

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**
2 **DOCKET NO. 950985-TP**
3 **DIRECT TESTIMONY OF**
4 **DANNY G. ENGLEMAN**
5 **ON BEHALF OF TIME WARNER AXS OF FLORIDA, L.P.**
6 **AND DIGITAL MEDIA PARTNERS**

7
8 **Q: WHAT IS YOUR NAME AND BUSINESS ADDRESS?**

9 **A: Danny G. Engleman, 160 Inverness Drive West,**
10 **Englewood, Colorado 80112.**

11
12 **Q: ON WHOSE BEHALF ARE YOU TESTIFYING TODAY?**

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

16
17 **Q: ARE YOU EMPLOYED BY THOSE COMPANIES?**

18 **A: No. My title is Director of Switch**
19 **Technologies for Time Warner Communications**
20 **("TWC"), which owns Time Warner AxS and is an**
21 **affiliate of DMP.**

22
23 **Q: WHAT ARE YOUR PROFESSIONAL AND EDUCATIONAL**
24 **QUALIFICATIONS?**

1 A: Attached to my testimony as Exhibit DGE-1 is a
2 complete list of my qualifications. However, I
3 have had experience in a number of different
4 aspects of telecommunications over the past sixteen
5 years, first with U.S. West, now with Time Warner
6 Communications. For example, I have undertaken
7 network modernization studies for telephone central
8 offices, interoffice facilities and operator
9 services. In addition, I have been involved in the
10 design of key service architectures such as the
11 information gateway, broadband integrated services
12 digital network (ISDN), personal communications,
13 services (PCS) and switched multi-megabit data
14 services (SMDS). In addition, I have taught
15 various courses as a manager of
16 instruction/development at Bell Communications
17 Research (Bellcore), including telephony
18 engineering, economics, financial analysis, wire
19 center analysis, and new types of network planning,
20 plus a set in planning, design, and operations of
21 telephone systems. In my current position with
22 Time Warner Communications, my responsibilities
23 include the development of switched service
24 architectures and product development.

1 Q: HAVE YOU TESTIFIED BEFORE THE FLORIDA PUBLIC
2 SERVICE COMMISSION BEFORE?

3 A. Yes, I filed direct and rebuttal testimony in
4 Docket No. 950737-TP, Investigation into Temporary
5 Local Telephone Number Portability Solution to
6 Implement Competition in Local Exchange Telephone
7 Markets.

8

9 Q. HAVE YOU EVER TESTIFIED BEFORE ANY OTHER PUBLIC
10 SERVICE COMMISSION BEFORE?

11 A: Yes, I filed testimony before the Hawaii Public
12 Utilities Commission, the Ohio Public Utilities
13 Commission and the Tennessee Public Service
14 Commission to provide evidence of Time Warner's
15 technical capabilities in obtaining our
16 certificates of public convenience and necessity in
17 those states. In addition, I have testified before
18 the Public Service Commission of Wisconsin
19 regarding temporary service provider number
20 portability.

21

22 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

23 A. The purpose of my testimony is to support Time
24 Warner's petition by discussing the problems with
25 the flat rate port charge, as proposed by Sprint

1 United, to discuss the proposed tandem versus end
2 office differential, as proposed by Sprint United,
3 and to discuss the need for cooperative network
4 management and design between Time Warner and
5 Sprint United.

6

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

- 10 • efficient and cooperative network coordination
11 between Sprint United and Time Warner, which
12 would include mutual network management and
13 design
- 14 • a rate structure for mutual interconnection
15 that enables Time Warner to develop an
16 efficient network, which would include bill
17 and keep for local interconnection, and
18 imputation of appropriate interconnection
19 costs; tariffing of interconnection rates;
20 recognition of the impact of collocation
21 costs; and options for Time Warner's
22 interconnection points with Sprint United
23 (addressed by Time Warner witness Don Wood).
- 24 • equal priority notification on outages;
25 cooperative 911 network arrangements and

1 database access; access of Time Warner to
2 adequate numbering resources; compensation for
3 terminating access charges to ported numbers
4 (addressed by Time Warner witness Joan
5 McGrath).

6 • access to and use of existing operator and
7 directory functions, which would include
8 access to operator services; input of
9 directory assistance and directory listings
10 provided at no charge; options for the
11 provision of directory assistance; free white
12 page/yellow page listings for Time Warner
13 customers; an information page in the
14 directory for Time Warner; directories
15 provided and distributed free of charge to
16 Time Warner customers. These issues are also
17 addressed by Time Warner witness McGrath.

18

19 **Q: WHAT METHOD OF INTERCONNECTION HAS SPRINT UNITED**
20 **OFFERED TO TIME WARNER?**

21 **A:** Sprint United has offered a flat rate port charge
22 which it says is based on its switched access rates
23 less carrier common line and the residual
24 interconnect charge. This charge makes certain

1 assumptions about the amount of traffic that will
2 be carried over that port.

3

4 **Q: WHAT IS ATTRACTIVE TO TIME WARNER ABOUT A FLAT RATE**
5 **PORT CHARGE STRUCTURE?**

6 **A:** There are several positive aspects about a flat
7 rate port charge structure, if it is priced
8 appropriately close to or at cost:

- 9 • First, it is administratively efficient. If
10 it were used for all local traffic, including
11 EAS and other local calling plans, there would
12 be no need to measure local traffic between
13 the two companies.
- 14 • Second, it is a known cost to both the LEC and
15 the ALEC within a relatively large range of
16 usage.
- 17 • Third, it is often more convenient to have the
18 wholesale price structure (interconnection)
19 more closely match the flat rate retail
20 pricing environment.

21

22 **Q: WHAT ARE THE PROBLEMS WITH THE FLAT RATE PORT**
23 **CHARGE BASED ON SWITCHED ACCESS RATES, AS SPRINT**
24 **UNITED HAS PROPOSED?**

25 **A:** There are several problems with this approach:

- 1 • First, switched access charge rate levels in
2 Florida today are loaded with contribution.
3 Using switched access charges for local
4 interconnection is inconsistent with the need
5 for local interconnection rates to be
6 separated from universal service. High
7 interconnection rates will increase the risk
8 to new entrants such as Time Warner and hinder
9 their ability to compete.
- 10 • Second, Sprint United's assumptions about the
11 amount of traffic that can be sent over the
12 port, and therefore the number of Time Warner
13 customers which can be served by a port, are
14 too high. With Sprint United's traffic
15 assumptions, Time Warner will experience
16 blockage of traffic and will not be able to
17 provide the high quality service it must offer
18 in order to compete.
- 19 • Third, Sprint United's interconnection
20 proposal reflects Sprint United's network
21 architecture inefficiencies by charging Time
22 Warner for using its tandem. Sprint United's
23 network was built with relatively short loops,
24 and a significant number of switches
25 (including tandems) and, as a result of the

1 many switches, a lot of interoffice mileage.
2 This is because it was put in place during a
3 time that switching costs were very low
4 relative to loop costs.

5
6 Now, technology has made outside plant costs
7 cheaper, and this has made it possible for new
8 entrants such as Time Warner to construct
9 networks with longer loops and fewer switches.
10 To reach all of Sprint United's customers,
11 Time Warner must interconnect at several
12 tandem switches, incurring Sprint United's
13 tandem switching charge. Sprint United will
14 be able to reach all of Time Warner's
15 customers through connection to its few
16 switches, without paying a tandem switching
17 charge, under Sprint United's proposal. This
18 results in a price differential, and thus a
19 cost to Time Warner, even if traffic is in
20 balance.

21 • Fourth, the need to fill up the ports with
22 traffic penalizes a company such as Time
23 Warner, which will be serving both business
24 and residential customers and will tend to
25 have its customers spread over a wide area.

1 Companies serving mainly business customers
2 will have greater concentrations in particular
3 geographic areas, thus being able to take
4 advantage of the trunking efficiencies of a
5 flat rated structure. However, this is not
6 the case with companies serving both residence
7 and business customers. Thus, Sprint United's
8 proposed flat rated structure disadvantages
9 new entrants which are not niche marketers.

10 • Fifth, Sprint United has said that its flat
11 rated port charge is only for Sprint United's
12 local calls. It does not include EAS calls to
13 calls outside of Sprint United, nor does it
14 include Extended Calling Plan (\$.25 plan)
15 calls. Sprint United plans to treat them as
16 toll calls, for which Time Warner must pay
17 terminating toll access charges. As a new
18 entrant, Time Warner must at least provide the
19 same quality and scope of service as the
20 incumbent. If it must pay toll access charges
21 on calls which Sprint United charges its end
22 user customers as local (and for which Sprint
23 United does not have to impute switched access
24 charges today), Time Warner could be at a
25 significant disadvantage.

1 • Sixth, having to purchase usage in large
2 blocks of capacity, as a flat rate port charge
3 requires, means that Time Warner must buy its
4 capacity in lumps, which will take away Time
5 Warner's retail pricing flexibility. Once
6 Time Warner sends even one minute of traffic
7 to Sprint United, it must pay the full flat-
8 rate port charge. A similar, but additional
9 issue occurs with overflow traffic. On
10 occasion, if a trunk experiences an especially
11 busy time, overflow capacity may be needed.
12 With Time Warner's only option being a flat-
13 rate DS-1 port, the minute legitimate
14 overflow capacity is needed, Time Warner must
15 purchase the full port. This results in an
16 anticompetitive windfall to Sprint United.

17

18 **Q: HOW DID TIME WARNER DETERMINE THE AMOUNT OF TRAFFIC**
19 **IT COULD CARRY OVER A PORT AND WHETHER SPRINT**
20 **UNITED'S PROPOSED INTERCONNECTION RATES WERE**
21 **REASONABLE?**

22 **A: Time Warner must determine what capacity of trunks**
23 **it will require to carry its traffic either through**
24 **a tandem switch or to selected end offices, at Time**
25 **Warner's required standard of service to assess**

1 whether Sprint United's flat rate port charge is
2 reasonable. With a flat rate price, Time Warner's
3 price per minute of traffic going over those ports
4 depends on how much traffic Time Warner can send
5 over the ports in a month (the period covered by
6 the flat rate port charge)--the higher the usage,
7 the lower Time Warner's cost per minute.

8
9 To determine whether the flat rate charge was
10 reasonable, I first looked up the busy hour ccs for
11 a DS-1 trunk from standard Poisson tables, which
12 show the amount of traffic that various trunk
13 capacities can handle, using different call
14 completion performance standards. We assumed
15 Sprint United's estimate of 10% of calls occur
16 during the busy hour, and 2.0 ccs per customer
17 during the busy hour. I believe that the 2.0 ccs
18 and 10% of calls occurring during the busy hour are
19 low estimates but will use it for the purpose of
20 this explanation. (If higher, and Time Warner
21 believes more realistic estimates of the number of
22 ccs and percent of calls occurring in the busy hour
23 are used, the results would be even less favorable
24 for Time Warner.) This results in a total number
25 of minutes per DS-1 port per month of 253,500. At

1 the performance level Time Warner believes it must
2 meet in order to compete for customers (p.01 grade
3 for service), a DS-1 trunk can handle 254
4 customers. Sprint United's offered price of \$5,760
5 per port means a cost to Time Warner of \$22.68 per
6 customer. Clearly, compared to the current local
7 exchange rate for residential customer of \$10.23,
8 this proposed rate is anticompetitive and an
9 automatic price squeeze. Even with a business rate
10 of \$24.03, this causes problems for Time Warner.

11
12 Increasing the number of DS-1 ports increases the
13 amount of traffic that can be carried over the
14 ports, of course. But even at four DS-1 ports, the
15 cost to Time Warner is still \$17.14, which is still
16 too high compared to current local exchange rates
17 and precludes Time Warner from ever serving one
18 customer.

19
20 **Q: BUT WON'T SPRINT UNITED ALSO BE BUYING PORTS FROM**
21 **TIME WARNER TO TERMINATE LOCAL EXCHANGE TRAFFIC?**
22 **THUS, WON'T THERE BE A ONE-TO-ONE RELATIONSHIP**
23 **BETWEEN THE PRICE PAID BY TIME WARNER AND THE PRICE**
24 **PAID BY SPRINT UNITED?**

1 A: Yes, Sprint United will be buying some ports from
2 Time Warner, and Time Warner expects to receive
3 some revenues from Sprint United for the
4 termination of its local exchange traffic.
5 However, there is no guarantee that Sprint United
6 will purchase the same number of ports as Time
7 Warner does.

8
9 It is also important to remember that as new
10 entrants such as Time Warner enter the market, the
11 quality of service they offer must be at least
12 equal to, if not superior to the incumbents. The
13 minute that customers perceive that Time Warner's
14 service quality is in any way worse than the LECs
15 will be the minute Time Warner stops attracting
16 customers. Thus, Time Warner must be extremely
17 careful that the capacity of its ports is
18 sufficient so that blocking or other service
19 degradation does not occur. Thus, Time Warner
20 anticipates that the number of ports it purchases
21 may be more than the number purchased by Sprint
22 United, even if traffic is in balance.

23
24 Further, while Sprint United proposes to charge
25 Time Warner \$5,760 per port at its tandem, Time

1 Warner will only be able to charge Sprint United
2 the end office rate of \$3,825 per port. Netting
3 these two prices results in a per customer charge
4 to Time Warner for local interconnection of \$7.62
5 per month, using Sprint United's assumption for ccs
6 and percent of calls in the busy hour. This charge
7 is so high that Time Warner cannot do business
8 under those conditions, even if Sprint United
9 purchases the same number of ports as Time Warner
10 does. It does not include any of Time Warner's
11 internal costs, nor does it include colocation
12 charges (cross connect, internal conduit, internal
13 cable per foot, and a nonrecurring charge of \$2,500
14 per order in every Sprint United central office
15 Time Warner collocates). It does not include
16 charges for remote call forwarding, directory
17 assistance, etc. Residential customers in Sprint
18 United's territory today pay a maximum of \$10.23
19 for basic local service. The operating margin
20 provided by Sprint United's price for local
21 interconnection does not allow Time Warner the
22 ability to compete.

23

24 Q: SPRINT UNITED HAS PROPOSED RATES WHICH
25 DIFFERENTIATE THE PRICE BETWEEN CONNECTING AT A

1 **SPRINT UNITED TANDEM VERSUS AT A SPRINT UNITED END**
2 **OFFICE. WHAT EFFECT DOES THIS HAVE ON TIME WARNER?**

3 A: Sprint United, like other incumbent LECs, has a
4 network that has evolved over many years to become
5 what it is today--a series of end offices and
6 tandems interconnected in various and not
7 necessarily efficient ways. Most customers are
8 served by switches which are relatively close to
9 the customers. If the network were redesigned
10 today from scratch, its design would most likely be
11 more efficient.

12
13 Because of Time Warner's inability to recover its
14 costs using its preferred architecture, it will
15 have an incentive to try to mirror the architecture
16 of Sprint United, even if this were not the most
17 efficient architecture. Such a result would limit
18 public policy benefits of competition, because it
19 would reduce the dynamic efficiency benefits from
20 entry. Time Warner should not be constrained by
21 Sprint United's rate design from developing its
22 network as efficiently as possible.

23
24 **Q: HOW SHOULD NETWORK MANAGEMENT AND DESIGN BE HANDLED**
25 **BETWEEN SPRINT UNITED AND TIME WARNER?**

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

15

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

17 A: For Time Warner to have a reasonable chance to
18 compete so that consumers receive the benefits of
19 local competition, Time Warner requests an
20 interconnection arrangement that permits and
21 encourages the following (in addition to the issues
22 addressed by Time Warner witnesses McGrath and
23 Wood):

24 • efficient network design by Time Warner

- 1 • cooperative network management and design by
2 Time Warner and Sprint United
- 3 • interconnection arrangements which permit Time
4 Warner to provide high quality service and to
5 operate without a price squeeze
- 6 • no price differential between end office and
7 tandem interconnection.

8 In short, the Commission should develop a structure
9 that encourages competition by permitting Time
10 Warner to exercise reasonable control over its cost
11 of doing business.

12

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

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

15

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**Professional
Experience**

I am currently the Director of Switch Technologies at Time Warner Communications. I have held a number of positions over the years including Wire Center Planning, Interoffice Facilities Planning, Instructor/Developer at Bellcore TEC, and Advanced Network Architect at U S West Advanced Technologies.

**1993 to
Present**

Director - Switch Technology - Time Warner Communications
In this capacity I am responsible for the development of switched services architectures and product development for Time Warner Communications. This includes fundamental planning for switched networks in TW Cable divisions and the development and recommendations for the inclusion of new switching technologies. I also have responsibility for the development and deployment of signaling networks (such as CCS7) to support switched services.

1987-1993

Member Technical Staff - Network Architect - U S WEST

In this position, I was:

- responsible for negotiating work programs and budgets with Bellcore for Broadband networks, Information Gateway, and PCS,
- involved in the definition of key service architectures such as the Information Gateway, SMDS, Broadband ISDN, and Personal Communications Services,
- involved in the development of an implementation strategy for a SONET-based network,
- AT technical lead in the development of an implementation strategy for a SONET-based network,
- responsible for budgets, headcount allocation, technical evaluations, detailed interactions with clients at all levels of management,
- responsible for presentations dealing with the Network of the Future to internal U S WEST people at all levels, officers of US companies external to U S WEST, and representatives from foreign companies/countries,
- responsible for the development of the PCN architecture used in the Unitel proposal for a license in Britain.

1984 - 1987

Manager, Instruction/Development - Bellcore
Bellcore Technical Education Center Lisle, Illinois

In this position, I developed and taught a number of courses to all levels of management dealing with Network Planning and Economic Evaluation.

1983 - 1984

Staff Specialist - Network Planning, Denver, Colorado - Mountain Bell

1979 - 1983

Assistant Staff Manager - Network Planning, Cheyenne, Wyoming - Mountain Bell

In these positions, I performed network modernization studies dealing with Central Offices, Interoffice Facilities, and Operator Services.

Education

B.S. in Finance from the University of Wyoming, Laramie, Wyoming, 1979