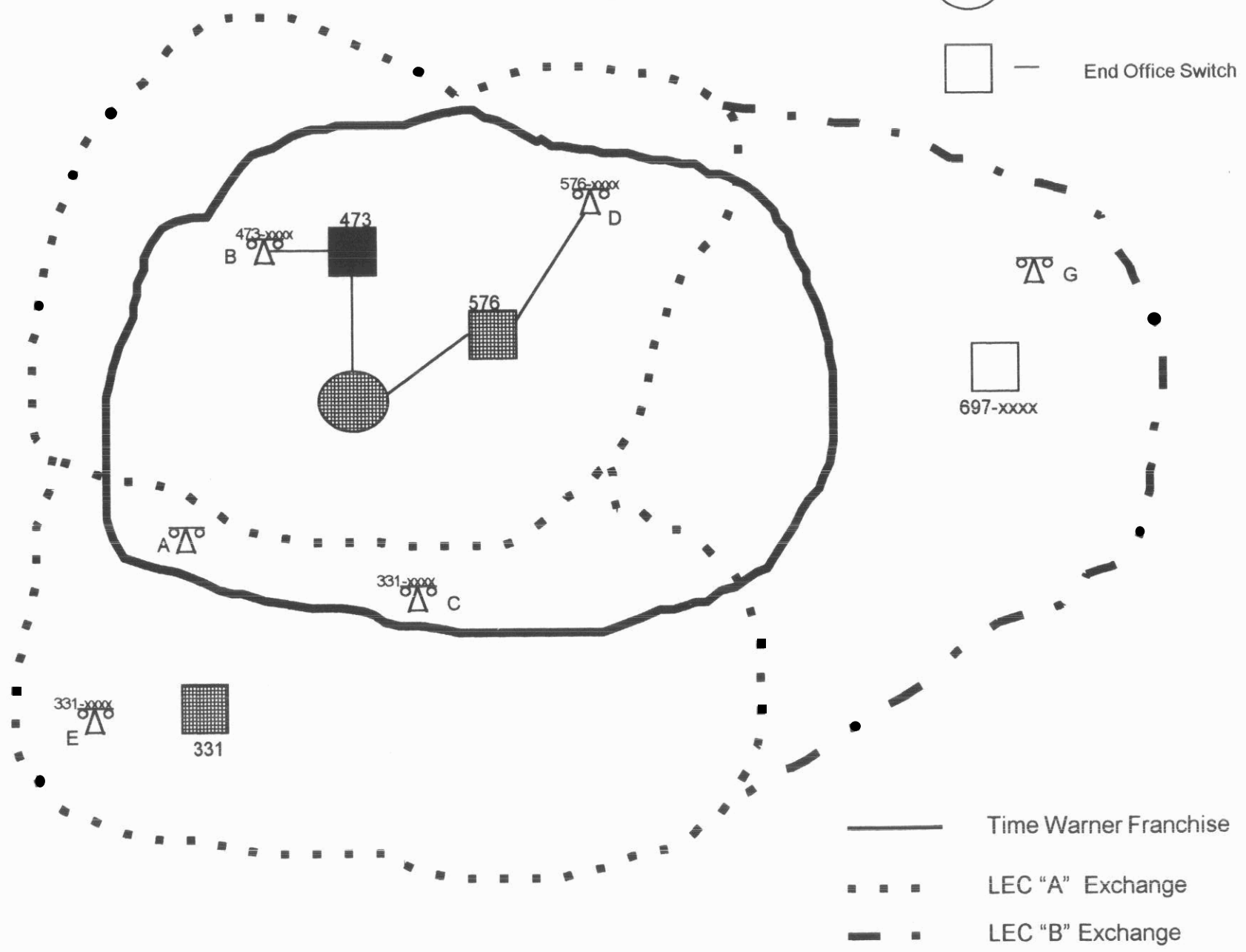


Diagram 2

TWC serves both Customer B and Customer A

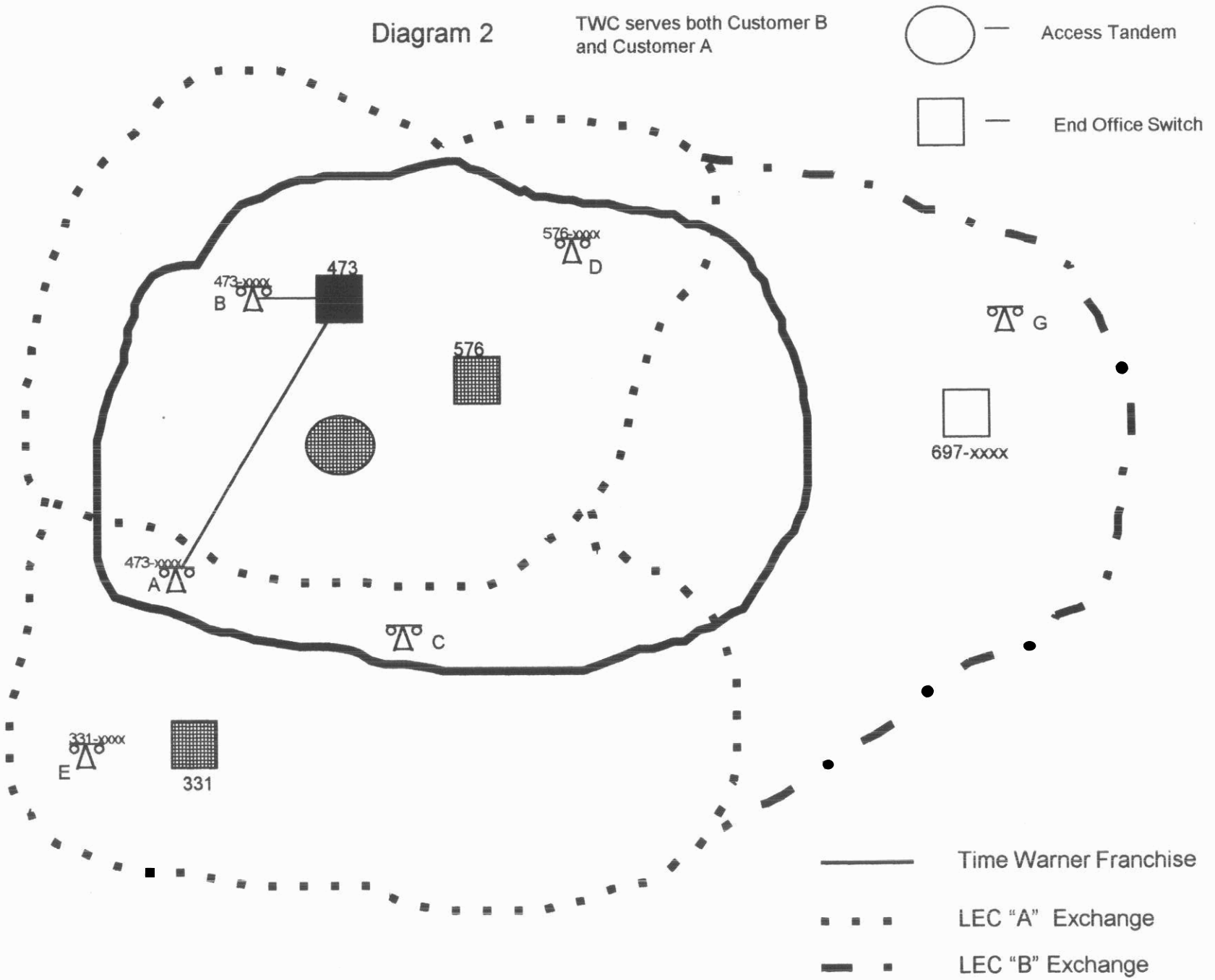


Diagram 3

TWC serves Customer B
LEC A serves Customer C

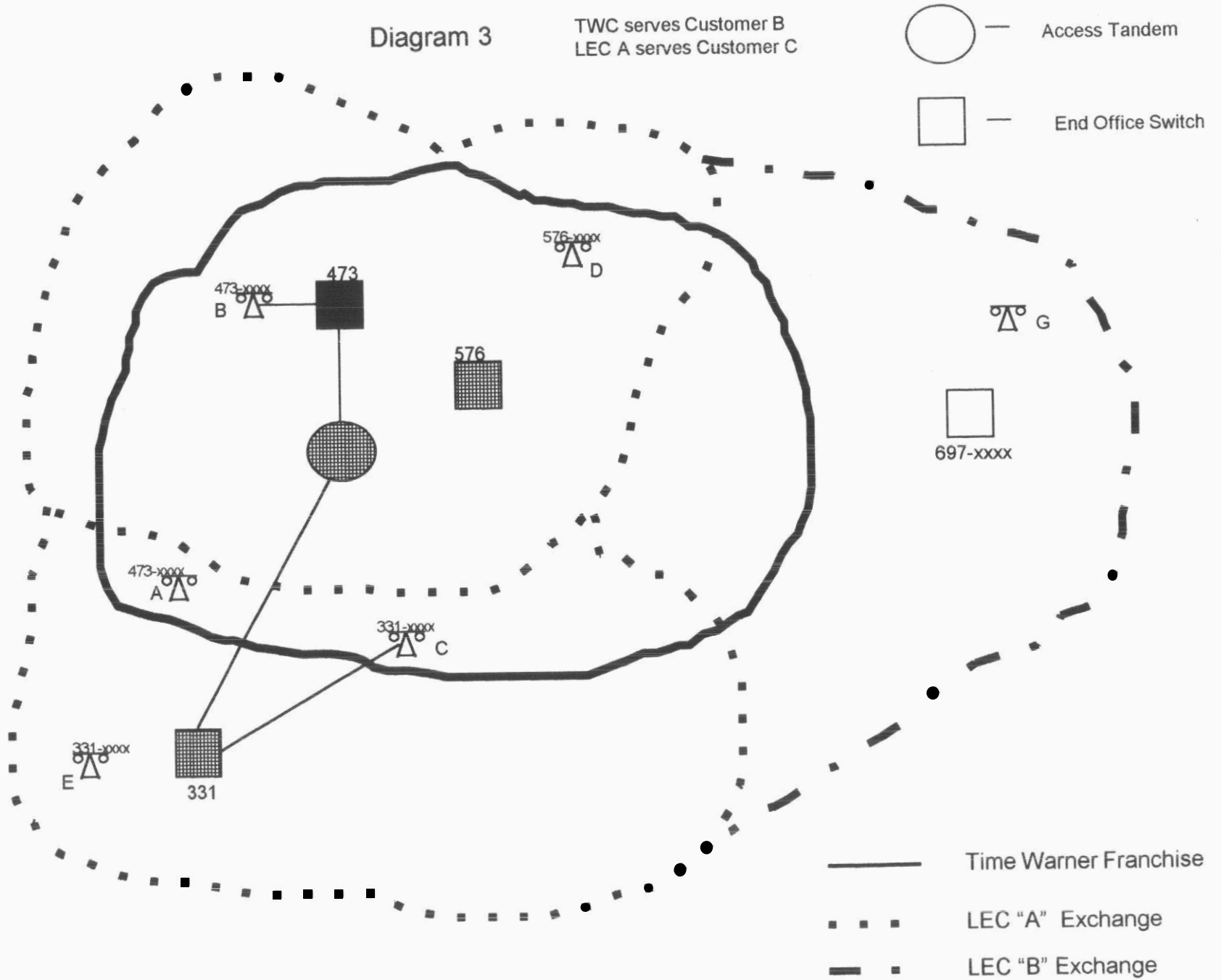
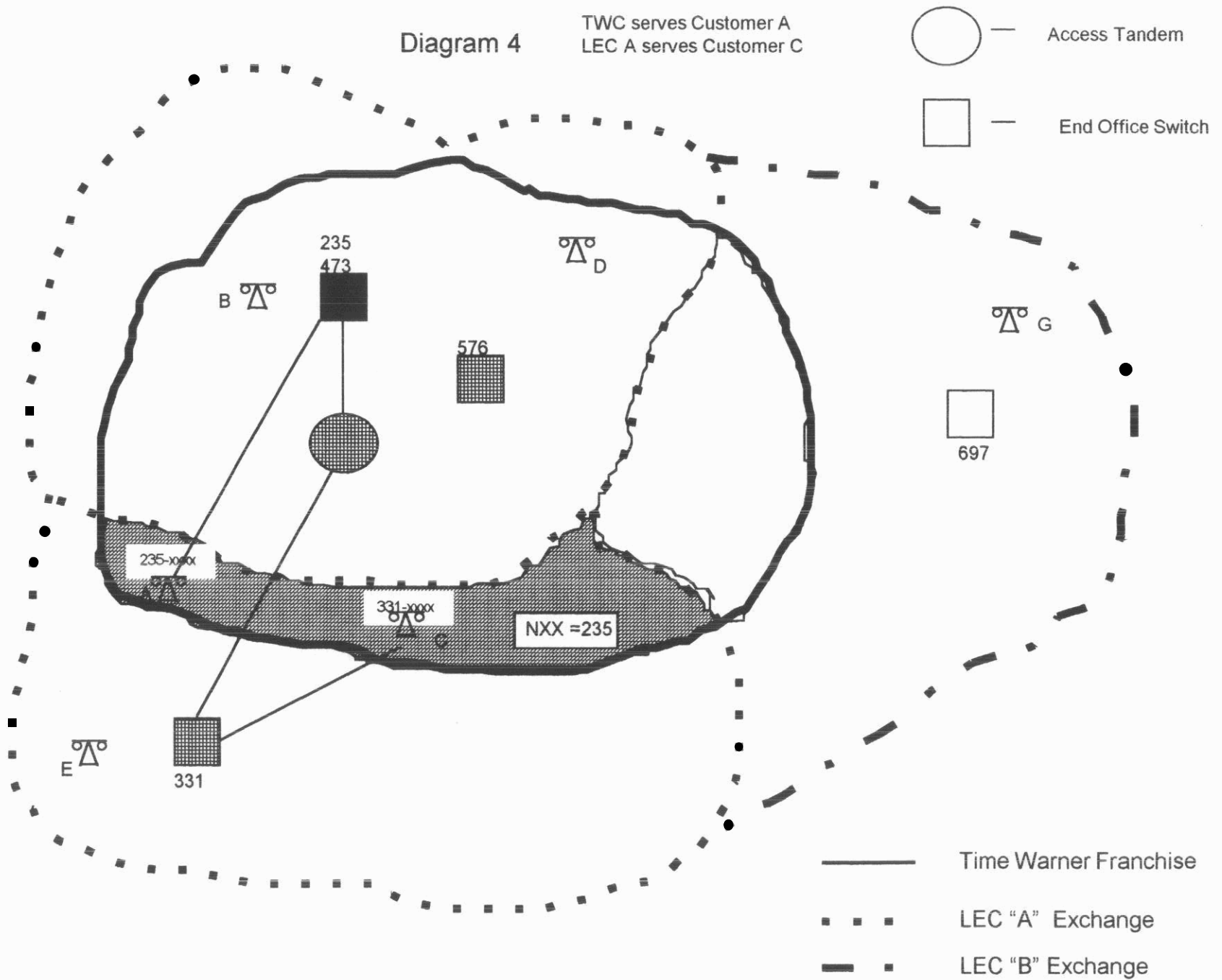


Diagram 4

TWC serves Customer A
LEC A serves Customer C



- — Access Tandem
- — End Office Switch

- Time Warner Franchise
- - - LEC "A" Exchange
- . - LEC "B" Exchange