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Feb 10 1999

February 4, 1999

**BY HAND DELIVERY**

Ms. Blanca Bayo, Director  
Division of Records and Reporting  
Room 110, Easley Building  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
Tallahassee, Florida 32399-0850

Re: Docket Nos. 981642-TP and 981745-TP

Dear Ms. Bayo:

Enclosed for filing on behalf of e.spire Communications, Inc. in the above captioned dockets are an original and fifteen copies of the following documents:

1. Revised Direct Testimony of Dr. Marvin Kahn on behalf of e.spire Communications, Inc.; 01459-99

2. Revised Direct Testimony of Tony Mazraani on behalf of e.spire Communications, Inc.; 01460-99

3. Revised Direct Testimony of C. William Stipe, III on behalf of e.spire Communications, Inc.; 01461-99

4. Revised Direct Testimony of James C. Falvey on behalf of e.spire Communications, Inc.; 01462-99

The direct testimony of Dr. Kahn and Mr. Falvey is being revised to reflect the recent 3 Supreme Court decision.

ACK \_\_\_\_\_  
AFA \_\_\_\_\_  
APP \_\_\_\_\_  
CAF \_\_\_\_\_  
CMI \_\_\_\_\_  
CTR \_\_\_\_\_  
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Ms. Blanca Bayo  
February 4, 1999  
Page 2

Please acknowledge receipt of these documents by stamping the extra copy of this letter "filed" and returning the same to me.

Thank you for your assistance with this filing.

Sincerely,

A handwritten signature in cursive script that reads "Norman H. Horton, Jr." The signature is written in dark ink and is positioned to the right of the typed name.

Norman H. Horton, Jr.

NHH/amb  
Enclosures

cc: James C. Falvey, Esq.  
Parties of Record

**CERTIFICATE OF SERVICE**  
**Docket Nos. 99-1262-TP and 99-1745-TP**

I HEREBY CERTIFY that a true and correct copy of the foregoing was served by  
Federal Express this 12th day of February, 1999 to the following:

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Bennett L. Ross (Hd)

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espire Exhibit \_\_\_\_\_  
Revised Testimony of C. William Stipe, III

**BEFORE THE  
STATE OF FLORIDA  
PUBLIC SERVICE COMMISSION**

In the Matter of )  
)  
Petition by E.SPIRE COMMUNICATIONS, INC., )  
and ACSI LOCAL SWITCHED SERVICES, INC., )  
AMERICAN COMMUNICATION SERVICES, )  
OF TAMPA, INC., and AMERICAN COMMUNICATION )  
SERVICES OF JACKSONVILLE, INC. )  
for Arbitration of an Interconnection Agreement )  
with BELL SOUTH TELECOMMUNICATIONS, )  
INC. Pursuant to Section 252(b) of the )  
Telecommunications Act of 1996 )

Docket No. 981745-TP

**REVISED  
DIRECT TESTIMONY  
OF C. WILLIAM STIPE, III  
ON BEHALF OF  
E.SPIRE COMMUNICATIONS, INC.**

**FEBRUARY 4, 1999**

DOCUMENT NUMBER-DATE  
01461 FEB-4 99  
FPSC-RECORDS/REPORTING

1 **Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

2 A. My name is C. William Stipe III and I am Vice President - Network Engineering for  
3 e.spire Communications, Inc. ("e.spire"). My business address is 12701 Fair Lakes  
4 Circle, Suite 800, Fairfax, Virginia 22033.

5 **Q. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE AND BACKGROUND.**

6 A. Since joining e.spire more than two years ago, I have been responsible for switch  
7 engineering and have overseen the company's installation of its first Lucent 5ESS switch  
8 and more than 20 others. For the past eight months, I also have been responsible for  
9 e.spire's SONET and network backbone electronics engineering. Prior to joining e.spire  
10 in 1996, I had twenty-three years of experience in the telecommunications industry  
11 working for Bell Atlantic Corporation. I held a number of positions with Bell Atlantic,  
12 and most recently, since 1994, was Director - Financial Systems. From 1991 to 1994, I  
13 served as Director - Product Profitability and Transfer Pricing and operated and enhanced  
14 a Product Profitability reporting system. I also developed and implemented a Transfer  
15 Pricing process for Line of Business financial reporting. From 1987 to 1991, I was the  
16 Director - Customer Business Services, responsible for pricing and costing multi-year  
17 service contracts in competitive proposals to Bell Atlantic's largest commercial and  
18 government customers. From 1972 to 1987, I held a variety of engineering and  
19 management positions of increasing responsibility. I received my Bachelor of Science in  
20 Electrical Engineering from Virginia Tech in 1972, and my M.B.A. from Virginia  
21 Commonwealth University in 1984.

22 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

23 A. Yes. I testified in e.spire's first arbitration with BellSouth (Docket No. 960916-TP).

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

3   A.   Yes. I have testified before numerous Commissions, including Commissions in the  
4       BellSouth, Bell Atlantic, and U S West regions.

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

6   A.   The purpose of my testimony is to explain the types and functionality of unbundled local  
7       loops (“ULLs”) and other unbundled network elements (“UNEs”) e.spire is interested in  
8       obtaining from BellSouth. During the course of negotiations that led to this arbitration  
9       proceeding, BellSouth already has agreed to provide some of the UNEs requested.  
10      However, even where BellSouth agreed to provide UNEs, in some cases, it often failed to  
11      propose rates, relied on interim rates, proposed rates that could not have a reasonable  
12      relation to cost, or proposed to limit the offering in a way that would deny e.spire the  
13      ability to use the UNE as intended.

14   **Q.   PLEASE SET FORTH THE NETWORK ELEMENTS TO WHICH E.SPIRE HAS**  
15      **REQUESTED BELL SOUTH TO PROVIDE UNBUNDLED ACCESS.**

16   A.   e.spire has requested access from BellSouth to various ULLs, including:

- 17           • 2-Wire Analog Voice Grade;
- 18           • 4-Wire Analog Voice Grade;
- 19           • 2-Wire ISDN Digital Grade;
- 20           • 4-Wire DS-1-Compatible;
- 21           • 2-Wire HDSL-Compatible;
- 22           • 2-Wire ADSL-Compatible;
- 23           • 2-Wire ADSL-Equipped;

- 1           • 4-Wire HDSL-Equipped;
- 2           • 56/64 kbps digital grade;
- 3           • DS-3;
- 4           • OC-3;
- 5           • OC-12; and
- 6           • OC-48.

7           **e.spire also has requested unbundled access to Enhanced Extended Links**  
8           **(“EELs”), with no limits on the types of loops and transport that can be incorporated into**  
9           **an EEL; Dark Fiber loop plant; and a Bit-Stream Loop UNE.**

10           **So that e.spire can begin its roll-out of xDSL-based advanced services, e.spire**  
11           **also has requested unbundled access to xDSL-compatible (or “clean copper”) loops,**  
12           **“loop conditioning”, loop conditioning operations support systems (“OSS”), and “loop**  
13           **spectrum unbundling”.**

14           **Where technically feasible, e.spire also has requested unbundled access to sub-**  
15           **loop elements. These sub-loop elements include:**

- 16           • the network interface device (“NID”);
- 17           • loop concentration equipment inside and outside the central office  
18            (including sub-loop concentration equipment and digital loop carriers  
19            of all kinds);
- 20           • feeder plant;
- 21           • distribution plant;
- 22           • dark fiber in the loop plant; and

- 1                   • **network terminating wires.**

2                   To ensure access to these sub-loop elements, e.spire also has requested BellSouth  
3 to provide access to remote terminals for collocation with and interconnection to  
4 equipment located in such remote terminals.

5                   To complement its own switching capabilities, e.spire also has requested  
6 unbundled access to local switching, tandem switching and frame relay packet switching,  
7 including user-to-network interface ("UNI") and network-to-network interface ("NNI")  
8 switch ports.

9                   e.spire also has requested unbundled access to a variety of unbundled transport  
10 options. These include shared transport and dedicated transport in various capacity  
11 levels, including DS-0, DS-1, DS-3, OC-3, OC-12, OC-48, OC-96 and SONET. e.spire  
12 also has requested unbundled access to dark fiber transport facilities on which it will  
13 supply its own electronics.

14                  e.spire also has requested unbundled access to a host of other network elements,  
15 including digital cross-connect system ("DCS"), operator services and directory  
16 assistance, signaling, OSS and databases.

17                  Finally, e.spire has requested unbundled access to a number of UNE  
18 combinations. These combinations include:

- 19                   • **an unbundled loop combination consisting of a loop, dedicated**  
20                   **transport, STPs, signaling link transport, and service control**  
21                   **points/databases;**



- 1                   • **an unbundled loop/network combination consisting of a loop, shared**  
2                   **transport, dedicated transport, STPs, signaling link transport, and**  
3                   **service control points/databases;**
- 4                   • **a switching combination referred to as "Switching Combination #1"**  
5                   **which includes a NID, local switching, operator systems, dedicated**  
6                   **transport, SS7 message transfer and connection control, signaling link**  
7                   **transport, service control points/databases and tandem switching;**
- 8                   • **a switching combination referred to as "Switching Combination #2"**  
9                   **which includes a NID, local switching, shared transport, dedicated**  
10                  **transport, SS7 message transfer and connection control, signaling link**  
11                  **transport, service control points/databases, and tandem switching;**
- 12                  • **a switching combination referred to as "Switching Combination #3"**  
13                  **which includes a NID, local switching, operator systems, shared**  
14                  **transport, dedicated transport, SS7 message transfer and connection**  
15                  **control, signaling link transport, service control points/databases, and**  
16                  **tandem switching;**
- 17                  • **a switched data services combination which includes a NID, local**  
18                  **switching, shared transport, dedicated transport and tandem switching;**
- 19                  • **an unbundled loop with interoffice transport combination comprising**  
20                  **a loop, cross-connect, and dedicated transport or an entrance facility;**
- 21                  • **an unbundled element platform without operator services and**  
22                  **directory assistance composed of a loop, local switching, shared**

1 transport, dedicated transport, STPs, signaling link transport, service  
2 control points/databases, and tandem switching; and

- 3 • a frame relay combination consisting of a loop, dedicated transport,  
4 and frame relay switching.

5 **Q. HAS E.SPIRE PROPOSED DESCRIPTIONS OF THE UNEs THAT IT WISHES**  
6 **TO ACCEPT?**

7 A. Yes. The technical descriptions are introduced in Attachment 2 of the draft agreement.  
8 We ask that the Commission require BellSouth to make available to e.spire now each  
9 such UNE – at pre-designated TELRIC-based rates.

10 **Q. DOES E.SPIRE HAVE A PARTICULAR OBJECTION TO BELLSOUTH'S**  
11 **PROPOSALS RELATING TO LOOP PROVISIONING?**

12 A. Yes. e.spire believes that BellSouth's proposed intervals are unreasonably lengthy, and  
13 its nonrecurring charges ("NRCs") are unreasonably high.

14 **Q. IS PROVISIONING A LOOP A COMPLICATED AND TIME CONSUMING**  
15 **UNDERTAKING?**

16 A. No, actually, it is a rather simple task that can be completed in a few minutes or less. To  
17 provision a loop, all that is required is that a technician must attach "jumper cables" from  
18 BellSouth's point of termination bay ("POT bay") to e.spire's terminating equipment in  
19 e.spire's collocation space. (e.spire will provide a demonstration of this task at the  
20 hearing in this proceeding.) The loop cutover is analogous to the activity in turning up a  
21 BellSouth end user – it is the same function that BellSouth technicians have been  
22 performing every day, many times a day, for years. Indeed, BellSouth's own data  
23 submitted in support of its second Federal Communications Commission ("FCC")

1 Section 271 application for Louisiana suggests that BellSouth can complete coordinated  
2 loop cutovers in less than four and a half (4½) minutes. Despite this, BellSouth  
3 apparently bases its cost studies on the presumption that 15 minutes of frame work is  
4 involved. This assumption, however, cannot be supported by time and motion studies.  
5 Ordinarily, running jumper cables to cutover a loop should take roughly two minutes.

6 **Q. IS IT IMPORTANT FOR COORDINATED CUTOVERS TO BE PERFORMED**  
7 **WITHIN A CERTAIN PERIOD OF TIME?**

8 A. Yes. It is important that coordinated cutovers be performed as quickly as possible  
9 because the interval during which they are performed represents the time the customer is  
10 without phone service. Thus, if, as BellSouth claims, it is able to perform coordinated  
11 cutovers, on average, in under four and a half (4½) minutes, that means e.spire's new  
12 customers typically experience a period of service outage of that duration while their  
13 line(s) are switched from BellSouth to e.spire.

14 **Q. HAVE E.SPIRE AND BELL SOUTH AGREED ON A LOOP CUTOVER**  
15 **INTERVAL?**

16 A. No. e.spire proposes, and BellSouth refuses, to incorporate terms from its original  
17 interconnection agreement with BellSouth regarding loop cutover intervals. Thus, e.spire  
18 proposes to renew provisions which call for a five minute cutover interval, penalties in  
19 the event that BellSouth misses the target interval, and a 30 minute window during which  
20 the five minute cutover must take place. BellSouth has responded with a complicated  
21 SL1/SL2 loop proposal which, as best I can tell, is designed to inflate competitors' costs  
22 rather than meet their unbundling requests and needs.

1 **Q. PLEASE EXPLAIN WHY E.SPIRE REJECTS BELL SOUTH'S "SL1/SL2"**  
2 **PROPOSAL.**

3 A. e.spire rejects BellSouth's SL1/SL2 proposal because it is nothing more than an elaborate  
4 means by which BellSouth attempts to drive up the prices for obtaining access to a  
5 minimum level of loop functionality. There should be one basic voice grade loop type  
6 with one monthly recurring charge ("MRC") and one NRC to recover the associated  
7 costs. Nevertheless, BellSouth offers an SL1/S2 loop proposal by which it offers less  
8 functionality than e.spire was getting pursuant to its original interconnection agreement at  
9 prices that grossly exceed BellSouth's retail rates for turning up new service (which is the  
10 technical equivalent of provisioning a ULL).

11 SL1 is virtually useless because customers could be out of service for up to an  
12 hour during a loop cutover. Moreover, on a standard SL1 loop, a cutover is not  
13 scheduled to take place at a particular time, but may take place during two four-hour  
14 intervals. Obviously, e.spire cannot ask customers willing to switch to e.spire from  
15 BellSouth to endure a conversion during which their service will be out for up to an hour  
16 commencing at an unspecified four-hour window during the business day. BellSouth  
17 realizes this and proposes to provide functionalities previously included in the basic  
18 electronic order NRC at separate non-cost-based rates.

19 Thus, in addition to proposing an inflated basic NRC, BellSouth now seeks to  
20 impose an additional non-cost-based NRC for performing cutovers within a 15 minute  
21 interval. It will not agree to a five minute interval at any price – despite that this is (1)  
22 what BellSouth voluntarily agreed to two years ago in its first interconnection agreement  
23 with e.spire; (2) the interval which BellSouth claims to the FCC that it meets; and (3) the

1        **minimum level of service Florida consumers will accept. BellSouth also seeks to tack on**  
2        **an additional non-cost-based NRC for allowing e.spire to schedule the 30 minute**  
3        **conversion window with its customers, again standard in the initial e.spire contract.**

4                **Taken together with inflated cross-connect, OSS, and interim number portability**  
5        **NRCs, BellSouth proposes to inflate the total installation cost of basic POTS loops to a**  
6        **level approximately three times higher than the retail rate paid for the same services,**  
7        **excluding number portability and OSS, by its own End Users. While Dr. Kahn and Mr.**  
8        **Falvey will have more to say on this point in each of their testimonies, my point here is**  
9        **that BellSouth proposes to back-out necessary functionalities from its basic loop offering**  
10       **in an effort to extract monopoly rents. As I understand it, the Telecommunications Act**  
11       **requires that all necessary functionalities be provided at TELRIC-based rates – BellSouth**  
12       **should not be able to extract premiums for provisioning loops in a way that allows e.spire**  
13       **to offer a service that is technically comparable to that offered by BellSouth to its own**  
14       **end users and affords e.spire a meaningful opportunity to compete.**

15               **Moving to BellSouth’s SL2 loop, it is clear that behind BellSouth’s proposal is**  
16       **the same strategy of trying to extract monopoly rents for provisioning a level of service**  
17       **that is necessary to allow e.spire to compete. Whereas an SL1 loop is the equivalent of a**  
18       **basic POTS loop (without the conveniences typically provided to and expected by Florida**  
19       **consumers), the SL2 loop is a designed loop which includes a design layout record**  
20       **(“DLR”), test access points (referred to as “SMAS points”), ground start facilities, repair**  
21       **of loops provisioned with test points, and a fifteen minute provisioning interval. Because**  
22       **of BellSouth’s poor loop provisioning record, e.spire has had to use this type of**  
23       **functionality to determine why unbundled loops randomly were disconnected or had low**

1 volume, static or noise. If BellSouth established that it could deliver high quality  
2 unbundled loops without such chronic deficiencies, then e.spire could do without the  
3 additional functionality offered by DLRs and SMAS points.

4 Thus, the point here is that BellSouth ought not be able to charge non-cost-based  
5 premiums for meeting its statutory and contractual unbundling obligations of delivering  
6 loops at a level of quality at parity with those it delivers to itself. It should unbundle the  
7 same loops over which a customer was served prior to switching from BellSouth and  
8 those loops should be technically capable of functioning without random disconnections,  
9 static, noise, low volume or other quality problems. BellSouth should not be permitted to  
10 turn its poor provisioning performance into an opportunity for it to extract additional  
11 monopoly profits from its competitors.

12 **Q. ARE THERE OTHER BELLSOUTH RATES WHICH RAISE AN ISSUE – AT**  
13 **LEAST FROM A TECHNICAL STANDPOINT?**

14 **A. Yes. For example, BellSouth proposes to charge considerably more for DS-3 and DS-1**  
15 **cross-connects than for a DS-0 cross connect. Although the circuit equipment itself**  
16 **might vary slightly, there is no actual difference in the work that is performed. As is the**  
17 **case in provisioning loops, it is simply a matter of connecting jumper cables from the**  
18 **point of termination bay to e.spire’s collocated facilities. Thus, a substantial difference in**  
19 **cross-connect NRCs cannot be justified – at least from a technical standpoint. In fact, it**  
20 **appears that BellSouth’s cross-connect rates appear to be reverse engineered so that the**  
21 **resulting UNE transport rates begin to approximate BellSouth’s subsidy-laden special**  
22 **access tariff rates. Such an approach has no technical basis nor, as I understand it, does it**  
23 **have any foundation in the 1996 Act.**

1 **Q. ARE THERE OTHER RATES THAT CAN BE QUESTIONED, AT LEAST**  
2 **FROM A TECHNICAL PERSPECTIVE?**

3 A. Yes. As Mr. Falvey describes in his testimony, the difference between original and first  
4 NRCs proposed by BellSouth does not appear to consistently reflect the efficiencies  
5 realized by BellSouth when a competitive local exchange carrier, such as e.spire, orders  
6 multiple UNEs. Indeed, there can be dramatic savings in time realized in back office  
7 "paper pushing" or computer entry functions. There also can be time savings in  
8 provisioning multiple UNEs pursuant to the same service order.

9 **Q. ARE ANY OF E.SPIRE'S COLLOCATION PROPOSALS TECHNICALLY**  
10 **INFEASIBLE?**

11 A. No. e.spire has requested solutions like shared space, small space/small increment, and  
12 adjacent collocation to reduce the cost and delay associated with physical collocation  
13 with BellSouth. None of these proposals – including adjacent collocation – raise any  
14 significant technical obstacles.

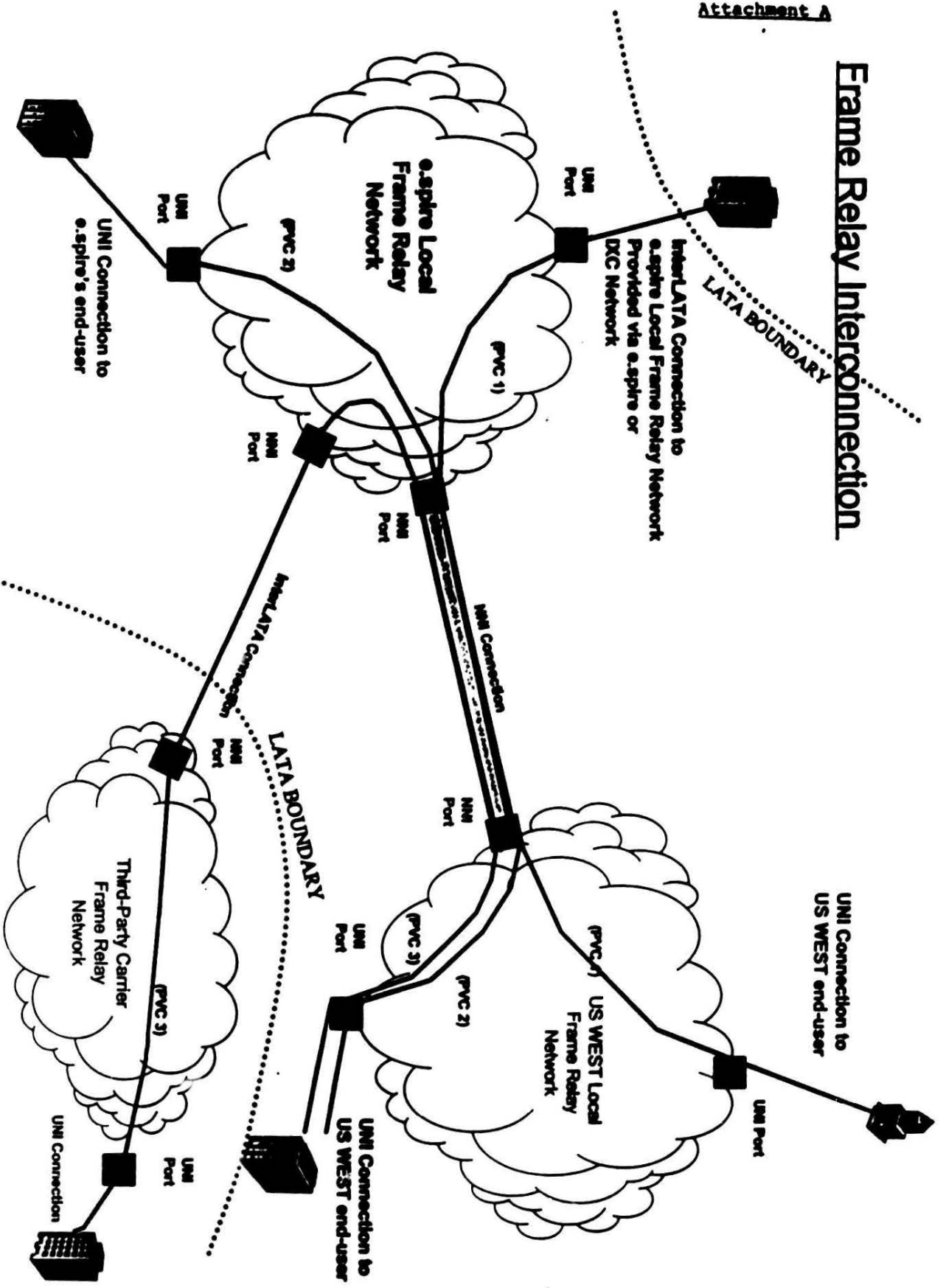
15 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

16 A. Yes, although I do not waive an opportunity, if afforded one by the Commission, to file  
17 supplemental direct testimony.





# Frame Relay Interconnection







**data frame relay**

*e.spire Frame Relay* is ideal for "burstable" applications, with bandwidth needs that vary, and for interconnecting geographically dispersed networks and equipment. Businesses of any size can take advantage of *e.spire Frame Relay* for internetworking, application sharing, e-mail, file transfer, PC-to-PC and PC-to-Server communications, imaging, and multimedia data transmission.

Our internetworking strategy connects *e.spire Frame Relay* to frame relay networks of other key providers via NNIs (Network-to-Network Interfaces). Therefore, *e.spire Frame Relay* offers comprehensive solutions to transparently interconnect your local, regional, and national sites regardless of their location. Our support of multi-protocol encapsulation makes it easier to integrate new and legacy systems.

And since *e.spire Frame Relay* scales to a variety of port connections and Committed Information Rate (CIR), you have the flexibility to implement point-to-point, star, or fully meshed networks with potentially significant savings over private leased-line networks.

#### **Service Levels**

Our service is engineered for high-speed data transmission across *e.spire's* fully redundant ATM network, which is monitored 24 hours a day, 7 days a week, to the point of service demarcation. You benefit from continual service delivery because, in the event of network failure, we automatically reroute traffic.

With *e.spire Frame Relay*, you connect with the speed and service level that is right for your business, and right for your budget. When you subscribe to the level of service you need to meet normal and peak traffic loads, *e.spire* guarantees bandwidth availability and sustained throughput levels at the Committed Information Rate (CIR). And, when additional network capacity is available, your traffic "bursts" above the CIR, up to the maximum port speed, for even better performance.

#### **Connectivity Options**

With our service, you need only one physical connection per site. This connection, or local loop, connects your customer premise equipment (CPE) such as a router, CSU/DSU, or FRAD, to the *e.spire Frame Relay* node. We establish multiple Permanent Virtual Circuits (PVCs) to provide additional logical connections between ports.

for more information, call 1-888-6espire  
*e.spire* Communications, Inc. Suite 200  
Annapolis Junction, MD 20701  
Fax 301-761-7666  
www.espire.net



**data frame relay**

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For more information, call 1-888-8-ESPIRE or 301-761-7666  
e.spire Communications, Inc. Suite 200 www.espire.net  
at 1-888-8-ESPIRE Annapolis Junction, MD 20701



## frame relay

The physical connection, or local loop, connects customer premise equipment (CPE) and the *e.spire Frame Relay* node. Physical connection speeds are:

56/64 kbps  
1.54 Mbps

The port connection represents the maximum port speed on the *e.spire Frame Relay* switch. Port speeds are available at:

56/64 kbps	384 kbps	1024 kbps
128 kbps	512 kbps	1.54 Mbps
256 kbps	768 kbps	

The CIR is the guaranteed transmission capacity. Committed Information Rate (CIR) increments include:

0 kbps	128 kbps	512 kbps
32 kbps	256 kbps	768 kbps
56/64 kbps	384 kbps	1024 kbps

This diagram depicts a five-site frame relay network. The headquarters site, in Las Vegas, connects to the *e.spire Frame Relay* service at 1.54 Mbps. It is connected to New Orleans, Ft. Worth Site 1, and Baltimore via Permanent Virtual Circuits (PVCs). While the two Fort Worth sites must communicate with one another, only Fort Worth Site 1 needs to communicate with headquarters. Legacy Ethernet and Token Ring LANs are connected to headquarters utilizing existing customer premise equipment (CPE).

For more information on *e.spire Frame Relay*, or any of our other voice, data or Internet services, contact *e.spire* at 1-888-6espire.



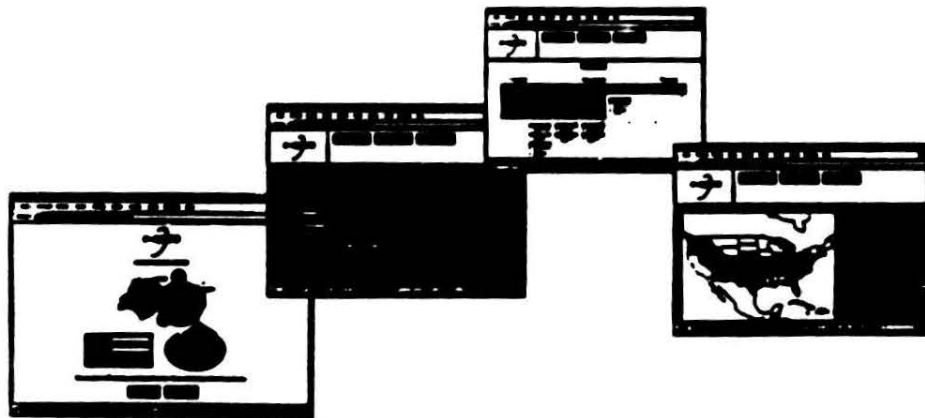
**data managed frame relay**

**"Interconnect" Without The Hassles**

*e.spire Managed Frame Relay services make it easy for small to mid-sized businesses to interconnect central and remote facilities, locally, regionally or nationally. These services include network design, provisioning, maintenance and on-going support, so customers can easily share applications, exchange information, transfer files and integrate new and legacy systems.*

*e.spire offers two levels of Managed Frame Relay services. e.spire Frame Relay Select offers a rich set of services for managing multi-site networks. e.spire Frame Relay Premier delivers a complete turnkey solution which includes fully maintained e.spire-supplied CPE. With either approach, customers benefit from the same high-performance networks, service level guarantees, and 24 by 7 proactive monitoring and support. Services may include:*

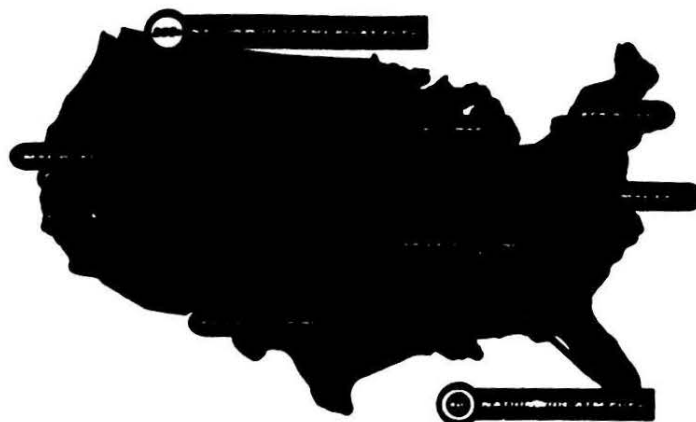
- Initial network design and consultation
- Complete implementation of telco circuits
- Customer Premise Equipment (CPE) and Frame Relay connectivity
- On-going maintenance and configuration management of CPE
- Management of problem escalation and resolution procedures
- On-line access to web-based reports
- Periodic network performance and capacity planning reviews



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## managed frame relay



At e.spire, we've engineered an extensive coast-to-coast Frame Relay network, interconnecting over 300 points of presence. The backbone is a fully-redundant, meshed T3 network, designed for maximum throughput, availability and reliability. This allows for flexibility in both proactive capacity management and dynamic rerouting in the event of a failure.

With e.spire Managed Frame Relay, bandwidth availability and sustained throughput are guaranteed. Since the services offer a variety of port speeds with multiple connections to sites within your network, they deliver the flexibility businesses need to implement or integrate point-to-point, star, or fully meshed networks.

Customize e.spire service with Frame Relay Select or take advantage of Frame Relay Premier for a complete "internetworking" solution. Features below highlight offerings for both levels of service.

Service Features	Select	Premier
Speeds ranging from 56Kbps to 1.5Mbps	••	••
Committed Information Rate (CIR) ranging from 56Kbps to 1.5Mbps	••	••
ACSI provided Customer Premise Equipment (CPE)	optional	••
Engineer-guided CPE site-installation assistance	••	••
On-going configuration management of CPE	••	••
In-band and out-of-band CPE monitoring	••	••
Implementation and testing of voice circuits, frame relay ports and virtual circuits	••	••
24 x 7 proactive service monitoring, including CPE	••	••
Periodic network performance and capacity planning reviews	••	••
Trouble ticket and fault isolation procedures initiated and managed to resolution	••	••
On-line, web-based reports including implementation status, network availability, network utilization and trouble ticket summaries	••	••
CPE maintenance	••	••
On-site CPE installation	optional	optional

The e.spire team is firmly committed to supporting our customers' "internetworking" needs as their environments evolve. Additional comprehensive managed services are available for establishing and maintaining global Internet access and secure Internet/Intranet connectivity. e.spire leverages communications technologies and services so customers can focus on their core business competencies.

For more information on e.spire Managed Frame Relay, or any of our other voice, data or Internet services, contact e.spire at 1-888-6espire.





**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that true and correct copies of the Revised Direct Testimony of C. William Stipe, III on behalf of e.spire Communications, Inc. in Docket Nos. 981642-TP and 981745-TP have been served upon the following parties by Hand Delivery (\*) and/or U. S. Mail this 4th day of February, 1999.

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