

# TOWN OF DAVIE

## TOWN COUNCIL AGENDA REPORT

**TO:** Mayor and Councilmembers

**FROM/PHONE:** Frank Apicella  
Director, Technology & Information Management

**PREPARED BY:** Frank Apicella

**SUBJECT:** Resolution

**AFFECTED DISTRICT:** Townwide

**TITLE OF AGENDA ITEM:** A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA WAIVING FORMAL BIDDING AND AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT WITH BELLSOUTH FOR THE PURCHASE OF THE ‘SMARTRING’ SERVICE COMMUNICATIONS NETWORK FOR A PERIOD OF 60 MONTHS.

**REPORT IN BRIEF:** The Town currently utilizes communication lines provided by Bellsouth. The existing communication lines that connect Town facilities do not have built-in redundancy. The architecture of the proposal “SMARTRing” has built-in redundancy (see section 4, page 54 of attachment A). This redundancy will help the Town in the event of a hurricane or other emergencies. The design allows parts of the network to fail and still allow the Emergency Operation Center (EOC) to stay running.

The one time cost to install the “SMARTRing” system is \$7,075.00. The actual increase monthly to the Town is only \$101.00 per month.

The speed of the proposed “SMARTRing” is 622.08 mbps. The significantly increased speed of communications will provide more efficient Town-Wide in network applications. Departments will be able to transfer GIS data across the network without degrading the network. We will be able to accommodate streaming video of Council meetings for public access, as well as future applications.

All existing Town communication lines are compatible with the proposed "SMARTRing". All remote facilities will connect to the ring.

Bellsouth is a single source provider of the "SMARTRing" by means of tariff regulations (attachment B).

This resolution is part of 3 resolutions for different contract periods with BellSouth. All 3 resolutions need to be passed for the "SMARTRing" to work.

**PREVIOUS ACTIONS:** N/A

**CONCURRENCES:** The Town Attorney has reviewed the contract and agrees with its form and correctness.

**FISCAL IMPACT:**

Has request been budgeted? yes

If yes, expected cost: \$84,108.00

Account Name: Communications Accounts ending in 4101

If no, amount needed: \$

What account will funds be appropriated from: All departments

Communications Accounts

Additional Comments:

**RECOMMENDATION(S):** Motion to approve the resolution.

**Attachment(s):**

A: Bellsouth Proposal

B: Single Source letter

C: Letter from Town Attorney

RESOLUTION \_\_\_\_\_

A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA WAIVING FORMAL BIDDING AND AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT WITH BELLSOUTH FOR THE PURCHASE OF THE 'SMARTRING' SERVICE COMMUNICATIONS NETWORK FOR A PERIOD OF 60 MONTHS.

WHEREAS, the Town currently has BellSouth as the provider of network communications to all the Town's facilities under Tariff B; and

WHEREAS, BellSouth is the single source provider of the 'SMARTRing' facilities under Tariff B; and

WHEREAS, a competitive bid of 'SMARTRing' service under a different tariff would result in higher costs to the Town; and

WHEREAS, the Town is in need of redundant communications between essential facilities during emergency operations and everyday communications; and

WHEREAS, the Town currently pays BellSouth for existing communication

WHEREAS, by implementing the 'SMARTRing' service , the Town gains significantly in network services by means of redundancy and network speed; and

WHEREAS, the Town Council has the authority to waive formal bidding.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF DAVIE, FLORIDA:

SECTION 1. The Town Council hereby waives formal bidding and authorizes the Mayor to execute the BellSouth Contract Service Agreement and

Letters of Election, which is attached here to and identified as attachment 'A', sections 9 and 10

SECTION 2. The Town Council hereby authorizes this expenditure from the appropriate departmental operating accounts.

SECTION 3. This resolution shall take effect immediately upon its passage and adoption.

PASSED AND ADOPTED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2006.

\_\_\_\_\_  
MAYOR/COUNCILMEMBER

ATTEST:

\_\_\_\_\_  
TOWN CLERK

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2006

# **Attachment A**



Foreign Profit

**BELLSOUTH TELECOMMUNICATIONS, INC.**

**PRINCIPAL ADDRESS**  
 675 W PEACHTREE ST., NE  
 SUITE 4500  
 ATLANTA GA 30375 US  
 Changed 04/18/2003

**MAILING ADDRESS**  
 1155 PEACHTREE STREET  
 SUITE 1800  
 ATLANTA GA 30309-3610 US  
 Changed 04/18/2003

<b>Document Number</b> P00329	<b>FEI Number</b> 580436120	<b>Date Filed</b> 12/19/1983
<b>State</b> GA	<b>Status</b> ACTIVE	<b>Effective Date</b> NONE
<b>Last Event</b> NAME CHANGE AMENDMENT	<b>Event Date Filed</b> 01/27/1992	<b>Event Effective Date</b> NONE

Registered Agent

<b>Name &amp; Address</b>
THE PRENTICE-HALL CORPORATION SYSTEM, INC. 1201 HAYS STREET TALLAHASSEE FL 32301
Name Changed: 09/19/1997
Address Changed: 09/19/1997

Officer/Director Detail

## Top 10 Business Markets Customer FAQs

**1. How does the merger announcement affect my current relationship with my BellSouth account team?**

Prior to the merger, the merger announcement will not affect your current relationship with your BellSouth account team. Your sales, as well as your service contacts, will remain the same for all aspects of your account. We remain committed, both before and after the merger, to providing the superior customer service you expect from us to support your business operations.

**2. Will contracts signed with BellSouth be honored in their entirety once the merger is complete?**

Prior to the closing of the merger, BellSouth will continue to offer its products and services via BellSouth contracts under BellSouth terms and conditions. Following the merger, AT&T will continue to honor our contractual obligations.

**3. Will I be required to migrate my BSLD services or my Network VPN over MPLS service to AT&T after the merger?**

AT&T will honor the terms of BellSouth customer contracts. We expect that any proposed changes that might affect a customer's service would not be made without first discussing it with the customer.

**4. Will BellSouth continue to compete against AT&T?**

Prior to completion of the merger, the companies must and will continue to operate independently and BellSouth will continue to compete against AT&T.

**5. Does the merger announcement impact wireless offers and Cingular?**

Prior to completion of the merger, there will be no impact to our wireless offerings through Cingular. You should still contact your BellSouth account team for your wireless needs. After the merger, Cingular Wireless will be wholly owned by the combined company.

**6. Will BellSouth continue to launch new products for the remainder of the year?**

BellSouth will continue to offer competitive products and services to our business customers and will introduce new products and enhancements to our existing products this year.

**7. Can I request that, if a merger occurs, my current BellSouth contracts be merged or the terms brought under any existing term I may already have in a contract with BellSouth's merged partner?**

Pre-merger legal restrictions and general contract law do not allow a company to bind a potential merger partner with terms and conditions. However, AT&T will continue to honor our customer contracts post merger.

**8. What will happen to the charitable organizations BellSouth supports?**

AT&T shares our commitment to serving the communities in which we live and work. AT&T's chairman sent a letter to Mr. Ackerman pledging to continue to fund charitable activities, and economic and educational initiatives throughout the BellSouth nine state region.

**9. How does the merger benefit me?**

The merger will create a more effective and efficient provider of wireless, broadband, data and video services. It will increase competition and innovation, thereby giving you more choices in products and services. Our size will allow us to attract the right content and technology partners to offer you the best solutions for your needs.

**10. When is the merger expected to close?**

BellSouth and AT&T are currently expected to complete the merger by the end of 2006. The merger must be cleared by the U.S. Department of Justice and approved by the Federal Communications Commission, various State public utility commissions, a few local and foreign economic authorities and the shareholders for both BellSouth and AT&T. Your account team will continue to update you as information becomes available. You can also visit our Web site at [www.bellsouth.com](http://www.bellsouth.com) at any time.

In addition to historical information, this document may contain forward-looking statements regarding the proposed merger with AT&T. Factors that could prevent or delay completion of the proposed merger with AT&T, could affect the future results of the merged company and could cause the merged company's actual results to differ from those expressed in the forward-looking statements include: (i) our and AT&T's ability to obtain governmental approvals of the proposed merger on the proposed terms and contemplated schedule; (ii) the failure of AT&T shareholders to approve the issuance of AT&T common shares in the merger or the failure of our shareholders to approve the merger; (iii) the risk that the businesses of AT&T and BellSouth will not be integrated successfully or as quickly as expected; (iv) the risk that the cost savings and any other synergies from the merger, including any savings and other synergies

relating to the resulting sole ownership of Cingular Wireless LLC, may not be fully realized or may take longer to realize than expected; (v) disruption from the merger making it more difficult to maintain relationships with customers, employees or suppliers; and (vi) those factors contained in the preliminary proxy statement relating to the proposed merger filed with the SEC.

**NOTE: In connection with the proposed merger, AT&T Inc. ("AT&T") filed a registration statement on Form S-4 (Registration No. 333-132904), containing a joint proxy statement/prospectus of AT&T and BellSouth Corporation ("BellSouth"), with the Securities and Exchange Commission (the "SEC") on March 31, 2006. Investors are urged to read the registration statement and the joint proxy statement/prospectus contained therein (including all amendments and supplements to it) because it contains important information.** Investors may obtain free copies of the registration statement and joint proxy statement/prospectus, as well as other filings containing information about AT&T and BellSouth, without charge, at the SEC's Web site ([www.sec.gov](http://www.sec.gov)). Copies of AT&T's filings may also be obtained without charge from AT&T at AT&T's Web site ([www.att.com](http://www.att.com)) or by directing a request to AT&T Inc. Stockholder Services, 175 E. Houston, San Antonio, Texas 78205. Copies of BellSouth's filings may be obtained without charge from BellSouth at BellSouth's Web site ([www.bellsouth.com](http://www.bellsouth.com)) or by directing a request to BellSouth at Investor Relations, 1155 Peachtree Street, N.E., Atlanta, Georgia 30309.

AT&T, BellSouth and their respective directors and executive officers and other members of management and employees are potential participants in the solicitation of proxies in respect of the proposed merger. Information regarding AT&T's directors and executive officers is available in AT&T's 2005 Annual Report on Form 10-K filed with the SEC on March 1, 2006 and AT&T's proxy statement for its 2006 annual meeting of stockholders, filed with the SEC on March 10, 2006, and information regarding BellSouth's directors and executive officers is available in BellSouth's 2005 Annual Report on Form 10-K filed with the SEC on February 28, 2006 and BellSouth's proxy statement for its 2006 annual meeting of shareholders, filed with the SEC on March 3, 2006. Additional information regarding the interests of such potential participants is included in the registration statement and joint proxy statement/prospectus contained therein, and other relevant documents filed with the SEC.



March 30, 2006

Mr. Frank Apicella  
Information Systems Manager  
Town of Davie  
6591 SW 45th St  
Davie, Florida 33314

Dear Frank:

Enclosed is our proposed solution for SMARTRing, PRI, Frame Relay, Metro Ethernet, and Private Line T1 services, which demonstrates BellSouth's commitment to your requirements. With our existing relationship off to an exceptional start, this procurement is an excellent addition to our partnership. Given that our goal is to provide you with a total integrated network solution that addresses your unique requirements and concerns, our proposal offers the best combination of flexibility, technical performance, and cost effectiveness.

We value our relationship with Town of Davie and will strive to exceed your expectations by listening to your needs and introducing new solutions for your specific applications. We look forward to participating in your continued growth and success. If you need to talk to me at any time, please call me at 954-838-1784.

Sincerely,

Tomas Tomas  
Account Executive

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## 1. Executive Summary

At BellSouth, we're in the business of harnessing the power of communications to improve our customers' lives and businesses every day. We serve more than one million business customers ranging in size from single-location small businesses to global Fortune 500 corporations. We are committed to offering our business customers the leading-edge services they need to grow and expand their operations, and to take advantage of the productivity and cost benefits that communications technology can deliver.

Acting on a commitment to better utilize tax dollars and deliver more efficient services to their citizens, many local governments are deploying innovative networking solutions. As communities grow and service expectations rise, communications can play a critical role in enhancing local services and providing easier, more cost-effective access to information and public services.

Our proposed solution, which consists of SMARTRing, PRI, Frame Relay, Metro Ethernet, and Private Line T1 services, is designed to enable you to a.

Recognizing that real value is measured in more than just dollars and cents, BellSouth's full menu of services is enhanced by three essential ingredients: stability, accountability, and reliability.

>> *Stability*



You want a supplier who has the financial, operational, and ethical strength to maintain your long-term trust. BellSouth has one of the best balance sheets in the business, and sets a high standard for business integrity and ethical behavior at every level of operation. Long before corporate governance dominated business page headlines, it was a fundamental philosophy at BellSouth.

Our ability to evolve, compete, and ultimately prosper in a rapidly changing industry is a function of a solid financial foundation:

- 2004 revenues of \$20.3 billion.
- More than \$59 billion in assets.
- 2004 net income of \$4.75 billion.

BellSouth's financial stability and corporate integrity offer you a strong and viable supplier who will be here for the long term.

>> *Accountability*



Advanced technology alone cannot deliver maximum value. BellSouth devotes substantial resources to ensuring service excellence. It reflects our total commitment to delivering the best technology, expertise, and support.

Your BellSouth account team provides a single point of contact for all account issues. BellSouth uses a comprehensive staffing plan to provide experienced, responsive, and knowledgeable personnel to respond to your business requirements. Our goal is to deliver service excellence and expert technical support to ensure unsurpassed system performance and reliability.

>> *Reliability*



Critical to the dependability of information transport is the nature of the facilities used for that transport.

BellSouth's network is built to survive. At no time is this more apparent than in times of natural disasters, whether a hurricane, tornado, ice storm, or flood.

- All central offices are secure structures built to meet stringent BellCore standards.
- High-speed, fiber-optic connections can redirect calls instantly.

- Radio equipment can regenerate communications signals in the event of major physical plant damage.
- Each circuit switch is connected to two redundant pairs of signal transfer points to provide optimized call setup, routing, and intelligent features.
- All of BellSouth's digital loop carrier systems and multiplexers in the local loop have built-in redundancy.
- In most BellSouth LATAs, two separate network access switches have been deployed, providing at least two routes between end-offices as well as load-sharing and backup capabilities.
- Critical BellSouth network facilities have immediate backup through batteries followed by generators.
- Portable generators, fuel sources, and transport trucks are strategically located across BellSouth's service area for rapid deployment.

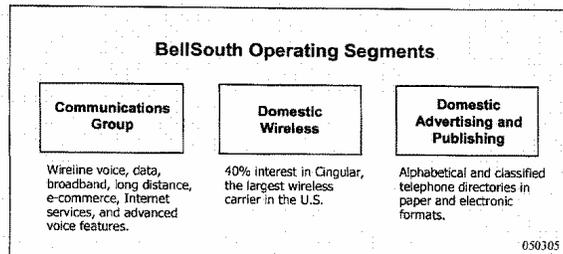
The future belongs to those who balance vision with fundamentals, financial discipline with investment, and the promise of new technology with improving the lives of customers. In a rapidly changing environment, BellSouth is committed to striking that balance. We will stand firm on that foundation – and we are committed to working hard for our customers today and in the future.

At BellSouth, we are driven to earn the loyalty of our customers. We appreciate the opportunity to earn yours.

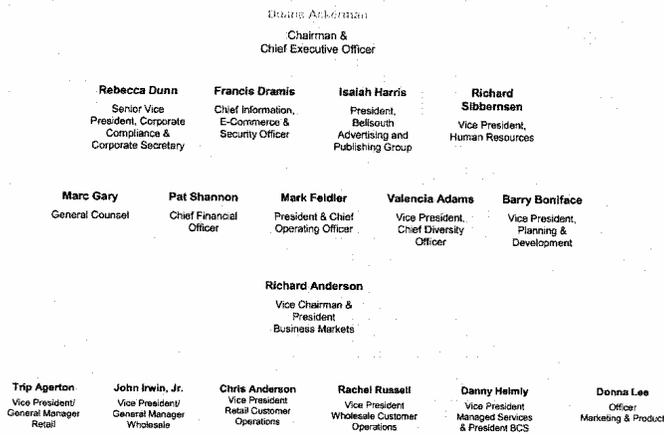
## >> 2. Corporate Overview

### The BellSouth Structure

Three operating segments are the focus of our business.



### BellSouth Business Organization





Our Values	
<b>Our Customers</b>	We are driven by the needs of our customers. We understand our customers' needs and deliver innovative products and services to meet those needs.
<b>Our People</b>	We respect each other. We work together as one BellSouth team. This team reflects the diversity of the communities we serve.
<b>Our Communities</b>	Everywhere we do business we strive to make our communities a better place to live, work, and grow.
<b>Excellence</b>	We strive for excellence in everything that we do, including excellent customer service for our customers, a great place to work for our employees, and outstanding performance for our shareholders.
<b>Integrity</b>	Every action we take reflects the highest ethical standards. We interact with our customers, our employees, and our shareholders with honesty and integrity.

For more than 120 years, BellSouth's reputation for excellence and integrity has remained unchanged. This solid reputation is built on the fundamental principles that have guided our company since its beginning – our values.

As we face the challenges of an industry transforming from narrowband to broadband and from wireline to wireless, we are committed to upholding the high ethical standards for which our customers and shareholders know us.

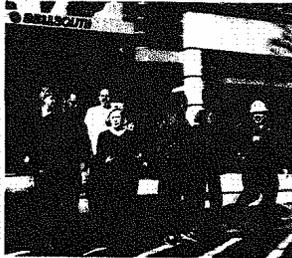
### **Our Commitment to Diversity**

BellSouth has a rich heritage of diversity spanning all aspects of our business. We believe that diversity — and fostering an inclusive workforce — is not only the right thing to do; it is also critical to maintaining a competitive advantage in today's global marketplace.

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**Our Commitment to Diversity**

- > Diverse, inclusive workforce
- > Supplier diversity program
- > Recognition
  - > NAACP's 2004 Telecommunications Industry Report Card
  - > Black Enterprise's 2005 30 Best Companies for Diversity
  - > Fortune Magazine's 2004 America's Best Companies for Minorities
  - > DiversityInc's 2005 Top 50 Companies for Diversity and Top 10 Companies for Supplier Diversity lists.
  - > Georgia Women's Business Council's 2004 Corporation of the Year
  - > Number 4 in Computerworld's top 10 companies for diversity
  - > One of America's Top Corporations for Women's Business Enterprises by the Women's Business Enterprise National Council



At BellSouth, we define diversity as the characteristics that make one individual different from another. However, with a focus on inclusion, we strive to take diversity a step further. Inclusion embraces these diverse characteristics in a way that engages all employees at all levels, fostering both individual success as well as the success of the company.

Our legacy and commitment to inclusion spans all aspects of our business, including relationships with employees, customers, suppliers, and the communities within our region.

Several prestigious awards have recognized our commitment to diversity.

Recognition for Diversity	
<b>Asian Enterprise</b>	In 2004, BellSouth Corporation was named as one of the 10 best companies for Asian Americans.
<b>Black Enterprise</b>	In 2005, named BellSouth as one of its 30 Best Companies for Diversity.
<b>Computerworld</b>	In 2004, named BellSouth #4 in its top 10 companies for diversity.
<b>DiversityBusiness.com</b>	In 2003, BellSouth ranked #10 of the 50 America's Top Organizations for Multicultural Business Opportunities.
<b>DiversityInc</b>	In 2005, BellSouth was named to DiversityInc's Top 50 Companies for Diversity and its Top 10 Companies for Supplier Diversity lists.

Recognition for Diversity	
Fortune Magazine	In 2004, BellSouth ranked #25, up 11 from 2003. For the sixth consecutive year, BellSouth ranked among the nation's top companies on the America's Best Companies for Minorities survey.
Georgia Minority Supplier Development Council	In 2004, BellSouth was honored with three major awards for its contribution to minority businesses in Georgia.
Georgia Women's Business Council	BellSouth was selected as 2004 Corporation of the Year.
Lawyers' Committee for Civil Rights under Law	In 2004, BellSouth was honored for its commitment to diversity with the prestigious A. Leon Higginbotham Corporate Leadership Award presented by the Lawyers' Committee for Civil Rights under Law.
NAACP	BellSouth received top honors in NAACP's 2004 Telecommunications Industry Report Card for the 5 <sup>th</sup> consecutive year.
South Regions Minority Business Council's Crystal Award	In 2003, BellSouth won for support of minority suppliers in Alabama, Mississippi, and North Florida.
Women's Business Enterprise National Council	BellSouth was named one of America's Top Corporations for Women's Business Enterprises in 2005.

## A Heritage of Helping

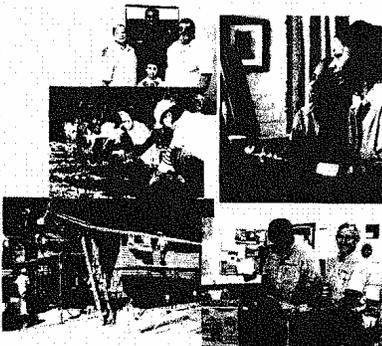
*"BellSouth has had a long and proud heritage of helping to make our communities better places to live and work. Even as our marketplace and our company experience tremendous change, this commitment remains constant."*

**Duane Ackerman, Chairman and CEO of BellSouth**

BellSouth's commitment to community stems from the same spirit that drives our dedication to customer service. And it, too, is vital to the company's growth and success. Starting at the top of our company and throughout BellSouth's force of approximately 62,500 employees, the individual volunteer spirit combines with corporate financial support to provide tremendous benefits to education, civic affairs, the arts, and human services.

**BELLSOUTH®**  
@Work in Communities

- > Habitat for Humanity
- > American Red Cross
- > United Way
- > BellSouth Pioneers
- > Amber Alert
- > BellSouth Foundation
- > Matching Gift Program



Since the earliest days of our company's operation, our employees have distinguished themselves as people who give of themselves to enrich their communities.

BellSouth employees are the first to respond. Whether it's a tornado in Tennessee, a hurricane in Florida, or a flood in Louisiana, BellSouth employees emerge to exhibit the spirit of service that outshines the storm. With the same force and speed of recent hurricanes Charley, Frances, Ivan, and Jeanne, BellSouth volunteers rolled into storm-damaged areas to provide much-needed supplies and assistance.

#### ***Habitat for Humanity***

In 1990, BellSouth became Habitat for Humanity's first corporate sponsor. The company and its Pioneer Volunteers have built nearly 300 Habitat homes, including the first home built (Birmingham, 1998) exclusively by persons with handicaps.

#### ***American Red Cross***

Whether it is donating blood, organizing blood drives, or assisting with disaster relief, BellSouth has been a long-standing partner and supporter of the American Red Cross. Company executives serve in leadership positions on its boards, and BellSouth collects thousands of pints of blood through annual blood drives. To aid victims of the recent tsunami disaster, BellSouth made a \$200,000 corporate donation and matched employee contributions up to \$1 million. To better prepare for disaster, BellSouth is helping the American Red Cross launch Together We Prepare Atlanta, to prepare and train the metro Atlanta community as the first line of defense in responding to disasters.

**United Way**

BellSouth employees and United Way make it possible for community-based organizations to make a measurable difference. BellSouth has long been a leader in United Way programs throughout our nine-state region through our corporate giving, employee giving, and by serving in leadership positions in community campaigns. Last year, BellSouth and its employees across the region contributed nearly \$10 million to help local communities through United Way.

**BellSouth Pioneers**

The BellSouth Pioneer Volunteers represent more than 94,000 active and retired employees. BellSouth Pioneers donate more than 6 million hours each year and support a broad base of community programs centering on education, the environment, health, human services, and life enrichment.

**AMBER Alert**

In 2003, BellSouth formed the AMBER Alert Partnership with law enforcement officials across the Southeast. The primary function of this program is to assist in the searches for abducted children. Under the program, BellSouth will receive the alerts from state law enforcement agencies and distribute them to about 15,000 field technicians through electronic messaging to their TechNet laptops and pagers.

**Matching Gift Program**

The BellSouth Matching Gift Program encourages employees and retirees to support their communities by stimulating and magnifying their gifts to organizations of their choice. Total contributions in 2004 are shown in the table below.

<b>BellSouth Matching Gift Program 2004 Contributions</b>	
Donor contributions	\$ 2.9 million
Company match	\$ 2.3 million
Number of gifts matched	9,915
Number of organizations receiving gifts	2,445

**BellSouth Foundation**

The mission of the BellSouth Foundation is to improve education in the South and other communities where BellSouth operates by stimulating fundamental change in education institutions and systems that will result in active learning and improved life chances for all students. Its grantmaking activity seeks imaginative strategies to drive deeper learning and

increase opportunities that lead to better lives for all students. The following examples are just a few ways that the Foundation is raising the bar for education:

- Quality in the Classroom, a \$10 million, five-year teaching initiative, is designed to assist teachers across our region with professional development, recruitment, and retention, top issues facing teachers nationwide.
- The BellSouth edu.pwr3 initiative, a \$10 million commitment launched in 1998 that focuses on unleashing the transformative power of technology for learning by providing educators and students with hands-on opportunities to develop understanding, skills, and new ideas for harnessing the energy of technology to every aspect of teaching, learning, and school management.
- The BellSouth College-Going Minorities initiative, which awarded grants to five institutions of higher education with the goal of increasing the persistence and success of students of color on these five campuses, and to learn how institutional structures, culture, and practice directly affect student success.

Superintendents Leadership Network, an approach to educational leadership, assists school superintendents in new ways of thinking about education and strengthening their leadership.

### BellSouth Behind the Scenes

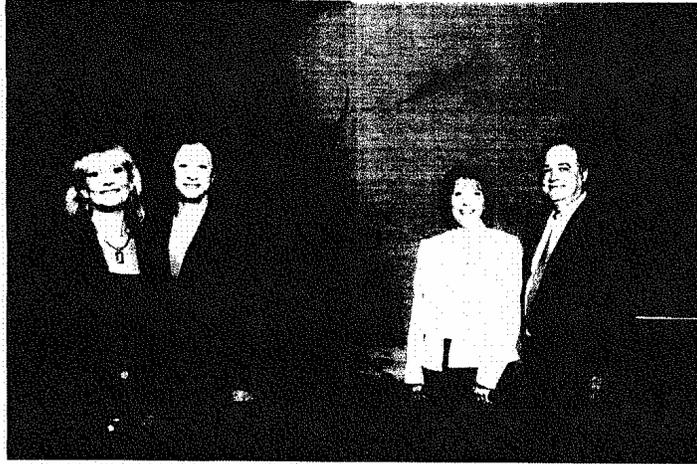
Every minute of every day, BellSouth employees are working behind the scenes to ensure that our customers' communications are reliable, efficient, cost-effective, and secure.

- BellSouth helped to deploy a robust and industry-leading WAN and voice network that enabled a Florida bank to better serve its customers, reduce costs, and execute its business strategies.
- For a lottery software customer, BellSouth developed a custom VPN solution that included equipment, networking, Internet access, security, and management to support the time-critical nature of the customer's operations.
- When a Tennessee credit union needed to increase bandwidth, centralize security, and integrate voice, data, and call center systems, BellSouth developed a solution that converged the customer's systems and created a VoIP call center using a central platform. The result was an enhanced account-holder experience, reduced costs, and increased profitability.
- A BellSouth wireless WAN links a medical practice's two main offices and provides its physicians with immediate access to critical patient data for more accurate diagnosis, treatment, and follow-up therapies.
- With an innovative voice and data solution from BellSouth, a hospital in Florida is able to easily share files, including electronic x-ray information, between locations.

Whether it is a new office location with 25 employees or an international political, scientific or sporting event, you can rest assured that BellSouth is behind the scenes, ensuring that communications systems are performing flawlessly.

### **Georgia Aquarium**

BellSouth has made a big splash at the Georgia Aquarium. If visitors could step behind the scenes at the newly-opened Georgia Aquarium, they would see how BellSouth is intricately involved with many facets of the facility's operations.



At the Georgia Aquarium, a whale shark and sawfish swim by the BellSouth Business sales account team (left) along with Phil Jacobs, president – BellSouth Community Technologies, and a Georgia Aquarium board member.

Opening its doors in late 2005, the Georgia Aquarium is the world's largest aquarium facility, holding more than eight million gallons of marine and fresh water, and more than 100,000 animals of 500 different species.

As the provider of a complete communications solution, BellSouth designed and implemented custom voice, data, and Internet solutions as well as a network that supports the advanced life support and security systems at the aquarium facility.

BellSouth's solution provides voice and data services for the aquarium, including cabling infrastructure to support all local area network (LAN) functions, Voice over Internet Protocol (VoIP), local and long distance voice services, dedicated Internet access and a high-speed data connection to the off-site animal receiving warehouse.

BellSouth's communications infrastructure at the aquarium includes:

- A network that connects data-sensing devices to systems that allow biologists, researchers and veterinarians to constantly monitor both animals and the environment.
- A robust security system that incorporates nearly 200 surveillance cameras and proximity card readers and a sophisticated monitoring system.
- Voice services that allow call center representatives to arrange guest ticketing and provide information.
- BellSouth® Dedicated Internet Access service, which links the aquarium's online ticketing site to the internal network to provide up-to-date information for reservation availability. Because of the aquarium's popularity, reservation times are required to maintain comfortable levels of visitors at all times.
- Voice and data services that support the needs of the food court, gift shops, children's programs, special event facilities and management staff.

Overall, BellSouth is one of six presenting sponsors of the Georgia Aquarium. Cingular Wireless is a partner with BellSouth in the sponsorship. In addition, BellSouth is the lead sponsor of the innovative 4-D theater, one of the aquarium's most engaging attractions featuring a 3-D film, a live actor and interactive seats.

#### ***Discovery Shuttle Launch***

More than 2,500 journalists were onsite at Kennedy Space Center for the July 26 return to flight of Space Shuttle Discovery and many of them utilized a wireless data network that covers the six-acre NASA Press Site to report the event. The wireless data solution was created specifically for this launch by Nortel and is linked to the Internet by high-speed dedicated circuits from BellSouth.

With the wireless data network in place, reporters on the ground have the flexibility to use their wireless-enabled laptops and handheld computing devices to seamlessly and securely access the Internet, e-mail, file sharing, and other applications. Designed to deliver user mobility, the Wireless Mesh Network provides reporters with secure and continuous access to the Internet while moving throughout the observation area, increasing productivity by allowing them to report on the story in real-time.

For the return to flight mission, the first shuttle launch since January 2003, BellSouth installed upgraded circuits to serve the media with high-speed connections, including DSL, T1s, and DS3s (45Mbps of dedicated bandwidth, commonly used for transmission of large amounts of data including video). Many of these circuits are run directly to the hurricane-rated structures that house individual news organizations, constructed after the last launch for additional safety at the NASA Press Site. These connections are utilized by news organizations for dedicated voice, data, and video circuits that link headquarters locations to the reporters onsite.

### **G-8 Summit**

BellSouth handled the telecom needs of world leaders and their delegations gathered at the G-8 Summit in Sea Island, Georgia, June 8-10. The G-8, short for Group of 8, is an annual meeting for the world's leading industrial nations to discuss the major issues facing the world in an informal setting. The meeting site rotates each year among the member nations: the United States, United Kingdom, France, Germany, Italy, Japan, Russia, and Canada. The United States assumed presidency of the G-8 in 2004, and President Bush chose Sea Island as the site for the summit.

While the actual summit was held on Sea Island, several thousand members of the international press descended upon Savannah and assembled at the International Trade Center.

Network additions made by BellSouth for the G-8 Summit include:

- The installation of multiple broadband gateways that allow several thousand additional customers to access DSL services in Sea Island and Savannah.
- The deployment of Metro Ethernet services in Savannah which will serve businesses for ultra high-speed data applications.
- The addition of several fiber-optic rings in Sea Island, St. Simons Island, Brunswick, and Savannah. These fiber-optic rings are self-healing and will help keep the core BellSouth network up and running in case of a single point of interruption.
- In total, BellSouth's G-8 preparations added over 2,000 miles of fiber to the existing fiber infrastructure in Glynn and Chatham counties.

The new fiber rings provide a greater level of network redundancy and network up-time that will benefit many area customers. Also, the new Metro Ethernet service deployed in Savannah will serve business customers for ultra high-speed data applications that were previously unavailable.

## >> 3. Network Overview

### BellSouth Local Network

Extending across nine Southeastern states (AL, FL, GA, KY, LA, MS, NC, SC, and TN), BellSouth's local network delivers high availability, exceptional reliability, and superior performance, and offers customers a wide range of voice, video, and data services.

### Network Architecture

BellSouth has evolved its underlying SONET infrastructure to a next-generation MSPP (multiservice provisioning platform) to improve network efficiencies and to better support new optical solutions. The company has also integrated MPLS (multi-protocol label switching) into its network core and edge, and is running the BellSouth Regional IP Backbone utilizing this technology. These network enhancements enable BellSouth to provide improved service level agreements, quality of service, and incremental speed options for customers. The enhancements also enable the creation and delivery of next-generation services, such as VoIP and Network VPN, beyond traditional network boundaries.

As the BellSouth network continues its narrowband-to-broadband transformation, BellSouth is building on its leadership position in fiber and broadband deployment to offer enhanced IP-based voice and data services as well as potential future IP video services currently in testing. BellSouth's network upgrade will enable the company to deliver more than 12Mbps of bandwidth over a single copper telephone line and more than 24Mbps over a bonded pair of lines.

### Network Statistics

BellSouth's local network consists of:

- > 5.2+ million miles of fiber
- > 1,589 central offices
- > 1,616 conventional voice switches
- > 1,000+ broadband switches
- > 4,032 central office DSLAMs
- > 700 switches that deliver Frame Relay
- > 552 switches that deliver ATM
- > 29,511 SONET rings

- > 388 DWDM (dense wave division multiplexing) systems
- > 59 points of presence on regional backbone IP network
- > 20,734 remote terminals deployed for DSL
- > 1,580 central offices deployed for DSL
- > 20.6 million retail and wholesale access lines

Ninety-nine percent of interoffice circuits are transported on fiber, and one hundred percent of BellSouth lines are equipped for Signaling System 7 capability. BellSouth owns all network components, including the facilities and the physical structures that house the equipment.

Today, one million BellSouth customers are served with fiber-to-the-curb. Approximately 50 percent of BellSouth's customers are served by a combination of fiber and short copper loops. Fiber-based broadband services are available to virtually all businesses within our nine-state region.

## Network Management



The Network Management Center (NMC) in Atlanta monitors the entire regional voice network. The NMC maintains close relationships with all IXCs (interexchange carriers), CLECs (competitive local exchange carriers), and independent companies, and serves as a single point of contact to keep traffic flowing, especially during disasters.

The Network Reliability Center (NRC) is charged with surveillance, analysis, and restoration of BellSouth's voice and data network throughout the region. The NRC has two locations: Charlotte, North Carolina, and Nashville, Tennessee. Each center is capable of assuming full control from the other in the event of an emergency.

The NRC is staffed 24x7x365 by highly skilled technicians and management personnel. To monitor the health of the network, the NRC uses a variety of tools, such as network monitoring and analysis software, live news and weather feeds, and customized intranet tools, including multiple databases and paging applications. One of the primary missions of the NRC is to perform proactive analysis and correct problems in BellSouth's network before they affect service.

The BellSouth network is constantly monitored for usage and capacity on the switch side as well as the interoffice and loop sides. The NRC proactively reviews facilities and switches for necessary increases, replacements, upgrades, and enhancements when they grow toward 85 percent of capacity. With this information and forecasts provided by forecasting and marketing groups, BellSouth grows the network to ensure our ability to accommodate traffic growth in all our markets.

## Network Reliability

BellSouth's network is built to survive. At no time is this more apparent than in times of natural disasters, whether a hurricane, tornado, ice storm, or flood.

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### Network Reliability and Survivability

- > All central offices are secure, stand-alone structures with bunker-like construction meeting stringent BellCore standards.
- > High-speed, fiber-optic connection can redirect calls instantly.
- > Radio equipment can regenerate communications signals in the event of major physical plant damage.
- > All of BellSouth's digital loop carrier systems and multiplexers in the local loop have built-in redundancy.
- > Each circuit switch is connected to two redundant pairs of signal transfer points to provide optimized call setup, routing, and intelligent features.
- > In most BellSouth LATAs, two separate network access switches have been deployed, providing at least two routes between end-offices as well as load-sharing and backup capabilities.
- > Critical BellSouth network facilities have immediate backup through batteries followed by generators.
- > Portable generators, fuel sources, and transport trucks are strategically located across BellSouth's service area for rapid deployment.



The BellSouth network has diverse, self-healing facilities with 50-millisecond automatic protection switching for more than 87% of central offices. Over ninety-nine percent of all lines served by BellSouth's 38 metro serving areas and 98% of BellSouth's overall lines are protected by the self-healing network.

BellSouth central offices are built to withstand extreme forces of nature and are continuously monitored for temperature, humidity, smoke, and fire and intrusion from a remote building surveillance center. Central offices are equipped with multiple levels of uninterruptible power supplies, including dual power feeds, more than three hours of battery reserves, and permanent, on-site diesel generators with up to 72 hours of fuel reserves. In addition, portable power generators are maintained in both local and centralized locations. Every switch in seven states (AL, FL, GA, MS, NC, SC, and TN) has a stationary generator on-site. In the remaining two states in our region, Kentucky and Louisiana, several smaller offices use portable generators, which are centrally stocked within three hours of the office.

## Disaster Recovery

BellSouth has a long history of emergency preparedness and restoration. In fact, BellSouth Telecommunications is often used as a benchmark for industry preparations. BellSouth has a direct interface with the Department of Homeland Security and, since 9/11, BellSouth has emphasized preparedness and restoration for man-made events to parallel its intense,

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historical planning for weather-related events. Since BellSouth is a local exchange carrier and a critical infrastructure partner, we have tremendous resources at our disposal on a regional and national level.

BellSouth developed an extensive organizational structure for emergency preparedness and restoration. This structure is active at local, state, and regional levels. Should an outage exceed even regional capabilities, BellSouth coordinates with the National Telecommunications Alliance for resources. In most instances, we restore emergency services entities (fire, rescue, police, hospital, etc.) first.

BellSouth's Disaster Recovery plans include rerouting traffic over alternate routes built into the BellSouth network infrastructure. BellSouth's specific plans are proprietary in nature and, for security reasons, we maintain control over their public release. These plans address damage assessment, local force requirements, borrowed force and equipment requirements, and portable emergency equipment. In addition, we have long-standing relationships with our equipment vendors, to ensure that we have access to telecommunications equipment in a disaster situation. Our equipment manufacturer for fast-packet switching, for example, has a full-featured switch ready to ship anywhere in BellSouth's region.

In case of a disaster, BellSouth activates an Emergency Control Center (ECC). Located in Atlanta, the ECC is the 24/7 central command post established to monitor all relief, repair, and restoration efforts across the region. Network Services functional teams, which are critical to the response and restoration effort, are moved together on-site to ensure that resources are deployed as quickly and efficiently as possible. The ECC goal is to facilitate the timely restoration of the network. Departments from many areas of the company have set up crisis teams within the ECC, such as:



<b>Corporate Real Estate Services (CRES) Crisis Team</b>	Responsible for making building assessments and organizing repairs to damaged structures.
<b>Corporate Security Crisis Team</b>	Works with the Department of Homeland Security (DHS) on issues on a national basis, and coordinates across the numerous governmental agencies.
<b>IT Crisis Team</b>	Works to ensure the availability of systems, keeps the systems operational, makes emergency changes, and arranges for replacement equipment.

Our restoration efforts begin as soon as it is safe for our field teams to enter affected areas. BellSouth works with power companies, and federal, state and local governments to repair the damage that the hurricanes caused. Whenever disaster hits, telecommunications companies band together to assist each other. During the 2005 Hurricane season, we had 3,400 additional technicians and support personnel in the Gulf States to assist our local staff there. These additional work crews were deployed in areas hardest hit by the storms.

BellSouth is proud of our employees who live and work in the devastated areas. These employees, many of whom have suffered personal loss or are homeless themselves, continue

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to work long hours, in difficult circumstances, to restore service to our customers as quickly as possible. Nancy Talbot Shebesta, a 32-year BellSouth veteran, has a ready explanation for our employees' work ethic: **"Providing phone service to people isn't just a business for us. It's a real point of pride."**

## >> 4. Proposed Network Solution

### **CrisisLink<sup>SM</sup> Service**

CrisisLink service is an Advanced Intelligent Network service that allows you to redirect incoming calls to a pre-selected site or sites during a crisis or emergency situation. Calls are redirected according to your pre-arranged plan.

Your BellSouth account team will work with you to identify in advance those lines/trunks and numbers that handle critical incoming calls, and the locations to which those calls will be redirected in the event that calls cannot be answered at the primary location. This information is then entered into the network in the form of a customer-specific "emergency plan" that can be activated with one call to the BellSouth CrisisLink Service Center, thereby ensuring your critical calls are answered.

### **CrisisLink Options**

CrisisLink provides you with options for redirecting incoming traffic, identifying parameters for CrisisLink services, selecting CrisisLink plans, and choosing phased restoration alternatives.

### **Redirect Your Incoming Traffic**

- A single alternate number: If you have another location that can handle the full volume of your incoming calls, you can route all of your calls to that number.
- Multiple alternate numbers: You can also choose to split the redirected calls among several locations (up to three backup telephone numbers) to share the load. You may even allocate a certain percentage of calls to each one.
- A standard announcement.
- The primary number "completed as dialed."

### **Four Parameters for CrisisLink Service**

- You can redirect calls for up to 10 numbers per plan.
- All numbers in a plan must go to the same backup number(s).
- All numbers in a plan must be at the same primary location.
- All numbers in a plan must be either trunk-side or line-side.

### CrisisLink Plans

- Primary location.
- Backup location(s).
- Announcements.
- Plan number.
- Percentages of calls to be forwarded to each backup location.

### Phased Recovery Options

- **Full restore:** Your regular service is restored all at once.
- **Incremental restore:** You can recover gradually, restoring a certain percentage of your calls to their original location, while the rest continue to be redirected.

### CrisisLink Plan Examples

In the examples below, a disaster interrupts phone service at a customer's Atlanta office. The customer calls the BellSouth CrisisLink Service Center to activate the CrisisLink plan, which specifies that 50% of the calls to its three Atlanta numbers are to be redirected to its Birmingham branch office and 50% to its Mobile branch office (Figure 1).

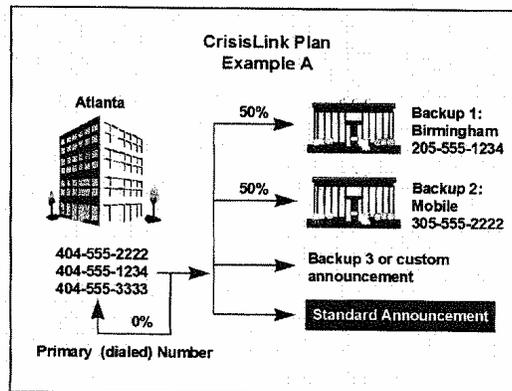


Figure 1 -- CrisisLink Plan Example A

The customer's Mobile branch office finds that it cannot handle all of the calls that are being directed to it, so the customer calls the BellSouth CrisisLink Service Center to request that 20% of the calls are redirected to the standard announcement (Figure 2).

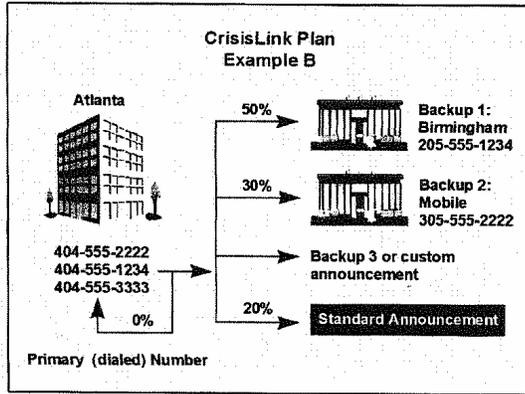


Figure 2 -- CrisisLink Plan Example B

As time passes, service to the Atlanta location is partially restored. The customer calls the BellSouth CrisisLink Service Center to have 20% of the calls complete to Atlanta (Figure 3).

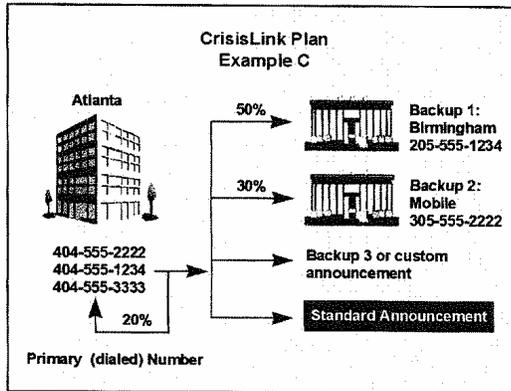


Figure 3 -- CrisisLink Plan Example C

**Reporting**

In addition, BellSouth provides reports to help you assess the impact of the problem:

**Town of Davie**

**>> Proposed Network Solution**

- > Number of lines affected
- > Number of calls rerouted
- > Downtime experienced

**Features and Benefits**

CrisisLink service protects your connection to the world when you need it most.

Feature	Benefit
<b>Protection for Vital Phone Service</b>	With CrisisLink service, you can ensure that your critical calls are always answered, even during an emergency situation.
<b>Automatic Redirection of Calls</b>	When service at your business is interrupted, your calls are automatically redirected according to your CrisisLink plan.
<b>Single and Multiple Backup Location Options</b>	You can send your calls to a single or multiple backup locations and allocate the percentage of calls to each.
<b>Flexible Changes</b>	You can make changes to your CrisisLink plan before or after the plan is activated.
<b>Easy Activation</b>	When a problem occurs, you simply contact BellSouth to activate your redirection plan.
<b>Periodic Testing</b>	To ensure that your CrisisLink service is working properly, you can periodically testing your plan.
<b>Phased Recovery Options</b>	You can restore service all at once or incrementally.

**Frame Relay**

BellSouth Frame Relay service offers a cost-effective, high-performance alternative to dedicated private lines. A connection-oriented packet mode service, Frame Relay delivers flexibility and reliability for your mission-critical applications. With packet technology, data is digitized, dropped into a high-capacity packet, and routed to its destination.

BellSouth Frame Relay Service	
<b>Speed</b>	<ul style="list-style-type: none"><li>▪ High-speed connectivity up to DS3</li><li>▪ Choice of speeds</li></ul>
<b>Reliability</b>	<ul style="list-style-type: none"><li>▪ Fully redundant switch architecture</li><li>▪ "Nailed up" connections</li><li>▪ Increased throughput and fewer delays</li><li>▪ 24/7 monitoring and maintenance</li><li>▪ Backup options</li></ul>

BellSouth Frame Relay Service	
<b>Cost</b>	<ul style="list-style-type: none"> <li>▪ Ability to use existing equipment</li> <li>▪ Elimination of costly under-utilized dedicated links</li> <li>▪ Reduction in the number of ports</li> <li>▪ Elimination of multiple access lines</li> <li>▪ Easy addition of end-users for a fraction of the cost</li> </ul>
<b>Flexibility</b>	<ul style="list-style-type: none"> <li>▪ Custom routing and PVC setup</li> <li>▪ Easy addition, modification, and deletion of sites</li> </ul>

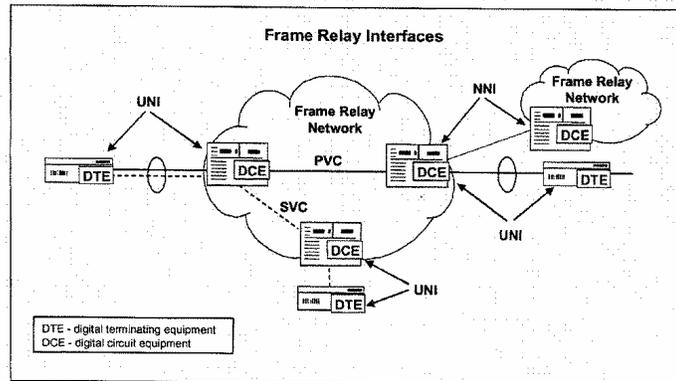
Frame Relay supports connection speeds from 56 Kbps to 44 Mbps as well as Fractional T1, Subrate T1, MultiLink, and Subrate T3, as described below.

- **Fractional T1** – Provided at 112 Kbps, 128 Kbps, 192 Kbps, 256 Kbps, 320 Kbps, 384 Kbps, 448 Kbps, 512 Kbps, 576 Kbps, 640 Kbps, 704 Kbps, 768 Kbps, 1024 Kbps, and 1152 Kbps.  
A Fractional T1 customer connection is provisioned in association with a channelized 1.536 Mbps transport facility and requires the dedication of only a quantity of the DS0 channels equivalent to the Fractional T1 customer connection transmission speed.
- **Subrate T1** – Provided at 128 Kbps, 256 Kbps, 384 Kbps, 512 Kbps, 768 Kbps, and 1152 Kbps.  
A Subrate T1 customer connection is also provisioned in association with a 1.536 Mbps transport facility but requires the dedication of the full 1.536 Mbps transport facility's bandwidth.
- **MultiLink** – Provided at 3 Mbps, 6 Mbps, 9 Mbps, and 12 Mbps.  
A MultiLink customer connection is provisioned in association with multiple 1.536 Mbps broadband line facilities whose combined bandwidth is equivalent to the transmission speed of the MultiLink customer connection.  
MultiLink customer connections will not be available to operate with Customer Network Management or Frame Relay Backup capability until such time as technical limitations are resolved. Customer's router must be FRF.16 compliant.
- **Subrate T3** – Provided at 3 Mbps, 6 Mbps, 9 Mbps, 12 Mbps, 15 Mbps, 18 Mbps, 21 Mbps, 24 Mbps, 27 Mbps, 30 Mbps, and 33 Mbps.  
A Subrate T3 customer connection is provisioned in association with a 44.210 Mbps transport facility and requires the dedication of the full 44.210 Mbps transport facility's bandwidth.

Frame Relay uses standard HDLC protocols and LAP-D frame format. The protocol relies on end-to-end error correction and flow control and, therefore, does not implement the overhead associated with X.25. This reduces the delay seen across a WAN. A typical X.25 node imposes a 5-20 msec delay while a Frame Relay node has less than 2 msec of delay.

The customer premises interface to a Frame Relay network is called the User to Network Interface (UNI). The UNI defines protocol standards and frame formats for customer access

to the Frame Relay switch. The UNI would terminate on a customer's premises in a router that supports the Frame Relay protocol or a Frame Relay Assembler/Disassembler (FRAD) device. Also, several IBM SNA devices now have a direct Frame Relay interface.



There are multiple levels of network redundancy and diversity:

- All switches are designed to have diverse trunking for connectivity to the network
- Each trunk is terminated on diverse input/output modules for component diversity
- Each trunk is ordered through diverse carriers by site
- Each trunk is designed with diverse physical routes by site
- Backbone trunking is designed with ring-type topology

BellSouth's Frame Relay service is offered through the following access lines:

- **IntraLATA – Broadband Line** – allows for access speeds of 56 Kbps (DS0), 64 Kbps, 1.536 Mbps (DS1), 45 Mbps (DS3), 44.210 Mbps.
- **InterLATA – Network to Network Interface (NNI)** – coordinated with several IXCs (interexchange carriers). Through the use of NNI standards, local exchange carrier Frame Relay networks can connect with IXC Frame Relay networks to achieve interLATA transport. NNIs can be either public or private.
  - ▶ **Public NNIs** allow several customers to share transport facilities.
  - ▶ **Private NNIs** allow several customers to transport traffic between multiple Frame Relay networks over dedicated facilities.

Data is transmitted from the end-device terminal, packaged into variable length frames, and transported through the network using pre-defined logical connections (PVCs). Through a single UNI, the end user can communicate with multiple end-points by establishing a PVC

for each. Therefore, statistical multiplexing is used per UNI to efficiently share network resources and also to provide applications with bandwidth on demand.

In each Frame Relay frame, a Data Link Connection Identifier (DLCI) identifies the PVC to be used for that frame. The CPE will place a DLCI in the address field and the network will relay the frame through to the far end.

A Committed Information Rate (CIR) can be associated with each DLCI. CIR provides for a sustained throughput over a particular PVC. When a customer's traffic starts to exceed the selected CIR, frames will be marked "discard eligible" (DE). Should congestion occur in the network, the frames marked DE may be discarded. However, as long as there is no congestion in the network, the frames marked DE will be transported through the network with the same reliability as those not marked DE. CIR may be set to zero or up to the speed of the access link.

### **PVC Enhancements**

BellSouth Frame Relay service includes the following PVC enhancements:

- > Priority Voice PVCs
- > Priority Data PVCs
- > Intelligent PVCs

### **PRIORITY VOICE PVCs**

BellSouth's Priority Voice PVCs support voice over Frame Relay and voice over IP via Frame Relay applications. Priority Voice PVCs support quality telephone conversations over BellSouth Frame Relay data circuits. Packets handling voice traffic receive preferential treatment in the transport process to help ensure the highest quality voice service.

At times of congestion at the terminating site, the frame with the voice traffic is placed in front of less time-sensitive data in the BellSouth Frame Relay switch buffer. In addition, Priority Voice PVCs provide buffers with extra memory to store packets during times of congestion. The result is that the voice traffic completes in a timely fashion, aiding elimination of voice distortion. Minor contention or congestion at the terminating end will not hinder the flow of Priority Voice PVCs like non-priority voice PVCs, which could be discarded during times of end link congestion.

### **PRIORITY DATA PVCs**

BellSouth Priority Data PVCs enable you to give key data, such as financial transactions, priority over less critical traffic, such as Internet surfing.

In times of end link contention or congestion, the BellSouth Frame Relay switch will put Priority PVC frames ahead of non-priority frames in the switch buffer.

## INTELLIGENT PVCs

Intelligent PVCs continuously monitor your network's primary links. If a disaster strikes or, if for any reason connectivity from the BellSouth network to the terminating site fails, the PVC will detect it and automatically reroute service to your selected backup site. When the problem is resolved, the Intelligent PVC will detect it and automatically reroute traffic back to your primary site.

Intelligent PVCs can detect router failures, CSU/DSU failures, loss of connectivity via circuit, loss of port, loss of switch card, switch failure, and any loss of LMI (local management interface).

## Customer Network Management

The BellSouth Customer Network Management (CNM) tool provides customers a view into their BellSouth Frame Relay network for monitoring and troubleshooting purposes. An optional feature, Frame Relay CNM enables customers to monitor fault and alarm information as network events occur. CNM also provides the ability to view on-demand network performance and historical performance reports. An added benefit of visibility into the "cloud" is the ability to monitor network capacity through reports generated on a scheduled basis.

BellSouth CNM features include:

The CNM platform supports hierarchical customer names. For example, a customer may define an overall network name and multiple sub-network names. A maximum of five hierarchical tiers are available (the overall network plus four sub-network tiers).

CNM is available in three packages: Gold, Silver, or Bronze. All customer connections within a customer's account must be under the same package. If a customer desires to have multiple packages, a separate account must be established for each package type. The Gold Package includes all CNM options: fault management, on-demand statistics, and performance reporting.

CNM provides secure customer database separation that allows customers to perform a variety of network monitoring functions, including alarm surveillance, performance monitoring, and historical performance reporting for BellSouth Frame Relay service. Customers can use dial-up or private line access with an X-windows workstation for access to CNM or customers can access CNM through a web interface that uses a Java applet to provide browser access to the X-windows functions.

CNM's Web browser-based graphical user interface (GUI) allows users to access all of CNM's functionality from either a Netscape or Internet Explorer browser. From a single point, users can bring up any combination of alarm displays, graphical maps, and reporting of network performance.

The CNM service provides four basic capabilities:

- Graphical presentation of a customer's network

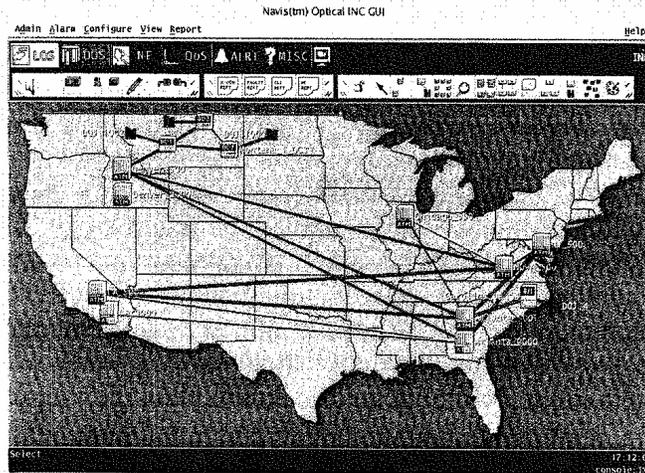
## Town of Davie

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- > Near real-time statistics on selected circuits
- > Fault management
- > Report generation from network statistics

## GRAPHICAL DISPLAY

A customer can display a graphical representation of their network based on the ports and PVCs selected for monitoring.



The colors on the above map will change as the alarm conditions on the nodes and circuits change to reflect the actual condition of the service. The following is an example of how alarm colors can be set based on the alarm condition.

## NEAR REAL-TIME STATISTICS

A customer will be able to select a specific circuit and request that the near real-time statistics for that circuit be displayed.

PVC ATM Statistics				
PVC Name: 003_Atlanta_Denver_Internet_5_62				
Logical Port1: WK1256_Atlanta_S4P1/ATM_UNI_to_P Logical Port2: 003_Denver_DSS/UNI_DSS_on_Denver				
Reset Time: 12/10/2001 17:21:15 Refresh Time: 12/10/2001 17:21:43				
	End Point 1		End Point 2	
	Received	Transmitted	Received	Transmitted
Passed CLP=0 Cells:	115326	16429	115325	115430
Passed CLP=1 Cells:	0	0	0	0
Discarded CLP=0 Cells:	0		0	
Discarded CLP=1 Cells:	0		0	
Tagged Cells:	0		0	
Cells Per Second:	4118	586	4118	4122

Close Refresh Reset Help

This feature uses SNMP messages to the switches to retrieve the statistics required to populate the forms. A threshold feature will limit the frequency with which a customer can request updates to the statistics. This threshold is a global setting for the Integrated Network Controller (INC) system.

### FAULT MANAGEMENT

Faults are generated by all switches and fed to the NavisCore complex utilizing the fault servers. The faults are sent on to the INC system. As the faults are received by the INC system, they can be displayed for users, as shown in the graphic below.

Alert Time	Clear Time	STAT	Type	SEV	ATYPE	SA	User	NE	AID	Level	SENR	ACK	Outage
06/26 10:06:10		ALM	LOS	MN	CKT_DOWN	SA	atm	0018	1-1--40--101	PVC	DCS		515209
06/26 10:06:10		ALM	LOS	MN	CKT_DOWN	SA	atm	0018	1-1--157--000/000	PVC	DCS		515209
06/26 10:06:11		ALM	LOS	MN	CKT_DOWN	SA	atm	0018	1-1-2-158-1000/13001	PVC	DCS		515208
06/26 10:06:11		ALM	LOS	MN	LPORT_DOWN	SA	atm	0018	1-1-1-157--*	LPORT	DCS		515208
06/26 10:06:10		ALM	LOS	MJ	LPORT_CONGEST	SA	atm	0018	1-1--10--*	LPORT	DCS		515209
06/26 10:06:11		ALM	MISC	MJ	LPORT_DOWN	SA	console	0018	1-1--154-000/000	PVC	DCS		515207
06/26 10:06:11		ALM	MISC	WARN	PPORT_DOWN	SA	console	0018	1-2--3--*	PPORT	DCS		515208
06/26 10:06:12		ALM	MISC	MN	LPORT_DOWN	SA	console	0018	1-1--157-1000/13001	PVC	DCS		515207
06/26 10:06:11		ALM	COE	MJ	CARD_DOWN	SA	atm	0018	1-1--1-11--*	LPORT	DCS		515208
06/26 10:06:11		ALM	COE	MJ	CARD_DOWN	SA	atm	0018	1-1--109--*	LPORT	DCS		515209
06/26 10:06:11		ALM	COE	MJ	CARD_DOWN	SA	atm	0018	1-1--157--*	LPORT	DCS		515208
06/26 10:06:12		ALM	COE	MN	PPORT_DOWN	SA	atm	0018	1-1--10--*	LPORT	DCS		515207
06/26 10:06:12		ALM	COE	MN	PPORT_DOWN	SA	atm	0018	1-1--157--*	LPORT	DCS		515207
06/26 10:06:12		ALM	COE	MN	PPORT_DOWN	SA	atm	0018	1-1--42--*	LPORT	DCS		515207
06/26 10:06:12		ALM	COE	MN	PPORT_DOWN	SA	atm	0018	1-1--155--*	LPORT	DCS		515207

Count = 25 of 30 STAT in Alarm NE: 18 To NE: Group: Level: Type: All SEV: All AID: Outage: SENR: User: Ack Id: Auto Refresh From: 06/26/2001 12:54 To: 06/26/2001 13:54 Sort: State Search: Close Refresh Report View ACK Command: Backlist Clear NE List User List Reset MAIN Print Abort Find Help

### HISTORICAL PERFORMANCE REPORTS

Historical performance reports baseline historic network performance, trend future performance, and highlight network performance problems. The following reports are available:

- > **Network Summary Report** – provides an overview of the customer’s network performance in terms of total frames/cells transmitted and received, percent total utilization, total frames/cells discarded, and percent frames/cells discarded of total frames/cells transmitted and received.
- > **Forecast Report** – provides the network interfaces (Lports or PVCs) that are projected to exceed customer-specific thresholds of utilization and congestion. Utilization includes transmitted utilization and received utilization. Congestion for Frame Relay includes FECN and BECN in both directions (in and out). This projection is provided for the following intervals: next 30 days, next 60 days, and next 90 days. The projection interval is a customer-selectable option. Ninety (90) days is the default.
- > **Network Interface Performance Report** – a daily report that provides the network performance level on a customer-selectable interface (Lport or PVCs). The report calculates this information for a customer-selectable date.
- > **Capacity Planning Report** – provides the top ten over-utilized and top ten under-utilized interfaces (Lports or PVCs).
- > **Threshold Exceptions Report** – a daily report that provides the top ten interfaces that exceed a customer-selectable threshold parameter. These parameters will be input utilization, output utilization, incoming congestion, outgoing congestion, in discards, and out discards.

- **Top Ten Report** – a daily report that provides the top ten interfaces (LPorts and PVCs) with the highest volumes and the worst network performance level. It also specifies the top ten interfaces (Lport or PVCs) with the greatest change in both volume and network performance level.

### **Frame Relay Backup Options**

BellSouth Frame Relay service offers two backup options:

- Backup Frame Relay Service
- Frame Relay Secure

### **BACKUP FRAME RELAY SERVICE**

BellSouth Backup Frame Relay provides a solution for host disaster situations. This service allows you to switch all traffic destined for your host to a backup host, simply by calling BellSouth. After receiving your call, your traffic is switched to the backup host and business operations resume.

Backup Frame Relay provides security for host locations:

- Central host computer crash
- Outage on the Frame Relay drop to your host site
- Router/bridge or DSU/CSU failure
- Natural disaster takes down your central host site
- A broken sprinkler head ruins your host computer

Backup Frame Relay is an integral part of an effective business continuity program, providing emergency routing for your mission-critical data. With Backup Frame Relay, you can overcome disaster situations and minimize business disruptions.

BellSouth will install in the Frame Relay network a PVC that routes traffic from your remote sites to an alternate host site with a backup central processing computer that you designate. BellSouth will link the PVCs to the backup site so that they are ready to be activated when needed.

If you experience any kind of outage, simply call BellSouth and all current PVCs will be turned down, all backup PVCs will be turned up, and your data will be directed to the backup site.

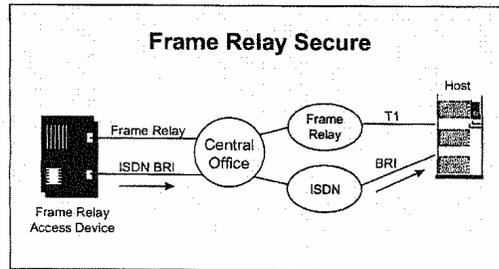
When the problem is resolved, simply call BellSouth to resume normal traffic routing.

### **FRAME RELAY SECURE**

For companies with mission-critical Frame Relay networks, BellSouth's Frame Relay Secure is the high-speed, reliable, and cost-effective solution for instantaneous backup and overflow.

As a key component of your overall business continuity plan, Frame Relay Secure uses Basic Rate ISDN (BRI) to provide seamless backup to your Frame Relay network.

BellSouth's BRI service consists of two 64 Kbps channels coupled to a third channel which handles signaling. Because it is digital, BRI delivers greater accuracy and better stability than analog service. And BRI is extremely reliable. If your Frame Relay network is disrupted, routers located at your host and remote locations immediately recognize the loss. Then, the remote location automatically originates a direct dial call to the host to begin transferring data over the ISDN network. When your Frame Relay network is restored, the ISDN call is automatically disconnected and data transfer resumes on your Frame Relay network.



Not only does Frame Relay Secure provide instantaneous backup for data delivery, it also gives you a cost-effective means of handling data overflow during peak data traffic times. Bandwidth-on-demand means your critical, revenue-generating business operations have the capacity they need, when they need it.

ISDN dial backup is a proven technology to recover crucial Frame Relay data network circuits. ISDN will recover your network in case of network or hardware failures, software errors, lost data, or corrupted data on the Frame Relay network, not including the router responsible for ISDN backup.

BellSouth is committed to being your partner in developing solutions to keep your business running smoothly. Frame Relay Secure is a key part of that effort.

**Service Level Agreements**

BellSouth Frame Relay is backed by service level agreements, which are summarized in the table below.

BellSouth Frame Relay Service Level Agreements		
Installation Interval	Agreed-upon due date	Credit non-recurring installation charge of customer connection applicable to the customer.

BellSouth Frame Relay Service Level Agreements		
Time-To-Repair	4 hours	Credit 1 day of Monthly Recurring Charge (MRC).
Network Availability*	99.9%	Credit 1 day of MRC.
Network Transit Delay*	60 milliseconds (one-way)	Credit 1 day of MRC for the DLCI or VPI/VCI pair making up the PVC for each day the measurement is missed.
Network Delivery Rate*	99.9%	Credit 1 day of MRC for the DLCI or VPI/VCI pair making up the PVC for each day the measurement is missed. Also credit 1/2 of the MRC for each CIR making up the PVC.

\* Only available to customers who subscribe to the CNM Gold package and have at least ten sites.

### Integrated Services Digital Network (ISDN)

At its simplest, ISDN is a telecommunications technology designed to bring the power of the worldwide digital network directly to the desktops of end users. It is a communication service that is able to handle several types of information, in many cases, simultaneously. ISDN delivers through two types of user interfaces — Primary Rate Interface (PRI) and Basic Rate Interface (BRI). The table below describes the characteristics of both ISDN interfaces.

Characteristic	Basic Rate ISDN (BRI)	Primary Rate ISDN (PRI)
One-64 Kbps bearer (B) channels coupled to one data (D) channel <ul style="list-style-type: none"> <li>▪ B channel transmits voice, video, or data</li> <li>▪ D channel signal channels and transmits data</li> </ul>		√
Two-64 Kbps B channels and one-6 Kbps D channel	√	
Twenty-three-Kbps B channel, one-6 Kbps D channel		√

ISDN provides an economical and flexible approach to implementing communications services, such as telephone, facsimile, data communications, and image transmission, by means of a digital transmission network where all signals are converted to digital signals at the user interface and remain digital end-to-end.

These channels allow you to connect more than one device, such as a PC, a telephone, and a fax to the line. You can then perform multiple tasks simultaneously, such as placing a call and sending a fax, or transmitting a data file and receiving a call. You can also combine the B channels into a single channel and achieve ISDN's top speed for sharing data files and Internet access.

**Town of Davie**

**>> Proposed Network Solution**

ISDN applications include:

- Internet access
- LAN bridging
- Record retrieval with calling number delivery
- Asynchronous access to packet network
- PBX/Call Centers
- PC-to-PC file transfer
- Compressed video conferencing
- Key system emulation/ answering position
- Medical imaging
- Desktop conferencing
- Agent-at-home
- Business continuity

**Features and Benefits**

The following table describes some of the features and benefits of ISDN.

Features	Benefits
<b>Dialed Digital Connections</b>	The digital flow of information begins at the user's desktop. Therefore, it is no longer necessary to use dedicated lines to achieve digital speeds or connectivity.
<b>Greater Accuracy, Better Stability</b>	Digital connections are virtually error-free and typical interruptions and slowdowns in today's facsimile and modem transmissions are no longer a factor.
<b>Higher Data Speed</b>	ISDN has transmission speeds up to 128 Kbps uncompressed — most of today's ISDN equipment offers compression ratios from 2:1 to 8:1.
<b>Higher Capacity</b>	Each ISDN line supports multiple devices and can attach up to 8 telephones, computers, workstations, facsimile machines, cash registers, and other to a single line.
<b>Full Interconnection to the World</b>	ISDN can dial any voice or data number, worldwide, including ordinary analog telephones and fax machines.
<b>Multiple Phone Numbers</b>	ISDN line can assign as many as 64 different telephone numbers to a single.
<b>Access to Multiple Services</b>	ISDN allows access to multiple services over a single access line.
<b>Standard Telephone Wires</b>	Copper telephone lines that are already in place provide all of these capabilities.
<b>Reduction in the Number of Trunks Needed</b>	ISDN reduces call set up time to milliseconds, resulting in total trunk usage.

Additional benefits of ISDN include:

- > Higher quality transmission, due to resistance to analog noise sources like electrical storms and wet lines
- > Fewer maintenance problems than analog lines
- > Simpler interfaces to computer applications

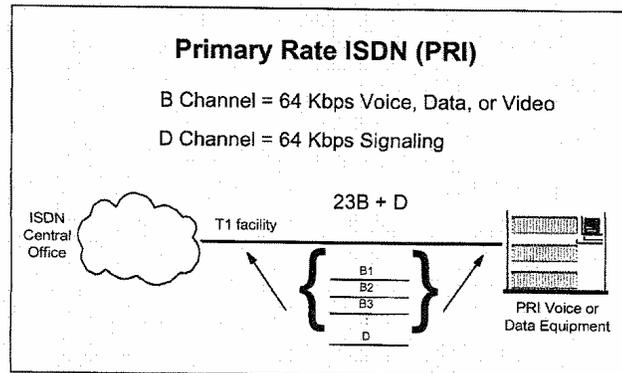
- > Faster call setup (D channel signaling saves about 6 seconds on each call)
- > Call-by-call selection
- > Calling number delivery (CLID)

### Primary Rate ISDN (PRI)

BellSouth Primary Rate ISDN service is an ISDN-based, DS1 transport designed for companies with variable telecommunications needs.

PRI's inherent value lies in its flexibility to integrate multiple voice, data and/or video transmission channels over the same facility and to provide flexible capacity on demand, which eliminates the need for single-use trunks. PRI also provides digital end-to-end connectivity, and faster call setup. This service is most commonly used for customers who need to handle large volumes of incoming calls (for example, customers with call centers and/or large PBXs, and Internet service providers). PRI is also used often for customers utilizing Calling Line Identification (CLID) and Calling Name Delivery information. Less common applications for PRI are video conferencing and LAN access. PRI can be used at a host site to terminate traffic from remote locations that use Basic Rate ISDN and/or analog modems.

The basic channel structure for PRI is 23 B channels and one 64 Kbps D channel. The 23 B channels are used for outbound, inbound, and two-way network access for voice, video, and data information. The 24th channel is the D channel, the signaling channel, which allows your equipment and the BellSouth network to exchange information that is needed to originate, terminate, or change the state of voice and/or data calls.



### Contract Periods

PRI service is available on a month-to-month basis or under variable rate periods, with rates based on lengths of 24-48 months or 49-72 months. BellSouth also offers a volume discount to customers under month-to-month or contract rates. The minimum period for which month-to-month PRI is furnished and for which charges are applicable is one month.

### Primary Rate ISDN Service Options

- **Voice/Data Option** allows transmission of voice, data, and video. This PRI service usually interfaces with a PBX to enable companies to better handle large call volumes
- **Digital Data Only (DDO)** allows transmission of digital data calls only. This PRI service usually carries video traffic
- **Inward Data Option (IDO)** allows transmission of inward analog and digital data calls only. This PRI service is designed for Internet service providers and corporate LAN sites to terminate dial traffic
- **Extended Reach Service (ERS)** is available for the Inward Data Option (and Voice/Data option via Special Assembly). ERS is designed to "extend the reach" of PRI data customers from the local calling area into non-local areas of the LATA. As such, the customer will install an ERS PRI in the foreign local calling area. Customers in that local calling area will dial a local number but the calls will be transported to the home local calling area. It bundles Inward Data PRI, interoffice mileage and inbound toll service. There are two types of ERS:
  - ▶ **ERS Dedicated Route** – The CO in the foreign calling area must be PRI equipped. The CO in the local calling area need not be PRI equipped. The calls are transported over FX like circuits from the foreign CO to the local CO.
  - ▶ **ERS Final Route** – The CO in the local calling area must be PRI equipped. The CO in the foreign calling area need not be PRI equipped. The calls are redirected from the foreign CO to the local CO using a Remote call forwarding type feature. One of the benefits of Final Route is that several foreign calling areas may be directed to a single local calling area trunk group.

### Features and Benefits

- Remote access to corporate networks and features that will help process incoming calls more efficiently
- Flexibility to integrate multiple voice, video, and/or data transmission channels on the same line
- Twenty-three 64 Kbps B channels for voice, video, and data
- One 64 Kbps D channel used for signaling information
- Calling Number Delivery Calling Line Identification (CLID)
- Direct-Inward-Dial (DID)

- Hunting
- Call-by-call selection
- Redirected Number
- Circular Hunting

**Optional PRI Features Include:**

- **Non-Facility Associated Signaling (NFAS)** provides the capability to control multiple PRIs with a single D channel.
  - ▶ Selecting NFAS will require you to order one BellSouth PRI service arrangement with one D Channel and up to 23 B channels.
  - ▶ With additional PRI arrangements, you can order up to 24 B channels.
  - ▶ One D channel can support up to 20 PRIs in the Nortel DMS-100 and Lucent 5ESS, and only five PRIs in the Siemens EWSD.
  - ▶ You may also request a backup D channel (except in EWSD).
  - ▶ You may not mix Voice/Data PRI, Digital Data Only option, and Inward Data Option PRI arrangements in the same NFAS group.
  - ▶ There is no additional charge for this feature.
- **Incoming Call Extension (ICE)** allows you to retain your existing telephone numbers when using BellSouth's PRI via a foreign central office. This feature works for voice and analog calls only.
- **Next Route Index (NRI)** allows routing of voice or voice and data calls to another BellSouth Primary Rate ISDN arrangement in the same switch. There are three NRI options:
  - ▶ **Digital Data Only (DDO)** – Voice Call Overflow Capability. An option to have voice calls attempting to terminate on a PRI DDO to overflow to a Voice/Data BellSouth Primary Rate ISDN facility residing in the same switch as the PRI DDO.
  - ▶ **Digital Data Only** – Voice and Data Call Overflow Capability – If the "Digital Data Only" pipe is full, you can choose to overflow digital data calls and voice calls to a Voice/Data BellSouth Primary Rate ISDN service facility residing in the same switch as the BellSouth Primary Rate ISDN service DDO.
  - ▶ **Inward Data Option (IDO)** – Overflow Capacity – Allows analog and digital inbound data calls to overflow to a Voice/Data arrangement residing in the same switch as the PRI IDO.
  - ▶ **Alternate Network Serving Arrangement (ANSA)** is a serving arrangement that expands BellSouth Primary Rate ISDN capabilities to non-equipped central offices. When the customer's serving central office cannot provide PRI, another equipped central office will serve you without incurring interoffice charges.
  - ▶ **Calling Name Delivery** will deliver calling party name identification. This feature is a NI-2 supported service. Calling Name Delivery supports NI-2 compliant equipment only.

**Primary Rate ISDN Can Help You:**

- > Reduce costs by effective replacement for dedicated, single-purpose trunks.
- > Afford more efficient use of your staff and resources.
- > Offer better customer service with fewer busy signals.
- > Provide greater employee flexibility to work at home with high-speed digital access to company information.
- > Increase efficiency of answering calls through call-by-call selection, calling line identification, and calling name delivery.

**Why BellSouth?**

BellSouth provides:

- > Knowledgeable Sales and Network support staff
- > State-of-the-art technology
- > Continually upgraded and evolved networks
- > Broad regional coverage
- > Competitive rates for service
- > 24 hour-a-day, 7 day-a-week service and repair

**BellSouth MegaLink Service**

The communications market is transitioning to the information age. With this transition comes a demand for the transfer of large quantities of data at higher transmission speeds and capacities. BellSouth® MegaLink® Service was designed to accommodate the high-speed transfer of voice, data, video, or control signals between at least two locations in the same LATA. High speed and reliability improve information processing and productivity, especially for those mission-critical customer applications.

MegaLink:

- > Allows customers to use high-speed, high-volume digital facilities for Private Branch Exchange (PBX) systems, off-premises extensions, tie lines, or interoffice data connections
- > Is appropriate for customers who require continuous data transmission at high speeds
- > Is a good choice for supporting the transfer of customer mission-critical data
- > Is appropriate for customers who need to replace or consolidate their low-speed digital private lines
- > Is offered on a month-to-month basis, or on a term contract basis with discounts.

- > Is backed by the superior operations support and the reputation for stability for which BellSouth is recognized

Specific MegaLink offerings include:

- > **MegaLink 1.544 Mbps private line service** – Dedicated private line that transports digital signals at 1.544 Mbps; on a link basis or on an end-to-end basis. MegaLink 1.544 Mbps is appropriate for multiple locations and 12 or more of any combination of DS0 private lines and analog data circuits.
- > **MegaLink Channel Service** – Channelized 1.544Mbps between a customer’s premises and service wire centers. MegaLink Channel Service is available in channelized packages beginning with a minimum 24-line capacity. Channelization supports the transport of voice, Centrex, local toll, and various data services at the DS0 level.

**MegaLink applications:**

- > Customer billing transfers
- > Reservation information and services
- > Payroll processing and transfers
- > Batch data processing and transfers
- > Electronic funds transfer
- > Inventory management
- > Complex order entry systems
- > Videoconferencing
- > Teleconferencing

**Features and Benefits**

Features and benefits of BellSouth® MegaLink® service are described in the following table.

Features	Benefits
1.544 Mbps Transmission	Reduces transmission and response time compared to analog transmission; increases productivity.
Region-wide Facilities	MegaLink facilities are supported almost everywhere throughout the nine-state region. CLECs typically own T1 facilities in only a few cities, making their service less attractive to large, multi-state customers.
High Service Availability	Availability objective: MegaLink circuits are “useable” by the customer 99.9% percent of the time on an end-to-end basis. MegaLink is a very reliable service for high bandwidth, continuous data applications.

Features	Benefits
<b>Low Error Rate</b>	Provides reliable end-to-end data transport with low cumulative noise. BellSouth's service objective is that transmission over MegaLink service will be error-free over 99.5% of the time. Specific service objectives are: <ul style="list-style-type: none"> <li>▪ Error Free Seconds &gt; 99.5% (end-to-end)</li> <li>▪ Severely Errored Seconds &lt; 0.020% (end-to-end)</li> </ul>
<b>Clear Channel Capability</b>	Supports most data encryption techniques. Maximizes bandwidth utilization through use of B8ZS line encoding.
<b>Extended Superframe</b>	Maximizes throughput by replacing framing bits to carry useful customer data.
<b>Expandability</b>	Reduces waiting period for new facilities; low cost of additional circuits, activation fee, and tariff charges.

### Technical Parameters

MegaLink technical parameters are described in the following table.

Features	Parameters
<b>1.544 Mbps</b>	T1 rate multiplexers may be needed; a customer purchases one data multiplexer for each MegaLink service channel termination to convert the signal to DS1 level.
<b>24 Channel Capacity</b>	The number of channels is dependent upon the type and parameters of the customer's equipment.
<b>Clear Channel Capability</b>	Customer signal at the channel interface must conform to B8ZS line encoding.

### BellSouth Megalink Channel Service

BellSouth® MegaLink® Channel Service is an intraLATA digital service that provides the channelization capability of a 1.544 MegaLink circuit for a particular customer in BellSouth's central office. This service is designed to accommodate large circuit concentrations from a central office to a customer premises within a LATA, where appropriate digital facilities are available.

MegaLink Channel Service is provided in packages or basic system sizes, based on multiples of channel equivalents where 24 voice grade circuits (DS0s) may be derived from one DS1. (Each MegaLink circuit can be channelized into 24 voice grade circuits.) This service provides local channels and/or interoffice channels for:

- > Network exchange access
- > Foreign exchange
- > ESSX station lines

- > Off-premises stations
- > Tie lines
- > Voice private lines
- > WATS and 800 service
- > Analog data services up to and including 9.6 Kbps
- > Digital data services at 2.4 Kbps, 4.8 Kbps, 9.6 Kbps, 19.2 Kbps, 56 Kbps, and 64 Kbps
- > Foreign central office

Customers with more than one DS1 may choose to channelize all or part of a package to activate voice and/or data facilities for interconnection with the exchange network, voice grade and data facilities for private line channels, as well as other MegaLink Channel Services. Customers may also choose not to channelize all or part of a package, allowing direct connection to other DS1 services (i.e., LightGate or MegaLink) as provided in the Private Line Services Tariff or the General Subscriber Services Tariff.

You may activate any number or combination of channels within a MegaLink Channel Service package; however the total number of activated voice grade circuits may not exceed the capacity of the basic system.

Channels may be activated at initial installation or at any time following the initial installation. Once activated, a circuit is subject to a minimum service period in accordance with the contract terms. Channels activated under month-to-month rates will have a minimum service period of one month.

Automatic protection switching (APS) is available only upon BellSouth special assembly approval. Rates, charges, and availability of the APS equipment will be negotiated with you on an individual case basis. This feature requires that you order an additional MegaLink (1.544 Mbps) channel from the Private Line Services Tariff for each backup channel required. Spare capacity in your MegaLink Channel Service package cannot be used.

### **Features and Benefits**

Features and benefits of BellSouth® MegaLink® Channel Service are described in the following table.

<b>Feature</b>	<b>Benefit</b>
<b>1.544 Mbps Transmission</b>	Links with Centrex-like service, PBXs, off-premises extensions (OPXs), tie lines, and data interoffice connections
<b>24 or More Dedicated Line Capacity</b>	Provides cost-effective connections compared to separate lines
<b>Digital Voice and Data</b>	Offers teleconferencing capability and multiple data/voice applications

<b>Analog Concentrators</b>	Reduces OPX costs; concentrators reduce the number of lines required by converting many individual lines to tie lines
<b>Low Error Rate</b>	Provides reliable transport with low cumulative noise. BellSouth's service objective is that customer transmission over MegaLink Channel Service is error-free over 99.75% of the time (end-user to central office). Specific service parameters are: Error Free Seconds > 99.75% (end-to-CO) Severely Errored Seconds < 0.010% (end-to-CO)
<b>High Service Availability</b>	MegaLink is a very reliable service. BellSouth's availability objective is that MegaLink Channel Service circuits will be "useable" by the customer 99.925% percent of the time (from end-user to central office)
<b>Expandability</b>	Reduces waiting period for new facilities; low cost of additional circuits, activation fee, and tariff charges
<b>Clear channel capability</b>	Supports most data encryption techniques. Maximizes bandwidth utilization through use of B8ZS line encoding
<b>Extended Super Frame</b>	Maximizes throughput by replacing framing bits to carry useful customer data

### Technical Parameters

MegaLink Channel Service technical parameters are described in the following table.

Feature	Parameter
<b>1.544 Mbps</b>	T1 rate multiplexers may be needed; a customer purchases one data multiplexer for each MegaLink service channel termination to convert the signal to DS1 level.
<b>24 Channel Capacity</b>	The number of channels is dependent upon the type and parameters of the customer's equipment.
<b>Clear Channel Capability</b>	Customer signal at the channel interface must conform to B8ZS line encoding.

### BellSouth Megalink Plus

When you need a network that will:

- > Minimize the expense associated with network downtime
- > Minimize network risk
- > Provide the best value for your network dollar
- > Enable you to focus on core competencies

BellSouth® MegaLink® Plus service meets these needs. MegaLink Plus service increases network reliability via a fiber ring topology (minimizing the risk of network downtime) while simultaneously giving you value for your network costs through flat rate billing and service assurance guarantees. MegaLink Plus service allows you to focus on core competencies by providing increased network reliability at an affordable rate.

MegaLink Plus guarantees a 100% fiber DS1 with alternate facilities for the circuit to travel from the central office to your premises. Automatic protection switching for circuits that experience degradation is also included in this offering. Should a circuit experience more than 60 seconds of outage time during any billing period, BellSouth will refund the entire month's service billing for the MegaLink Plus channel.

MegaLink Plus service gives you an efficient, diverse fiber offering supported by BellSouth's large staff of experienced personnel, superior Network Control Centers, and reputation for stability.

MegaLink Plus service is not available in all areas. Any customer wishing to subscribe to MegaLink Plus service in a serving area where facilities do not exist can request this service via a special construction agreement.

MegaLink Plus DS1s will be provisioned in a timely manner, backed by service installation guarantees where facilities exist.

MegaLink Plus is offered on a month-to-month or contract basis. You will not pay non-recurring charges for service provided under a contract option; non-recurring charges will only apply for the month-to-month option.

In addition to the performance guarantees, installation guarantees, attractive flat-rate pricing, and fiber transport topology, MegaLink Plus is backed by superior operations support and the reputation for stability for which BellSouth is recognized.

**Features and Benefits**

BellSouth MegaLink Plus service is a premium DS1 service designed to address your performance and price concerns. MegaLink Plus service offers you guaranteed fiber, loop diversity, service guarantees, flat-rate local loop pricing, and no non-recurring charges for contract options. Details of these features are provided in the following table.

Features	Benefits
<b>Guaranteed Fiber/Loop Diversity</b>	MegaLink Plus service provides for 100% fiber-based, self-healing local loop facilities from the central office to the customer's premises. Due to the inherent design of MegaLink Plus service, you are guaranteed a diverse self-healing DS1 fiber offering.
<b>Service Guarantees</b>	Should any circuit experience more than sixty seconds of outage time during any billing period, BellSouth will refund the entire month's service billing for the MegaLink Plus channel.

<b>Flat-rate Local Loop Pricing</b>	MegaLink Plus service offers a flat-rate local channel, allowing you to accurately determine local loop expense with a minimal time investment.
<b>No Non-recurring Charges</b>	If a contract arrangement is agreed upon, there will be no non-recurring charges.
<b>Contract Payment Plans</b>	Three contract payment plans are available for MegaLink Plus service: Plan A (24-48 months), Plan B (49-72 months) and Plan C (73-96 months). A month-to-month plan is also available.
<b>Service Installation Guarantees</b>	BellSouth will meet the negotiated due date for installation of MegaLink Plus service or will refund an amount equal to the month-to-month payment plan's non-recurring charge.

### Why BellSouth?

BellSouth is one of the most advanced communications companies in the world. We are committed to helping you become more productive and profitable by delivering advanced, integrated communications solutions designed to transform the way you do business.

BellSouth is so sure that MegaLink Plus service is the solution to your performance and price concerns that we are willing to offer a full month's service billing refund on the local loop if any MegaLink Plus service circuit should experience more than sixty seconds of outage time during any billing period. You can count on the diverse, self-healing design of 100% fiber-based local loop facilities to deliver virtually flawless performance to keep your business running smoothly. In addition, our service installation due date is guaranteed:

*If we fail to meet our negotiated due date, we will refund an amount equal to the month-to-month payment plan non-recurring charge.*

We hope we've addressed your pricing concerns with our assortment of contract payment plans, flat-rate local loop pricing, and the waiver of non-recurring charges if you agree to a contract arrangement.

Other advantages of doing business with BellSouth include:

- **Choice of Services** – You can choose a variety of voice, data, facsimile, and video services, changing as your needs change.
- **Cost Predictability** – You can plan on stable rates without unexpected repair or maintenance costs.
- **Network Expansion** – You can activate additional circuits as needed, without buying or building new facilities.
- **Upgrade/Enhancement Capabilities** – You can avoid obsolescence in major equipment because you will be using our equipment; BellSouth continuously upgrades and enhances capabilities to ensure the best possible service.



- **Maintenance Cost Avoidance** – You can avoid maintenance costs because BellSouth owns and maintains the equipment.
- **Experience** – You can depend on experts in putting together the best network configuration. We've had years of experience in delivering convenient, efficient solutions to meet our customers' needs and make the best use of their resources. Our brand name is associated with high-quality service and state-of-the-art technology.

### **BellSouth Metro Ethernet Service**

BellSouth® Metro Ethernet Service is an intra-LATA, high-speed, optical Ethernet transport service most commonly used to interconnect LANs at geographically dispersed sites within a metropolitan area. BellSouth introduced Metro Ethernet in 1994 as BellSouth NML1 Service, and has since continued to enhance the service by adding new bandwidth speeds and features.

Metro Ethernet service is currently supported in over 200 PoPs within the BellSouth nine-state region. Metro Ethernet offers cost-effective, scalable solutions for delivering high bandwidth in the metropolitan area. BellSouth's customers include Healthcare, Financial, Retail, Manufacturing, Government, K-12, University, and corporate enterprises looking to break the bandwidth bottleneck between corporate LANs.

Metro Ethernet is designed to support customers who:

- Need to connect multiple LANs over a wide area connection.
- Send high volumes of data between several company locations.
- Have sites needing to share high bandwidth applications such as CAD/CAM or image processing.
- Want to optimize their networks using the widely deployed Ethernet industry standard.
- Have applications that will require the ability to grow bandwidth speeds
- Need the flexibility in their network to support Data, IP, Video and VoIP applications on a single physical backbone.

### **Switched and Dedicated Service**

Metro Ethernet is available as a Switched (Shared) or Dedicated service. Switched service supports traffic between multiple locations in a many-to-one or any-to-any configuration.

Dedicated service supports a point-to-point dedicated connection between two customer locations. Dedicated service is also referred to as Ethernet private line.

**Basic and Premium Metro Ethernet Services**

Switched Metro Ethernet offers two different Class of Service (COS) levels; Basic and Premium. These service types are designed to support different features and customer applications.

Both Basic and Premium Service operate as transparent LAN services that bridges customer traffic across the core network using Ethernet MAC addressing schemes and spanning tree protocols. Metro Ethernet service complies with these Ethernet IEEE standards: 802.1d, 802.1p, 802.1Q, 802.3u, and 802.3z. All connections offer full-duplex service.

Basic and Premium Services utilize 802.1Q VLAN tagging to provide separation of customer traffic and security within the network. 802.1p is utilized to assign Class of Service and ensure that the customer's intended application can be supported across the network. Switched Metro Ethernet utilizes four (4) levels of frame priority to support classes of service.

<b>Basic Service</b>	Basic is a "best effort" Ethernet service. Basic service supports customers basic data transport requirements. Basic Metro Ethernet service delivers high-bandwidth networking with reduced complexity, management and cost in increments of 10, 100, and 1000 Mbps (1 Gig).
<b>Premium Service</b>	Premium service offers improved bandwidth throughput and lower latency than is available using a best effort service. The key feature of Premium service is guaranteed bandwidth in specified bandwidth increments ranging from 10Mbps up to 500Mbps, with the ability to burst up to the physical port speed. Enhanced features and SLAs are offered with Premium service.

Metro Ethernet also offers **Premium service with the "Priority Plus" option**. Priority Plus is a feature that supports delay-sensitive applications such as VoIP and video. Customer traffic that is classified as Premium with Priority Plus experiences the lowest latency across the core network. Priority Plus is available only to customers subscribing to Premium Service... Figure 2 below illustrates BellSouth's Metro Ethernet design and highlights features of our Basic and Premium Metro Ethernet service.

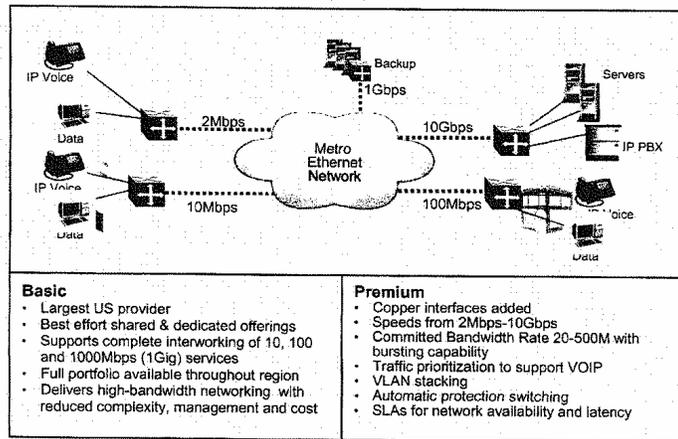


Figure 4 -- Metro Ethernet Design and Features

### Basic Metro Ethernet Service

Basic service is a switched, best-effort, economical service that is ideal for locations that do not require QoS features. BellSouth recommends the use of Basic Metro Ethernet service at locations that transmit delay tolerant, non-real-time, best-effort applications. The table below shows traffic types supported using the Basic Metro Ethernet Class Service.

Type of Traffic	Application Example
Non-Real-time, Mission Critical, Interactive	Information Database access (E-Business Transaction processing, ERP)
Non-Real-time, Mission Critical, Non-Interactive	Intranet (Email, FTP, Tape Backup)
Non-Real-time, Non-Mission Critical Best Effort	Internet (Web surfing, Multicast Video)

Basic Service is fully compliant with IEEE 802.3 Ethernet standards utilizing standard Ethernet frame formats. Metro Ethernet Basic operates as a transparent LAN service that bridges customer traffic across the core network using Ethernet MAC addressing schemes. From the customer's standpoint, Metro Ethernet Basic simply extends their LAN capability across the metro to remote offices on the "other side of town".

Traffic separation is provided in the BellSouth assigned VLAN tag that ensures security and customer privacy on the Metro Ethernet network; this operation occurs internally to the BellSouth network and is transparent to the customer. Customers may still utilize their own VLAN tags – customers may transmit either tagged or untagged frames.

Following are the Service Characteristics of Basic Service:

- Switched service provisioned at 10/100/1000 Mbps port speeds.
- "Best-effort" service subject to bandwidth contention on the core network during peak usage periods.
- Connectionless service that supports "many-to-many" and point-to-multipoint ("hub-and-spoke") logical traffic configurations.
- Full-duplex port configurations at all speeds.
- Customer interface to BellSouth's network may be provisioned as either a fiber interface (for 10/100/1000 Mbps) or metallic interface (for 10 and 100 Mbps only).
- Suitable for all basic data transport applications.

### Premium Metro Ethernet Service

BellSouth recommends the use of Premium Metro Ethernet service at locations that transmit delay intolerant, real-time applications such as VOIP and Video Conferencing. Premium Metro Ethernet is also recommended for real-time, delay tolerant applications. Key attributes for Premium service will include a CIR-type capability for speeds ranging from 10Mbps up to 500Mbps, with the ability to burst up to the port rate; network SLAs that are supported by Customer Network Management (CNM), and new network-enabled features to support delay-sensitive applications such as VoIP. To support these attributes, Premium traffic will carry higher priority on the network than Basic traffic. The table below shows traffic types supported using the Premium Metro Ethernet Class of Service.

Recommended applications for Premium or Premium with Priority Plus services	
Type of Traffic	Application Example
Real-time, Delay Intolerant	VOIP (Highest quality IP Telephony)
Real-time, Delay Tolerant	<ul style="list-style-type: none"> <li>▪ Video Conferencing</li> <li>▪ High-Speed Video (Streaming audio/video, audio/video on demand)</li> </ul>
Non-Real-time, Mission Critical, Interactive	Information Database access (E-Business Transaction processing, ERP)
Non-Real-time, Mission Critical, Non-Interactive	Intranet (Email, FTP, Tape Backup)
Non-Real-time, Non-Mission Critical Best Effort	Internet (Web surfing, Multicast Video)

Premium service is fully compliant with IEEE 802.3 Ethernet standards utilizing standard Ethernet frame formats. Metro Ethernet Premium service operates as a transparent LAN service that bridges customer traffic across the core network using Ethernet MAC addressing schemes and spanning tree protocols. Premium service also complies with these Ethernet IEEE standards: 802.1d, 802.1p, 802.1Q, 802.3u, and 802.3z. Premium connections offer full-duplex service.

Following are the service characteristics and enhanced features for Premium Service:

**COMMITTED BANDWIDTH (CBW)**

The Committed Bandwidth Rate is similar to the concept of Committed Information Rate (CIR). CBW is defined as the minimum bandwidth across the switched core network that will always be available to transport data originating from a specific customer location. CBW is a required rate element for "Premium" level service, meaning that all Premium level customers are required to purchase CBWs. CBW is not offered with Basic service. CBW is available in the preset bandwidth increments that are shown in the table below. CBW will always be provisioned on a higher physical port speed:

CBW and Corresponding Physical Ports	
CBW Rate	Physical Port Rate
10Mbps	100 Mbps
20 Mbps	100 Mbps
50 Mbps	100 Mbps
100 Mbps	1000Mbps
250 Mbps	1000 Mbps
500 Mbps	1000 Mbps

The Metro Ethernet switch uses policing to limit transmission speed to the CBW rate on the ingress port. The policer limits the bandwidth to the subscribed CBW rate. Premium Service with CBW and without the ability to burst is referred to as CBW – Fixed Mode service.

**BURST**

Bursting offers the customer access to a higher bandwidth than their subscribed CBW rate. Customers can burst to the physical port speed when the excess bandwidth is available. Burstable bandwidth in excess of the CBW rate is not guaranteed. Premium Service with CBW and bursting capability is referred to as CBW—Burst Mode service.

The maximum burst rate is limited to the physical port speed on the ingress port of the customer's connection. The burst rates associated with each CBW rate are shown below under the column titled "Maximum Burst Rate".

CBW and Corresponding Burst Rates	
CBW Rate	Maximum Burst Rate
10Mbps	100 Mbps
20 Mbps	100 Mbps
50 Mbps	100 Mbps
100 Mbps	1000Mbps
250 Mbps	1000 Mbps

500 Mbps	1000 Mbps
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**PRIORITY PLUS**

Priority Plus is offered as a feature of Premium Service. Priority Plus provides control of real time traffic, specifically for VoIP and some video applications. Priority traffic experiences the lowest latency of any traffic stream on the network. The amount of Priority traffic allowed is limited to a percentage of the customer CBW rate.

Priority Plus traffic is provisioned at 25 percent of the customer's CBW rate on a given port. Burst Mode does not increase the amount of Priority Plus traffic allowed.

As an illustration, if a customer purchases a 50Mbps CBW Premium port at a given location, and also purchases Priority Plus, then the total bandwidth available to support Priority Plus traffic is 12.5Mbps: **50 Mbps x 25% = 12.5 Mbps**

In the example above, the remaining 37.5Mbps of bandwidth is still available to the customer to use as standard Premium traffic.

**CUSTOMER NETWORK MANAGEMENT (CNM)**

Metro Ethernet Reporting (MER) is BellSouth's tariffed service name for Customer Network Management (CNM) that supports Metro Ethernet service. Metro Ethernet Reporting (MER) provides alarm surveillance, performance reporting, and SLA reporting for Metro Ethernet network components.

Premium Service customers who wish to claim SLA service credits must also subscribe to Metro Ethernet Reporting. Metro Ethernet Reporting is tariffed as part of the Metro Ethernet service tariff.

Metro Ethernet Reporting offers a web-enabled graphical user interface (GUI) and is made available to the customer's desktop. To access the MER GUI, the customer simply points his browser to the MER website and then logs into the MER server. Login IDs, passwords, and Secure ID cards are provided to the customer. Customers may purchase additional web interfaces to support multiple simultaneous users. MER has the ability to partition different customer user groups.

Metro Ethernet Reporting is only available to customers who subscribe to Premium Service. It is not offered to Basic or Dedicated customers.

Metro Ethernet Reporting provides these capabilities:

- **Alarm Surveillance:** Near real-time critical and major alarms. Alarms can be isolated to a specific network element and viewed on map of the customer's Metro Ethernet network. Alarms types include loss of service, out-of-service, threshold crossing, and loss of network interface. Customers can use historical reports to monitor outage events.

- **Performance Reporting:** MER provides near real-time and historical reporting on various service performance metrics, including port utilization, frame volume, transmission errors, and QoS threshold exceptions.
- **SLA Reporting:** MER provides reports that measure BellSouth compliance with network availability and network latency SLAs. Customers can use these reports to ensure that their Metro Ethernet service meets network SLA parameters.
- **Service Level Agreements (SLAs).** SLAs are available to customers who subscribe to both Premium Service and Metro Ethernet Reporting/CNM. Metro Ethernet Premium SLAs provide service level commitments for the following performance metrics:
  - ▶ Network Availability
  - ▶ Network Latency
  - ▶ Time-to-Repair

The table below summarizes the service thresholds and billing credits associated with each SLA.

SLA Metric	Threshold	Credit for SLA Violation
Network Availability	99.9% availability (monthly)	<p>Terms: Maximum of 1 credit will be applied monthly for each customer VLAN. Network Availability is calculated on a monthly basis. Time for scheduled maintenance windows does not count towards SLA threshold. Customer networks that do not traverse the core network are not eligible for credits.</p> <p>Credit Amount: Credit 3 days of MRC against all monthly recurring charges associated with the affected customer connections.</p>
Network Latency	55 ms one-way (30 day average)	<p>Terms: Maximum of 1 credit will be applied monthly for each customer VLAN. Average network latency is calculated over a 30-day period. Customer networks that do not traverse the core network are not eligible for credits.</p> <p>Credit Amount: Credit 3 days of MRC against all monthly recurring charges associated with the affected customer connections.</p>
Time-to-Repair	4 hours (per incident, per connection)	<p>Terms: Repair interval begins with time entered on a trouble ticket and ends when fault is remediated. SLA</p>

SLA Metric	Threshold	Credit for SLA Violation
		<p>measurements are based on each trouble ticket issued for a customer connection; SLA threshold and credits are applied on a per incident, per customer connection basis. Multiple trouble tickets on the same day for the same customer connection will only be eligible for one time-to-repair credit. Time for scheduled maintenance windows does not count towards SLA threshold.</p> <p>Credit Amount: Per incident outage time, per customer location:</p> <ul style="list-style-type: none"> <li>▪ 0 to 4 hours per month = No credit</li> <li>▪ &gt; 4 hours to 24 hours per month = Credit 3 days MRC</li> <li>▪ Each add'l 24-hour period, per mo. = Credit add'l 3 days MRC</li> <li>▪ Credits will apply to all MRC associated with the affected customer connections.</li> <li>▪ Total credits in a calendar month may NOT exceed the total MRC for Metro Ethernet service to the impacted customer connection.</li> </ul>

Please note that credits for all SLAs for a calendar month CANNOT exceed the monthly recurring charges for the customer's Metro Ethernet service.

SLAs are ONLY available to customers who subscribe to Premium Service AND Metro Ethernet Reporting.

**VLAN AGGREGATION UTILIZING "Q-FORWARDING"**

Q-Forwarding provide as Network VLAN aggregation across a common physical connection. Network VLAN aggregation enables a customer to aggregate traffic from multiple VLANs across the BellSouth Metro Ethernet network and across a common user network interface to a central customer location. Q-Forwarding operates in a one-to-many ("hub-and-spoke") network configuration, and is provisioned as a feature on the customer's Premium ports. This feature was specifically designed to support ISPs and government entities.

**Dedicated Metro Ethernet Service**

BellSouth® Dedicated Metro Ethernet is a fiber-based service that provides customers with the ability to transmit data on a point-to-point connection at very high speeds. Dedicated Service is available at 100Mbps and 1000Mbps port speeds. Dedicated Service is ideal for

customers who need to transmit data continuously between two locations. Dedicated Service is compliant with IEEE 802.3 standards.

Applications for which Dedicated Service is ideal include: medical imaging; enterprise data storage and backup; Storage Area Networks (SAN); point-to-point video; and any other high data application where high bandwidth is required between two locations.

Bandwidth on a Dedicated Service connection is dedicated to a single customer. Customers using Dedicated Service experience less bandwidth contention and enjoy higher throughput than is available on Basic Service connections.

Service Characteristics for Dedicated Service include:

- Dedicated connection at 100Mbps or 1Gbps port speeds
- No bandwidth contention, low latency
- Full-duplex port configurations at all speeds.
- Customer interface to BellSouth's network may be provisioned as either a fiber interface (100 or 1000 Mbps) or as a metallic interface (100 Mbps only).
- Suitable for all basic data transport applications.

### Metro Ethernet Value Proposition

The benefits of BellSouth Metro Ethernet include:

- **Value** - BellSouth's Metro Ethernet service offers high bandwidth for low relative cost. Metro Ethernet provides the high bandwidth capabilities that were once only available via more expensive SONET and ATM connections.
- **Cost Savings** - BellSouth's Metro Ethernet service requires minimal CPE investment for customers migrating from an existing Ethernet platform. No additional equipment, beyond the routers or LAN Switch that you currently own, is required to support Gigabit Ethernet Service. BellSouth's Gigabit Ethernet Service is lower in cost per bit than other transport methods, such as ATM and Frame Relay.
- **Transparent Transport** - Town of Davie recognizes the cost effectiveness and simplicity of extending LAN technology through the WAN for LAN interconnection. BellSouth's Metro Ethernet service allows Town of Davie to leverage existing experience, in managing, maintaining, and troubleshooting your Ethernet networks, to establish a Wide Area Network (WAN) for your applications.
- **Clear Migration Path** - BellSouth's Metro Ethernet Service supports full interworking between existing 10Mbps, 100Mbps and 1000Mbps service, allowing Town of Davie to mix speeds by location and application. Even lower bandwidth options via copper are also under development to add flexibility for connecting small, remote locations. In addition to leveraging existing end stations and management tools, Town of Davie can leverage

### BellSouth SMARTRing Service

BellSouth® SMARTRing® Service is a dedicated, high-capacity network designed to deliver increased reliability and functionality. Based on SONET architecture, SMARTRing's survivable, self-healing ring topology connects multiple customer-designated locations and BellSouth central offices. SMARTRing is a 100% SONET fiber-based ring.

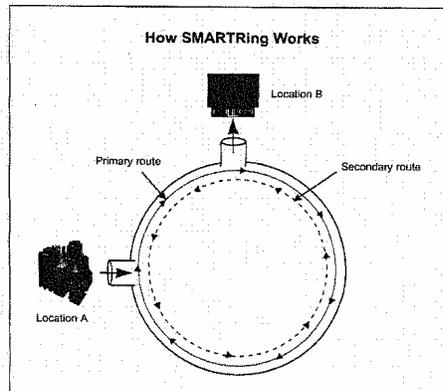


Figure 5 -- How SMARTRing Works

As the above graphic illustrates, traffic from Location A enters the ring and travels over both primary and secondary routes. The multiplexer at Location B samples the signals and delivers the signal with the best quality. (Note that the above graphic has been simplified and does not depict BellSouth central offices or actual routing between the locations.)

The network consists of fiber routed through central offices to transmit DS1, DS3, STS-1, and/or OC-3, OC-12, Gigabit Ethernet *and/or* OC-48 channel services simultaneously over primary and alternate paths. The ring topology will continually monitor service quality, detect any failure within the system, and automatically heal around a point of failure to ensure the flow of services between locations within the self-healing network.

SMARTRing service has the following components:

- > Nodes – customer, central office
- > Channels – local, interoffice, internodal; alternate central office
- > Interfaces – customer channel, central office channel
- > Mileage – based on ¼ air miles

Strengths of the SMARTRing service include:

- > Exceptionally high reliability
- > Fiber-based, SONET architecture
- > Multiple interfaces options Optical interface – TDM, Optical and Ethernet
- > Dual counter rotating fibers
- > Link connectable with other BellSouth services
- > Credit allowances for interruptions longer than 1.0 seconds
- > Diversity
- > Channel Services Payment Plan
- > MultiService Provisioning Platform (MSPP) features

The service is available in the following capacities: OC-3, OC-3+, OC-12, OC-48, OC-48+, OC-192 and OC192+. The OC-48+ and OC-192+ rings are bi-directional line switched rings (BLSR), and all others are uni-directional path switched rings (UPSR).

Channel Interfaces are available as follows: DS-1, DS-3, STS-1, OC-3, OC-12, OC-48 and 1000 Mbps. Additional equipment and rate elements may be required to support a connection on specific ring sizes, for example, a DS-1 interface may require a 28 DS-1 Channel System on an OC-48 ring. Refer to the following chart:

Channel Interfaces							
Capacity ↓	DS1	DS3	28DS1 DS3	OC-3	OC-12	1000 Mbps	OC-48
OC 3	Yes	Yes	Yes	No	No	No	No
OC 3+	Yes	Yes	Yes	No	No	No	No
OC-12	No	Yes	Yes	Yes	No	No	No
OC-48	Yes	Yes	Yes	Yes	Yes	Yes	No
OC-192	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Figure 6 – SMARTRing® Channel Interfaces

SMARTRing service OC-3, OC-12, or OC-48 channel interfaces are associated with circuits within a SMARTRing arrangement. These signals may be provisioned as concatenated. When an optional signal is provisioned as concatenated, the multiple STS-1s within the optional circuit are provided as a single entity with a single overhead channel.

SMARTRing service interfaces may be ordered as asymmetrical (i.e., a circuit enters one node at a lower level interface and exits at another node at a higher interface, You may have a service that connects to a ring via an OC-3 interface at a node. The service is then transported around the ring and connects via an OC-12 interface to another of your services.

The DS-3 Asymmetrical interface allows you to connect DS-1 to SMARTRing service via a DS-3 Asymmetrical interface at a node and then handoff the services via a DS-3 interface at

**Town of Davie**

**>> Proposed Network Solution**

another node. The ability to integrate DS-1s into a DS-3 is based on the functionality of the node and the DS-3 Asymmetrical interface. This DS-3/DS-1 may be referred to as Transmux.

SMARTRing service Overlay Ring Arrangements are available as follows:

Overlaying SMARTRing Service	OC-12	OC-48	OC-48+	OC-192	OC-192+
OC-3	X	X	X	X	X
OC-3+		X	X	X	X
OC-12		X	X	X	X
OC-48				X	X

SMARTRing service is located in the section B.7. of the Private Line Tariff. SMARTRing service is connectable at the BellSouth Central Office to any compatible high capacity service provided in the section B-7 of the tariff and to any Broadband Exchange Line Service at compatible data rates (1.586 Mbps) as provided in section A.40.5 of the GSST tariff.

To support the service, you, the customer, will provide appropriate space, a controlled environment, and a source of non-switched suitable power. Where two separate entrance facility cable routes for SMARTRing service are provided, the primary and alternate facilities will be separate and will enter your node over such different routes.

SMARTRing service DS3 high-capacity service channels have a performance objective of 99.5% error-free seconds over a continuous 24-hour period. DS1 high-capacity service channels have a performance objective of 99.95% error-free seconds over a continuous 24-hour period.

SMARTRing service can be ordered under the following contract service payment plans: 36 Month Term Payment Plan (24-48 months), 60 Month Term Payment Plan (49-72 months), or 84 Month Term Payment Plan (73-96 months). The minimum service period for SMARTRing is 12 months. All rate elements, except for Channel Interfaces, for a given SMARTRing, whether initially or subsequently ordered, must be provided under the same payment plan with the same service period and are co-terminus. Channel Interfaces may be ordered under a payment plan equal to or less than the selected payment period for the given SMARTRing service.

Contract Service Arrangements and Special Assemblies are available. Customers that cancel their arrangements before contract expiration will incur a Termination Liability Charge.

**Features and Benefits**

SMARTRing features and benefits are described in the following table.

<b>Feature</b>	<b>Benefit</b>
<b>Greater Transmission Capacity</b>	SMARTRing provides scalability far beyond Frame Relay. Traffic aggregation can be supported from OC3 to OC192 bandwidths allowing your current transports to simultaneously "ride" the SMARTRing.
<b>SONET Architecture</b>	SONET is a standard optical interface with sufficient overhead for network management. Without SONET, proprietary equipment interfaces are required.
<b>Self-healing high availability</b>	Automatic switching between redundant fibers provides protection for business-critical data, video and voice traffic.
<b>Supports emerging high-bandwidth applications</b>	Future applications, such as bit-intensive, three-dimensional computer-aided design (CAD), collaborative computing, interactive virtual reality programs, multipoint videoconferencing, video-on-demand, and interactive entertainment, will require the SONET standard.
<b>Dedicated service</b>	Dedicated bandwidth means your traffic isn't affected by unpredictable network loads or timing.
<b>Supports many transport technologies</b>	Existing public and private networks connect easily to SMARTRing facilities. SMARTRing installations can carry traffic from PRI, MegaLink, Flexserv, Channelized trunks as well as data traffic from Frame Relay (FR), Ethernet and Asynchronous Transfer Mode (ATM) systems.
<b>Seamless Interconnectivity</b>	SONET standards make possible seamless interconnectivity among compliant equipment, allowing worldwide broadband networking without single-source vendors.
<b>Real-time Network Management</b>	SONET allows extensive real-time network management tailored to the needs of individual users.
<b>Remotely Configurable Optical Cross-connects</b>	SONET eliminates central office reliance on metallic DSX technology and replaces it with remotely configurable optical cross-connects.
<b>More Efficient Switching</b>	SONET provides more efficient switching and transport by eliminating the need for back-to-back M13 multiplexers.
<b>Intelligent Network Elements</b>	SONET permits sophisticated self-diagnostics and fault analysis to be performed in real-time. Intelligent network elements can automatically restore service in the event of failure via a variety of restoral mechanisms.
<b>Equipment Interconnects</b>	SONET equipment interconnects with a variety of current and emerging carrier services, including ATM, FR, and Public Switched Network.

Feature	Benefit
<b>Performance Tracking and Service Level Commitments</b>	SONET's embedded control channels enable the tracking of end-to-end performance and identification of elements that cause errors. In the rare event of a performance failure, BellSouth backs this service with money back assurances. See the actual agreement for details.
<b>MultiService Provisioning Platform (MSPP) features</b>	With the deployment of MSPP in our network, we can offer you even greater flexibility with our SMARTRing products. Smaller drop off connection nodes are now available enabling smaller locations to now be added to the ring. We also now offer Ethernet LAN connections eliminating the need for protocol conversions for LAN traffic on the ring.

### Why BellSouth?

Experience, track record, and reputation are important criteria for choosing a network provider. You can count on BellSouth's experience and expertise – which include having built the SONET infrastructure of the 1996 Summer Olympic Games – for the design and deployment of your SONET network solution. The Olympic broadcast network (called "Scarlett") was carried over BellSouth's SONET infrastructure and experienced no outages.

From BellSouth's network architects and engineers to its fleet of service teams in your local area, we have the experience to deploy high quality fiber and manage the services such as SMARTRing that utilize it. BellSouth's network architects have designed and built the area's most advanced MultiService Provisioning Platform (MSPP) within our SONET network. MSPP gives you much greater flexibility in the configuration and design options for your own ring architecture. Combining the flexibility and scalability of SMARTRing with your network will offer you the opportunity to develop Total Cost of Ownership (TCO) savings for your overall network management.

BellSouth's fiber-based SONET ring – SMARTRing – provides a highly reliable communications network between your site, central offices, and inter-exchange carrier locations. The rings are diversely routed, redundant, and self-healing. SMARTRings are monitored 24 hours a day, 365 days a year by BellSouth's Network Reliability Center. In addition, SMARTRing service is backed by a strong service guarantee.

SMARTRing satisfies your basic need for a reliable, fiber-based transmission service that will complement your core business strategy. SMARTRing is a dual counter-rotating fiber ring that is uniquely designed for each customer.

## >> 5. Customer Support

### Customer Care

BellSouth Business Customer Care serves as a single point of contact for all business customers.

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#### BellSouth Business Customer Care

*Vision: To be a recognized leader in providing a superior, seamless customer experience that differentiates BellSouth in the business marketplace.*

*Mission: To provide a superior customer experience on every interaction every day.*

From gathering accurate customer data to complete an order package to managing complex, cross-affiliate projects, BellSouth Business Customer Care understands the need for a positive overall experience.

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#### Customer Care Differentiators

- > Best positioned to support total customer solution
- > Long-standing track record of proven service delivery
- > Ongoing relationships with our customers
- > We are where our customers are
- > Employees with expertise in servicing business product offerings

These differentiators represent the unique value Customer Care brings to the business customer.

### Customer Care Connect

Online ordering is available via Customer Care Connect (ccConnect), a web engine that creates dedicated customer web sites for online order requests and status updates. Instead of

phone calls, faxes, and emails, customers can go online anytime to place orders and receive updates. Each web site is personalized to meet the needs of the customer.

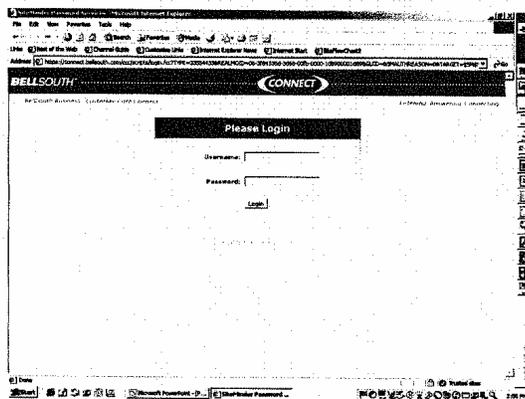
Features of ccConnect include:

- Online ordering and status tracking
- Project monitoring and management
- Automated updates via email
- Contact and location management
- Secured data and system reliability
- Information export to Microsoft Excel

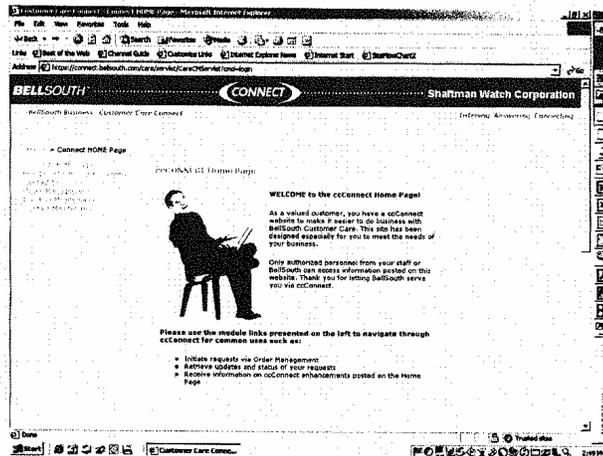
ccConnect can also incorporate a customer's internal processes, such as internal order approval.

Developed in our Georgia Customer Care organization to improve operations, the impact of ccConnect on the customer experience was so positive in Georgia that we developed a region-wide strategy.

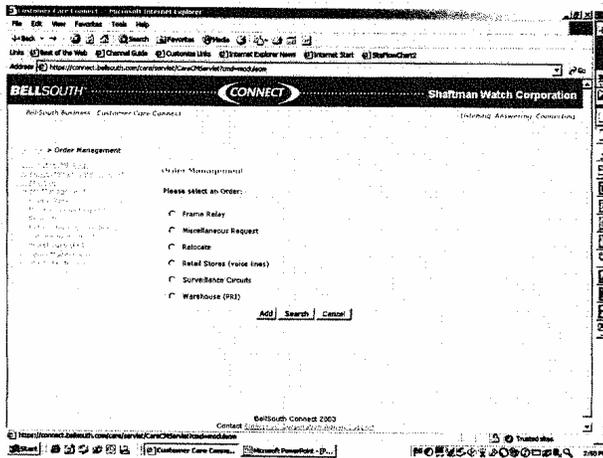
Sample screen shots appear below.



Logging in



ccConnect home page



Order Management menu screen

BELLSOUTH CONNECT Shaftman Watch Corporation

Frame Relay - Add Order

Add Order

Date Ordered: [ ]

Request Originator: [ ]

Request Status: [ ]

Approved By: [ ]

Purchase Order Number: [ ]

Address: [ ]

City: [ ]

State: [ ]

ZIP Code: [ ]

Site: [ ]

Contact: [ ]

Internal Accounting Code (D1 Code): [ ]

Billing: [ ]

Adding an order

Billing Account: [ ]

Quantity of Circuits: [ ]

Frame Relay: [ ]

Speed: [ ]

Interface Type: [ ]

Customer Comment: [ ]

Bellsouth Contact: [ ]

Actual Due Date: [ ]

Order Number: [ ]

Project Number: [ ]

Circuit Number (s): [ ]

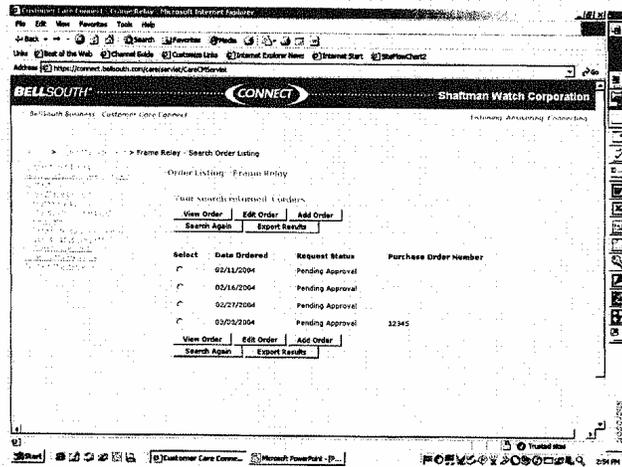
D1C1: [ ]

Bellsouth: [ ]

Bellsouth Comments: [ ]

Submit Cancel

Adding an order (continued)



Checking on the status of an order

**Project Management**

BellSouth's project management organization is supported by processes and tools designed to ensure a seamless experience for our customers. Core components include:

- > Field personnel responsible for planning and coordinating customer implementations
- > Governance teams responsible for improving coordination and implementation management
- > Common project management methodology, including processes, tools, and templates
- > Continuous improvement through quality assurance processes

Upon contract award, BellSouth will assign a Project Manager to manage the implementation of your BellSouth solution.

Project Manager Activities	
Master Work Plan	The master work plan (scope and charter) development process starts during the internal kickoff meeting when the project team begins the initial draft of a high-level consolidated project schedule, including both key milestones and dependencies. Based on additional customer input gathered during the external kickoff meeting, the Project Manager works with the project team to revise and finalize the master work plan.

<b>Project Manager Activities</b>	
Project Launch	The Project Manager will formally confirm the scope and schedule requirements in the master work plan with team members at the beginning of the project. The Project Manager will also obtain team member commitments to these requirements, including project milestones.
Identify and Collect Data to Measure Project Progress	For each status reporting period (determined and communicated during project launch), the Project Manager will collect data to measure the project's progress against the master work plan. Information collected includes: <ul style="list-style-type: none"> <li>▪ Milestones completed on time and the date of completion</li> <li>▪ Milestone dates that have passed and reasons for non-completion (or late completion)</li> </ul>
Manage Project Progress	The Project Manager manages the project's progress by performing the following activities: <ul style="list-style-type: none"> <li>▪ Calculate schedule variance for individual tasks or milestones, and identify issues and change requests. The Project Manager will track expected completion dates if different from scheduled completion dates until each task or milestone is complete. The Project Manager will also assess conformance to the project charter and contractual requirements, and identify project issues and change requests.</li> <li>▪ Review variances, issues, and change requests, and determine corrective action. The Project Manager is responsible for determining corrective actions for schedule variances, issues, and change requests, with the assistance of other implementation team members as appropriate.</li> </ul>
Take Corrective Action	There are two types of corrective actions to be taken: <ul style="list-style-type: none"> <li>▪ Actions that the Project Manager is empowered to implement immediately to correct a task or milestone variance, an issue, or a "minor" change that does not require contract revision.</li> <li>▪ Actions that require the approval/assistance of others, such as issue escalation or "major" changes that affect the project scope.</li> </ul>
Communicate Project Status	The Project Manager will create project status reports that communicate project progress to the customer and the project team. Although the contents of each status report could vary slightly, most will contain the following elements: <ul style="list-style-type: none"> <li>▪ Tasks completed</li> <li>▪ Milestones met</li> <li>▪ Tasks completed late</li> <li>▪ Milestones missed</li> <li>▪ Issues identified</li> <li>▪ Approved changes to the project</li> <li>▪ Near-term milestones</li> </ul>

The project management process flow is described below.

Project Management Process Flow	
1.	The internal kickoff meeting will result in a preliminary master work plan and project scope and charter definition.
2.	During the external kickoff meeting, a firm project scope and charter definition will be developed and signed by everyone no later than one week after the external kickoff meeting.
3.	A communications matrix will be developed at the external kickoff meeting that specifies the frequency of project status meetings, the medium (face-to-face, or via conference bridge), and the recipients of status reports.
4.	The Project Manager will provide a written status after each status meeting to update the team on issues that may impact delivery dates and desired resolution.
5.	The project plan will track milestone completion and each task's percentage of completion along with the resource assigned each task.
6.	During the external kickoff meeting, the following forms may be introduced: <ul style="list-style-type: none"> <li>▪ Change Request Form, to be used to request changes that will affect delivery dates or the project scope</li> <li>▪ Change Control Form, to be used to track each change to the project scope or changes that impact delivery dates</li> <li>▪ Risk Priorities List, to be used to discuss known risks associated with service delivery</li> <li>▪ Issue Form to track issues associated with service delivery, such as pending equipment.</li> </ul>
7.	Project status will be communicated during project status meetings. The project plan will be used to track task completion and contingent tasks that need to be completed before the next task can be completed.
8.	Approximately two weeks after the last site product delivery date has been met, a quality review session will take place to discuss lessons learned during the implementation process.
9.	Once service delivery of all sites has been completed, the project will stay open until the first billing is confirmed as correct between the BellSouth Service Consultant and the customer.

### Business Repair Centers

BellSouth's Business Repair Centers (BRCs) are responsible for the installation and maintenance of local services throughout the BellSouth region. The BRCs are staffed on a 24x7 basis and interface with other BellSouth entities to test circuits, isolate trouble conditions, and coordinate the work activities necessary to provide outstanding customer service.

BellSouth operates three Business Repair Centers, which are located in Atlanta, Jacksonville, and Nashville.

The primary responsibilities of the BRCs are to:

- Receive trouble reports.
- Sectionalize or isolate the trouble condition, direct the efforts of local forces to resolve the trouble condition and ensure that the service is restored.
- Provide internal proactive escalation on existing trouble to ensure timely resolution of the service interruption.
- Provide the customer with trouble report status on a proactive and scheduled basis.
- Assume the role of customer advocate on all trouble conditions reported.
- Receive and act upon escalation requests from the customer.

If you detect a problem with your BellSouth local service, you have two options for reporting the trouble:

- via telephone
- via the Internet (Network eRepair)

To initiate a trouble report via telephone, call the BRC at 800-247-2020.

The BRCs distinguish between out-of-service and service-affecting faults, with out-of-service taking priority in fault resolution activities.

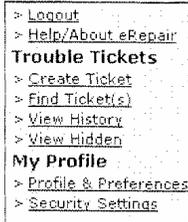
### **BellSouth® Network eRepair**

BellSouth Network eRepair service is an automated, Web-based application that complements and simplifies customer reporting and tracking of BellSouth repair tickets. Network eRepair service for voice and data circuits is available at no charge to all BellSouth large business customers.

With Network eRepair, you can:

- Enter trouble tickets online via a password-secured web site
- View trouble ticket details and history
- Cross-reference BellSouth trouble ticket numbers with your internal trouble ticket system numbers
- Generate ticket summary notices at selected time intervals
- Receive customizable e-mail notices with detailed status information
- Access troubleshooting guides to assist in diagnosing/analyzing the repair situation
- Print reports by open tickets, closed tickets, and trouble histories for a telephone number or circuit ID

- > User access is controlled by your in-house staff administrator.



The navigation bar appears on the left side of every eRepair screen, making it easy to move from one part of the program to another.

### Creating Trouble Tickets

Network eRepair Service makes it easy to originate trouble tickets for any line or circuit in your eRepair account. Simple point-and-click operations let you search by partial telephone numbers or partial circuit IDs. Menus and text fields let you specify problems clearly.

#### Enter Trouble Ticket

\* required fields

**Step 1: Troubleshooting**

- Before you request a repair, take these simple steps to isolate your problem by clicking
- If you have multiple trouble ticket reports, please contact your Repair Center.

**Step 2: Identify the Circuit ID or Telephone Number**

Choose one of the following search types:

Circuit Type:

Telephone Number Type:

### Checking on Trouble Ticket Status

Using Network eRepair Service, you can view status and details of trouble tickets associated with your eRepair account. You can list all trouble tickets or tickets by their reporting date. You can view specific trouble tickets by ticket number, circuit ID, or telephone number. A simple mouse click on a ticket number link brings up additional status details, if available.

### Find Trouble Tickets

required fields

View Tickets

All Tickets: 99

Date Reported:    to    99

View a Specific Trouble Ticket Detail

Choose **one** of the following viewing options for the ticket you want to view:

BellSouth Trouble Ticket Number:  99

OR Custom Trouble Ticket Number:  99

### Trouble Tickets

Total Number of Results: 2

- To view the details of a ticket, click on the ticket number of the ticket you want to view.
- Create a customized view by using the [hide](#) function.
- Click on the column title to view tickets in order of that criteria. [View Help Page](#)

Tickets

Hide

<input type="checkbox"/>	PBM	30/CENA/300366/S B	08/19/2002 11:27	Dispatch In to WFA/DI Enbr, Dispatched to central office tech
<input type="checkbox"/>	PBM	30/CENA/304437/S B	08/19/2002 06:35	Closed, Trouble ticket closed - If further problems exist, please call the BellSouth Repair Center.

submit hide

### Customizing eRepair

The Update Profile & Preferences page is where you customize eRepair.

The first part of the page, User Information, is where your name and contact information is stored. You'll only need to modify this information if any of your key contact information changes.

Update Profile & Preferences

Account Name: fl\_test\_ro

required fields

User Information

First Name: Christopher

Last Name: Robbin

Primary Contact Number: 676 783 2837 ext. 2189

Alternate Contact Number: 210 129 0912 ext. 0217

E-mail Address: renita.jain@bellsouth.com

Re-enter E-mail Address: renita.jain@bellsouth.com

The Select Ticket View part of the page gives you choices about the types of tickets you want to view.

Select Ticket View

The separation of voice and data is based on the way circuit IDs/telephone numbers are inventoried within BellSouth databases. Therefore, eRepair may display circuit IDs and/or telephone numbers outside of your selection.

Voice line-related tickets only

Data line-related tickets only

Both voice and data tickets

The Select E-mail Option part of the page lets you choose how and when you receive e-mail notifications of status changes for your trouble tickets.

Select E-mail Option

**Option 1:** Do not send me status reports via e-mail. If you select this option, skip the E-mail Status section below.

**Option 2:** E-mail me a status report when my trouble ticket status changes to one of the following [statuses](#).

**Option 3:** E-mail me a status report when my trouble ticket status changes to one of the statuses listed in **Option 2** and send me a status report of all open trouble tickets at the selected time interval:

Please Select ▾

If you choose Option 2, you will receive an e-mail whenever the status of an open ticket changes. If you click the "statuses" link next to Option 2, you'll get a pop-up box of status types.

If you choose Option 3, you can specify how often you'll receive updates. Option 3 includes all the status updates provided by Option 2, plus a report of all trouble tickets in your eRepair account at the hourly intervals you select.

The final part of the Profile & Preferences page lets you decide the days and times you want to receive e-mails and the content of the e-mail's subject line.

**E-mail Status Report Options:**  
The following subject line options are only applicable if you have chosen to receive status e-mails:

Circuit ID/telephone number  
 BellSouth ticket number  
 My custom ticket number  
(if not available, circuit ID/telephone number will be used)

**E-mail Schedule:**  
Please send me e-mails on the days selected below:

Mon.  Tues.  Wed.  Thurs.  Fri.  Sat.  Sun.

Please send me e-mails only during the selected time:

From:  To:

### System Requirements

System requirements for Network eRepair includes:

- > Internet access
- > Browser version 5.0 or higher
- > Capability to send and receive Internet e-mail

### The Customer Rules

To strengthen our commitment to improving the service experience of our customers, BellSouth launched *The Customer Rules!*<sup>SM</sup> program, which provides the company-wide framework for improving service delivery and guiding the individual actions and behaviors of team members.

The *Customer Rules!* originate from a combination of what customers expect from BellSouth and what it takes to meet and exceed those expectations. *The Customer Rules!* ensure that every customer interaction is handled with consistent quality care. They provide definition

for the service imperative and are the common language we use to communicate our shared goals for service excellence.

The *Customer Rules!* are intended to:

- Explicitly define our service culture and commitment to operational excellence.
- Align leadership's view of what service must become for BellSouth.
- Provide all BellSouth employees with commonly agreed-to principles that govern our interaction with our customers, based on what they tell us they want.

The *Customer Rules!* and related guiding principles illustrate the standards to which we aspire for every interaction with a customer.

© BELL SOUTH

**The Customer Rules!**

**Take Ownership . . . And Show We Care**  
We value our customers . . . let them know it.  
The Guiding Principle: We take personal responsibility for meeting each customer's need and demonstrate to our customers that we value them.

**Be Responsive and Deliver**  
Listen to the customer . . . and then deliver with speed.  
The Guiding Principle: We balance our capabilities with customer needs, and strive to meet their expectations for speed and responsive service.

**Do It Right**  
Provide quality and accuracy . . . the first time, every time.  
The Guiding Principle: Every interaction should be handled with quality so that the customer's needs are met the first time.

**Make It Seamless**  
BellSouth has many parts . . . but to the customer we should look like one team.  
The Guiding Principle: Our customers will have an experience with BellSouth that, regardless of interface, shows that we operate as a unified company.

**Meet Our Commitments**  
Keep our promises . . . and when we fall behind, let the customer know.  
The Guiding Principle: We establish commitments that consider customer needs, strive to meet these needs and communicate to our customers when we cannot.

### Awards and Recognition

BellSouth has a long-standing tradition of service excellence, receiving top honors in numerous independent studies and surveys of customer satisfaction. Each of these highly reputable studies is based on customers' opinions of BellSouth products and services. Some of the recent rankings include:

- No. 3 in the 2005 American Customer Satisfaction Index (ACSI), which for the first time combined the local and long distance industry groups. This annual customer

survey of more than 150 companies and 50 government agencies is conducted at University of Michigan's Business School. For ten straight years (1994-2003), BellSouth was ranked the No. 1 local telephone service provider.

- No. 3 in the 2004 Yankee Group survey ranking telecommunications service providers; more than 700 businesses (with at least 500 employees) participated in the survey.

Please visit our web site at [www.bellsouthcorp.com/awards/top\\_ranked.vtm](http://www.bellsouthcorp.com/awards/top_ranked.vtm) for more information about these surveys as well as other awards and recognition received by BellSouth during the past several years.

### Your BellSouth Account Team

Improving service year-over-year is a strategic objective for the company. This keeps BellSouth on track for continued gains in operational service quality and for increasing satisfaction because the company is focused on interactions with customers – every point of contact between an employee and a customer.

BellSouth has developed a comprehensive staffing plan that will provide dedicated, responsive, and knowledgeable personnel to respond to Town of Davie's business requirements.

The BellSouth team is a tested, trusted, and proven team of industry leaders. No other team can match our combined experience and leadership, but perhaps most importantly, no other team can match our commitment to the success of the Town of Davie's communication services.

The key members of your account team include:

- **Account Manager, Sales Executive, or Account Executive** develops and maintains the overall account management strategy, is the primary sales contact for the customer, and calls on the resources of the account team as necessary.
- **Sales Engineer** provides complex voice and data communication support in the form of pricing, engineering, design, and technical expertise, including local and long distance services and related equipment
- **Solutions Account Executive** supports and coordinates the design of integrated voice and data solutions, including infrastructure, equipment, Internet, long distance, and security services.
- **Associate Account Executive** works in support of the overall account team to sell DSL and other individual network services, negotiate contract renewals, qualify leads from campaigns, and sell other services in support of the account management strategy.
- **Network Deployment Manager** serves as a liaison between the Sales and Network organizations and responsible for advanced technology deployment, business case development, forecasting, and prioritizing infrastructure deployment.

- **Customer Service Associate** processes service orders and billing inquiries.
- **Service Manager** is the first-level escalation point for all service repair issues.
- **Network Account Service Manager** is the second-level escalation point for repair issues.
- **Project Manager/Service Consultant** manages a customer care group that is responsible for complex order activity and project implementation.

BellSouth structures the account team using a “quarterback” model. As the quarterback, the account manager is responsible for developing and maintaining the overall account management strategy. The account manager calls upon the other members of the account team as necessary.

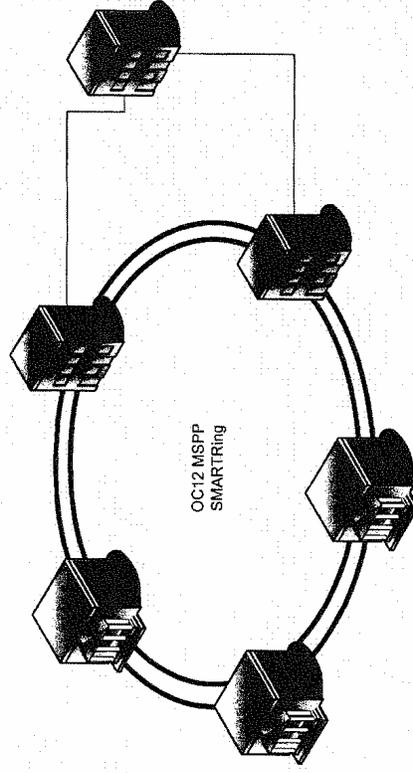
## **>> 6. Attachments**

Please refer to the following page(s) for attachments.

## >> 7. Network Design

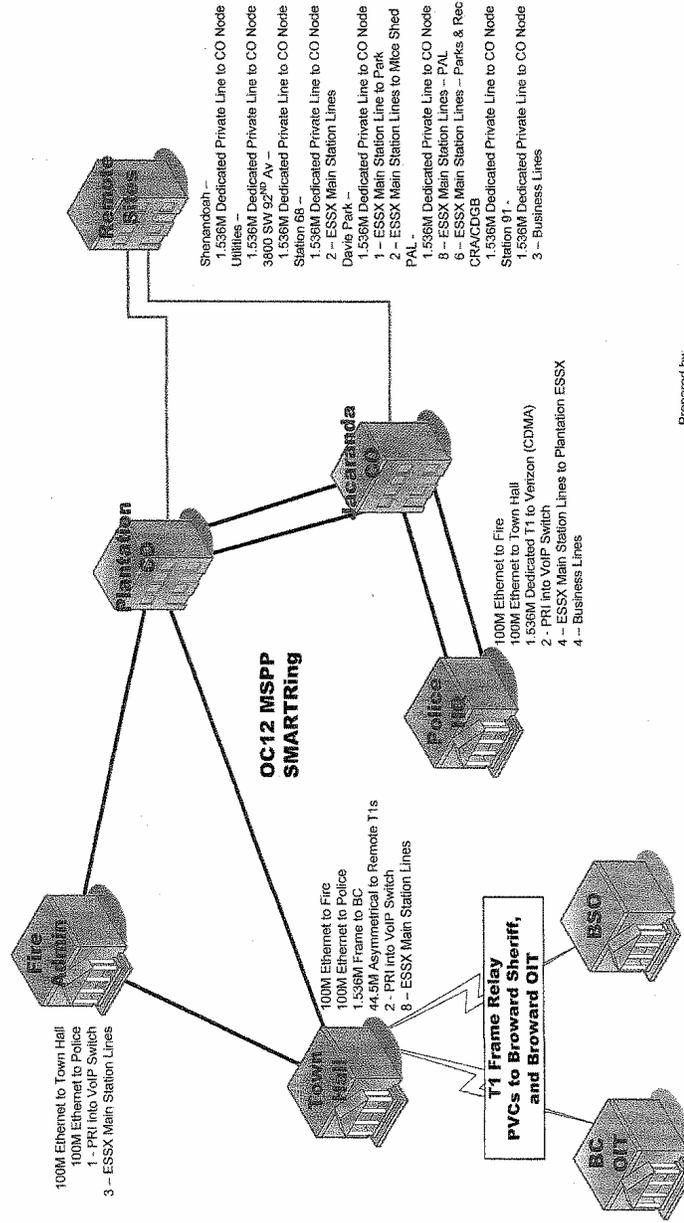
Please refer to the following page(s) for network design information.

# Town of Davie SMARTRing Conceptual Diagram



Prepared by  
Cathy Graveline  
Network Sales Engineer  
BellSouth Business  
954.838.1723  
04-04-2006

# Town of Davie Network Transport Design



Prepared by:  
Cathy Graveline  
Network Sales Engineer  
BellSouth Business  
954 838-1723  
04-04-2006

## >> 8. Pricing

Please see the following attachment(s) for pricing.

## **Town of Davie Net Cost of Redesign**

**Existing Network Monthly Recurring Cost = \$15,935.00**

**Proposed Network Monthly Recurring Cost = \$16,036.00**

**Proposed Network Non-Recurring Cost = \$8,884.00**

**Proposed Network MRC Increase = \$ 101.00**

## Town of Davie Network Transport Costs

Location	Non-Recurring	Monthly Recurring
SMARTRing	\$ 0.00	\$ 7,009.00
Town Hall	\$ 3,089.00	\$ 2,939.00
Fire Admin	\$ 1,400.00	\$ 1,394.00
Police HQ	\$ 2,395.00	\$ 2,736.00
Shenandoah	\$ 250.00	\$ 145.00
Utilities	\$ 250.00	\$ 295.00
3800 SW 92nd Av	\$ 250.00	\$ 135.00
Station 68	\$ 250.00	\$ 173.00
Davie Park	\$ 250.00	\$ 177.00
PAL	\$ 250.00	\$ 367.00
CRA/CDGB	\$ 250.00	\$ 155.00
Station 91	\$ 250.00	\$ 511.00
Total	\$ 8,884.00	\$16,036.00

## >> 9. Contract

Please refer to the following page(s) for contract information.

**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01

This Contract Service Arrangement (CSA) Agreement ("Agreement") is by and between BellSouth Telecommunications, Inc., a Georgia corporation, d/b/a BellSouth, ("Company") and TOWN OF DAVIE ("Customer or Subscriber"), and is entered into pursuant to Tariff Section B5 of the Private Line Services Tariff. This Agreement is based upon the following terms and conditions as well as any Attachment(s) affixed and the appropriate lawfully filed and approved tariffs which are by this reference incorporated herein.

1. Subscriber requests and Company agrees, subject to the terms and conditions herein, to provide the service described in this Agreement at the monthly and nonrecurring rates, charges, and conditions as described in this Agreement ("Service"). The rates, charges, and conditions described in this Agreement are binding upon Company and Subscriber for the duration of this Agreement. For the purposes of the effectiveness of the terms and conditions contained herein, this Agreement shall become effective upon execution by both parties. For purposes of the determination of any service period stated herein, said service period shall commence the date upon which installation of the service is completed.
2. Company agrees to provide Subscriber notice of any additional tariffed services required for the installation of the Service. Subscriber agrees to be responsible for all rates, charges and conditions for any additional tariffed services that are ordered by Subscriber.
3. This Agreement is subject to and controlled by the provisions of Company's or any of its affiliated companies' lawfully filed and approved tariffs, including but not limited to Section A2 of the General Subscriber Services Tariff and No. 2 of the Federal Communications Commission Tariff and shall include all changes to said tariffs as may be made from time to time. All appropriate tariff rates and charges shall be included in the provision of this service. Except for the expressed rates, charges, terms and conditions herein, in the event any part of this Agreement conflicts with the terms and conditions of Company's or any of its affiliated companies' lawfully filed and approved tariffs, the tariff shall control.
4. This Agreement may be subject to the appropriate regulatory approval prior to commencement of installation. Should such regulatory approval be denied, after a proper request by Company, this Agreement shall be null, void, and of no effect.
5. If Subscriber cancels this Agreement prior to the completed installation of the Service, but after the execution of this Agreement by Subscriber and Company, Subscriber shall pay all reasonable costs incurred in the implementation of this Agreement prior to receipt of written notice of cancellation by Company. Notwithstanding the foregoing, such reasonable costs shall not exceed all costs which would apply if the work in the implementation of this Agreement had been completed by Company.
6. The rates, charges, and conditions described in this Agreement may be based upon information supplied to Company by the Subscriber, including but not limited to forecasts of growth. If so, Subscriber agrees to be bound by the information provided to Company. Should Subscriber fail to meet its forecasted level of service requirements at any time during the term of this Agreement, Subscriber shall pay all reasonable costs associated with its failure to meet its projected service requirements.
7. (a) If Subscriber cancels this Agreement or a Service provided pursuant to this Agreement at any time prior to the expiration of the service period set forth in this Agreement, Subscriber shall be responsible for all termination charges. Unless otherwise specified by the tariff or stated elsewhere in this Agreement, termination charges are defined as fifty percent (50%) of the recurring charges due or remaining as a result of the minimum service period agreed to by the Company and Subscriber and set forth in this Agreement and any nonrecurring charges that were not applied upon installation as set forth in this Agreement.

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**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01

(b) Subscriber further acknowledges that it has options for its telecommunications services from providers other than Company and that it has chosen Company to provide the services in this Agreement. Accordingly, if Subscriber assigns this Agreement to a certified reseller of Company local services and the reseller executes a written document agreeing to assume all requirements of this Agreement, Subscriber will not be billed termination charges. However, Subscriber agrees that in the event it fails to meet its obligations under this Agreement or terminates this Agreement or services purchased pursuant to this Agreement in order to obtain services from a facilities based service provider or a service provider that utilizes unbundled network elements, Subscriber will be billed, as appropriate, termination charges as specified in this Agreement.

8. This Agreement shall be construed in accordance with the laws of the State of Florida.
9. Except as otherwise provided in this Agreement, notices required to be given pursuant to this Agreement shall be effective when received, and shall be sufficient if given in writing, hand delivered, or United States mail, postage prepaid, addressed to the appropriate party at the address set forth below. Either party hereto may change the name and address to whom all notices or other documents required under this Agreement must be sent at any time by giving written notice to the other party.

Company

BellSouth Telecommunications, Inc.  
Assistant Vice President  
13450 W Sunrise Blvd, Suit 600  
Sunrise, FL 33323

Subscriber

TOWN OF DAVIE  
6591 ORANGE DR  
DAVIE, FL 33314

10. Subscriber may not assign its rights or obligations under this Agreement without the express written consent of Company and only pursuant to the conditions contained in the appropriate tariff.
11. In the event that one or more of the provisions contained in this Agreement or incorporated within by reference shall be invalid, illegal, or unenforceable in any respect under any applicable statute, regulatory requirement or rule of law, then such provisions shall be considered inoperative to the extent of such invalidity, illegality, or unenforceability and the remainder of this Agreement shall continue in full force and effect.
12. Subscriber acknowledges that Subscriber has read and understands this Agreement and agrees to be bound by its terms and conditions. Subscriber further agrees that this Agreement, and any orders, constitute the complete and exclusive statement of the Agreement between the parties, superseding all proposals, representations, and/or prior agreements, oral or written, between the parties relating to the subject matter of the Agreement.
13. Acceptance of any order by Company is subject to Company credit and other approvals. Following order acceptance, if it is determined that: (i) the initial credit approval was based on inaccurate or incomplete information; or (ii) the customer's creditworthiness has significantly decreased, Company in its sole discretion reserves the right to cancel the order without liability or suspend the Order until accurate and appropriate credit approval requirements are established and accepted by Customer.
14. This Agreement is not binding upon Company until executed by an authorized employee, partner, or agent of Subscriber and Company. This Agreement may not be modified, amended, or superseded other than by a written instrument executed by both parties, approved by the appropriate Company

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AGREEMENT**

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organization, and incorporated into Company's mechanized system. The undersigned warrant and represent that they have the authority to bind Subscriber and Company to this Agreement.

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**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01  
Option 3 of 3

Offer Expiration: This offer shall expire on: 11/21/2006.

Estimated service interval following acceptance date: Negotiable weeks.

Service description:

This Contract Service Arrangement (CSA) provides intrastate, intraLATA OC-12 BellSouth® SMARTRing® service.

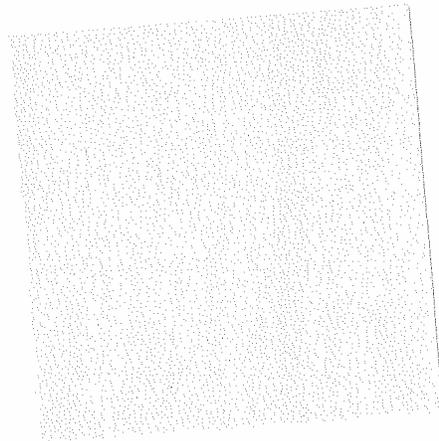
The service period for this Agreement is sixty (60) months.

The service interval must be negotiated.

Under this Agreement, this service may only be purchased by Customers whose traffic on this service will be at least 90% intrastate. Customer is responsible for complying with this requirement, and by ordering or accepting such service under this Agreement, Customer is representing to the Company that its traffic on the service will be at least 90% intrastate.

This Agreement shall be extended for additional one-year terms under the same terms and conditions herein unless either party provides written notice of its intent not to renew the Agreement at least sixty (60) days prior to the expiration of the initial term or each additional one-year term.

Customer Initials \_\_\_\_\_



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**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01  
Option 3 of 3

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives on the dates set forth below.

Accepted by:

Subscriber:  
TOWN OF DAVIE

By: \_\_\_\_\_  
Authorized Signature

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Company:  
BellSouth Telecommunications, Inc.  
By: BellSouth Business Systems, Inc.

By: \_\_\_\_\_  
Authorized Signature

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01  
Option 3 of 3

**RATES AND CHARGES**

	Rate Elements	Non-Recurring	Monthly Rate	USOC
1	BellSouth® SMARTRing® service Local Channel Mileage Rates (All capacities) - Per Local Channel	\$0.00	\$0.00	1HVXX
2	BellSouth® SMARTRing® service Local Channel Mileage Rates (All capacities) - Per quarter air mile	\$0.00	\$35.77	1HVAX
3	BellSouth® SMARTRing® service Interoffice Channel Mileage Rates - Fixed, OC-12 capacity	\$0.00	\$63.00	1HXFX
4	BellSouth® SMARTRing® service Interoffice Channel Mileage Rates - Per quarter air mile (OC-12 capacity)	\$0.00	\$14.70	1HXAX
5	BellSouth® SMARTRing® service Internodal Channel Mileage Rates - Per Internodal Channel, Same Wire Center area	\$0.00	\$0.00	1HNXX
6	BellSouth® SMARTRing® service Internodal Channel Mileage Rates - Per quarter air mile, Same Wire Center area	\$0.00	\$203.35	1HNWX
7	BellSouth® SMARTRing® service Customer Node (Per Node) - OC-12 capacity	\$0.00	\$882.00	SHNC1
8	BellSouth® SMARTRing® service Central Office Node (Per Node) - OC-12 capacity	\$0.00	\$882.00	SHNH1

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**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01  
Option 3 of 3

**RATES AND CHARGES**

**NOTES:**

1. The OC-12 SMARTRing service includes the following nodes in Davie, Florida:  
  
Customer Nodes:  
6591 SW 45<sup>th</sup> Street  
6901 SW 45<sup>th</sup> Street  
1230 Nob Hill Road  
  
Central Office Nodes:  
FTLDFLJA  
FTLDFLPL
2. All rules and regulations for SMARTRing Service from Section B7 of the Private Line Services Tariff (PLST) are applicable to this Agreement. The rate elements included herein have been specifically discounted. Other rate elements used in the provision of the service have not been listed, but may be found in the appropriate Company tariff. Examples of other rate elements are: FCC surcharges, regulatory fees, taxes, or charges for features ordered that are not listed in the Agreement.
3. If any of the services provided under this Agreement are cancelled prior to the beginning of the selected service period, Subscriber will be liable for all capital expenses incurred by Company in provisioning this service, as of the date the order is cancelled by Subscriber.
4. A termination liability charge will be applicable if services provided under this Agreement are disconnected prior to the end of the chosen service period.
  - a. For SMARTRing service the applicable charge is equal to the number of months remaining in the service period times sixty percent (60%) of the monthly rates for SMARTRing service which includes all Nodes, Channel Interfaces, Local Channels, Alternate Central Office Channels, Internodal Channels and/or Interoffice Channels provided under this Agreement.
  - b. For IPMS, the applicable charge is equal to the number of months remaining in the minimum service period times ninety percent (90%) of the monthly rates for IPMS rate elements provided under this Agreement.
  - c. For non-tariff service, Subscriber has two payment options:
    1. Continue paying monthly for the remainder of the minimum service period.
    2. Make a lump sum payment discounted by the current prime interest rate plus two percentage points.
5. A termination liability will be assessed to Subscriber if any service provided under this Agreement is terminated prior to the end of the chosen service period.
  - a. The amount to be assessed will be calculated as specified in this Agreement.
6. The following nonrecurring charges will not apply upon initial installation. However, if any service provided under this Agreement is disconnected prior to the expiration of this Agreement, then Subscriber will pay nonrecurring charges as identified below:
  - Local Channel Mileage, per Local Channel (1HVXX) .....\$425.00 each
  - IOF Channel Mileage, Fixed OC-12 (1HFX) .....\$145.00 each
  - Internodal Channel Mileage, per Internodal Channel,  
Same Wire Center area (1HNXX) .....\$505.00 each

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**CONTRACT SERVICE ARRANGEMENT  
AGREEMENT**

Case Number FL06-0827-01  
Option 3 of 3

- Customer Node, OC-12 capacity (SHNC1).....\$375.00 each
  - Central Office Node, OC-12 capacity (SHNH1).....\$375.00 each
  - Contract Preparation Charge (WGGVF) .....\$326.00
7. These rates and charges are in addition to any tariff rates and charges that may apply.

All trademarks and service marks contained herein are the property of BellSouth Intellectual Property Corporation.

**END OF ARRANGEMENT AGREEMENT OPTION 3**

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## **Attachment B**



BellSouth Business<sup>SM</sup>  
Suite 410  
13450 W. Sunrise Blvd.  
Sunrise, Florida 33323

October 12, 2006

Frank,

The SmartRing<sup>®</sup> service that has been proposed for the City of Davie is only provided by BellSouth and therefore we are single source for this service. The specific SmartRing<sup>®</sup> package that has been provided to you has the following features:

- SmartRing<sup>®</sup> service provided from the Florida Intrastate Tariff - B. Private Line Services Tariff (PLST)
- We have provided a custom discounted Contract Service Agreement
- 5 nodes including two BellSouth Central offices, Jacaranda and Plantation
- Carrying all local services provided by BellSouth

One of the specific provisions of the Florida Intrastate Tariff - B. Private Line Services Tariff (PLST) referenced above is that it may not be resold by another carrier. BellSouth does have SmartRing<sup>®</sup> service that we do allow other carriers to resell. It is out of a different tariff and we are legally not allowed to discount the service with a Contract Service Arrangement. It also would not be sold by any other carrier with only BellSouth Central Office and customer nodes. Let me know if you have any other questions.

*Thank you,*  


Christine Vicens  
Sales Manager - BELLSOUTH  
13450 West Sunrise Boulevard, Suite 600  
Sunrise, FL 33323  
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# **Attachment C**

*Handwritten initials/signature*

MONROE D. KIAR  
TOWN ATTORNEY  
TOWN OF DAVIE  
6191 SW 45<sup>th</sup> Street, Suite 6151A  
Davie, Florida 33314  
(954) 584-9770

RCVD JUL 10 '06

**MEMORANDUM**

DATE: July 10, 2006  
TO: Frank Apicella, Technology Information Management Director  
CC: Ken Cohen, Acting Town Administrator  
Mayor and Councilmembers.  
FROM: Monroe D. Kiar *MOK*  
RE: Control Number 060609  
Proposed Solutions for SMARTRing, PRI, Frame Relay, Metro Filternet, and Private Line TI Services

Pursuant to your request, this office has reviewed the proposal for the Town of Davie submitted by BellSouth. Chapter 8 sets forth certain proposed network monthly recurring costs as well as proposed network non-recurring costs, along with network transport costs for the Town of Davie. It is assumed that these have already been closely reviewed by your Department. Chapter 9 contains the Contract Service Arrangement Agreement between BellSouth Telecommunications, Inc., a Georgia Corporation, d/b/a BellSouth, and the Town of Davie. It provides that BellSouth shall provide the Town notice of any additional tariffed services required for the installation of the service and that the subscriber (Town) agrees to be responsible for all rates, charges and conditions for any additional tariffed services that are ordered by subscriber. It also states that the Agreement is subject to and controlled by the provisions of companies or any affiliated companies lawfully filed and approved tariffs and shall include all changes to said tariffs as may be made from time to time. It is again presumed that inquiry has been made by your office as to said filed and approved tariffs.

The Contract indicates that if the Town cancels the Agreement prior to the completed installation of the service, but after the execution of the Agreement, the Town shall pay all reasonable costs incurred in the implementation of this Agreement prior to receipt of written notice of cancellation by Company. Further, the Agreement provides that the rates, charges and conditions

described in the Agreement may be based upon information supplied to the company by the Town, including, but not limited to, forecasts of growth and should the Town fail to meet its forecasted levels of service requirements at any time during the term of the Agreement, the subscriber shall pay all reasonable costs associated with its failure to meet its projected service requirements.

It should be noted that paragraph 7(a) of the Agreement indicates that if the Town cancels the Agreement or a service provided pursuant to the Agreement at any time prior to the expiration of the service period set forth in the Agreement, the Town shall be responsible for all termination charges. The Agreement further states that unless otherwise specified by the tariff or stated elsewhere in the Agreement, termination charges are defined as 50% of the recurring charges due or remaining as a result of the minimum service period agreed to by the company and subscriber and any non-recurring charges that were not applied upon installation.

The Contract Service Arrangement Agreement states on page 4 that BellSouth's offer to the Town shall expire on May 18, 2006. It is presumed that this has been extended since the date of your Memorandum and receipt of same by this office was near the end of June, 2006. The Agreement however, should be modified to reflect a new offer expiration date.

The Contract Service Arrangement Agreement further provides that the service period for the Agreement is 60 months and that the Agreement shall be extended for additional 1 year terms under the same terms and conditions contained therein, unless either party provides written notice of its intent not to renew the Agreement at least sixty (60) days prior to the expiration of the initial term or each additional 1 year term. It is felt that it is important for your Department to be fully aware of this provision which would automatically extend the Agreement unless adequate written notice is sent to BellSouth at least 60 days prior to any expiration period.

The Contract Service Arrangement Agreement appears to be in proper legal form for submission to the Town Council for its consideration, but it is suggested that your office, if it has not already done so, familiarize itself with the provisions set forth above and determine what, if any, additional charges and costs the Town may be subject to prior to the Town's execution of the Contract Service Arrangement Agreement. Again, the Town should be fully aware of the termination provisions and penalties for early termination. In addition to the provisions outlined above, a termination liability charge will be applicable if services provided under the Agreement are disconnected prior to the end of the chosen service period and these are further outlined on page 7 and 8 of the Contract Service Arrangement Agreement.

You have also asked this office to review the Letters of Election set forth in Chapter 10. These pertain to BellSouth Centrex Service, Frame Relay Service, and T1 - Hicap. Attached to each Letter of Election is a quote detail setting forth the applicable charges. It is presumed that these have been reviewed by your Department and such other appropriate staff members as the Administration deems fit. It is noted that the 3 Letters of Election indicate that the service period is for 24 months. This is not consistent with the 60 month period set forth in the Contract Service Arrangement Agreement. It is suggested that this be reviewed to ensure that this discrepancy in duration was in

fact intended by the parties. If not, then this should be addressed and the Letters of Election be made consistent with that of the provisions of the Contract Service Arrangement Agreement. It should be noted that the Letter of Election provides that the Town agrees to pay BellSouth for the provision of the services based on the selected length and term described in the tariff and that the monthly rate will continue for the elected service period and will not be subject to company initiated change during said period. This would appear to indicate that after 24 months, BellSouth would have the right to initiate rate changes. Again, you should be aware of the provisions contained in the Letters of Election that refer to service being terminated by the Town prior to the expiration of the service period and the cancellation charges the Town would be subject to under such circumstances.

The Letters of Election also contain a provision whereby the Town acknowledges that it has read and understands the Agreement and agrees to be bound by its terms and that by signing or indicating acceptance, the Town acknowledges and accepts all terms of the Agreement as set forth above, including all terms set forth in the "Service Descriptions and Price List" found at [HTTP://cpr.bellsouth.com/vest/product\\_line.htm](http://cpr.bellsouth.com/vest/product_line.htm), as applicable.

Assuming that you have familiarized yourself with the provisions set forth above, as well as the balance of the provisions contained in the Letters of Election and have obtained satisfactory answers to the issues and concerns outlined above, then under such circumstances, the Letters of Election would be in proper legal form for submission along with the Contract Service Arrangement Agreement to the Town Council for its consideration and review.

Upon your receipt of this Memorandum, will you please contact this office so that we may discuss its contents.

MDK/gmv