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December 22, 2003

Ms. Blanca S. Bayo, Director
Division of the Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

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Re: Docket No. 030852-TP
Implementation of requirements arising from Federal Communications
Commission's triennial UNE Review: Location-Specific Review for DS1, DS3
and Dark Fiber Loops, and Route-Specific Review for DS1, DS3 and Dark Fiber
Transport

Dear Ms. Bayo:

Please find enclosed for filing an original and 15 copies of the Joint Direct Testimony of
Orville D. Fulp and John White on behalf of Verizon Florida Inc. in the above matter.
Service has been made as indicated on the Certificate of Service. If there are any
questions regarding this matter, please contact me at 813-483-1256.

Sincerely,

Richard A. Chapkis

Richard A. Chapkis

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CERTIFICATE OF SERVICE

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Implementation of Requirements Arising)
From Federal Communications Commission's)
Triennial UNE Review: Location-Specific Review)
For DS1, DS3 and Dark Fiber Loops, and)
Route-Specific Review for DS1, DS3 and Dark)
Fiber Transport.)
_____)

Docket No. 030852-TP

JOINT DIRECT TESTIMONY OF

ORVILLE D. FULP

AND

JOHN WHITE

ON BEHALF OF VERIZON FLORIDA INC.

DECEMBER 22, 2003

DOCUMENT NUMBER DATE

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FPSC-COMMISSION CLERK

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR FULL NAME AND BUSINESS ADDRESS.**

3 A. My name is Orville D. Fulp. My business address is 600 Hidden Ridge Drive,
4 Irving, Texas 75038.

5
6 **Q. BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?**

7 A. I am employed by Verizon as Director - Regulatory.

8
9 **Q. PLEASE BRIEFLY OUTLINE YOUR EDUCATIONAL BACKGROUND
10 AND EXPERIENCE IN THE TELECOMMUNICATIONS INDUSTRY.**

11 A. I have a Bachelor of Arts degree in Economics from the University of California,
12 San Diego, and a Master of Science degree in Economics from the University of
13 Wyoming.

14
15 In 1981, I began working at the Illinois Commerce Commission in the Economics
16 and Rates Department as Senior Economist, where I analyzed filings and testified
17 in utility rate proceedings in the areas of pricing, cost of service, and demand
18 analysis. In January of 1984, I transferred to the Policy Analysis and Research
19 Division as Director of the Pricing Program. My responsibilities included
20 developing policy concerning pricing in the telecommunications and energy
21 fields.

22
23 In 1985, I joined Contel as Manager — Revenue Requirements/Pricing for the
24 company's eastern region, and was responsible for rate case activity, tariff
25 maintenance, surveillance of regulatory activities, and pricing of local exchange,

1 toll and access services in six states.

2

3 In 1991, I assumed the position of Manager – Access Pricing for GTE Telephone
4 Operations, and was responsible for the development of access pricing plans and
5 rates for interstate and intrastate purposes in 40 states. In 1994, I became
6 Director of Product Management Network Services (Wholesale Markets). Since
7 then, I have held various positions in GTE and Verizon involving pricing and
8 product management and operations. In December 2001, I assumed my current
9 position of Director – Regulatory. My current responsibilities include national
10 public policy and pricing matters.

11

12 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE STATE UTILITY**
13 **COMMISSIONS?**

14 A. Yes. I have testified on national public policy and pricing matters, including
15 several generic access charge dockets and other pricing related dockets over the
16 last 15 years, on behalf of various Verizon telephone companies before state
17 commissions in California, Florida, Illinois, North Carolina, South Carolina,
18 Georgia, Alabama, Maine, Vermont, New Hampshire, Pennsylvania, and
19 Washington.

20

21 **Q. MR. WHITE, PLEASE STATE YOUR FULL NAME AND BUSINESS**
22 **ADDRESS.**

23 A. My name is John White. My business address is Sunset Drive, North Salem,
24 New York.

25

1 **Q. BY WHOM ARE YOU EMPLOYED, AND IN WHAT CAPACITY?**

2 A. I am a principal of 8 Degree Research and Consulting, Inc.

3

4 **Q. PLEASE BRIEFLY DESCRIBE YOUR EXPERIENCE IN THE**
5 **TELECOMMUNICATIONS INDUSTRY AND EDUCATIONAL**
6 **BACKGROUND.**

7 A. I was employed by Verizon, or by its affiliates and predecessor companies,
8 from 1966 to November 2003. Before joining Verizon, I worked for a number
9 of engineering and construction firms. During my first 12 years at Verizon, I
10 was involved in virtually every aspect of Outside Plant telephone engineering.
11 From 1979 to 1994, I held managerial positions in Construction, Installation
12 and Maintenance, and Engineering, in both line and staff capacities. I was
13 appointed Executive Director for Transport Technology Planning in 1994, and
14 became Executive Director Wholesale Services in June 2000 with responsibility
15 for introduction of wholesale digital services. In March of 2003, I was
16 appointed Executive Director for Fiber to the Premises.

17

18 I began undergraduate engineering studies at the University of Buffalo and
19 went on to receive a Bachelors Degree in Business Administration and a
20 Masters in Business Administration from Pace University. I have also
21 continued graduate work at Pace University in Finance and Economics as part
22 of Doctorate of Professional Studies Program.

23

24 In November 2003, I left Verizon and started my own consulting company, 8
25 Degree Research and Consulting, Inc.

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE STATE UTILITY**
2 **COMMISSIONS?**

3 A. Yes, I have testified before the FCC and state commissions in connection with
4 Verizon's applications for long distance entry (*i.e.*, 271 proceedings) for New
5 York, Massachusetts, Pennsylvania, New Jersey, Vermont, New Hampshire,
6 Maine, Virginia, Maryland, District of Columbia and West Virginia. I also
7 testified in UNE proceedings in New York, Massachusetts, the District of
8 Columbia, Maryland, New Jersey and Pennsylvania. I have also been involved
9 in a number of arbitrations related to DSL services and line sharing in New
10 York, Massachusetts, Maryland and Pennsylvania.

11

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

13 A. The first portion of our testimony addresses dedicated transport. According to the
14 FCC's *Triennial Review Order* ("TRO"), a state commission must find that
15 competing carriers are not impaired without access to Verizon's unbundled
16 dedicated interoffice transmission (or transport) facilities if Verizon meets either
17 of two objective "triggers." We describe the FCC's transport triggers and explain
18 how they are applied. Then, we present Verizon's evidence, drawn from internal
19 and public sources, that other carriers have deployed fiber transport routes in
20 LATA 952 meeting one or both of the FCC's triggers.

21

22 The second portion of our testimony addresses high capacity loops. The FCC in
23 its *Triennial Review Order* established two triggers for state commissions to apply
24 to determine whether competing carriers are impaired without access to Verizon's
25 unbundled high capacity loops. We explain that because information about where

1 carriers other than Verizon have deployed high capacity loops is almost
2 exclusively within the control of those other carriers, Verizon cannot present a
3 triggers case for high capacity loops until it receives and analyzes information
4 from those carriers through the discovery process.

5
6 Verizon specifically reserves the right to supplement its testimony because it has
7 not received responses to the Florida Public Service Commission Staff's ("Staff")
8 TRO data request issued on November 12, 2003 to CLECs and Alternative Access
9 Vendors. The responses to the Staff's data request are critical to Verizon's ability
10 to pursue its dedicated transport and high capacity loop triggers cases. Once
11 Verizon has received and analyzed the data, it may need to supplement this
12 testimony. In addition, while the *Triennial Review Order* authorizes Verizon to
13 present a potential deployment case, it will not do so at this time.

14
15 **II. DEDICATED INTEROFFICE TRANSPORT TRIGGERS**

16 **A. Description of the Triggers for Dedicated Interoffice Transport**

17 **Q. WHAT ARE DEDICATED INTEROFFICE TRANSPORT FACILITIES?**

18 A. "Dedicated interoffice transmission facilities (transport) are facilities dedicated to
19 a particular customer or competitive carrier that it uses for transmission among
20 incumbent LEC central offices and tandem offices." TRO ¶ 361. The FCC's
21 definition excludes "shared transport," which are transmission facilities shared by
22 more than one carrier. TRO ¶ 361, n.1100, ¶ 533, n.1633. Therefore, the CLEC
23 facilities that are of interest for purposes of this trigger are those dedicated
24 transport facilities that directly or indirectly connect Verizon wire centers or
25 switches.

1 **Q. PLEASE DESCRIBE THE FCC’S TWO OBJECTIVE TRIGGERS FOR**
2 **IDENTIFYING WHERE CLECS ARE NOT IMPAIRED WITHOUT**
3 **ACCESS TO VERIZON’S UNBUNDLED DEDICATED TRANSPORT**
4 **FACILITIES?**

5 A. In its *Triennial Review Order*, the FCC found that requesting carriers are impaired
6 on a nationwide basis without access to unbundled dark fiber, DS1, and DS3
7 dedicated transport facilities. TRO ¶ 359. The FCC recognized, however, that
8 competing carriers often self-provision dedicated transport facilities or obtain
9 them on a wholesale basis from carriers other than the incumbent LEC. The FCC
10 authorized state commissions to determine the specific routes that meet one or
11 both of two objective triggers – which show that CLECs are already providing
12 non-ILEC transport facilities, either to themselves (self-provisioning trigger) or to
13 other carriers (wholesale trigger). If a state commission finds that either trigger is
14 met for a route, the state commission “must make a finding of non-impairment,”
15 and “the incumbent LEC will no longer be required to unbundle that transport
16 along that route[.]” TRO ¶¶ 400, 411; *see also* TRO ¶ 405. In other words, when
17 a transport route meets one or both of the FCC’s triggers, the state commission
18 conducting the route-specific review *must* find that the FCC’s national finding of
19 impairment has been overcome.

20
21 The first of the FCC triggers looks at whether competing carriers have *self-*
22 *deployed* or *self-provisioned* dark fiber and DS3 capacity transport facilities.
23 Under the self-provisioning trigger, the Commission must find no impairment if
24 *three or more* unaffiliated competing carriers have deployed along a particular
25 route their own dark fiber or DS3 transport facilities. TRO ¶¶ 405-411. The FCC

1 has also determined that the self-provisioning trigger is satisfied if, on a particular
2 route and for dark fiber and DS3 facilities, there are at least two unaffiliated
3 competing carriers using their own interoffice transport facilities, and at least one
4 additional carrier willing to provide transport facilities at wholesale. TRO ¶ 408
5 n.1264. Leased “dark fiber” is considered to be that carrier’s own fiber for
6 purposes of applying the self-provisioning trigger. If the carrier has attached its
7 own electronics to activate the leased dark fiber at a DS3 level, the activated fiber
8 is also considered the carrier’s own. TRO ¶ 408.

9
10 The second FCC trigger looks at whether dark fiber, DS1, and DS3 interoffice
11 transport facilities are available from other carriers on a *wholesale* basis. Under
12 this test, competing carriers are not impaired without access to Verizon’s transport
13 facilities if there are “two or more alternative transport providers, not affiliated
14 with each other or the incumbent LEC, immediately capable and willing to
15 provide transport at a specific capacity of transport on a route.” TRO ¶ 400. Dark
16 fiber that is leased from a carrier other than the incumbent LEC, and then offered
17 on a wholesale basis, is considered to be the buying carrier’s own dark fiber.
18 Similarly, dark fiber obtained as an unbundled network element from Verizon
19 counts as the buying carrier’s own fiber if that carrier attaches its own electronics
20 and offers the activated fiber at wholesale. TRO ¶ 416.

21
22 **Q. WHAT IS A ROUTE?**

23 A. As defined by the FCC, a “route” is any direct *or indirect* connection between two
24 Verizon wire centers or switches. In other words, “a ‘route’ may connect Verizon
25 wire centers or switches that are not directly connected to each other.” TRO ¶ 402

1 n.1246. Thus, under the FCC’s definition of a route, if a pair of Verizon wire
2 centers meets either of the FCC’s two triggers, competing carriers are not entitled
3 to unbundled access to Verizon dedicated interoffice transmission facilities that
4 directly or indirectly connect that pair of wire centers.

5

6 **Q. WHAT DOES THE FCC REQUIRE AS FAR AS OPERATIONAL**
7 **READINESS?**

8 A. To count toward the triggers, the FCC requires the transmission facility to be
9 “operationally ready” to provide transport between Verizon wire centers. This
10 condition is satisfied if a carrier has an operational collocation arrangement and
11 has pulled fiber into that arrangement (generally known as “fiber-based
12 collocation”). The FCC made clear in its *Triennial Review* order that
13 “[c]ollocation may be in a more traditional collocation space or fiber can be
14 terminated on a fiber distribution frame.” TRO ¶ 406 n.1257.

15

16 **Q. PLEASE SUMMARIZE THE FCC’S RULES CONCERNING ITS TWO**
17 **OBJECTIVE TRIGGERS FOR DEDICATED INTEROFFICE**
18 **TRANSPORT?**

19 A. To summarize the FCC’s regulations:

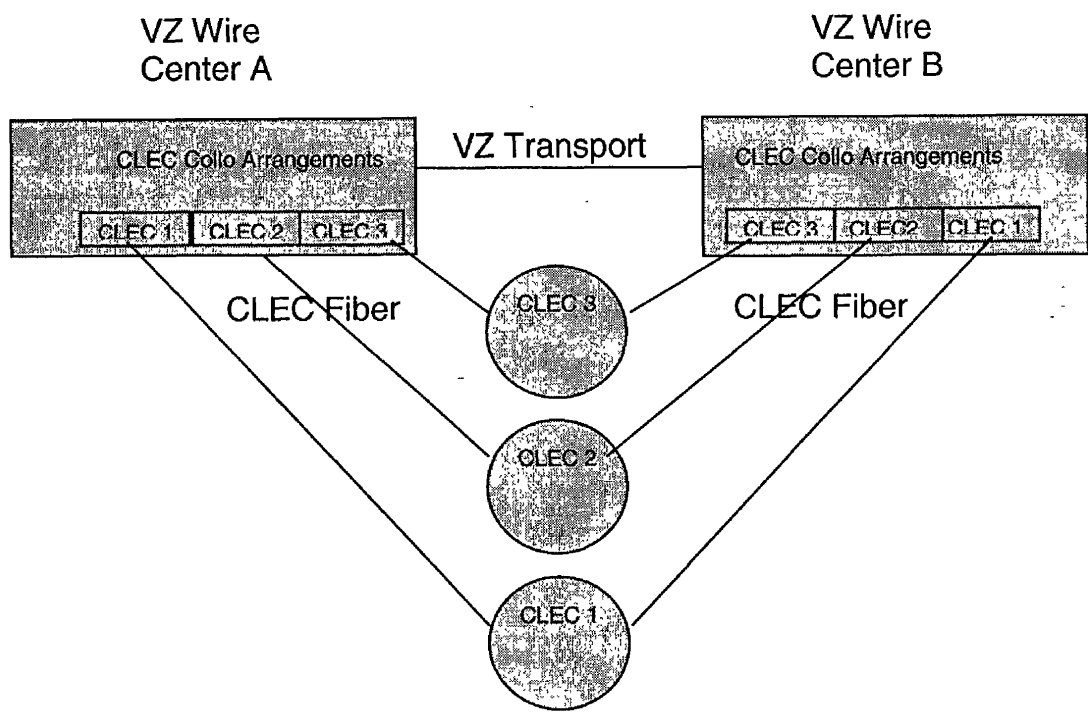
- 20 • The self-provisioning transport trigger requires that a route direct or
21 indirectly connecting a pair of Verizon wire centers have at least the
22 same three competing carriers (or at least the same two competing
23 carriers and a wholesale provider), with operational, fiber-based
24 collocation arrangements, and that these carriers have deployed dark
25 fiber or DS3 level transport facilities.

- 1 • The wholesale transport trigger requires that a route directly or
2 indirectly connecting a pair of Verizon wire centers have at least two
3 wholesale providers, with operational, fiber-based collocation
4 arrangements, offering dark fiber, DS1 or DS3 level transport facilities
5 to other carriers.
- 6 • If either trigger is met, Verizon is no longer required to make available
7 unbundled dedicated transport on any Verizon transmission routes that
8 directly or indirectly connect that pair of Verizon wire centers.

9

10 In the diagram below, we illustrate how local exchange carriers, both incumbent
11 LECs and CLECs, typically connect to Verizon wire centers using dedicated
12 interoffice transport. In this diagram, three CLECs have dedicated interoffice
13 transport on operational fiber between their respective collocation arrangements in
14 Verizon Wire Centers A and B. Each of these CLECs has dark fiber in their
15 transport facilities, and each has channelized their facilities to provide DS3 and
16 DS1 level services. The FCC's self-provisioning trigger is met in this example
17 because CLECs 1, 2, and 3 have deployed their own operational fiber with dark
18 fiber and DS3 level services on the route between Verizon Wire Centers A and B.
19 And if we assume that CLECs 1 and 2 offer their transport facilities to other
20 carriers, then the arrangement also meets the FCC's wholesale trigger for dark
21 fiber, DS1, and DS3.

1



2
3

4

5 **Q. THE FCC’S TWO TRIGGERS APPLY TO DIFFERENT**
 6 **“CAPACITIES” OF TRANSPORT. WHAT DETERMINES THE**
 7 **CAPACITY OR CAPACITIES AT WHICH FIBER TRANSPORT**
 8 **FACILITIES OPERATE?**

9 **A.** The capacity of fiber optic cable is almost exclusively based on the equipment that
 10 a carrier attaches to activate or “light” the fiber. As the FCC found in its Triennial
 11 Review Order, when carriers deploy new transport facilities, they deploy fiber
 12 optic facilities, and those facilities can operate at a wide range of capacities, from
 13 DS0 to OC192. TRO ¶ 372. Fiber optic cable is also “channelized” – that is,
 14 larger capacity facilities are subdivided into smaller capacity facilities – by
 15 attaching the appropriate electronics at both ends of the fiber cable to provide
 16 these various capacities. For example, lower capacity DS1 and DS3 facilities are
 17 channelized simultaneously within the larger capacity OC12 or OC48 facility.

1 The electronic equipment used to activate these various levels of capacity is
2 widely available.

3

4 **Q. WHAT DOES IT MEAN TO OPERATE A FIBER OPTIC TRANSPORT**
5 **FACILITY AT OCN, DS1, OR DS3 LEVELS OF CAPACITY?**

6 A. OCN transport refers to the technical distinction (*i.e.*, Optical Carrier or “OC”) and
7 the capacity (*i.e.*, “n”) of fiber optic cable. For example, an optical carrier-level 3
8 – or OC3 capacity circuit – is capable of transporting up to three DS3 circuits (an
9 OC3 is approximately 155 Mbps, while three DS3s are 135 Mbps), but terminates
10 on a different type of electronic interface.

11

12 DS1 and DS3 transport likewise refer to the technical distinction (*i.e.*, Digital
13 Signal or “DS”) and capacity. The elemental speed is a DS0, which is a voice
14 grade line with a bandwidth of 64 Kbps. A DS1 capacity circuit contains the
15 equivalent of 24 voice-grade or DS0 channels. A DS3 capacity circuit contains
16 the equivalent of 28 DS1 channels or 672 DS0 channels.

17

18 **Q. THE FCC’S DEDICATED TRANSPORT TRIGGERS ARE**
19 **SEPARATELY APPLIED TO DARK FIBER FACILITIES. WHAT IS**
20 **DARK FIBER?**

21 A. Dark fiber is fiber optic strands of cable that have been deployed, but have not
22 been activated or “lit” through connections to electronics (which would make the
23 fiber capable of carrying communications). *See, e.g.*, TRO ¶¶ 359 n.1097, 381.

24

25

1 **B. Verizon’s Evidence Of Routes Meeting The Triggers**

2 **Q. PLEASE DESCRIBE VERIZON’S EVIDENCE OF INTEROFFICE**
3 **TRANSPORT ROUTES IN TAMPA THAT MEET THE FCC’S**
4 **TRANSPORT TRIGGERS?**

5 A. Verizon has evidence that 67 pairs of Verizon wire centers -- that is, 67 direct
6 routes -- in the Tampa LATA meet one or both of the FCC’s transport triggers.
7 Specifically, there are 29 direct routes meeting the FCC’s self-provider trigger,
8 and 67 routes meeting the FCC’s wholesale provider trigger.

9
10 Attached to our testimony as Exhibit A is a map presenting the direct transport
11 routes in the Tampa LATA meeting one or both of the FCC’s dedicated transport
12 triggers. The direct transport routes (or pairs of Verizon wire centers) are shown
13 as blue lines. Notably, although there are scores of Verizon wire centers in the
14 Tampa LATA, based just on internal and publicly available data, Verizon seeks
15 relief for direct routes that originate or terminate in only 16 wire centers. CLEC
16 responses to the Commission Staff’s TRO Data Request could reveal more direct
17 routes that meet the FCC’s transport triggers. The blue lines in downtown Tampa
18 and the St. Petersburg area illustrate the many direct routes meeting the FCC’s
19 triggers and reflect the vast amount of fiber that carriers other than Verizon have
20 deployed over the last decade. As you would expect, the wire centers with
21 multiple competing carriers with operational, fiber-based collocation
22 arrangements tend to be clustered in these highly populated urban areas, namely,
23 downtown Tampa, the suburban area just northwest of downtown Tampa, St.
24 Petersburg, and Sarasota.

25

1 **Q. PLEASE DESCRIBE VERIZON’S EVIDENCE OF DIRECT**
2 **TRANSPORT ROUTES IN THE TAMPA LATA MEETING THE SELF-**
3 **PROVISIONING TRIGGER?**

4 A. Verizon’s evidence shows that there are 29 pairs of Verizon wire centers -- or 29
5 direct routes -- in the Tampa LATA meeting the FCC’s *self-provisioning* trigger
6 for dark fiber and DS3 capacity facilities. Each pair of Verizon wire centers has
7 (at least) the same three unaffiliated competing carriers with operational, fiber-
8 based collocation facilities. In fact, in the Tampa LATA, approximately 18 pairs
9 of Verizon wire centers have four or more unaffiliated competing carriers with
10 operational, fiber-based collocation arrangements, and 10 pairs have 5 or more
11 unaffiliated carriers -- well exceeding the FCC’s self-provisioning trigger.

12
13 Verizon’s evidence on the direct transport routes in the Tampa LATA meeting the
14 FCC’s self-deployment trigger is presented in Exhibit B. The proprietary version
15 of Exhibit B identifies the competing carriers with operational, fiber-based
16 collocation arrangements in the Verizon wire centers. CLEC names are removed
17 from the public version of Exhibit B.

18
19 The first Verizon wire center in the pair of wire centers – Beach Park
20 (BHPKFLXA) -- is shown in the first two columns of Exhibit B (which are
21 labeled “Wire Center 1” and “Wire Center 1 Name”). The third and fourth
22 columns show that 6 other Verizon wire centers in the Tampa LATA – Clearwater
23 (CLWRFLXA), Sweetwater (SWTHFLXA), Tampa Tandem (TAMPFLXA),
24 Tampa East (TAMPFLXE), Tampa Main (TAMPFLXX), and Tampa Westside
25 (WSSDFLXA) – have at least three CLECs in common with the Verizon Beach

1 Park wire center.

2

3 The next pair of Verizon wire centers identified in Exhibit B is Clearwater
4 (CLWRFLXA) and Countryside (CNSDFLXA). In addition to Countryside, the
5 Verizon Clearwater wire center has at least three competing carriers in common
6 with five other Verizon wire centers: Pinellas (PNLSFLXA), St. Petersburg Main
7 (SPBGFLXA), Sweetwater (SWTHFLXA), Tampa East (TAMPFLXE), and
8 Tampa Westside (WSSDFLXA).

9

10 **Q. PLEASE DESCRIBE VERIZON'S EVIDENCE OF DIRECT**
11 **TRANSPORT ROUTES MEETING THE FCC'S WHOLESALE**
12 **PROVIDER TRIGGER?**

13 A. In the Tampa LATA, 67 pairs of Verizon wire centers meet the FCC's *wholesale*
14 *provider* trigger for dark fiber, and DS1 and DS3 capacity facilities. Each pair of
15 Verizon wire centers has (at least) the same two or more carriers that offer
16 transport services to other carriers, i.e., at wholesale. Approximately 24 pairs of
17 Verizon wire centers have three or more unaffiliated wholesale providers of
18 transport services, and 15 pairs of Verizon wire centers have 4 or more
19 unaffiliated wholesale providers of transport services.

20

21 The evidence Verizon has developed from internal and public sources on the
22 direct transport routes meeting the FCC's wholesale provider trigger is shown,
23 by Verizon wire center and wholesale provider, in Exhibit C. For example,
24 Exhibit C shows that the Verizon Bayou wire center (BAYUFLXA) has the
25 same two wholesale providers in common with the Clearwater, Countryside,

1 Pinellas, St. Petersburg Main, and Sarasota Main wire centers (respectively,
2 CLWRFLXA, CNSDFLXA, PNLSFLXA, SPBGFLXA, and SRSTFLXA).

3
4 The vast majority of competing carriers that have deployed fiber transport
5 facilities for their own use have indicated in their website materials and other
6 public statements that they will lease those facilities to other carriers. For this
7 reason, based on the criteria that Verizon used to identify which carriers offer
8 transport facilities at wholesale (described below), most pairs of Verizon wire
9 centers that meet the self-deployment trigger also meet the wholesale provider
10 trigger.

11
12 Exhibit D depicts the pairs of Verizon wire centers that meet either of the FCC's
13 two transport triggers.

14
15 Some companies have deployed fiber transport facilities primarily, if not
16 exclusively, for use by other carriers. In the Tampa LATA, these companies
17 include FPL FiberNet and Progress Telecom. This explains why there are 38
18 pairs of Verizon wire centers that meet the FCC's wholesale provider trigger, but
19 not the self-provisioning trigger.

20

21 **Q. ARE THE DEDICATED TRANSPORT FACILITIES THAT VERIZON**
22 **HAS IDENTIFIED AS MEETING THE FCC'S TRIGGERS**
23 **OPERATIONAL, AND DO THEY CONTAIN FIBER?**

24 A. Yes. To count toward either of the FCC's triggers, the CLEC transport
25 facility must be "operationally ready to provide transport into or out of" the

1 Verizon wire centers, *i.e.*, the carrier's collocation facility must be provisioned
2 and powered, and its fiber must have been pulled into the collocation arrangement.
3 TRO ¶ 406 nn.1256, 1257. We are confident that the transport facilities that
4 Verizon has identified as meeting one or both of the FCC's triggers both meet the
5 FCC's definition of "operationally ready" and use fiber optics. We have reached
6 this conclusion because, last summer, Verizon conducted visual inspections of *all*
7 collocation arrangements included in this triggers case. Inspectors checked each
8 collocation facility in those Verizon wire centers to verify that there is powered
9 equipment in place (*i.e.*, it is operational), and that the collocating carrier had non-
10 Verizon fiber optic cable that both terminated at its collocation facility and left the
11 wire center. Verizon adopted rigorous controls to ensure the reliability of these
12 data, including supervision by the director in charge of provisioning collocation
13 throughout Verizon, written procedures for each step of the visual inspection
14 process, standard forms that were filled out by each inspector, signed statements
15 by the inspectors verifying the accuracy and reliability of the information provided
16 and the inspector's compliance with the written procedures, and signed statements
17 by each inspector's supervisor confirming that the inspector followed the
18 appropriate procedures. A collocation arrangement is included in Verizon's
19 triggers case *only* if, through this rigorous process of visual inspection and
20 verification, it was found to be operational and to have non-Verizon fiber.

21
22 Verizon's approach in this initial testimony has been conservative. Of the 90
23 Verizon wire centers in Florida, Verizon visually inspected 29 wire centers (or
24 32%) and seeks relief from this Commission for routes that originate and
25 terminate in an even lower percentage of Verizon wire centers. Put differently,

1 there are *over 4000 possible intraLATA direct transport routes* in Florida, but
2 Verizon is asking the Commission for relief for only *67 direct routes* or pairs of
3 Verizon wire centers (less than 2%).
4

5 **Q. IF A CARRIER HAS OPERATIONAL FIBER IN TWO VERIZON**
6 **WIRE CENTERS IN THE TAMPA LATA, IS IT REASONABLE FOR**
7 **THE COMMISSION TO ASSUME THAT THE CARRIER HAS A**
8 **TRANSPORT ROUTE DIRECTLY OR INDIRECTLY CONNECTING**
9 **THOSE VERIZON WIRE CENTERS?**

10 A. Yes. When carriers in Verizon's territories deploy their own fiber transport
11 facilities, they typically deploy fiber optic rings that connect to their points-of-
12 presence (or "POPs") in the LATA and various customer premises, in addition to
13 connecting to Verizon's wire centers. Therefore, if the same carrier has fiber-
14 based facilities in two Verizon wire centers in a LATA, it is very reasonable to
15 assume that those fiber facilities are part of a CLEC-operated ring and that traffic
16 can be directly or indirectly routed from one Verizon wire center to the other. It is
17 also reasonable to assume that these CLEC-operated fiber rings connect to the
18 CLEC's POP, and that traffic can flow to and from all parts of the carrier's
19 network through the POP.

20
21 Given that it is widely recognized that CLECs that deploy their own fiber tend to
22 build fiber rings, the burden is now properly put on competing carriers if they
23 wish to attempt to show that a specific route cannot in fact be connected within
24 their network. Absent such particularized, route-specific evidence, however, the
25 Commission should rely on Verizon's evidence that these carriers' networks

1 connect together the transport facilities we have shown exist at each end of each
2 identified route.

3

4 **Q. DO YOU BELIEVE THAT THESE FIBER TRANSPORT FACILITIES**
5 **DEPLOYED BY OTHER CARRIERS ARE USED FOR DS1 AND DS3**
6 **TRANSPORT?**

7 A. Yes. In identifying the routes meeting the FCC's triggers, Verizon made the
8 reasonable assumption that when competing carriers deploy fiber and attach OCn
9 electronics (*e.g.*, OC48 multiplexers), they then subdivide -- *i.e.*, channelize -- the
10 OCn system into the lower transport levels required by their customers, including
11 DS3s and DS1s. There is no doubt that fiber transport facilities are *capable* of
12 operating at various levels of capacity, as evidenced by the carriers' own
13 statements on their company websites. The capacity of the fiber is almost entirely
14 a function of the electronics that a carrier attaches, not something inherent in the
15 fiber itself. Once the fiber is deployed, it is operated at a DS1, DS3, OC48 or
16 higher level – or at all of these levels simultaneously – simply by changing the
17 electronics. It is also beyond dispute that the electronics used to channelize the
18 OCn system to DS1 and DS3 transport levels are commonly available. For
19 example, Level 3 describes its (3)Hub service for allowing customers to activate
20 and control circuits as follows:

21 “For example, a single OC-48 (3) Hub facility might consist of one
22 OC-3 circuit on Tuesday—then get upgraded by the customer to
23 six OC-3s and two DS-3s the following Wednesday.” [Exhibit E.
24 4: www.level3.com/2234.html]

25

1 Verizon's assumption that competing carriers who deploy fiber optics generally
2 build OCn level transport facilities, capable of channelization to DS1 or DS3, is
3 also consistent with standard industry practices. Few if any carriers deploy
4 transport facilities to accommodate *only* a DS1 or *only* a DS3. TRO ¶¶ 386, 391.
5 To the contrary, as the FCC found in its *Triennial Review Order*, carriers
6 deploying fiber transport facilities almost always build at an OCn speed. TRO ¶
7 382 ("The record indicates that when competing carriers self-deploy transport
8 facilities, they often deploy fiber optic facilities that are activated at OCn levels.").
9 AT&T reports that it, along with "most carriers, including incumbent LECs,"
10 TRO ¶ 372 n.1144, generally constructs its interoffice transport networks at an
11 OC48 capacity. Verizon's interoffice transport facilities likewise are generally
12 built at an OC48 capacity.

13
14 These CLEC-deployed OCn facilities are then subdivided or channelized to a DS1
15 or DS3 level because these are the levels at which transport is typically requested
16 by end user customers. There is considerable public evidence from competing
17 carriers' websites that they deploy DS3 and DS1 circuits over their OC transport
18 facilities. This evidence is appended to this testimony as Exhibit E, and separately
19 numbered within that exhibit, as follows.

20 • AT&T: Exhibit E.1

21 AT&T offers private line services with bandwidth options including
22 "Single Channel, Fractional T1, T1 and High- Speed Services including
23 Fractional T3, T3, Reserve T3, SONET OC3 and OC12, and OC48 and
24 OC192 Wavelengths." [www.business.att.com]

25 • FPL FiberNet: Exhibit E.2

1 FPL FiberNet provides “wholesale fiber optic service with bandwidth
2 capacity from DS-3 to OC-192 for long distance companies, CLECs,
3 BLECs, ISPs, ASPs, and other communications related businesses within
4 the major metropolitan areas of Florida.” [www.fplfibernet.com]

5 • KMC Telecom: Exhibit E.3

6 KMC Telecom offers “DS-1 to OC-n access hubs”.
7 [www.kmctelecom.com]

8 • Exhibit E.4: Level 3

9 Level 3 provides (3)Hub facilities and Private Line Metro service at
10 speeds from DS-3 to OC-48. The individual circuits within the (3)Hub
11 facility are available from DS-1 through OC-48, and E-1 to STM-16
12 bandwidths.” [www.level3.com]

13 • Progress Telecom: Exhibit E.5

14 Progress Telecom is a wholesale provider offering private line services
15 ranging from E-1, DS-3, OC-3 through OC-192, STM-1 through STM-64.
16 [www.progresstelecom.com]

17 • SBC Telecom: Exhibit E.6

18 SBC Telecom’s “Private Line Service offers several transport options with
19 bandwidth ranging from 1.5Mbps (DS1) to 622 Mbps (OC12).”
20 [www.sbctelecom.com]

21 • TelCove: Exhibit E.7

22 TelCove (Adelphia Business Solutions) advertises transport at a full range
23 of capacities, from DS1 to OC48. [www.telcove.com]

24 • Time Warner: Exhibit E.8

25 Time Warner claims to be “the leading provider of metro-area broadband

1 optical networks and services to businesses” and offers “dedicated high
2 capacity services (DS1/DS3), digital trunks, and ISDN PRI.”
3 [www.twtelecom.com]

- 4 • MCI WorldCom: Exhibit E.9

5 MCI claims to have “the most scalable IP network available,” and offers
6 end users “speeds from dial to OCn48.” [http://global.mci.com]

- 7 • XO: Exhibit E.10

8 XO offers carrier private line services at bandwidth from DS1 (1.5 Mbps)
9 to DS3 (45 Mbps)to OC-n.. [www.xo.com]

- 10 • Xspedius: Exhibit E.11

11 Xspedius provides special access, ISDN-PRI and collocation services.
12 [www.xspedius.com]

13

14 The assumptions underlying Verizon’s self-deployment trigger case are entirely
15 consistent with the way transport facilities commonly are constructed and
16 operated. The Commission therefore should find that self-provisioned fiber optic
17 transport facilities carry individual DS3 circuits unless a carrier shows, for a
18 particular route, that it is not carrying DS3 circuits over its fiber facility.

19

20 **Q. DO THESE FIBER TRANSPORT FACILITIES ALSO CONTAIN DARK**
21 **FIBER?**

22 A. Yes. It is virtually certain that self-provisioned transport facilities have dark fiber.
23 Dark fiber is simply fiber optic cable “that has not been activated through
24 connections to optronics that light it, and thereby render it capable of carrying
25 communications.” TRO ¶ 381. It is a truism, therefore, that all fiber transport

1 facilities, regardless of the capacities at which they now operate, once consisted
2 entirely of dark fiber. Put differently, evidence of “lit” fiber automatically is
3 evidence that a carrier has self-provisioned dark fiber.

4
5 Additionally, as a matter of basic network engineering and sound economics, the
6 vast majority of self-provisioned fiber transport facilities will have spare fibers. It
7 is simply inconceivable that a carrier would incur the “large fixed and sunk costs
8 [] required to self-provision fiber transport facilities,” including the costs of
9 obtaining rights of way, digging up the streets and attaching cable to poles, and
10 deploying the fiber, without leaving even a single strand of dark fiber. Fiber
11 transport facilities are always installed with extra fiber to meet projected demand
12 growth. Furthermore, fiber cables are commonly manufactured and deployed in
13 increments of 12 fiber strands (*i.e.*, 12, 24, 48, etc., fibers per cable), but OCn
14 electronics (*e.g.*, fiber multiplexers) generally require only 4 fibers to activate
15 (“light”) the fiber to provide dedicated transport.

16
17 Here again, Verizon has come forward with evidence showing that these carriers’
18 fiber transport facilities almost certainly also include dark fiber as shown in
19 Exhibits E.1 through E.11. For example:

- 20 • FPL FiberNet advertises its product offering to include “metro **dark**
21 **fiber**, inter- and intra-city transport, DS3 and optical hubs, metro
22 wavelengths, co-location services and gigabit Ethernet.” (emphasis
23 added) [Exhibit E.2]
- 24 • Level 3 advertises its services to include “wholesale internet access
25 services, managed modem dial-up services, broadband transport, IP-

1 centric voice services, private packet-switched services, DSL
2 aggregation, collocation, metropolitan and intercity **dark fiber**, [and]
3 managed services.” (emphasis added) [Exhibit E.4]

- 4 • Xspedius provides **dark fiber** and inventory conduit in six core Tier I
5 markets across the United States, has access to assets in over 30
6 additional Tier II and III cities, and long haul in Florida and Texas.
7 [Exhibit E.11]

8 The burden is now on competing carriers to show that a specific route in fact has
9 no dark fiber on it. Absent such particularized, route-specific evidence, however,
10 the Commission should rely on Verizon’s evidence that these carriers’ fiber
11 networks also include available dark fiber on each identified route.

12

13 **Q. HOW DID VERIZON IDENTIFY CARRIERS OFFERING DEDICATED**
14 **TRANSPORT FACILITIES ON A WHOLESALE BASIS, AND THE**
15 **CAPACITIES AT WHICH THOSE FACILITIES ARE OFFERED?**

16 A. There is considerable public evidence that allows Verizon to identify carriers that
17 are likely to offer dedicated transport to other carriers.

- 18 • If a carrier holds itself out as a wholesale provider on its website -- and
19 does not limit its representation to particular routes -- Verizon identified
20 the carrier as a wholesale provider.

- 21 • Carriers that supply transport facilities to Universal Access, Inc. are
22 wholesale providers, and Verizon has identified them as such.
23 Universal Access is a broker of transport services, and is a certificated
24 carrier in all of Verizon’s territories, including Florida. *All* carriers that
25 sell transport facilities to Universal Access are selling to another carrier,

1 and, therefore, are appropriately considered wholesale providers. In
2 addition, Universal Access indicates in its web site materials that many
3 of its customers are carriers, further supporting Verizon's conclusion
4 that Universal Access' suppliers are wholesale providers. [Exhibit E.12]

- 5 • Verizon identified a carrier as a wholesale provider if it is listed in the
6 New Paradigm CLEC Report 2003 as offering dedicated access
7 transport, unless the offering is limited to particular routes, and unless
8 the carrier indicates that it will not provide its dedicated access transport
9 to other carriers. The New Paradigm Resources Group ("NPRG"),
10 which prepared the New Paradigm CLEC Report, provides, among
11 other things, business planning advice to CLECs. NPRG reports that it
12 gets information from the CLECs themselves, and provides these
13 carriers with the opportunity to provide direct input on coverage.

14
15 The vast majority of the carriers that Verizon has identified as offering wholesale
16 meet more than one of these criteria. For example, MCI WorldCom is identified
17 in the *New Paradigm Report* as offering dedicated access transport (and there is
18 no indication that MCI WorldCom will not sell to another carrier), and also
19 advertises its wholesale services on its website. In addition, a number of the
20 carriers that Verizon has identified as wholesale providers, such as Telecove, have
21 filed competitive access tariffs in Florida.

22
23 Verizon has offered the Commission evidence showing that these carriers hold
24 themselves out as offering transport facilities on a wholesale basis. The burden is
25 now on competing carriers to show that a specific route is not available at

1 wholesale. Absent such particularized, route-specific evidence, however, the
2 Commission should rely on Verizon's evidence of a carrier's general willingness
3 to offer its transport facilities on a wholesale basis and treat all such carrier's
4 transport facilities as available for leasing at wholesale.

5 Finally, Verizon assumes that a carrier that has deployed fiber transport facilities
6 and is willing to provide transport over those facilities to other carriers is
7 providing (or is willing to provide) various levels of capacity at wholesale,
8 including dark fiber, DS1, and DS3. This assumption is supported by substantial
9 public evidence, which is appended to this testimony as Exhibit E and separately
10 numbered within that Exhibit. For example:

- 11 • FPL FiberNet offers its wholesale customers metro dark fiber, inter- and
12 intra-city transport, DS3 to OC192 circuits, optical hubs, metro
13 wavelengths and collocation services in most metropolitan cities
14 throughout Florida, including Tampa.
- 15 • Level 3 offers dark fiber and (3)Hub facilities at speeds from DS-3 to
16 OC-48. The individual circuits within the (3)Hub facility are available
17 from DS-1 through OC-48, and E-1 to STM-16 bandwidths.
18 (www.level3.com/2234.html)
- 19 • XO offers transport with high capacity bandwidth from DS-1 (1.5
20 Mbps) to DS-3 (45 Mbps) to OC-n.

21 Therefore, unless there is specific evidence that a carrier has refused to sell to
22 other carriers specific capacities and dark fiber on a particular transport route, the
23 Commission should find that a wholesale provider will sell DS1 and DS3
24 transport over its fiber facilities, as well as dark fiber.

25

1 **C. Conclusion Regarding Dedicated Transport Triggers**

2

3 **Q. PLEASE SUMMARIZE THE CONCLUSIONS YOU DRAW FROM**
4 **YOUR TESTIMONY ON DEDICATED TRANSPORT?**

5 A. Verizon has presented compelling evidence that 67 direct routes (or pairs of
6 Verizon wire centers) in the Tampa LATA one or both the FCC's two objective
7 triggers for dedicated transport. Because Verizon has taken a very conservative
8 approach in this proceeding by limiting its presentation to only Verizon wire
9 centers that it visually inspected to confirm the existence of fiber-based
10 collocation, there may be many more transport routes that meet the FCC's
11 triggers. Verizon takes no position on those routes at this time. Verizon may
12 seek relief on other routes based upon information disclosed through the
13 discovery process.

14

15 **III. VERIZON'S HIGH CAPACITY LOOPS TRIGGERS CASE**

16 **Q. IS VERIZON PRESENTING EVIDENCE OF THE HIGH CAPACITY**
17 **LOOPS DEPLOYED BY OTHER CARRIERS THAT MEET THE FCC'S**
18 **TWO TRIGGERS?**

19 A. Not at this time. Verizon does not know the specific buildings to which other
20 carriers have deployed high capacity loops; this information is in the hands of
21 those other carriers. Verizon has requested copies of the responses filed by
22 CLECs and Alternative Access Vendors to the Staff's 2003 TRO Data Request
23 and has also submitted its own discovery to carriers. The discovery responses that
24 Verizon has received to date indicate that CLECs have deployed high capacity
25 loops in Florida. Verizon may submit supplemental evidence on buildings

1 meeting the high capacity loop triggers once it has received the necessary
2 information from other carriers through the discovery process.

3

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

5 A. Yes.

6

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- Support for a wide range of applications
- End-to-End Service Assurance Warranty for High Speed Services
- A Customer Refund Allowance for Single Channel and Fractional T1 Services

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- Enhanced Reliability Option for T1 and T3 Service
- Premium Service Option for OC3, OC12 and OC48 Service; provides millisecond restoration, "five nines" (99.999%) availability -- The Best Service Warranty in the Industry
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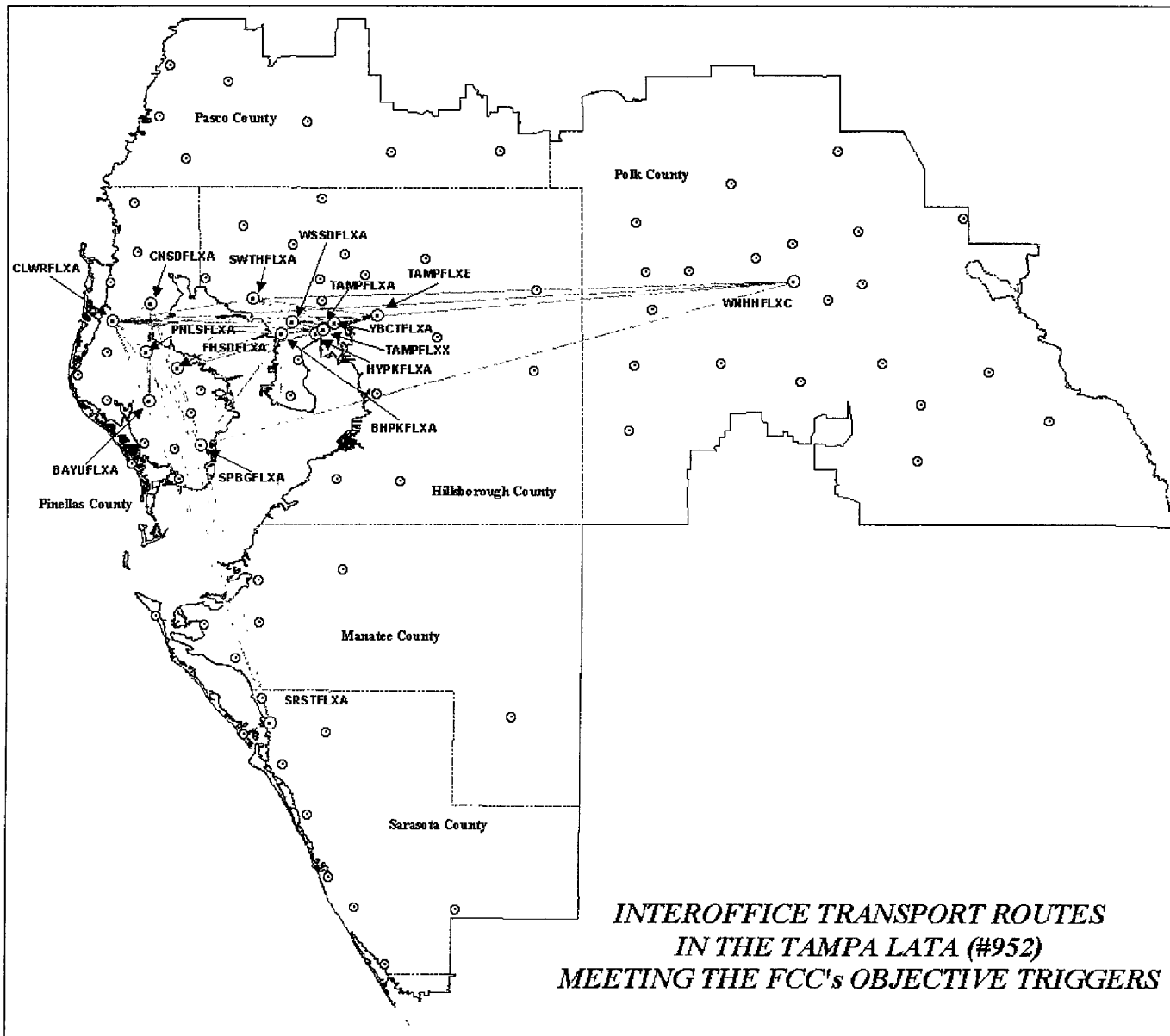
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| LATA 952 | | | | | | |
|-------------|---------------------|---------------|-----------------------|------|-------------------------|-------------------|
| WIRE CENTER | WIRE CENTER 1 NAME | WIRE CENTER 2 | WIRE CENTER 2 NAME | LATA | SELF DEPLOYMENT TRIGGER | WHOLESALE TRIGGER |
| BAYUFLXA | BAYOU 1 | CLWRFLXA | CLEARWATER 1 | 952 | 0 | 2 |
| BAYUFLXA | BAYOU 1 | CNSDFLXA | COUNTRYSIDE 1 | 952 | 0 | 2 |
| BAYUFLXA | BAYOU 1 | PNLSFLXA | PINELLAS 1 | 952 | 0 | 2 |
| BAYUFLXA | BAYOU 1 | SPBGFLXA | ST. PETERSBURG MAIN 1 | 952 | 0 | 2 |
| BAYUFLXA | BAYOU 1 | SRSTFLXA | SARASOTA MAIN 1 | 952 | 0 | 2 |
| BHPKFLXA | BEACH PARK | CLWRFLXA | CLEARWATER 1 | 952 | 3 | 2 |
| BHPKFLXA | BEACH PARK | FHSDFLXA | FEATHERSOUND | 952 | 0 | 2 |
| BHPKFLXA | BEACH PARK | SPBGFLXA | ST. PETERSBURG MAIN 1 | 952 | 0 | 2 |
| BHPKFLXA | BEACH PARK | SRSTFLXA | SARASOTA MAIN 1 | 952 | 0 | 2 |
| BHPKFLXA | BEACH PARK | SWTHFLXA | SWEETWATER | 952 | 5 | 4 |
| BHPKFLXA | BEACH PARK | TAMPFLXA | TAMPA TANDEM | 952 | 5 | 5 |
| BHPKFLXA | BEACH PARK | TAMPFLXE | TAMPA EAST | 952 | 4 | 3 |
| BHPKFLXA | BEACH PARK | TAMPFLXX | TAMPA MAIN | 952 | 4 | 4 |
| BHPKFLXA | BEACH PARK | WSSDFLXA | TAMPA WESTSIDE | 952 | 6 | 5 |
| BHPKFLXA | BEACH PARK | YBCTFLXA | YBOR | 952 | 0 | 2 |
| CLWRFLXA | CLEARWATER | CNSDFLXA | COUNTRYSIDE | 952 | 3 | 2 |
| CLWRFLXA | CLEARWATER | FHSDFLXA | FEATHERSOUND | 952 | 0 | 2 |
| CLWRFLXA | CLEARWATER | PNLSFLXA | PINELLAS | 952 | 3 | 2 |
| CLWRFLXA | CLEARWATER | SPBGFLXA | ST. PETERSBURG MAIN | 952 | 4 | 4 |
| CLWRFLXA | CLEARWATER | SRSTFLXA | SARASOTA MAIN | 952 | 0 | 2 |
| CLWRFLXA | CLEARWATER | SWTHFLXA | SWEETWATER | 952 | 4 | 3 |
| CLWRFLXA | CLEARWATER | TAMPFLXA | TAMPA TANDEM | 952 | 0 | 2 |
| CLWRFLXA | CLEARWATER | TAMPFLXE | TAMPA EAST | 952 | 4 | 3 |
| CLWRFLXA | CLEARWATER | WNHNFLXC | WINTER HAVEN | 952 | 0 | 2 |
| CLWRFLXA | CLEARWATER | WSSDFLXA | TAMPA WESTSIDE | 952 | 3 | 2 |
| CNSDFLXA | COUNTRYSIDE | PNLSFLXA | PINELLAS | 952 | 3 | 2 |
| CNSDFLXA | COUNTRYSIDE | SPBGFLXA | ST. PETERSBURG MAIN | 952 | 0 | 2 |
| CNSDFLXA | COUNTRYSIDE | SRSTFLXA | SARASOTA MAIN | 952 | 0 | 2 |
| FHSDFLXA | FEATHERSOUND | SPBGFLXA | ST. PETERSBURG MAIN | 952 | 0 | 2 |
| FHSDFLXA | FEATHERSOUND | SWTHFLXA | SWEETWATER | 952 | 0 | 2 |
| FHSDFLXA | FEATHERSOUND | TAMPFLXA | TAMPA TANDEM | 952 | 0 | 2 |
| FHSDFLXA | FEATHERSOUND | TAMPFLXE | TAMPA EAST | 952 | 0 | 2 |
| FHSDFLXA | FEATHERSOUND | WSSDFLXA | TAMPA WESTSIDE | 952 | 0 | 2 |
| HYPKFLXA | HYDE PARK | TAMPFLXA | TAMPA TANDEM | 952 | 0 | 2 |
| HYPKFLXA | HYDE PARK | TAMPFLXE | TAMPA EAST | 952 | 0 | 2 |
| HYPKFLXA | HYDE PARK | TAMPFLXX | TAMPA MAIN | 952 | 0 | 2 |
| HYPKFLXA | HYDE PARK | WSSDFLXA | TAMPA WESTSIDE | 952 | 0 | 2 |
| HYPKFLXA | HYDE PARK | YBCTFLXA | YBOR | 952 | 0 | 2 |
| PNLSFLXA | PINELLAS 1 | SPBGFLXA | ST. PETERSBURG MAIN | 952 | 0 | 2 |
| PNLSFLXA | PINELLAS 1 | SRSTFLXA | SARASOTA MAIN | 952 | 0 | 2 |
| SPBGFLXA | ST. PETERSBURG MAIN | SRSTFLXA | SARASOTA MAIN | 952 | 0 | 2 |
| SPBGFLXA | ST. PETERSBURG MAIN | SWTHFLXA | SWEETWATER | 952 | 3 | 3 |
| SPBGFLXA | ST. PETERSBURG MAIN | TAMPFLXA | TAMPA TANDEM | 952 | 0 | 2 |

| LATA 952 | | | | | | |
|-------------|---------------------|-------------|--------------------|------|-------------------------|-------------------|
| WIRE CENTER | WIRE CENTER 1 NAME | WIRE CENTER | WIRE CENTER 2 NAME | LATA | SELF DEPLOYMENT TRIGGER | WHOLESALE TRIGGER |
| SPBGFLXA | ST. PETERSBURG MAIN | TAMPFLXE | TAMPA EAST | 952 | 3 | 3 |
| SPBGFLXA | ST. PETERSBURG MAIN | WNHNFLXC | WINTER HAVEN | 952 | 0 | 2 |
| SPBGFLXA | ST. PETERSBURG MAIN | WSSDFLXA | TAMPA WESTSIDE | 952 | 0 | 2 |
| SRSTFLXA | SARASOTA MAIN | SWTHFLXA | SWEETWATER | 952 | 0 | 2 |
| SRSTFLXA | SARASOTA MAIN | TAMPFLXA | TAMPA TANDEM | 952 | 0 | 2 |
| SRSTFLXA | SARASOTA MAIN | TAMPFLXX | TAMPA MAIN | 952 | 0 | 2 |
| SRSTFLXA | SARASOTA MAIN | WSSDFLXA | TAMPA WESTSIDE | 952 | 0 | 2 |
| SWTHFLXA | SWEETWATER | TAMPFLXA | TAMPA TANDEM | 952 | 4 | 4 |
| SWTHFLXA | SWEETWATER | TAMPFLXE | TAMPA EAST | 952 | 6 | 5 |
| SWTHFLXA | SWEETWATER | TAMPFLXX | TAMPA MAIN | 952 | 3 | 3 |
| SWTHFLXA | SWEETWATER | WNHNFLXC | WINTER HAVEN | 952 | 0 | 2 |
| SWTHFLXA | SWEETWATER | WSSDFLXA | TAMPA WESTSIDE | 952 | 5 | 4 |
| SWTHFLXA | SWEETWATER | YBCTFLXA | YBOR | 952 | 0 | 2 |
| TAMPFLXA | TAMPA TANDEM | TAMPFLXE | TAMPA EAST | 952 | 5 | 5 |
| TAMPFLXA | TAMPA TANDEM | TAMPFLXX | TAMPA MAIN | 952 | 5 | 5 |
| TAMPFLXA | TAMPA TANDEM | WSSDFLXA | TAMPA WESTSIDE | 952 | 6 | 6 |
| TAMPFLXA | TAMPA TANDEM | YBCTFLXA | YBOR | 952 | 4 | 4 |
| TAMPFLXE | TAMPA EAST | TAMPFLXX | TAMPA MAIN 1 | 952 | 3 | 3 |
| TAMPFLXE | TAMPA EAST | WNHNFLXC | WINTER HAVEN | 952 | 0 | 2 |
| TAMPFLXE | TAMPA EAST | WSSDFLXA | TAMPA WESTSIDE | 952 | 5 | 4 |
| TAMPFLXE | TAMPA EAST | YBCTFLXA | YBOR | 952 | 4 | 4 |
| TAMPFLXX | TAMPA MAIN | WSSDFLXA | TAMPA WESTSIDE | 952 | 5 | 5 |
| TAMPFLXX | TAMPA MAIN | YBCTFLXA | YBOR | 952 | 3 | 3 |
| WSSDFLXA | TAMPA WESTSIDE | YBCTFLXA | YBOR | 952 | 3 | 3 |



- VERIZON WIRE CENTER
- PAIRS OF VERIZON WIRE CENTERS MEETING FCC TRIGGERS
- TAMPA LATA 952
- VERIZON SERVICE AREA
- COUNTY

| LATA 952 | | | | | | | | | | | | | | | | | | | | |
|-----------------|--------------------|--------------------|--------------------|---------------------|--|---|---|--|---|--|--|--|--|--|--|--|--|--|--|--|
| Count of CLECNm | WIRE CENTER 1 Name | WIRE CENTER 2 | WIRE CENTER 2 Name | CLECNm | | | | | | | | | | | | | | | | |
| | BAYOUFLXA | BAYOU | CLWRFLXA | CLEARWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | CNSDFLXA | COUNTRYSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | | | PNLSFLXA | PINELLAS | | | 1 | | 1 | | | | | | | | | | | |
| | | | SPBGFLXA | ST. PETERSBURG MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SRSTFLXA | SARASOTA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | BHPKFLXA | BEACH PARK | CLWRFLXA | CLEARWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | FHSDFLXA | FEATHERSOUND | | | 1 | | 1 | | | | | | | | | | | |
| | | | SPBGFLXA | ST. PETERSBURG MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SRSTFLXA | SARASOTA MAIN | | 1 | 1 | | 1 | | | | | | | | | | | |
| | | | SWTHFLXA | SWEETWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXA | TAMPA TANDEM | | 1 | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXX | TAMPA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | 1 | 1 | | 1 | | | | | | | | | | | |
| | | | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |
| | CLWRFLXA | CLEARWATER | CNSDFLXA | COUNTRYSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | | | FHSDFLXA | FEATHERSOUND | | | 1 | | 1 | | | | | | | | | | | |
| | | | PNLSFLXA | PINELLAS | | | 1 | | 1 | | | | | | | | | | | |
| | | | SPBGFLXA | ST. PETERSBURG MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SRSTFLXA | SARASOTA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SWTHFLXA | SWEETWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXA | TAMPA TANDEM | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | WNHFLXC | WINTER HAVEN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | CNSDFLXA | COUNTRYSIDE | PNLSFLXA | PINELLAS | | | 1 | | 1 | | | | | | | | | | | |
| | | | SPBGFLXA | ST. PETERSBURG MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SRSTFLXA | SARASOTA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | FHSDFLXA | FEATHERSOUND | SPBGFLXA | ST. PETERSBURG MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SWTHFLXA | SWEETWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXA | TAMPA TANDEM | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | HYPKFLXA | HYDE PARK | TAMPFLXA | TAMPA TANDEM | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXX | TAMPA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | | | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |
| | PNLSFLXA | PINELLAS | SPBGFLXA | ST. PETERSBURG MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SRSTFLXA | SARASOTA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | SPBGFLXA | ST PETERSBURG MAIN | SRSTFLXA | SARASOTA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | SWTHFLXA | SWEETWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXA | TAMPA TANDEM | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | WNHFLXC | WINTER HAVEN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | SRSTFLXA | SARASOTA MAIN | SWTHFLXA | SWEETWATER | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXA | TAMPA TANDEM | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXX | TAMPA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | SWTHFLXA | SWEETWATER | TAMPFLXA | TAMPA TANDEM | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXX | TAMPA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WNHFLXC | WINTER HAVEN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | TAMPFLXA | TAMPA TANDEM | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXE | TAMPA EAST | | | 1 | | 1 | | | | | | | | | | | |
| | | | TAMPFLXX | TAMPA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | | | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |
| | TAMPFLXE | TAMPA EAST | TAMPFLXX | TAMPA MAIN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WNHFLXC | WINTER HAVEN | | | 1 | | 1 | | | | | | | | | | | |
| | | | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | | | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |
| | TAMPFLXX | TAMPA MAIN | WSSDFLXA | TAMPA WESTSIDE | | | 1 | | 1 | | | | | | | | | | | |
| | | | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |
| | WSSDFLXA | TAMPA WESTSIDE | YBCTFLXA | YBOR | | | 1 | | 1 | | | | | | | | | | | |

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> KMC TELECOM

Wholesale Services

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Our comprehensive solutions and services are designed to meet the needs of a wide range of providers and end-user customers:

| Services | |
|--|--|
| Regional/National Interexchange Carriers | Services include collocation, DS-1 to OC-n access hubs, POP to POP connectivity, hub to hub connectivity, and POP to end-user connectivity. |
| Internet Service Providers (ISPs) | Services include collocation, ISDN-PRI, transport and port wholesale. |
| Wireless Carriers | Services include collocation, backhaul facilities to a switch, local numbers in bulk, and transport to cell towers. |
| Fortune 500 Companies | A full range of integrated communications solutions including local service, long distance, Internet access, and bundled services. We can tailor our services to the specific needs of your business and provide enterprise applications for Call Centers and the Retail, Finance, and Hospitality industries. |




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KMC Coverage Map Please select one of the following:

- Advanced Communications Service Areas
- Nationwide Data Service Areas
- Softswitch PRI Platform Service Areas

100% view

Alternate navigation:
Arrow keys move map, +/- zooms in/out.



FiberNet

"Moving at the Speed of Light..."

...to get you connected everywhere you need to go"

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Tuesday 12-16-200

Welcome to FPL FiberNet's Web Site


[Overview](#) | [FPL FiberNet is the leading carrier in the state of Florida](#)

Overview

Launched in early 2000, the FPL Group subsidiary acquired an existing 1,600-mile, inter-city fiber network from Florida Power & Light. In operation for 12 years, the inter-city network travels from Miami to

- Jacksonville on the east coast of Florida
- Lake City in North Florida and
- Tampa on the west coast.

**See Maps
for Locations**



Coming Soon

NAP **metros** connectivity

Connectivity to
NAP of the Americas and
cable heads

Metro access
available in the
following cities:
Miami, Orlando, Tampa, Jacksonville, Lake City

1-866-STRANDS

FPL FiberNet provides metro access solutions to Florida's

- local and long distance telephone companies
- international cable carriers
- ISPs
- ASPs
- CLECs and
- ILECs.

FPL FiberNet has invested \$350 million to expand our fiber-optic network throughout Florida's metropolitan cities. The subsidiary also provides wholesale fiber services through partnerships and interconnections with multiple regional networks throughout the southeastern U.S.

FPL FiberNet is the leading carrier in the state of Florida

FPL FiberNet is connecting all of the state's

- major carrier hotels
- central offices
- international cable-heads and
- NAPs.

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Company Information

- Why FPL FiberNet?
- A Leading Provider
- Unique Benefits
- Products & Services
- Network Topology
- Careers
- News & Events
- About Us
- Leadership Team

Company Information

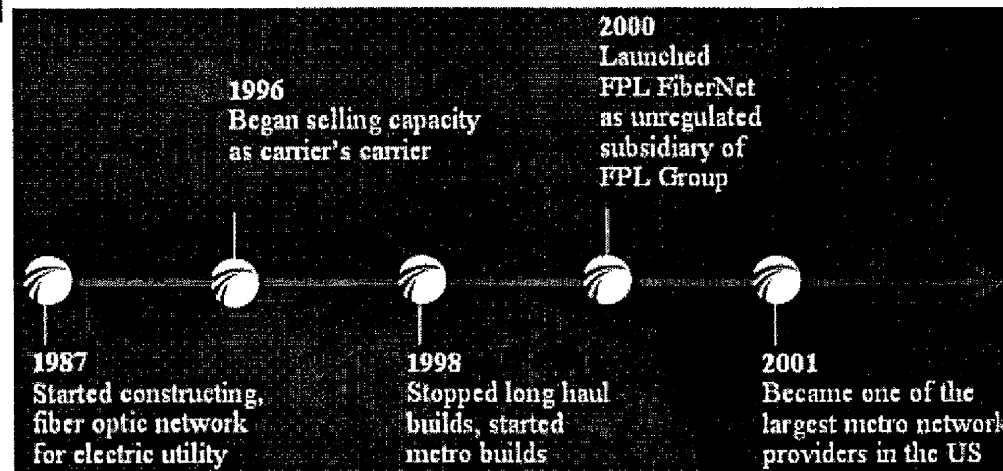
FPL FiberNet is a leading provider of world class fiber optic network solutions in Florida. | [Company history](#) | [Why are we a success?](#)

FPL FiberNet is a leading provider of world class fiber optic network solutions in Florida.

The company provides connectivity to the major telecom centers in the state including leading carrier hotels, NAP initiatives, cable heads and large central offices. Under multiple interconnection agreements, FPL FiberNet provides dark fiber and bandwidth on its fiber-optic network in Florida's major cities and through partnership agreements across a 10,000-mile network extending throughout the Southeast.

FPL FiberNet, LLC, is the telecommunications subsidiary of FPL Group, Inc., (NYSE:FPL), one of the nation's largest providers of electricity-related services with annual revenues of more than \$8 billion.

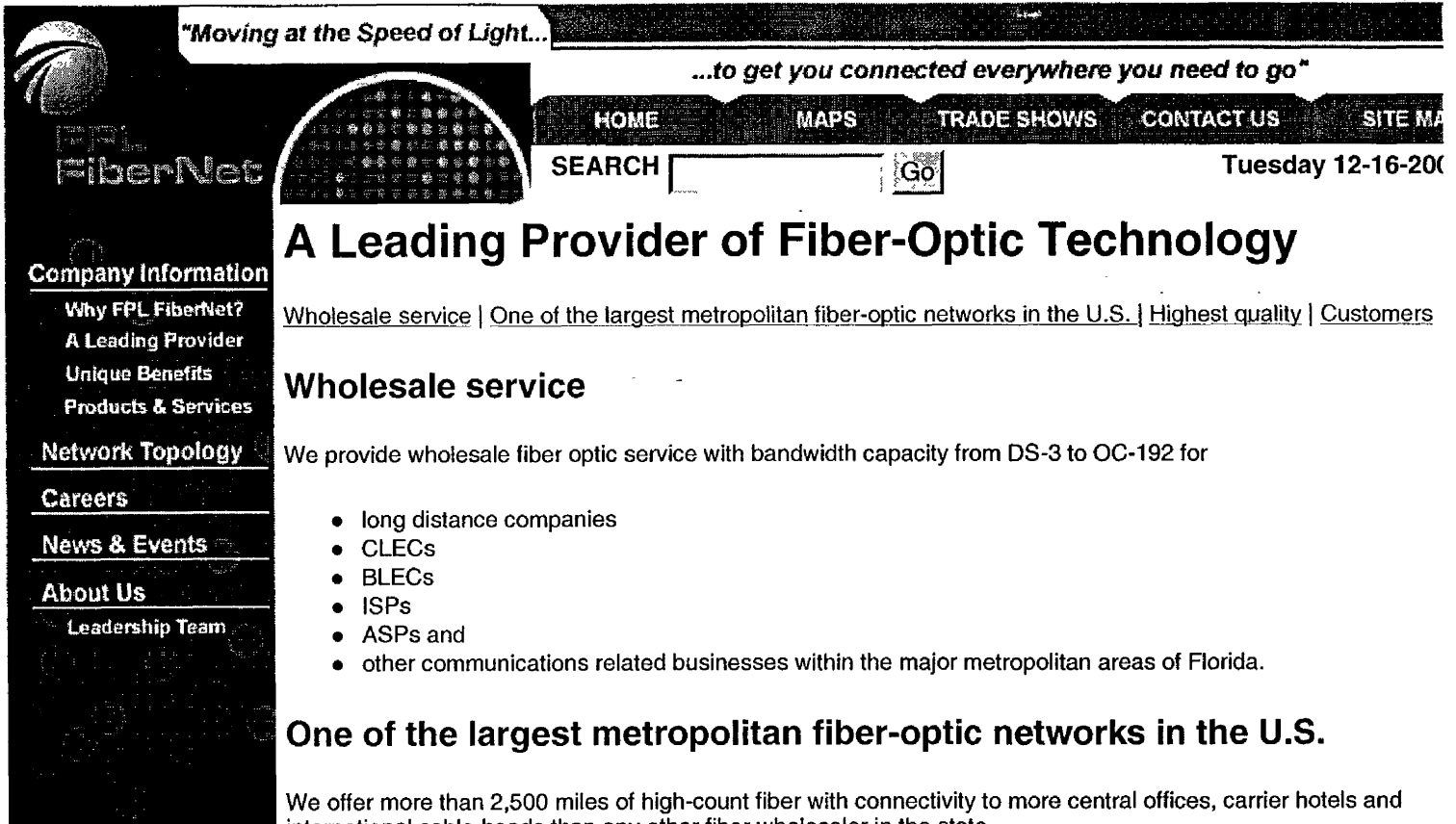
Company history



Why are we a success?

- Flexible product offering at competitive prices.
 - Pricing options: Lease or IRU.
- Vast high-grade fiber network.
- Network reliability and scalability.
- Superior network redundancy.
- We can get your business to market quickly.
- Stability and backing of the FPL Group.
 - Operations in 17 states; 11,000 employees.
 - Over \$8 billion in revenues

TOP ▲



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...to get you connected everywhere you need to go"

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A Leading Provider of Fiber-Optic Technology

Wholesale service | One of the largest metropolitan fiber-optic networks in the U.S. | Highest quality | Customers

Wholesale service

We provide wholesale fiber optic service with bandwidth capacity from DS-3 to OC-192 for

- long distance companies
- CLECs
- BLECs
- ISPs
- ASPs and
- other communications related businesses within the major metropolitan areas of Florida.

One of the largest metropolitan fiber-optic networks in the U.S.

We offer more than 2,500 miles of high-count fiber with connectivity to more central offices, carrier hotels and international cable-heads than any other fiber wholesaler in the state.

Highest quality

We offer the highest quality dark fiber with the fastest possible transmission speeds. The ultimate in reliability is insured through our ring-based, intra-city networks using SONET-based architecture that is both

- redundant and
- geographically diverse.

Target customers

Our customers include virtually all service and telecom providers, as well as leading

- ISPs
- ASPs
- International Cable Carriers
- ILECs
- CLECs and
- hospitals, colleges, banks and other businesses.


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Products and Services

[What we provide](#) | [Co-location services](#)

What we provide

- Metro dark fiber
- Inter- and intra-city transport, DS-3 to OC-192
- DS-3 and optical hubs
- Metro wavelengths
- Co-location services
- Gigabit Ethernet

Co-location services

We provide carrier class co-location facilities that enable you to get closer to your customers while being a cost-effective means to expand your business.

You can count on

- secured facilities access
- controlled climate
- choice of
 - individual locking cabinets or
 - open racks, and
- choice of power options
 - AC or
 - DC.

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Florida's Footprint

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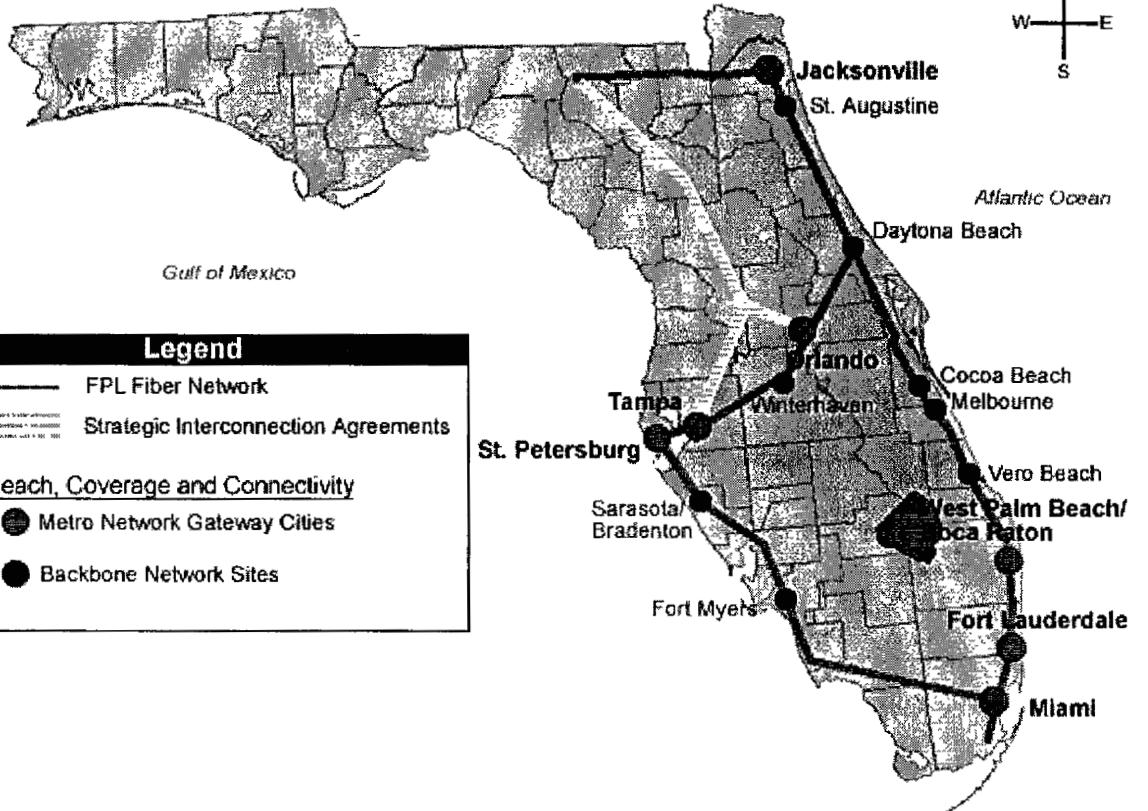
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Legend

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- Strategic Interconnection Agreements

Reach, Coverage and Connectivity

- Metro Network Gateway Cities
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THE LEVEL 3 STORY

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Introduction to Level 3: The Level 3 Story

Who is Level 3?

Level 3 (Nasdaq: LVL3) is an international communications and information services company and is headquartered in Broomfield, Colorado. The company operates one of the largest communications and Internet backbones in the world.

Level 3 is one of the largest providers of wholesale dial-up service to ISPs in North America and is the primary provider of Internet connectivity for millions of broadband subscribers through its cable and DSL partners.

Nine out of ten of the world's largest telecom carriers all continue to use Level 3 services, as do five of the top six U.S. Internet Service Providers, and nine out of ten of the largest European telecom carriers.

The company offers a wide range of communications services over its approximately 22,500 mile broadband fiber optic network including Internet Protocol (IP) services, broadband transport, colocation services, and patented Softswitch-based managed modem and voice services. Services offered under the "Level 3 Communications" brand include:

- Wholesale Internet access services
- Managed modem dial-up services
- Broadband transport
- IP-centric voice services
- Private packet-switched services
- DSL Aggregation
- Colocation
- Metropolitan and intercity dark fiber
- Managed Services (Dedicated Internet Access (domestic and international), Remote Dial-up Access, Managed Internet Security, and Virtual Private Networks)

Based on the amount of Internet traffic on Level 3's IP backbone, Level 3 is among the top three largest Internet carriers in the world. Through Level 3's dial-up ISP customers, the company's dial-up infrastructure is accessible to approximately 90% of the U.S. population. When a typical Internet user at home dials the Internet using a modem in the U.S., there is better than a one-in-three chance that their call is being completed within a Level 3 data center.

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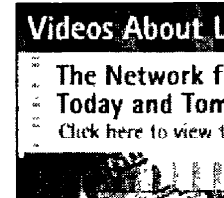
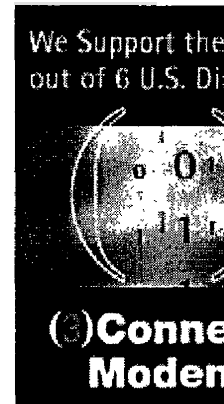
"We were very impressed with Level 3's ability to turn up the services very quickly at a time when our need was great. Level 3 was able to activate more than 10 gigabits of Internet access in less than a week at interface speeds up to 2.5 gigabits per second. As a result, we're now able to offer services over our own high-speed nationwide IP network."

—Scott Hatfield, Chief Information Officer, Cox Communications

Level 3 Subsidiaries

Level 3 offers enterprise and information services through wholly owned subsidiaries:

- Software Spectrum is a global business-to-business software services provider and has supply arrangements with major software publishers including Microsoft, IBM, Lotus, Adobe Systems



partners including Microsoft, IBM Lotus, Adobe Systems, Symantec, Novell, and McAfee. It is the world's largest reseller and license manager of Microsoft products.

- (i)Structure is an information technology, or IT, infrastructure outsourcing company that provides managed computer infrastructure services in Data Centers located in Omaha, Nebraska, and Tempe, Arizona. The company enables businesses to outsource costly IT operations and thereby benefit from secure, cost-effective, managed services that scale to meet changing needs.

Why is the Level 3 Network Ideal for Communications-Intensive Companies?

The majority of the Level 3 network is a multi-conduit, fully upgradeable network, allowing it to be more adaptable to future technological changes than existing and less flexible networks.

Level 3's construction team built the entire Level 3 intercity network and all 36 of the company's metropolitan networks in North America and Europe. In the process, Level 3 created one of the most scalable, cost-effective, and state-of-the-art optical networks in existence. Few providers own the amount of available fiber infrastructure that Level 3 owns. Consequently, few can claim to be as accommodating of future customer growth. Read more about the [Level 3 Network](#).

For More Information

To speak with Level 3, you may call Level 3's main number at 1-877-2LEVEL3 (1-877-253-8353).

Level 3, Level 3 Communications, is a Service Mark of Level 3 Communications, Inc. in the United States, other countries, or both.

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THE LEVEL 3 NETWORK

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The Level 3 Network

Level 3 has built an advanced fiber-optic network utilizing Internet Protocol (IP) based technology. The Level 3 network combines both local and long distance networks connecting customers end-to-end. The company has 85 markets in service; 68 in the U.S. and 17 in Europe.

U.S. Intercity Network

The North American intercity network spans approximately 18,900 miles.

U.S. Local Networks

The 68 U.S. markets in service are Akron, Albany, Atlanta, Austin, Baltimore, Birmingham, Boston, Buffalo, Charlotte, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Durham, El Paso, Fort Worth, Hartford, Houston, Indianapolis, Jacksonville, Jersey City, Kansas City, Las Vegas, Long Island, Los Angeles, Louisville, Manchester, Memphis, Miami, Milwaukee, Minneapolis, Nashville, New Orleans, New York, Newark, Oakland, Oklahoma City, Omaha, Orange County, Orlando, Philadelphia, Phoenix, Pittsburgh, Portland, Poughkeepsie, Princeton, Providence, Raleigh, Richmond, Sacramento, Salt Lake City, San Antonio, San Diego, San Francisco, San Jose, San Luis Obispo, Seattle, St Louis, Stamford, Syracuse, Tampa, Tulsa, Washington, D.C., White Plains, and Wilmington. Markets in service are defined as the number of local markets where Level 3 has an operational Gateway facility and products offered over leased or owned facilities.

Multi-conduit, upgradeable local city networks are currently operational in 27 U.S. cities. A typical local network consists of a Gateway site where Level 3 is able to offer services over its own local fiber network. This network interconnects with the other carriers and directly to potential customers within a city, ultimately allowing Level 3 to offer end-to-end services.

European Intercity Network

The 3,600-mile European intercity network is complete. Ring 1 connects London, Amsterdam, Frankfurt, Paris, Brussels and Karlsruhe. Ring 2 connects Frankfurt, Dusseldorf, Hamburg, Berlin, Munich, and Cologne.

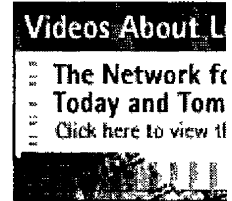
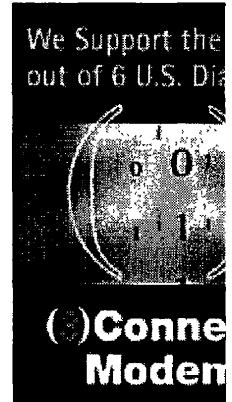
The company also offers services in eight additional European markets: Madrid, Manchester, Karlsruhe, Cologne, Geneva, Milan, Stockholm, and Zurich.

European Local Network

The 9 European markets in service are London, Frankfurt, Paris, Amsterdam, Brussels, Dusseldorf, Berlin, Munich, and Hamburg. All markets have their own Level 3 multi-conduit, upgradeable fiber network.

Transatlantic

Yellow, our transatlantic cable, spans 6,350 km and was activated in 4Q, 2000. It consists of 4 fiber pairs of which Level 3 owns and operates 50%. Global Crossing received 50% ownership in a joint build agreement with the company. Capacity starts at 320 Gbps initially and is upgradeable to 1.28 Tbps. Landing points are in Bude, Cornwall, U.K. and Long Island, New York, U.S. Additional transatlantic agreements have been signed for capacity on Global Crossing's AC-1.



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NETWORK MAPS

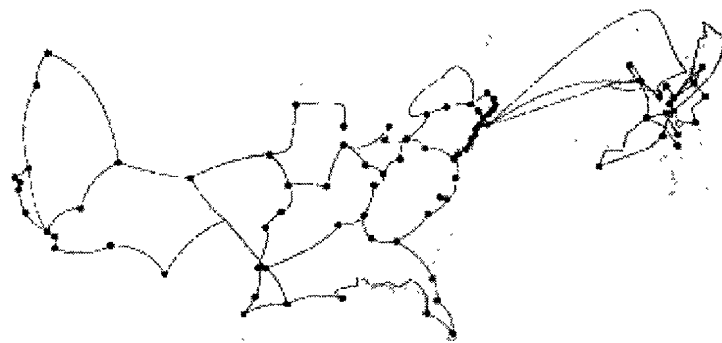
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Network Maps

In 30 months, Level 3 built a 20,000-mile multi-conduit intercity network and 36 multi-conduit metropolitan networks in North America and Europe. Additionally, the company constructed a transatlantic cable system connecting North America and Europe, and has secured 5.0 million square feet of technical space in 73 data centers serving 68 North American markets and 17 European markets.

"The construction of our global communications network in only 30 months is an unprecedented accomplishment and a strong testament to the commitment of our employee-owners, construction and technology partners, and investors. A continuously upgradeable network like ours is never truly complete, but we're extremely pleased to be able to move customer traffic from leased facilities and offer services on our own global broadband infrastructure in less than 3 years."

- James Q Crowe, Chief Executive Officer



- Currently Providing Service
- ⊙ Planned Cities

Note: Markets projected to provide service are subject to change. Network connections between cities are logical paths and may not reflect actual routes. Transatlantic Network includes leased and owned facilities.

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PRODUCTS

- Colocation
- Dark Fiber
- Data Services
- DSL Aggregation
- Enterprise Remote Access
- Hosted Voice Services
- Level(3)Commerce
- Managed Internet Access and Managed Security
- Managed Modem
- ONTAP
- Private Line
- Private Line Hubbed
- Transoceanic Services
- Voice Origination Services
- Wavelength
- Wholesale Internet Access

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|--------------|---|
| Dec 01, 2003 | Level 3 CEO Urges FCC Restraint on Access Charges For Voice Over IP |
| Nov 17, 2003 | Level 3 Providing Bandwidth for International Supercomputing Conference |
| Nov 12, 2003 | Level 3 Providing Detroit Metro Fiber to Sprint |

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- Industry Leadership
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- IP Tutorial

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(3)Link® Dark Fiber

(3)Link Dark Fiber (Intercity and Metro) gives carriers and service providers the infrastructure required to "own" a fiber optic network without the burden of network construction. (3)Link Dark Fiber service includes optical fiber cable, colocation and running line facility space, power, and operation and maintenance of the network (as well as enhanced services).

Intercity Features

- Approximately 19,000 intercity route miles in North America connecting more than 150 cities
- Approximately 3,600-mile Pan-European network
- High fiber counts, utilizing the latest generation of optical fiber technology
- State-of-the-art running line colocation facilities

U.S. Metro Features

- Approximately 1,800 route miles of upgradeable metro fiber networks worldwide, and growing
- 27 metro markets in North America with more than 130 loops
- Access to more than 350 strategic "On-Net" buildings

European Metro Features



- 9 metro markets in Europe with more than 28 loops
- Access to more than 90 strategic "On-Net" buildings

Facilities

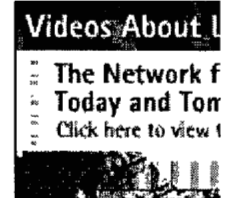
A major player in the expanding market for colocation services, Level 3 is building more colocation space worldwide than any telecommunications company. (3)Center Colocation facilities include:

- State-of-the-art facilities typically sized between 20,000 to 80,000 square feet
- 24 x 7 access with palm scan security and closed-circuit video surveillance
- Locked cabinet space
- Uninterruptible power supply with eight hours of backup

Related Links and Materials:

-  [\(3\)Link Dark Fiber Product Overview Brochure](#)
-  [\(3\)Link Dark Fiber Off-Net Lateral Product Overview Brochure](#)

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(3)HubSM Private Line

Dedicated bandwidth at the customer's command

(3)Hub Private Line is a more flexible version of traditional private line service that allows SONET/SDH capacity to be dedicated to customers at low cost so that they can activate and control circuits through their own initiative and pay for each circuit only after they activate it.

The unique commercial model of (3)Hub service allows customers with expected metropolitan or intercity bandwidth growth to order an amount of capacity several times larger than what they might typically afford.



When a new circuit is needed, (3)Hub service allows extremely rapid activation times, owing to a combination of Level 3's ONTAPSM system and the "pre-provisioned" nature of the (3)Hub bandwidth itself. This dedicated bandwidth is called a (3)Hub facility. A (3)Hub facility is a point-to-point SONET/SDH path within which the customer can activate and control one or more (3)Hub circuits.

For example, a single OC-48 (3)Hub facility might consist of one OC-3 circuit on Tuesday — then get upgraded by the customer to six OC-3s and two DS-3s the following Wednesday. Although the entire OC-48 facility had been dedicated to the customer from the start, customers pay for individual circuits within this facility only as they activate them.

(3)Hub service therefore offers the best of both worlds — the risk management of a "buy-as-needed" approach with the margin enhancement of a "buy-and-fill" approach.

The service's flexibility, ordering system technology, and "pay-as-you-grow" pricing model benefit both local as well as wide area customer networks:

Related Links and Materials:

-  [\(3\)Hub Private Line Product Overview Brochure](#)
-  [News Coverage: Level 3 to Unveil Layaway Plan, *Telephony*, 11/03/03](#)

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Network problems solved through (3)Hub Private Line service

- Capacity shortages
- Long lead times
- High prices for metro capacity
- Unpredictable growth patterns
- Customer dependence on the LEC

How customers use (3)Hub Private Line

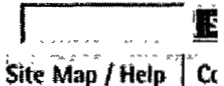
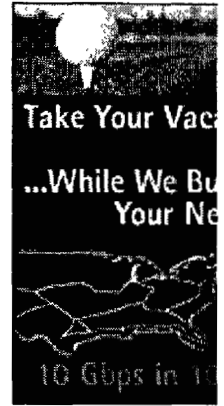
"One-to-many" network configurations — (3)Hub is an excellent solution for distributing traffic from a single access point to many target communities.

Opening a new market — (3)Hub service lets customers create a highly customized virtual private line network to extend their presence to new markets without the expense of dedicated infrastructure or leased facilities.

Connecting end users efficiently — (3)Hub service is ideal for interconnecting a community of users in one market to a community of users in another — over a single, self-managed facility between markets.

Wide geographic coverage and port speed availability

- (3)Hub service is available throughout Level 3's international long-haul transport network and 36 metro networks. If a market offers



(3)Link[®] Private Line, it offers (3)Hub Private Line as well.

- *Protected* (3)Hub facilities are available in speeds from DS-3 to OC-48 (DS-3 to STM-16 in Europe and transatlantic). The individual circuits *within* the (3)Hub facility are available from DS-1 through OC-48, and E-1 to STM-16 bandwidths.
- *Unprotected* (3)Hub Private Line facilities are available with OC-3 to OC-48 (STM-1 to STM-16) speeds of service.

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- ONTAP
- Transoceanic Services

(3)Link® Private Line

(3)Link Private Line Metro

(3)Link Private Line Metro service makes it possible for Level 3 customers to transport high volumes of voice, video, or data over secure channels to your local presence. Our (3)Link Private Line Metro service provides you with an excellent solution for true end-to-end connectivity between two long-haul points-of-presence (POPs).

Ranging in speeds from DS-3 to OC-48 in 27 North American and 9 European On-Net metro markets, (3)Link Private Line Metro services currently provides four distinct configuration options:

- (3)Link Private Line - Metro Point-to-Point
- (3)Link Private Line - Metro Access
- (3)Link Private Line - Metro Hub & Spoke
- (3)Link Private Line - Metro Managed Ring Service (MMRS)

(3)Link Private Line - Metro Point-to-Point

Metropolitan Private Line is a dedicated and fully route-diverse circuit between two or more customer-specified locations within one metropolitan or Level 3 Gateway market. Although the circuit is configured to traverse the Level 3 Gateway, neither end of a Metro Point-to-Point configuration terminates in the Level 3 Gateway. At least one of the customer-specified termination points must be On-Net for this service.

(3)Link Private Line - Metro Access

Metropolitan ("Metro") Access connects a customer location to the nearest Level 3 Gateway or point of presence (POP). A point of presence could be a building where Level 3 is collocated with another service provider (such as a telephone company), a building with Level 3 equipment, or most often a Level 3 Gateway. This service accesses a Level 3 backbone service, such as (3)Link Private Line. It can also access and terminate in a (3)Center Colocation cabinet within a Level 3 Gateway. Metro Access can be either On-Net or Off-Net.

(3)Link Private Line - Metro Managed Ring Service (MMRS)

MMRS provides the customer with a dedicated optical metro ring service connecting two or more On-Net locations within a single metro market. Dedicated multi-node SONET rings are custom-built to the locations and speeds specified by the customer.

Off-Net

Through a combination of third-party vendor relationships, Level 3 also offers extensive Off-Net access to the Level 3 Network.

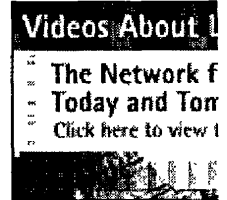
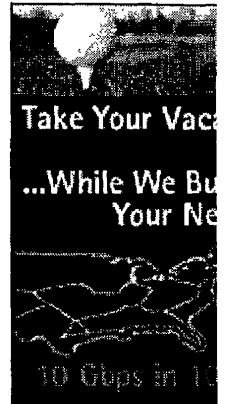
(3)Link Private Line U.S. Intercity

Level 3 provides dedicated point-to-point (3)Link Private Line service 66 North American and 16 European On-Net markets. This service is ideal for customers with multiple locations who need to transport high volumes of voice, video, or data over a secure channel. As a (3)Link Private Line U.S. Intercity customer, you can easily migrate to higher capacity as your network requirements increase

Related Links and Materials:

- [\(3\)Link Private Line Metro Product Overview Brochure \(North America\)](#)
- [\(3\)Link Private Line Metro Product Overview Brochure \(Europe\)](#)
- [\(3\)Link Private Line U.S. Intercity Product Overview Brochure](#)
- [\(3\)Link Unprotected Private Line Product Overview Brochure](#)
- ["Taking Control of Your Capacity" Webcast](#)


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(3)Link Unprotected Private Line

(3)Link Unprotected Private Line service in North America gives you the ability to create a new meshed network or add capacity or protection to your existing transport-based network. Called (3)Link UPL for short, this product gives you point-to-point connections at OC-3 or OC-12 concatenated bandwidths. (Concatenated services maximize the usable payload of the available bandwidth by removing the overhead needed to manage subrate services.)

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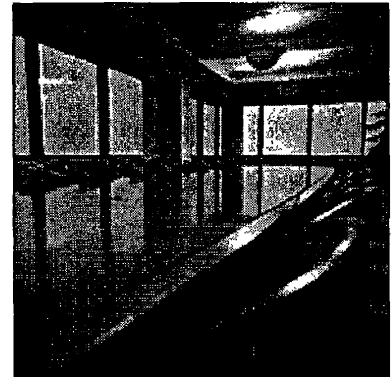
Corporate Overview

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Mission Statement

"To be a wholesale telecommunications leader in providing high quality telecommunication services throughout the Eastern United States and beyond."

Our mission is founded on building and nurturing long-term customer relationships. We are committed to providing our customers with the highest quality services from a family of products including lit fiber capacity and wireless infrastructure services, using **knowledge**, **creativity** and **flexibility** to develop solutions for our customers that are complete, convenient and reliable.



Private **Line Services**

Progress Telecom's Metro, Long-Haul and International Private Line Service offers scalable and survivable high bandwidth solutions for all your telecommunication needs. Progress Telecom is a leading-edge broadband services provider with extensive coverage throughout the Eastern United States. Our network is strategically located in first, second, and third-tier growth markets and gives you local access; not just in the major Metropolitan

Statistical Areas (MSAs), but in the smaller markets, too. In addition, our network alliances allow us to carry your traffic throughout the Eastern U.S. and beyond. We help you go where there's room to grow and transport information where you need it. Whatever your network requirements, we combine the best available products with custom, turn-key solutions to give you the capacity you need, now and in the future.

Services:

Metro — With Progress Telecom as your partner, you can reach regional and metro customers using local access with true diversity through our robust, reliable network. Progress Telecom employs a number of regional metro rings that have fully redundant broadband capacity. We provide dedicated private lines between Progress Telecom On-Net locations in key metropolitan areas.

Long-Haul — Progress Telecom's next generation transport architecture has allowed us to construct a scalable, survivable network backbone. The Progress Telecom long-haul network consists of the latest generation SONET and DWDM equipment, ensuring reliable and efficient high capacity bandwidth throughout our network.

International — With our extensive South Florida presence and access to several international gateways, Progress Telecom is among the leaders in the U.S. distribution of international telecommunications traffic to and from Latin America.

Flexibility & Features:

- SONET/SDH
- E-1, DS-3, OC-3 through OC-192
- STM-1 through STM-64
- Ethernet Interfaces (GigE)
- Single point of contact for Metro, Long-Haul and International Connectivity
- Industry-leading provisioning intervals – On-Net 10 days
- Performance monitoring and guarantees for network availability

Reaching beyond @ the speed of light.

 **Progress Telecom**
A Progress Energy Company

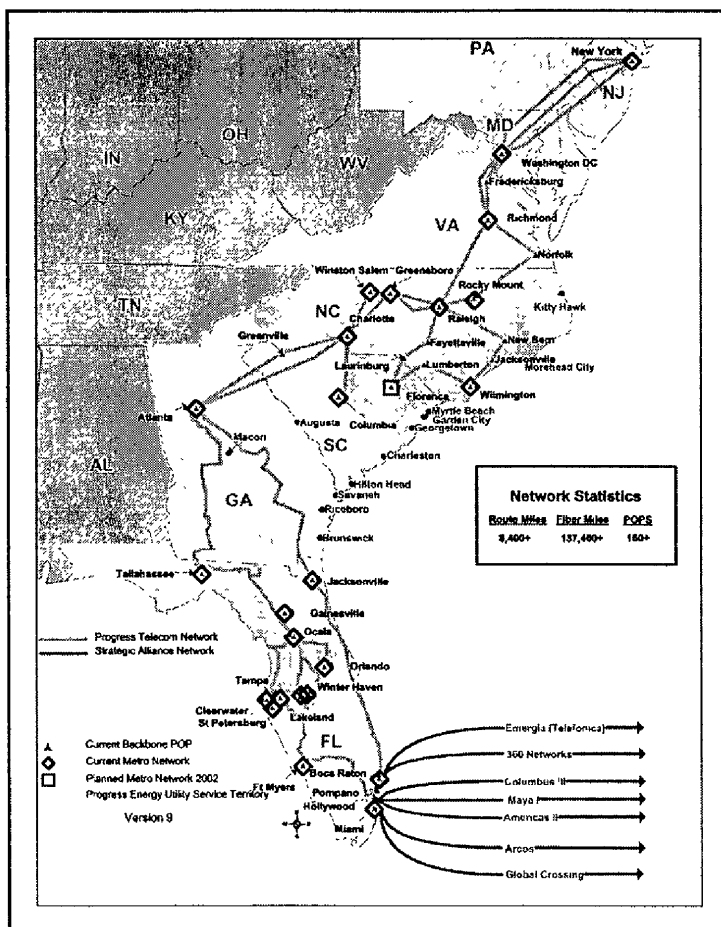
Private Line Services

Network Overview:

- Over 137,400 fiber miles including 8,400 route miles built with state of the art optics and DWDM equipment
- Fully redundant, geographically diverse OC-192 carrier-grade backbone connectivity to first, second, and third-tier cities throughout the Eastern United States
- Access to over 160 POPs including carrier hotels, central offices and tandems
- 24/7/365, "hurricane hardened" Network Operation Center with mirrored redundancy for all monitoring systems
- Our network backbone is a combination of underground fiber and optical ground wire (OPGW). OPGW is positioned on top of electrical transmission towers in existing right-of-way areas.
- Diversity + Redundancy + Readiness = RELIABILITY

On-Net Service Specifications:

| | |
|-------------------------|---|
| Specifications | Metro/Long Haul Access |
| Bandwidth/Capacity | E-1, DS-3, OC-3 to OC-192 |
| Installation Intervals | 10 days On Net |
| Protection | 1 + 1 SONET protected diverse ring architecture |
| SONET Availability | 99.997% |
| Network Technology | SONET or SDH over DWDM over fiber |
| Geographic Availability | <ul style="list-style-type: none"> • Eastern United States • National and international reach via strategic alliances |
| Network Management | 24/7/365 monitoring |



To find out more information about these products and services, contact Progress Telecom today!

Tel: 727.820.5300 or visit www.progresstelecom.com

Ethernet Services

Reaching beyond at the speed of lightSM

Ethernet Services

Progress Telecom's Ethernet services deliver easy to use, full-rate connectivity for both long-haul and metro connectivity. Utilizing this popular transmission protocol allows customers to achieve cost effective and flexible connectivity in the metro area and throughout the long-haul network, providing access to applications such as Internet connectivity, storage connectivity and Virtual Private Networking. As a service provider, you can leverage Progress Telecom's dense metro presence and long-haul connectivity as the foundation for delivering many higher-level services.

Benefits:

As a complement to existing connectivity services, our Ethernet services have important advantages:

- > Ease of use
- > A standard, widely available and well-understood interface
- > Simplified OAM&P
- > Cost effectiveness
- > An inexpensive interface due to broad usage
- > Lower equipment and operational costs
- > Flexible connectivity option and data rates

Applications:

- > High-speed data connectivity between data centers and carrier hotels
- > Connectivity between Storage Area Networks within a metro
- > High speed Internet access
- > Corporate LAN interconnection
- > High-speed interconnection between switches
- > Inter and Intra POP connections

find out more at
www.progresstelecom.com





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Products & Services

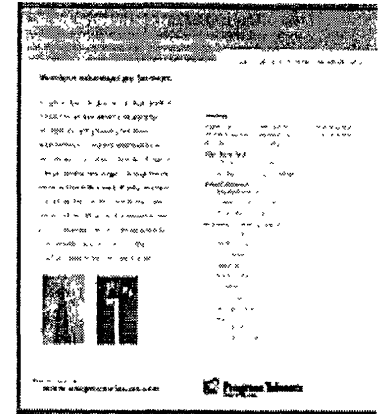
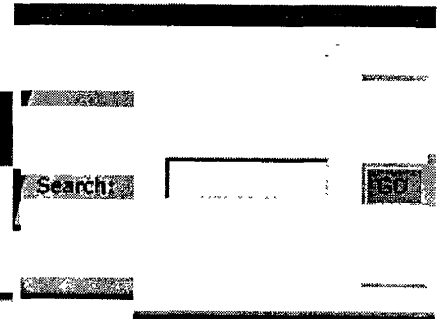
Wireless Services

Progress Telecom gives you a single point of contact for turnkey wireless infrastructure services, including tower colocation, engineering, construction and fiber back-haul services.

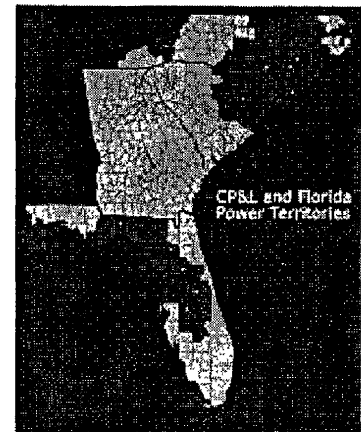
Services:

Progress Telecom is capable of providing a full range of in-house services to keep pace with the rising demand for wireless communications and help your company succeed:

- Fiber back-haul
- Tower colocation
- Architectural and engineering
- Construction



Download wireless brochure





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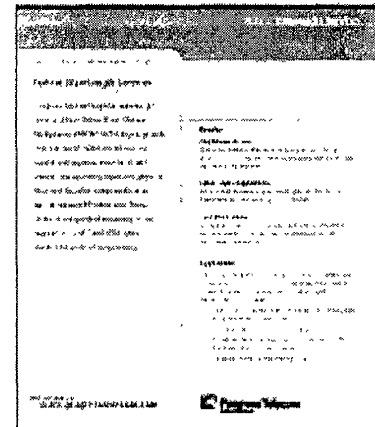
Optical Wavelength

Progress Telecom's optical wavelength service utilizes Dense Wave Division Multiplexing (DWDM) technology to provide high bandwidth solutions with out the capital and expense associated with owning and operating repeaters, physical fiber and the other components of an optical network infrastructure.

- 2.5 Gbps and 10 Gbps
- Unprotected standard offering - Diverse route protection available upon request

Benefits:

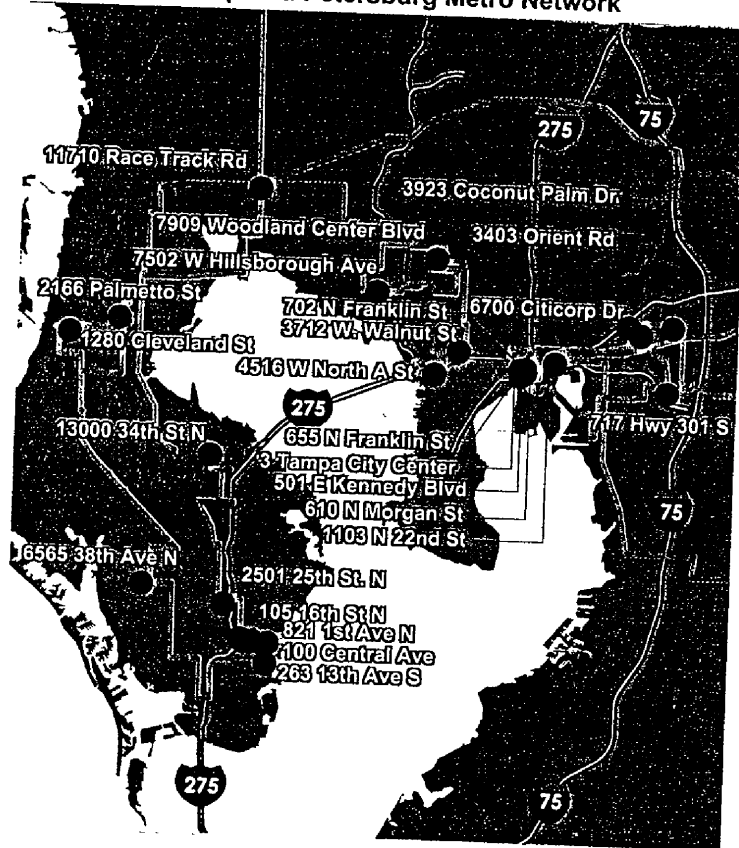
- Fast market access
- Lower capital expenditures
- Cost effectiveness



Download Optical Wavelength Brochure

Tier 2 Metro Network Maps

Tampa/St. Petersburg Metro Network



Reach us beyond at the speed of light

- Progress Telecom Network
- Progress Telecom POP

Additional Progress Telecom Metro Networks

| | | |
|-------------------------|-------------------|----------------|
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| Gainesville, FL | Charlotte, NC | Groenville, SC |
| Ocala, FL | Fayetteville, NC | Richmond, VA |
| South Florida/Miami, FL | Greensboro, NC | Washington, DC |
| Tallahassee, FL | Wilmington, NC | |
| Winter Haven, FL | Winston-Salem, NC | |



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Business Products and Services

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SBC Long Distance Private Line Service

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Do you need to link LANs across multiple locations? Move small amounts of data at set times? Consolidate voice trunks or link offices for videoconferencing? Whatever your needs, SBC Long Distance has a cost-effective, dedicated Private Line Service that is right for you.

SBC Long Distance Private Line Service is a digital point-to-point inter-LATA connection that provides a dedicated circuit of pre-subscribed bandwidth between any two points across a state line or LATA. Private Line Service lets you consolidate communications over one line- data, video, and multimedia.

Private Line Service offers several transport options with bandwidth ranging from 1.5 Mbps (DS1) to 622 Mbps (OC12). This gives your business the speed you need while leaving room to grow down the road.

Unlike some types of transport, Private Line Service provides a versatile, digital conduit for all kinds of business-related traffic. Be it data or multimedia, Private Line Service can handle the variety.

With Private Line Service, you can get a complete end-to-end transport for your local and long distance communications needs. Certain applications may require the purchase of additional equipment. You can buy this equipment from us, ensuring a seamless solution.

Private Line Service provides you with interLATA point-to-point connectivity between two distant locations. Within each LATA, local access consists of one channel termination (also known as a CT or "chan-term"). Each CT connects your site to your serving wire center (SWC). The midlink connects the SWC in one LATA to the SWC in another LATA or state.

Needs

Private Line Service provides you with interLATA point-to-point connectivity between two distant locations. Within each LATA, local access consists of one channel termination (also known as a CT or "chan-term"). Each CT connects your site to your serving wire center (SWC). The midlink connects the SWC in one LATA to the SWC in another LATA or state.

What will it do for me

- **Super-fast connection** - Private Line Service gives you speed up to 622 Mbps (OC12) on a single circuit. This high bandwidth service lets you transmit all types of multimedia and data traffic to more locations in a fraction of the time needed by a standard analog connection.
- **Quality** - Private Line Service gives you speed up to 622 Mbps (OC12) on a single circuit. This high bandwidth service lets you transmit all types of multimedia and data traffic to more locations in a fraction of the time needed by a standard analog connection.

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- **High performance standards** - Private Line Service adheres to the high performance objectives. We monitor our network every day, 24 hours a day. Our high performance standards provide you maximum uptime and reliable connections to your WAN and other private networks. This will help keep your business operating smoothly and uninterrupted.
- **Predictable pricing** - Private Line Service is offered with economical flat-rate prices and term pricing. You can budget your expenses, knowing your rates will not change during the term of your agreement and you won't incur usage charges.
- **Private, secure connection** - Private Line Service isolates your sensitive data traffic on your own dedicated circuit. Because your network is accessible only to your business, your communications remain secure and private.

Options

The following options are available with SBC Long Distance Private Line Service:

- **DS1 Service** - sets the standard for a reliable, all-purpose digital connection for relatively high volume requirements. Operating at 1.5 Mbps, DS1 Service lets you combine multimedia and data traffic, link remote hosts, and increase productivity with data-intensive applications like videoconferencing. You can use that bandwidth to support single, high-bandwidth applications.
- **DS3 Service** - serves as a reliable, all-purpose connection for extremely high-volume requirements. Operating at up to 45 Mbps (equal to 28 DS1 circuits), DS3 Service provides a cost-effective solution to consolidate your existing multimedia and data traffic. With DS3, you can link high-volume host computers for resource sharing and load balancing. Whether you use your DS3 to support a single application or channelize your DS3 into 28 separate DS1s, you'll have the capacity you need to grow.
- **OC3 Service** - utilizes optical carrier technology to provide a cost-effective, dedicated, high-speed circuit that transmits data at speeds up to 155 Mbps. OC3 brings the efficiency and power of high-speed performance to your existing networks and delivers super-high capacity to support a wide range of business applications. With OC3, you'll get leading-edge technology without a major capital investment.
- **Pricing Plans** - Private Line Service offers pricing plans that are right for your business needs and your budget. Sign up for one-, two-, three-, or five-year term plans with reduced or no installation charges. And with our volume incentive programs, the more you spend on your private line service, the more you save. Whichever term plan you choose, we offer you simple, competitive pricing.
- **Local Loop Access** - means that we will provide local access facilities for you if you order Private Line Service "with local loop facilities." If you choose Private Line Service "without local loop facilities," you must provide your own local loop transport to the serving Local Exchange Carrier (LEC) central office at a DS1, DS3, OC3, or OC12 standard interface. Local loop access is available with all four transport options.
- **OC12 Service** - provides the ideal transport solution for the most advanced network requirements. OC12 is a cost-effective, dedicated, high-speed circuit that transmits data at speeds up to 622 Mbps. With OC12, employees at different sites can concurrently work on projects in real time. They can share graphics and motion-intensive applications that require high bandwidth, including videoconferencing,

medical imaging, and engineering-related applications.

Components

SBC Long Distance Private Line Service uses these components:

- **Long distance midlink** - connects two serving wire centers in different LATAs or states.

Availability

SBC Long Distance Private Line Service is available in those locations SBC Telecom is able to serve on a facilities-basis (i.e., not through resale) in the SBC Telecom service areas of Boston, MA; New York City, NY; Nassau-Suffolk, NY; Bergen-Passaic, NJ; Middlesex, NJ; Newark, NJ; Philadelphia, PA; Baltimore, MD; Washington DC; Charlotte, NC; Atlanta, GA; Miami, FL; Fort Lauderdale, FL; West Palm Beach, FL; Tampa, FL; Orlando, FL; Minneapolis, MN; Denver, CO; Phoenix, AZ; Las Vegas, NV; Salt Lake City, UT; Portland, OR; and Seattle, WA."

Customers planning to use SBC Long Distance Private Line Service in support of a voice application should verify whether their CPE provides echo protection.

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*Penn S
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High-Speed Internet and Data. Local Voice and Long Distance. Stand-alone or integrated. Local or intercity. TelCove can deliver the communications solution that is right for you.

*Rendel
Support
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Incentiv
Busines
Organiz
High-Sp
Telecom*

We are a facilities-based telecommunications provider with an 11-year history of delivering advanced, secure communications over our fiber optic network. Among our customers you will find Fortune 500 companies, educational institutions, government agencies, financial and healthcare organizations, and other communications service providers.

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Voice &
Velocity*

*TelCov.
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More...

■ *Featur*

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TelCov*

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Our team of local professionals, throughout the markets we serve, will attend to your unique requirements, helping to determine which solution from our range of services works best for you today and as your business grows.

Our redundant Synchronous Optical Network (SONET) ring architecture will transfer your communications securely while providing constant monitoring and maintenance from our Network Operations Control Center.

Just some of the reasons that so many companies are choosing TelCove.

■ *Featured Product* ■

Transform your TelCove invoice...



into vital business intelligence

■ *Featured Product* ■

It's not just city to city...



It's door to door

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PRODUCTS

*Internet Services ■ Data Services ■ Voice Services
User Guides ■ Product Data Sheets ■ On-line Tariffs*

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TelCove offers a robust array of Internet, Data, and Voice products and services, stand-alone or integrated, to fulfill your telecommunications needs. Our experienced professionals will personally work with you to identify your requirements, provide you with appropriate, economical solutions, and offer on-going support through your project's installation. A local TelCove representative is always available to address any of your post-sale requests.

Our offerings include:

Internet

- Internet Services
- Data Center Solutions
 - Shared Web Hosting
 - Dedicated Web Hosting
 - E-commerce
 - Co-location

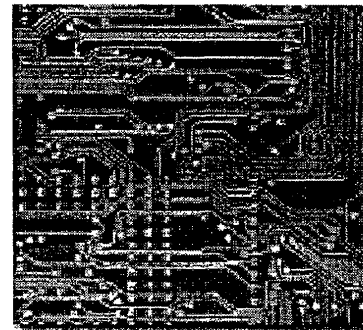
Data

- Local Private Line
- Private Local SONET Ring
- Intercity Private Line
- Frame Relay
- ATM

Voice

- Business Line
- Business Trunks
- ISDN BRI \ ISDN PRI
- Centrex
- Voice Messaging and Auto Attendant
- Long Distance

INTEGRATED



Our Products

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INTEGRATED



Data Intercity Private Line

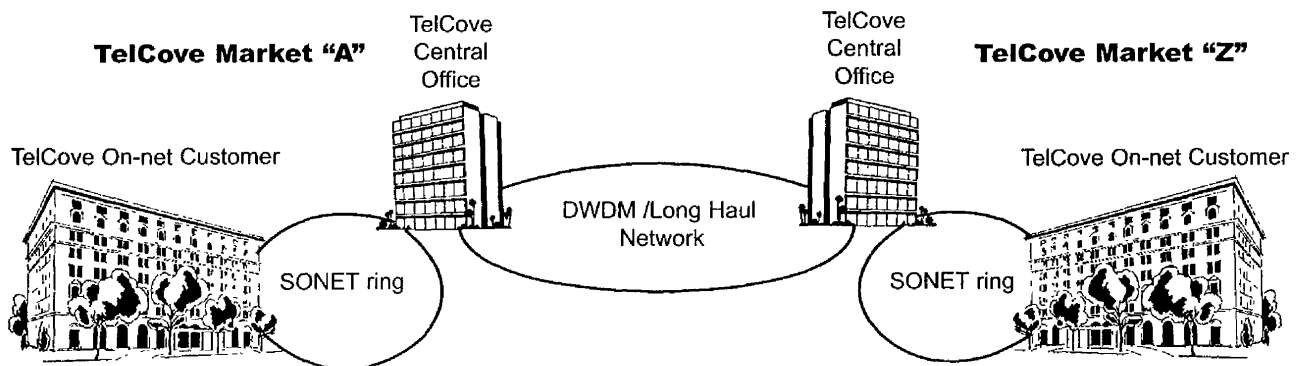
Product Description

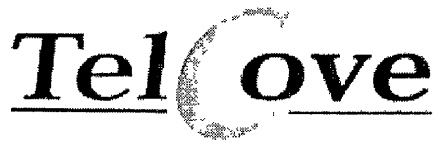
TelCove's Intercity Private Line (IcPL) is a high-capacity, point-to-point network that pairs customer locations in TelCove markets via a self-healing, dedicated fiber optic infrastructure. Currently offered in bandwidths of DS-1 (1.544 Mbps), DS-3 (44.736 Mbps), OC-3 (155 Mbps), and OC-12 (622 Mbps), IcPL provides an ideal solution for those businesses that routinely transmit large volumes of digital information. In addition, the network is well suited for applications that demand constant bandwidth, such as LAN-to-LAN connectivity and teleconferencing. IcPL utilizes TelCove's Dense Wavelength Division Multiplexing (DWDM) infrastructure. This backbone is the workhorse of IcPL, providing the necessary physical diversity in each circuit route. IcPL provides a guaranteed bandwidth dedicated to the customer.

Applications

IcPL is well positioned for those applications requiring the benefits of non-shared, secure point-to-point data facilities including:

- Banking and security
- Legacy operations environments
- Video applications
- Disaster recovery services
- High-capacity offsite storage networks
- Cellular telephone companies





NETWORK

Network Operations Control Center (NOCC) ■ National Repair Center

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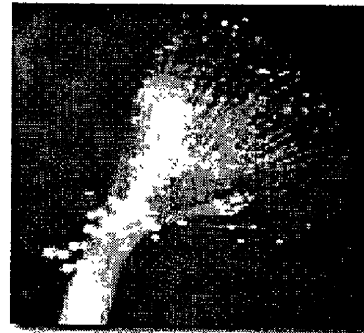
SEARCH

Another reason businesses are choosing and staying with TelCove is our technologically-advanced, facilities-based fiber optic network. Conventional phone networks still offered by many of our counterparts often consist primarily of copper wire that is susceptible to interruptions and outages.

TelCove's network consists of high-capacity fiber optic technology that is reliable,

secure, and cost-effective. We are one of the few telecommunications providers that offers both local and intercity service over our network.

RELIABLE



Our Network

Our Synchronous Optical Network (SONET) ring architecture connects your business through fiber optic loops, transmitting information bi-directionally, for built-in, protective redundancy. Your communications will be crystal clear, lightning fast, and secure. Also, there's plenty of room for expansion as your need for bandwidth intensifies. Our network has the capacity to meet your multifaceted needs today and well into the future.

We back our technology by proactively monitoring the network 24/7 from our Network Operations Control Center (NOCC) to ensure your communications are trouble-free. Because we largely own our network, if the NOCC detects a problem anywhere in our system, we can often identify and correct it before it becomes an issue for you.

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CUSTOMERS

Customers We Serve ■ *Customer Success Stories*

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Organizations that require integrated and innovative solutions to communicate efficiently, recognize the reliability and value of TelCove. We are proud to serve thousands of customers in a variety of vertical markets. Among our valued customers -- local government, banks, hospitals, school districts, utility companies, manufacturers, long distance carriers, universities, Internet service providers -- are some names you're sure to recognize:

AT&T

American Heart Association

Archdiocese of Philadelphia

Arthritis Foundation

Ben & Jerry's

BlueCross BlueShield

Cessna Aircraft Company

Cingular Wireless

City of Wichita

The Coleman Company

Commonwealth of Pennsylvania

Domino's Pizza

Drexel University

Earthlink

Fletcher Allen Health Care

GIANT Foods

Harley-Davidson

Hershey Foods

Ingersoll-Rand

Mayo Clinic

MCI

Muscular Dystrophy Association

The Pennsylvania State University

PNC Bank

School District of Philadelphia

Sprint

State of Vermont

Sunoco Chemicals

SunGard

Sysco Food Services

The United States Navy

University of Vermont

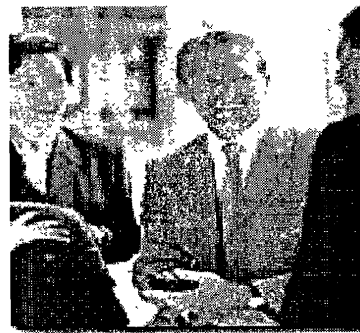
Via Christi Regional Medical Center

Wichita Marriott Hotel

Wichita State University

Williams-Sonoma

PROVEN



Our Customers



ABOUT TELCOVL

Markets Served & Contacts ■ *Press Releases* ■ *Employment*



TelCove currently provides a robust array of integrated Internet, Data, and Voice Services to a variety of enterprises throughout the nation. Please use the list below to locate a TelCove Office near you, or call our toll-free number at 1-888-743-2233 for assistance.

For more info ...



View Current Network Map (WARNING: this will take about 30 seconds to download)

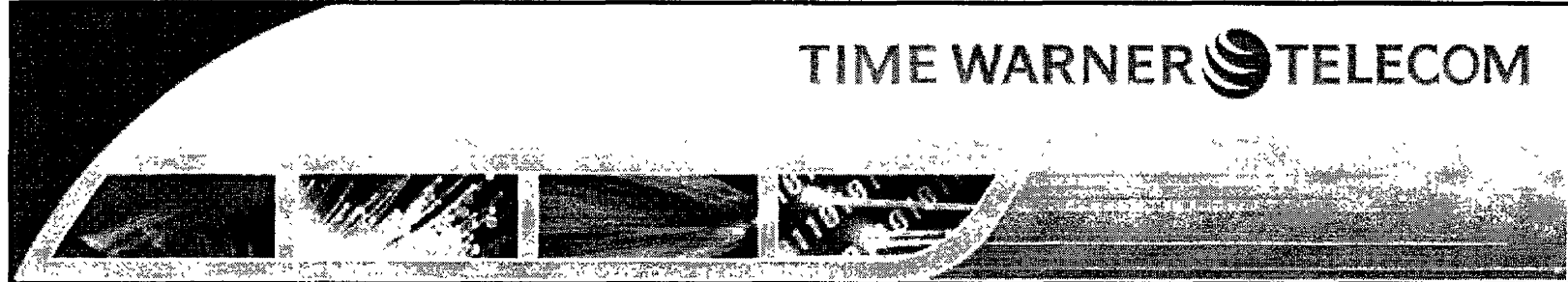
| <i>Market</i> | <i>Local Phone Number</i> |
|-------------------|---------------------------|
| Allentown, PA | 610-871-5000 |
| Atlanta, GA | 678-559-9900 |
| Baton Rouge, LA | 225-612-1700 |
| Burlington, VT | 802-846-1234 |
| Charlotte, NC | 704-357-8080 |
| Columbia, SC | 803-733-1633 |
| Columbus, OH | 614-227-0599 |
| Coudersport, PA | 814-260-2000 |
| Detroit, MI | 248-864-0100 |
| Erie, PA | 814-456-4600 |
| Greenville, SC | 803-733-1633 |
| Harrisburg PA | 717-506-1600 |
| Houston, TX | 713-222-8887 |
| Jackson, MS | 601-914-1241 |
| Jacksonville, FL | 904-680-2000 |
| Kansas City, MO | 316-264-9220 |
| Lancaster, PA | 717-506-1600 |
| Lexington, KY | 859-514-1000 |
| Little Rock, AK | 501-604-1700 |
| Louisville, KY | 502-515-1000 |
| Mobile, AL | 251-650-9912 |
| Nashville, TN | 615-263-1100 |
| Newark, NJ | 973-319-7700 |
| New Orleans, LA | 504-569-9220 |
| Norfolk, VA | 757-777-7716 |
| Oklahoma City, OK | 405-235-1984 |
| Orlando, FL | 407-659-8000 |

| | |
|--------------------------|---------------------|
| Philadelphia, PA | 610-785-5000 |
| Piscataway, NJ | 973-319-7400 |
| Pittsburgh, PA | 412-681-9600 |
| Raleigh, NC | 919-341-2200 |
| Rome/Utica, NY | 315-234-5678 |
| Scranton, PA | 570-300-2900 |
| South Florida, FL | 954-217-6700 |
| State College, PA | 814-689-1400 |
| Syracuse, NY | 315-234-5678 |
| Tampa, FL | 813-224-9630 |
| Titusville, FL | 904-680-2000 |
| Tulsa, OK | 405-235-1984 |
| Wichita, KS | 316-264-9220 |
| York, PA | 717-505-1100 |

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THE POWER DRIVING YOUR NETWORK

Time Warner Telecom is the leading provider of metro-area broadband optical networks and services to businesses. Our power is driven by more than 17,000 route miles of our own metro and regional fiber that delivers the local last mile of connectivity to our customers.

Time Warner Telecom leads as the best ISP in the United States.

Customer Center

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[Switched & Transport](#)

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[Packaged Solutions](#)

[Find Your Local Sales Office](#)

SPECIAL OFFERS

NEWS & INFO

12/11/2003

Time Warner Telecom Wins Voice and Transport Services Contract for Brigham Young University - Hawaii

12/10/2003

Time Warner Telecom Wins Multi-year Contract to Deliver Dedicated Internet Access to State of Ohio Department of Administrative Services (DAS)

12/8/2003

Time Warner Telecom and Data Services Broadcast El Dorado Hospital Knee Surgery over Internet

EVENTS

Are your business communications operating more like a soap box derby? Let Time Warner Telecom 'rev up your business and get you on the right track. For a limited time select products are available at significant savings to help your business win in today's fast-paced marketplace.

Make an appointment to see how our service beats the rest of the "pack" and we'll bring your office a "pack" of 28AA batteries, just for inviting us to visit.

Race into action today! Offer ends January 31, 2004.
More...

TIME WARNER TELECOM

THE POWER DRIVING YOUR NETWORK

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SOLUTIONS

Solutions

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[Packaged Solutions](#)
[Joint Marketing Solutions](#)
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Our metropolitan fiber networks enable us to deploy new service platforms efficiently and cost effectively, which allows us to rapidly meet our customers' needs. Our innovative **National Operations Center (NOC)** monitors all our networks for availability and performance, 24-hours-a-day, seven-days-a-week. The flexible infrastructure provided by these networks allows us to support almost any technology, product, service, or solution to benefit our customers.

Our solutions include:

- **Internet & Data Products** that allow customers to create their own internal computer networks and to access Internet and other external networks.
- **Switched & Transport Services** which include local and long distance calling solutions that use a carrier class of service to connect one calling party to the other, and private line connections for broadband services at transmission speeds of up to 1.5 megabits to 10 gigabits per second.
- **Packaged Solutions** that bundle products and services to meet unique customer needs for voice, data and dedicated Internet access.

Joint Marketing Solutions

Expand your options as you deal with customers' wide-area networking needs at no cost to you. The Time Warner Telecom Joint Marketing Program allows you to leverage Time Warner Telecom's infrastructure ... bringing more value to your customer and increasing your revenue opportunities. [Learn more...](#)

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CUSTOMERS

- Customers**
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Carriers

Time Warner Telecom is committed to serving the needs of carriers and service providers. Our commitment, combined with our robust network, means you can count on us to provide the communications solutions you need to stay competitive.

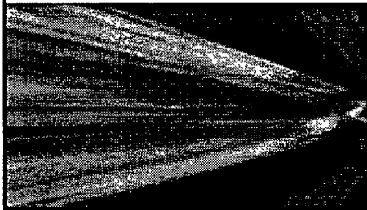
Some of our services for carriers include:

Internet & Data

- Storage & Transport Services

Switched & Transport

- Dedicated High Capacity Services (DS1/DS3)
- Digital Trunks
- ISDN PRI



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Docket No. 030852-TP
 Joint Direct Testimony of Fulp/White
 Exhibit E-8
 FPSC Exhibit No.
 December 22, 2003
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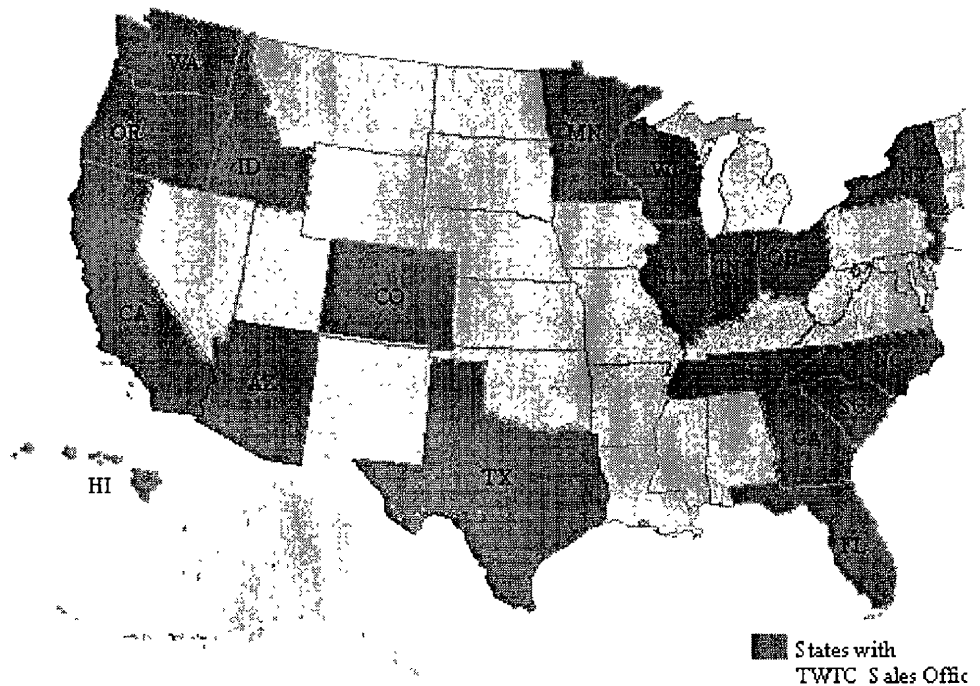
THE POWER DRIVING YOUR NETWORK

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[Billing](#)

Contact Your Local Sales Office

Click on your state to find the name, address, and telephone number of your local TWTC sales representative.
Please note that Time Warner Telecom does not offer its products and services in all states.



Arizona

Phoenix, Arizona

Market Contacts:

Ron Martin, Sales Manager (602) 385-8447
Eric Warren, General Manager (602) 385-2000

Office Address:

Tucson, Arizona

Market Contacts:

Mike DeNatale, General Manager 520-61
Les Smith, Sales Director 520-618-4210

Office Address:

Office Address:
501 Second Street, Suite 200
San Francisco, CA 94107
Main Phone: (415) 489-0700
Main Fax: (415) 489-0765

3050 Broad Street, Suite 113
San Luis Obispo, CA 93401
Main Phone: (805) 597-6544
Main Fax: (805) 597-6407

Colorado

Denver, Colorado

Market Contacts:
Jeff Wiley, General Manager

Office Address:
14200 E. Jewell Ave.
Aurora, CO 80012
Main Phone: (303) 566-1386

Florida

Orlando, Florida

Market Contacts:
Gene Mohen, Operations Director (407) 215-6870
Dick Davis, Vice President & General Manager (407) 215-6901
Paul Potter, Sales Director (407) 215-6850
Joe McCourt, Regional Vice President (704) 731-2958
Ray Maxwell, Sales Manager (407) 215-6890

Office Address:
485 North Keller Road, Suite 551
Maitland, Florida 32751
Main Phone: (407) 215-0000
Main Fax: (407) 215-6803

Tampa, Florida

Market Contacts:
Gabby Nieto, Sales Director (813) 316-7786
Richard Santoro, Regional Vice President & Gen

Office Address:
3030 North Rocky Point Drive West
Suite 150
Tampa, Florida 33607-5901
Main Phone: (813) 281-0064
Fax Number: (813) 281-0125

Georgia

Atlanta, Georgia

Market Contacts:
Mike Renaldo, Director of Operations (678) 579-8811

Office Address:
180 Peachtree Street, Ste 350
Atlanta, GA 30303
Main Phone: (678) 579-8900
Main Fax: (678) 579-8822

Hawaii

Honolulu, Hawaii



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About MCI



Our Network

MCI's extensive global network is a key advantage for business customers of all sizes.

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 - ▶ [IP Dial-up PoP Numbers](#)
 - ▶ [IP Latency Statistics](#)
 - ▶ [DSL \(On-Net\) Latency Statistics](#)
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- ▶ [MCI Worldwide](#)

MCI® owns, operates, monitors and maintains one of the largest communications networks in the world. Our network facilities are throughout North America, Latin America, Europe, Africa, and the Asia-Pacific region, in more than 125 countries and over 2,800 cities.

Our 98,000-mile fiber optic network is designed to support the largest array of data communications and voice products in the world.

MCI owns the world's farthest reaching global network (based on company-owned PoPs), and spans more than 4,500 Points of Presence (POPs) throughout the world, with 3.2 million global dial modems and high-capacity connections to more than 91,000 lit buildings. The global IP network can circle the globe more than four times.

MCI offers the fastest speeds available over IP today. We were the first to route and switch OC-192 IP network traffic. MCI also has the most scalable IP network available, offering speeds from dial to OC-48.

MCI's IP data solutions are directly built into a wholly-owned global network, for direct, safe, secure access.

Skilled technicians in Network Operations Centers around the world monitor the network for optimal efficiency 24 hours a day, 365 days a year.

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www1-md-atlas :80 v-New:1.1.2.96:1064567468-

MCI[Home](#)[Products](#)[News](#)[About MCI](#)[Company Values](#)[Customer Service](#)

The same strengths with a new approach

UUNET Wholesale Network Services

Welcome to UUNET – providing the Wholesale communication services you need to maximize your business potential.

We'll help you to find the right solution to enhance your productivity and profitability.

Our new name is MCI and our brand for domestic and international Wholesale Services is UUNET – a name known in the industry for unsurpassed innovation and value. But we have changed more than our name. We are marking an exciting new era in communication by delivering more powerful products and services for your business and for your customers' businesses.

UUNET will continue its market leadership by delivering the highest quality services and driving the convergence of voice and data on one of the world's largest IP backbone network. We will serve you with the utmost integrity while providing simplicity, innovation, and value for your business. We want to see you succeed.

Contact us for your wholesale needs.

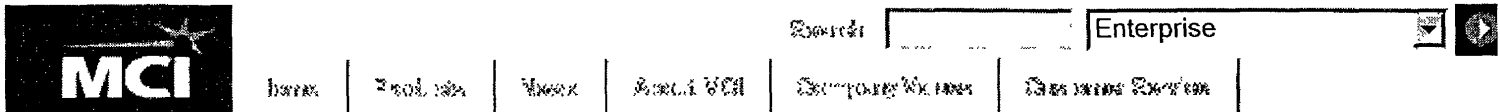
➔ For information on US wholesale products and services, please email wholesale-solutions@mci.com or call **800.494.5629**

➔ For information on international wholesale products and services, [click here](#)



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Enterprise



Managed Services

Voice

Internet

Dial

DSL

Dedicated

T1

T3

OC3

OC12

OC48

Ethernet

Dedicated Analysis

Broadband Satellite

Web Hosting

Corporate Remote Access

Security

ImagePort Fax

MCI Advantage

Web Services

Data

Government Services

All Products

Partner Center

Insight & Innovation

Manage My Account

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Dedicated Internet Access

MCI® Internet Dedicated products are high-speed solutions for businesses that need high-performance and full-time dedicated Internet access. This product suite offers a range of options to suit your access needs and support all your mission-critical communications.

Dedicated services provide connectivity to a world-class infrastructure, 24x7 monitoring and notification and the peace of mind that comes with industry-leading Service Level Agreements (SLAs).

Installation Engineers fully support and monitor your Internet access with the power, quality, and reliability that you expect from MCI. Timely installation and consistent, reliable customer bandwidth ensures your satisfaction.

Product Suite

T1

T1 service provides speeds of 1.544 Mbps and can be used to transmit high capacity data, email traffic, large files, or host a Web site.

[Tell me more](#)

T3

MCI Internet T3, available in variable bandwidths up to 45 Mbps, optimizes the response time of a business Web site, and provides businesses the ability to conduct large data and audio file transfers, as well as regional Internet access.

[Tell me more](#)

OC 3

MCI's OC 3 service, using Packet Over SONET encapsulation technology, can provide your business greater bandwidth and flexibility. OC 3 offers bandwidth of 155 Mbps and is ideal for a wide variety of uses, such as hosting large corporate Web sites with high traffic.

[Tell me more](#)

OC 12

For the ultimate in high-speed connectivity, choose MCI's OC12 service. This reliable, high-speed service is ideal for Internet Service Providers, large content providers, search engines, Web hosting companies, and wholesalers.

[Tell me more](#)

OC 48

MCI's OC 48 service, using Packet Over SONET encapsulation technology, can provide your business the ultimate bandwidth. OC 48 is ideal for net-centric businesses focused on extremely high bandwidth applications such as Web hosting and Internet service provision and has an available bandwidth of 2488 Mbps.

[Tell me more](#)

Ethernet


Internet Dedicated Ethernet uses established Ethernet technology and extends it beyond the local area network (LAN) environment into a metropolitan area network.

[Tell me more](#)

Related Tools

Bandwidth Simulator

How fast is fast? Run our bandwidth simulator to see how fast data loads based on different connections.



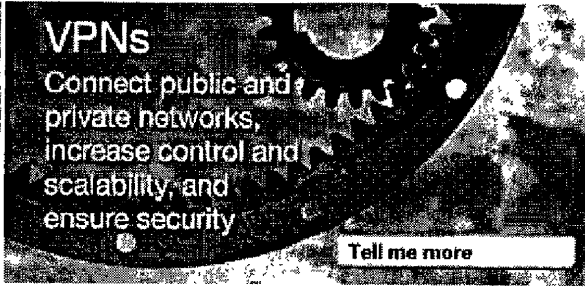
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Enterprise

Enterprise



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VPNs

Connect public and private networks, increase control and scalability, and ensure security

[Tell me more](#)



Security

Protect your data, control unauthorized access, manage authentication

[Tell me more](#)

Data

No matter what type of business you're in, it's likely that your data needs are becoming increasingly complex.

Perhaps you're looking for a way to provide high-speed connectivity to your employees - whether they're across the hall or on the other side of the globe. Maybe you need a robust connection to handle a high volume of voice, video, and multimedia. Or maybe you want a security system that will keep your data safe.

Whatever your specific needs, MCI® can help you simplify your communications technology and reduce costs. Selecting from our complete menu of global solutions, MCI can customize a plan for you that will help you realize better economies of scale and improve the efficiency of your IT networks.

ATM

A broadband service that handles voice, data, multimedia, and video through a single network, simplifying technology management with fewer access lines. Tell me more...

- ◆ Domestic | International

Frame Relay

A cost-effective high-speed data technology that provides seamless local-to-global connectivity. Tell me more...

- ◆ Domestic | International

Private Lines

Secure, private line connections dedicated to your large enterprise's high-volume voice, imaging, video, and data transfer needs. Tell me more...

- ◆ U.S. | International
- ◆ Metro Private Lines

Corporate Remote Access

Secure, reliable access to your corporate network for your employees around the world. Tell me more...

- ◆ IP Link | Transaction Services

VPNs

A reliable, secure networking option that offers cost-effective connectivity and control by combining the best of both public and private networks. Tell me more...

- ◆ IP VPN Dedicated

IP VPN Remote Private IP Service

Security

Protect your data from malicious attacks and unauthorized access with firewalls, authentication, and other security services. Tell me more...

- ◆ Firewalls | Firewall Training

Managed Firewalls Authentication

Data Center Services

Outsource your hosting, data networking, voice, and Internet equipment in a single, secure, dedicated environment. Tell Me More...

MCI Advantage

Simplify network management and streamline costs by consolidating local and long distance voice and data needs on a single network. Tell me more...



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XO™ Carrier Services



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Support
Call toll-free **1.888.575.6398**
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What's Hot

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- [Boardwatch Ranks XO™ Second in Backbone Performance](#)
- [XO Provides Broadband Services Using Upgraded Nationwide OC-192 IP Backbone Network](#)

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[XO Network Map](#)

Overview

XO™ is committed to serving the needs of emerging and established carriers and service providers such as:

- Competitive Local Exchange Carrier (CLEC)
- Internet Service Provider (ISP)
- IntereXchange Carrier (IXC)
- Incumbent Local Exchange Carrier (ILEC)
- Building Local Exchange Carrier (BLEC)
- Cable TV Provider
- Wireless Service Provider
- VOIP Service Provider
- Utility Telecom Division

This commitment, combined with our financial strength and vast network, means you can rely on XO to provide the communications solutions you need to stay competitive today... and further down the road.

Everything You Want. Exactly What You Need.™

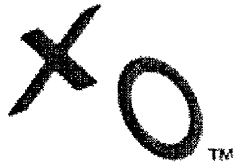
XO understands that carriers and service providers need more than just bandwidth to satisfy their customers. So along with the generous bandwidth capabilities we offer, our [products and services](#) - coupled with dedicated customer service and technical support - make it possible for you to deliver what your customers need.

With assets that directly compete with those of the largest telecommunications service providers, XO serves carriers and service providers of various sizes. So no matter what your line of business, or product or service requirements, XO can handle a piece of your business... or all of it. We'll design a solution specifically for you, evaluating and delivering exactly what you need at a price you can afford.

[View All Carrier Service Products & Services](#)

See Also

- [Learn More About the XO™ Network](#)
- [XO Available Markets](#)



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XO™ Carrier Services



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 - [XO Provides Broadband Services Using Upgraded Nationwide OC-192 IP Backbone Network](#)

Product Portfolio

| XO Product Solution | Product Advantage |
|--------------------------------------|---|
| Carrier Long Distance Termination | With Carrier Long Distance Termination, you can complete interstate calls in all 50 states and intrastate calls in the 48 continental states (excludes AK and HI) with only one interconnection. |
| High-Speed Dedicated Internet Access | High-Speed Dedicated Internet Access provides unlimited high capacity Internet access via non-shared, non-fractional lines. |
| Inbound PRI (Primary Rate Interface) | Inbound PRI is a 100% digital circuit designed for organizations that provide dial Internet access to end-users and employees. |
| Wholesale Dial-Up | Wholesale Dial-Up gives you maximum flexibility in offering highly reliable Internet access while maintaining control of your own subscriber accounts. |
| Carrier Private Line | Carrier Private Line typically consists of non-switched communications circuits and the required equipment to connect two or more locations. Long-haul and local circuits are available in a variety of configurations. |
| Collocation | Collocation provides secure, controlled carrier-class space and network access for carriers, such as CLECs (Competitive Local Exchange Carriers), IXC's (InterExchange Carriers) and ISPs (Internet Service Providers). |
| Wavelength Services | Dedicated connections between sites using Wave Division Multiplexing. Available at OC-12, OC-48 and OC-192 capacities |
| SONET Services | Allows the transmission of large voice, image and data files by maximizing the high-speed capacity of fiber-optic cables |

See Also

- [Learn More About the XO™ Network](#)
- [XO Available Markets](#)

Type in your question here: [PRODUCTS & PROGRAMS](#)[CUSTOMER CARE](#)[ABOUT XO](#)[AGENT PROGRAM](#)[NEWS](#)[CONTACT XO](#)

XO™ Carrier Private Line



Contact XO

Carrier Services

Sales

[Contact us online](#)

Support

Call toll-free **1.888.575.6398**

[Contact us online](#)

What's Hot

- [XO on the Road: Visit Us at These Upcoming Events](#)
- [Boardwatch Ranks XO™ Second in Backbone Performance](#)
- [XO Provides Broadband Services Using Upgraded Nationwide OC-192 IP Backbone Network](#)

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XO Network Map

Overview

XO™ Carrier Private Line services provide high-speed, dedicated point-to-point connectivity for voice, data and video applications. Typically consisting of non-switched communications circuits and the required equipment to connect two or more locations, Carrier Private Line has long-haul and local circuits available in a variety of configurations. XO Carrier Private Line:

- Lets you select from IntraLATA, InterLATA and Interstate lines available in point-to-point or multipoint configurations
- Achieves 100% network availability with capacities from DS-1 to OC-n
- Offers state-of-the-art, self-healing fiber system for network recovery within milliseconds
- Uses our extensive intercity and metropolitan network that spans more than 400,000 route miles to 50 cities nationally

Features

- High-capacity bandwidth from DS-1 (1.5 Mbps) to DS-3 (45 Mbps) to OC-n
- 100% network availability
- SONET architecture
- Self-healing fiber system
- Proactive 24x7 network management and monitoring
- Customized circuits between locations
- Consolidated voice and data bill
- Flexible terms from 12 to 36 months

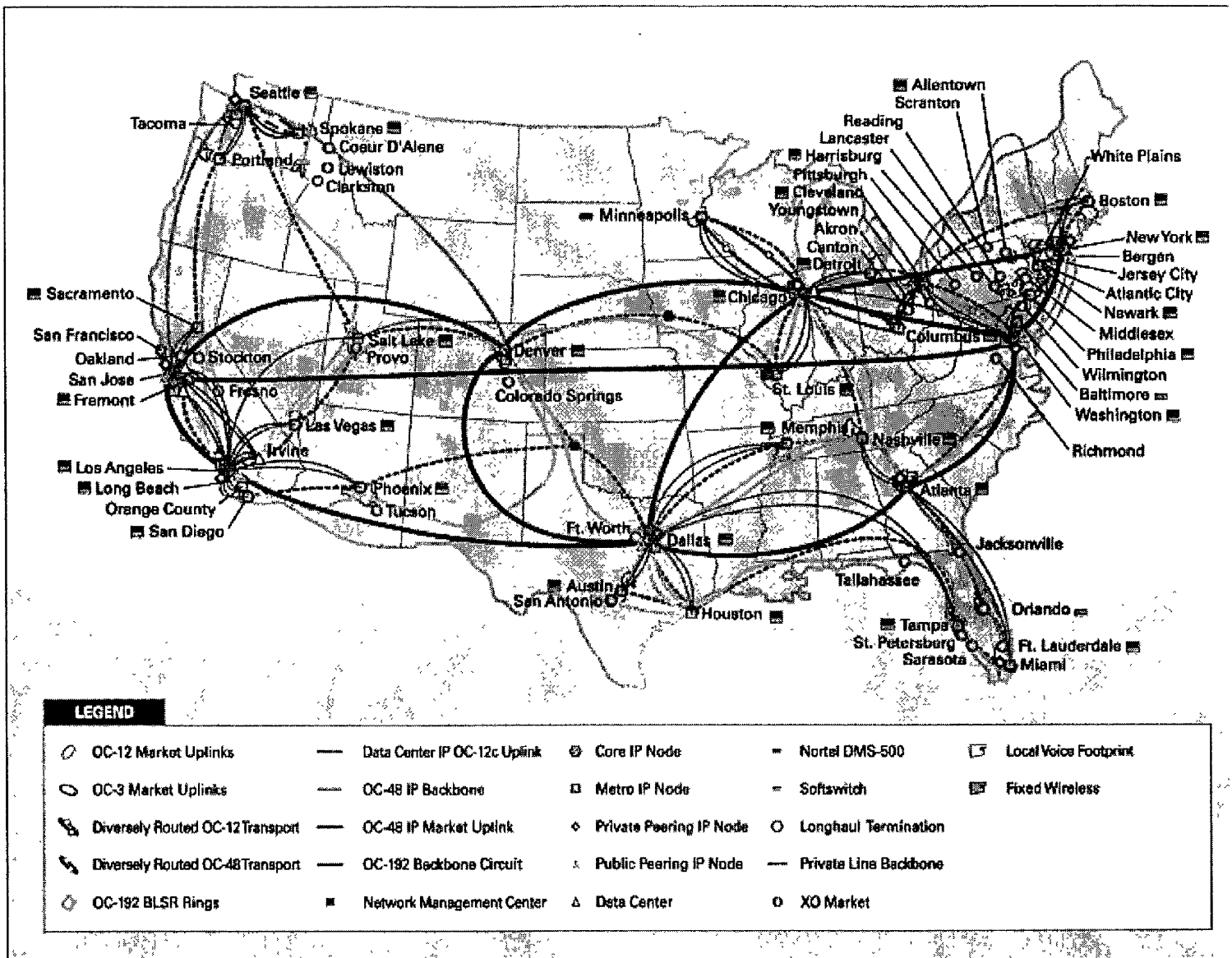
Pricing and Availability

Pricing and availability for XO Carrier Private Line Services varies. For more information, please contact us online or call XO Carrier Services toll-free today at **1.800.474.1763**.

See Also

- [Learn more about the XO™ Network](#)
- [XO™ Wavelength Services](#)
- [XO Available Markets](#)

Complete Network Assets
 Network Maps Home: [Normal View](#) | [Large View](#)





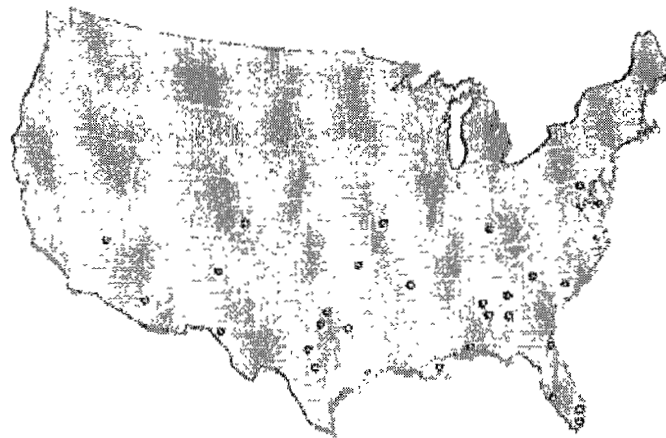
Carrier Solutions

About Xspedius • Business • Carrier • Agent • Support

- ▶ Colocation
- ▶ ISDN-PRI
- ▶ Special Access

Carrier Solutions

Xspedius Communications offers superior products and services to carrier customers in 36 markets across the United States. What's more, Xspedius Communications, committed to the highest level of carrier customer satisfaction, employs a full-service account team comprised of Carrier Account Managers, Technical Consultants and Service Managers. This highly skilled team works directly with your organization to identify expectations, define network objectives, facilitate timely implementation and billing, and promptly resolve service-related issues.



Click on the map above to view a larger version

Special Access

Xspedius Communications Special Access is the perfect alternative for your local access networking needs. Our Special Access service provides optimal connectivity to major business districts, interexchange carrier points of presence (POPs), local serving offices (LSOs), carrier hotels and commercial end-user buildings.

ISDN PRI

Looking for a service solution for your dial-up customers? Xspedius Communications ISDN PRI service offers regional and national ISPs a solution to meet the inbound requirements of the still-growing dial-up internet market.

Colocation

Xspedius Communications Colocation Service provides customers a cost-effective, dependable, and secure facility in which to house their telecommunications equipment. Companies that want to avoid the major expense of developing and maintaining their own facility can rely on Xspedius Communications. We offer the ideal solution for organizations -- large and small -- interested in expanding their telecommunications footprint.

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To learn more about any of the Xspedius Communications Carrier Services, simply click on one of the links below.

[Special Access](#)
[ISDN - PRI](#)
[Colocation](#)

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Business Solutions

About Xspedius • Business • Carrier • Agent • Support

Cities Served

- ▶ Lead Broker Program
- ▶ Managed Services
- ▶ Messaging Services
- ▶ Internet ConneXions
- ▶ Complete Integrated
- ▶ Data ConneXions
- ▶ Complete Xchange™
- ▶ Cities Served



Click on the image above to view our Network Cities

Xspedius is a facilities-based telecommunications service provider. What this means is that we deliver our services over our own networks and supporting switching and routing equipment. We have 36 local area fiber-optic or broadband networks and a total of 3,500 fiber route miles in key metropolitan markets. To support advanced, high-speed data transport, we have a nationwide ATM-based multi-service network. We are also a Tier-1 Internet access provider with private, as well as public, peering interconnections to ensure that customer traffic is routed quickly and reliably.

Click [here](#) for a list of our office locations.

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- ▶ Office Locations
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Xspedius Fiber Group is a wholly owned subsidiary of Xspedius Communications. Xspedius Fiber Group is a leading provider of fiber-optic network infrastructure solutions and network design services for organizations deploying network systems in major U.S. metropolitan markets. Each metropolitan area network is strategically designed for optimal connectivity of major Business Districts, Local Serving Offices, Carrier Hotels, and Interexchange Carrier Points-of-Presence (POP) sites. Xspedius Fiber Group serves a diverse customer base including local and long distance carriers, Internet Service Providers, municipalities, utilities and Fortune 500 companies.



The unique offering of Xspedius Fiber Group's network services covers the full range of requirements that occur in the telecommunications marketplace today. Xspedius Fiber Group provides customer-driven services tailored to meet a development plan with project-based consulting and construction to provide speed-to-market solutions in the form of conduit and dark fiber for high-bandwidth customers. Through extensive capabilities and experience, Xspedius Fiber Group provides clear, concise, cost-effective infrastructure solutions.

For more information about Xspedius Fiber Group, click [here](#) for a direct link to the Xspedius Fiber Group web site.

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XSPEDIUS Fiber Group **Customer Solutions**

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- ▶ Dark Fiber Markets
- ▶ Network Design Philosophy
- ▶ Network Footprint
- ▶ Plant Protection
- ▶ Customer Support
- ▶ Network Construction Services

Dark Fiber and Conduit Inventory

XFG provides dark fiber and inventory conduit in six core Tier I markets across the United States. Moreover, we have access to assets to over 30 additional Tier II and Tier III cities.

The value of each XFG network is enhanced by strategically connecting high telecommunications traffic areas and multiple service provider networks. Connectivity provides the ability for fiber customers to enter a market rapidly and to achieve a faster return on investment.

Markets

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Tier I

- Atlanta, GA
- Dallas-Fort Worth, TX
- Houston, TX
- South Florida
- Tampa, FL
- Washington, DC

In certain circumstances, XFG may also be able to provide inventory offerings in the following markets:

Tier II and III

- Albuquerque, NM
- Amarillo, TX
- Austin, TX
- Baltimore, MD
- Baton Rouge, LA
- Birmingham, AL
- Chattanooga, TN
- Colorado Springs, CO
- Columbia, SC
- Columbus, GA
- Corpus Christi, TX
- El Paso, TX
- Greenville, SC
- Jackson, MS
- Jacksonville, FL
- Kansas City, MO
- Las Vegas, NV
- Lexington, KY
- Little Rock, AR
- Louisville, KY
- Mobile, AL
- Montgomery, AL
- New Orleans, LA
- San Antonio, TX
- Shreveport, LA
- Spartanburg, SC
- Tulsa, OK
- Tucson, AZ

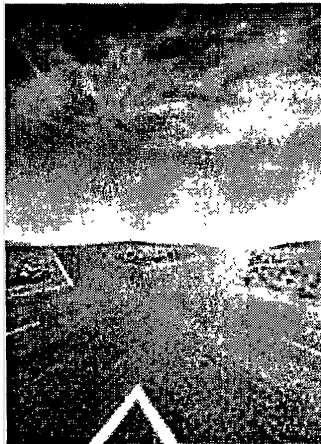
Other Offerings

- Long Haul: Florida
- Long Haul: Texas



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- LOCATIONS

Universal Access
Where Evolution is Constant

To grow and prosper in today's fast-paced business environment, companies need to embrace new ideas and ways of thinking - to challenge existing paradigms that restrict innovation and creativity.

Among these pioneers is Universal Access - a company that is not content with just the evolution of their business but rather *revolutionizing* the industry.

Universal Access: Revolutionizing the Telecom Industry

Since 1997, Universal Access has been at the vanguard of change in the telecom industry. By creating innovative solutions and challenging conventional beliefs in the telecom industry, Universal Access can do what no other company has been able to do successfully - leveraging its insight to existing infrastructure to discover, fulfill and manage multi-carrier networks.

As a pioneer and established telecom specialist, Universal Access has revolutionized the industry by discovering solutions that resolve inefficiencies in today's network environment. We have taken the lead in uniting today's fragmented, inefficient network environment into a single network fabric.

Universal Access is more than just a leader in interconnecting networks. We realize that as high-speed services become increasingly essential to today's global economy, the industry needs solutions that bring new possibilities to businesses around the world. We are dedicated to bringing innovative solutions that ignite the new vision of the industry.

Unique Products and Services

With our proprietary databases, global transport and network optimization services, Universal Access makes it easier for carriers to manage, implement and maintain multi-carrier networks.

For more information on our products and services, click a link below:

Innovative Resources

- The Universal Information Exchange (UIX) enables Universal Access to develop optimally priced network solutions from multi-carrier facilities through the use of a proprietary database.
- Universal Transport Exchange (UTX) facilities provide interconnection points between multiple network service providers.

Global Transport

- Private Lines ranging from DS-1 to OC-n level, Universal Access considers the best circuit solution to fit its customers' needs including a single point of contact for 24-hour-a-day, seven-day-a-week network monitoring, maintenance and restoration across multiple vendor networks.
- Interconnection Services enables service providers to efficiently and cost-effectively reach their customers' locations.

Portfolio Management

- Network Optimization assesses and improves the financial return on existing contracts, lowers operating costs and simplifies the process of conducting business off-network
- Managed Services frees resources so service providers can focus on their core business

Our History

Founded in 1997, Universal Access started with five employees, \$200,000 and a major market opportunity:

The telecom industry had difficulty bringing high-speed data network connections to end users quickly, especially when multiple carriers were needed to facilitate that connectivity. Due to the unique structure of the post-divestiture U.S. telecom environment, 70% of all private line circuits require multiple carriers to provide end-to-end service.

Widely seen as the inventor of new solutions that unite fragmented networks together, Universal Access has been the recipient of significant industry recognition.

2002

In January, Boardwatch magazine named Universal Access one of the "Industry Champs" that went the distance to meet industry challenges.

2001

In December, Telephony magazine named Universal Access CEO Patrick Shutt one of "Ten to Watch" in the telecom marketplace that will lead the revival of the industry.

In November, Capacity magazine awarded Universal Access as "Most Innovative Company" for its innovative solution that enable the telecommunications industry to operate more efficiently and effectively.

In September, Universal Access was awarded the Interop Infrastructure Award for Innovative Service for its innovation in meeting customer needs and providing leading edge network services. Our Universal Information Exchange (UIX) solution contains an unprecedented database of network information from every major carrier in the world.

In September, Forbes magazine cited Universal Access, due to its online web-quoting capability, as one of the top five telecom companies in its "Best of The Web: B2B" list for 2001.

In September, Deloitte & Touche recognized Universal Access as the number one "Rising Star" for its phenomenal growth. This is the second year Universal Access was named on Deloitte & Touche's prestigious "Fast 50" program for Greater Chicagoland, a ranking of the fastest growing technology companies in the area.

In June at Supercomm, Universal Access' Universal Transport Exchange (UTX) solution was recognized as the year's most promising technology with a SUPERQuest award for Best Backbone Service for Public Networks.

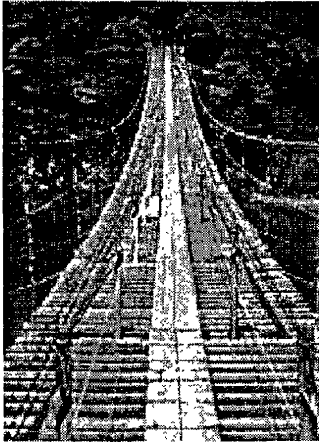
2000

Recognition in 2000 included being one of the "12 Hot Start-Ups" named by America's Network as well as being listed as part of Red Herring's "Hot 100."



Global Transport Services

Global Transport Services



Global Transport Services through Universal Access

Your search for state-of-the-art global connectivity services ends with Universal Access.

For private lines/transport ranging from DS-1 to OC-n level, Universal Access considers your network expansion plan and devises a circuit solution that best fits your needs.

Worn out from trying to reach your customers' locations? Universal Access' interconnection services create a single, efficient network fabric to provide you with easy access to your customers' various locations.

Finally, our Network Operations Center (NOC) ensures that you are 100% satisfied with our global transport services.

- INNOVATIVE RESOURCES
- GLOBAL TRANSPORT
- PORTFOLIO MANAGEMENT
- SOFTWARE SERVICES
- INDIANA TARIFF
- MICHIGAN TARIFF

Private Lines/Transport

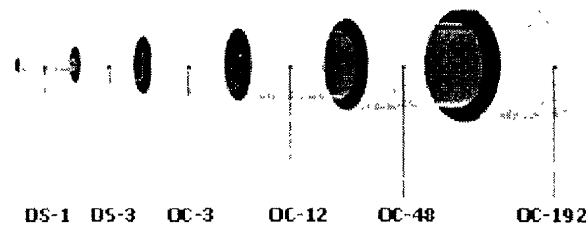
Universal Access provides a suite of services dedicated to enabling true end-to-end connectivity. Our team of professionals analyzes a customer's network expansion strategy and determines a solution that most effectively fulfills their need. By leveraging the proprietary worldwide carrier network information housed in our Universal Information ExchangeSM (UIXSM), strong carrier relationships and strategically located Universal Transport ExchangeSM (UTXSM) interconnection facilities, we can provision circuits to and from virtually any place in the world from DS-1 to OC-n level. Customer benefits include:

- Faster delivery of service to their enterprise customers
- One vendor for all circuits
- Faster revenue realization
- Elimination of provisioning headaches
- Capital-efficient network expansion

Interconnection Services

The complexities and challenges of the metropolitan connectivity landscape and lack of transparent marketplace information leave service providers and their customers holding the bag, including

- extended service delivery intervals
- less than optimal pricing for connectivity



Universal Access enables service providers to efficiently and cost-effectively reach their customers' locations without these hassles by creating a single network fabric from the disparate and fragmented facilities of multiple local and long-haul providers.

Interconnection services include **Co-location** (racks, power), **Network Interconnectivity** (cross connects) and **Enhanced** services such as Redundancy Services, Extended Cross Connects and Active Mux Ports.

Customer benefits include:

- Speed to revenue from quicker installations
- Reduced capital expenditures
- Reduced local access operational costs
- Single point of contact for local building access
- Information management to improve your business practices

Network Operations Center

Universal Access' Network Operations Center (NOC) is a world-class facility with exceptional capabilities and functionality that support our global transport services. The NOC's forward looking and aggressive pursuit of 100% customer satisfaction empowers Universal Access to surpass the industry standard in network reliability.

The NOC is operational 24 hours a day, 7 days a week, 365 days a year. The NOC is capable of internal and external circuit monitoring as well as surveillance of environmental, security and network alarms at each one of Universal Access's UTX sites. As part of our operating procedures, the NOC offers several benefits:

- **Serves as the single point of contact.** Contact NOC for all issues, requests, and questions regarding Universal Access network operations.
- **Utilizes the best equipment and systems.** The NOC is based on industry-standard hardware and software platforms. In addition, the NOC supports multiple network management platforms in support of Universal Access equipment and infrastructure.
- **Constantly monitors circuit degradation and outage recovery.** Those circuits passing through the equipment of our carrier partners are monitored proactively for outage or degradation, with automatic trouble ticket generation currently under development. For other circuits, the NOC relies on our customers to notify us of circuit issues as they occur.
- **Recovers quickly if a disaster occurs.** In the event of the loss of the NOC in Chicago, all systems are recovered within one hour at an off site location. In the event of an IT network failure, Universal Access' back up systems are located in Virginia and Pennsylvania.

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Universal Access

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[CUSTOMERS](#)



[CUSTOMERS](#)
[SUPPLIERS](#)

As Universal Access continues to grow, customer-focused solutions and service is and will continue to be the driving factor of our business and in revolutionizing the industry. Following is a list of the customers we enjoy serving each day.

To experience the benefits only Universal Access has to offer, please email us.

Client List

- AOL Time Warner
- Bell Nexxia
- Broadwing
- Cable & Wireless
- Global One
- Group Telecom
- Infonet
- Level 3
- MFN
- Microsoft
- Qwest
- Sprint Canada
- Teleglobe
- Telia
- Telus
- Touch America
- Verio
- Verizon
- Wam!Net
- Williams Communications Group
- Worldcom
- XO Communications

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PARTNERS



Partnering with many of the industry's elite carriers has been key to providing the level of service our customers demand. Following are just some of the suppliers that allow us to extend world-class service to our customers.

- | | | |
|---------------------|-------------------------|----------------------------|
| Ameritech | Level 3 | SNET |
| BCE Nexxia | Metcom | Southern California Edison |
| Bell South | Nevada Bell | Sprint |
| Broadwing | Northeast Optic Network | SW Bell |
| Cox | Onvoy | Time Warner |
| Dominion Telecom | Pac-Bell | Touch America |
| Fibernet | Progress Telecom | TXU Communications |
| Genuity | Qwest | Verizon(Bell Atlantic) |
| Gulf Telephone | RCN | Williams |
| Interstate FiberNet | Smart City Telecom | XO |

To join the ranks of companies that benefit from partnering with Universal Access, please email us.

- [CUSTOMERS](#)
- [SUPPLIERS](#)

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