Year 2000 Readiness Workshop Questions for All Local Exchange Companies All Alternative Local Exchange Companies and All Interexchange Companies

March 19, 1999 - 9:30 a.m. Florida Public Service Commission Betty Easley Conference Center, Room 152 4075 Esplanade Way Tallahassee, FL

1. What is the status of your company's Year 2000 plans and preparations? Please report your company's overall percentage of completion toward being fully Year 2000 compliant.

BellSouth's Year 2000 program has been divided into six phases: planning; inventory; impact analysis; conversion; testing; and implementation. BellSouth Telecommunications monitors its progress within these six phases based on the number of inventoried items that have been addressed. Overall, BellSouth Telecommunication's has completed its planning, inventory, and impact analysis phases of its Year 2000 program. As of February 28, 1999, the remediation and testing phases were each approximately 75% complete, and the implementation phase was approximately 65% complete.

2. What specific timetables and milestones have you identified to prepare for Year 2000? For each timetable and milestone, please report the following: (1) the percentage completed and expected full-completion date; (2) the specific tasks remaining to be completed; and (3) any specific problems anticipated.

Management's target date for completion of all phases for most of its mission critical applications is June 30, 1999. The percentage complete for BellSouth Telecommunications main areas of focus are:

Category	%Conversion & Testing Complete	%Implementation Complete
Network	74%	33%
ІТ	76%	78%

In the area of Year 2000 contingency planning, BellSouth Telecommunications has developed a master Year 2000 Contingency Planning Guide and associated workbook and completed internal training. Other major milestones for the contingency plans include the completion of assessments by the end of first quarter 1999, and the completion of testing and signoff of contingency plans during third quarter 1999.

No problems are anticipated to date.

3. What is the status of the **inventory** phase of your company's Year 2000 preparations? Please report the following: (1) the percentage of this phase completed and expected full-completion date; (2) the specific tasks remaining to be completed; (3) problems found where corrective action(s) is being taken; and (4) the expected completion date for each problem identified.

BellSouth Telecommunications has completed the inventory phase.

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YEAR 2000 READINESS DISCLOSURE

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4. What is the status of the **assessment** phase of your company's Year 2000 preparations? Please report the following? (1) the percentage of this phase completed and expected full completion date; (2) the specific tasks remaining to be completed; (3) problems found where corrective action(s) is being taken/ and (4) the expected completion date for each problem identified.

#### BellSouth Telecommunications has completed the assessment phase.

5. Which of your company's hardware and software systems, such as billing, administrative, customer service, infrastructure, and operational support systems, do you consider critical? For each such system, what functions (in whole or part) are done via mainframe computers and which functions electronically interface with PC-based computers? How are these systems being remediated and tested? What problems have been identified that require additional work to make them Year 2000 compliant? Please report estimated completion dates for each problem identified.

BellSouth Telecommunications' mission critical applications include those that (1) directly affect delivery of primary services to BellSouth Telecommunications' customers; (2) directly affect BellSouth Telecommunications' revenue recognition and collection; (3) would create noncompliance with any statutes or laws; and (4) would require significant costs to address in the event of noncompliance. The method of remediation is either four-year format or windowing. BST's windowing standard is a 60/40 fixed window. In this case, software will interpret the two-digit year numbers 00-59 as 2000-2059. It will interpret the numbers 60-99 as 1960-1999. The four-year format approach is to change all year references in a particular program or database to the four full digits. The choice of remediation approach is normally determined on a case by case basis by the type of program involved, the cost and expected life of the application. No remediation problems have been identified to date.

6. What is the status of the **remediation**, or renovation, phase of your company's Year 2000 preparations? Please report the following: (1) the percentage of this phase completed and expected full-completion date; (2) the specific tasks remaining to be completed; (3) problems found where corrective action(s) is being taken; and (4) the expected completion date for each problem identified.

BellSouth Telecommunications is approximately 75% complete with the remediation phase. Outside suppliers provide all hardware and most software that comprise BellSouth Telecommunications' networks; these components are being remediated by those third party suppliers. BellSouth's information technology systems were developed by both BellSouth Telecommunications and vendors, and is being remediated by both. Management's target date for completion of remediation of most of its mission critical applications is June 30, 1999. No remediation problems have been identified to date.

7. What is the status of the testing (both unit and system) phase of your company's Year 2000 preparations? Please report the following: (1) the percentage of this phase completed and remaining to be completed; (2) the specific tasks remaining to be completed; (3) problems found where corrective action(s) is being taken; and (4) the expected completion date for each problem identified. What tests are being done or will be done on network elements and customer-affecting systems? Please describe your company's testing process, including its approach and steps.

BellSouth Telecommunications is approximately 75% complete with the testing phase. Again, outside suppliers provide all hardware and most software that comprise BellSouth Telecommunications' networks; testing of these components for Year 2000 compliance is being performed by the vendors, BellSouth Telecommunications, and industry groups such as the Telco Year 2000 Forum. BST is testing all of its internal information technology software. Vendor supplied software and hardware must undergo testing by BellSouth in addition to any certifications or test results received from the vendor. Management's target date for completion of testing of most of its mission critical applications is June 30, 1999. No testing problems have been identified to date.

8. Please describe your company's plans to address interoperability issues with other domestic carriers, such as LEC's, IXC's, ALEC's, CAP's, and wireless providers, and with interconnected networks and outside systems. Please describe the status of such plans and related discussions, including percentage of completion.

In general, the assurance that BellSouth's products and services will function properly in the post-2000 environment is based on well defined plans for the remediation, testing, and deployment of systems and network components. To provide additional risk mitigation, BellSouth Telecommunications is also conducting final assurance testing on many mission critical systems and elements (see question #9). These efforts, as well as BST's cooperation with selected entities with which BellSouth Telecommunications has tested (and will test) and collaborative forums within the industry, will serve as the primary means for assuring customers of certification and compliance for Year 2000.

9. What network inter-operability testing has your company conducted or will your company conduct? Is your company working with ATIS and NRIC to perform network interoperability tests? Please report the following concerning such testing: (1) the percentage of this phase completed and expected full-completion date; (2) the specific tasks remaining to be completed; (3) problems found where corrective action(s) is being taken; and (4) the expected completion date for each problem identified.

#### **BellSouth Inter-Network Testing**

The BellSouth Year 2000 Program Management Office established the BellSouth Inter-Network Test Team in mid-1998 with members representing BellSouth's wireline, wireless, and long distance operations. The purpose of the team was to plan and execute wireline and wireless network tests that would assess the impact of Year 2000 on the stability of BellSouth's interconnected network, and to help ensure that our customers will be able to complete wireline, wireless, and long distance calls at the millennium rollover and other key dates.

The test environment was representative of the networks used by our wireless and wireline customers. Thirty-eight unique test cases were developed which contained approximately 90 different call scenarios. Each call scenario was executed for up to 8 key dates including 9-9-99, the millennium rollover 12-31-99 and 1-1-00, and Leap Year 2-28-00, 2-29-00, and 3-1-00. In addition, 2-28-01 and 3-1-01 were tested to further ensure the integrity of Leap Year software logic. The tests included calls representing wireline to wireline, wireline to wireless, and wireless to wireless. These call types were tested for: E911, local, toll, 800 number, operator-assisted, calling card, and international calls.

Testing was completed in March 1999. The overall testing results indicated that no Year 2000 induced problems were identified and all call tests were ultimately deemed successful.

#### Telco Year 2000 Forum http://www.telcoyear2000.org/

BellSouth is a member of the Telco Year 2000 Forum which was organized in 1996 by the largest local carriers in the U.S. Current Forum member companies are: Ameritech, Bell Atlantic, BellSouth, GTE, SBC Communications, US West, Southern New England Telephone Company, and Cincinnati Bell. As a member of the Telco Year 2000 Forum, BellSouth participated in joint testing designed to evaluate the interoperability of key network elements and support systems. The testing covered many of the types of equipment and software common to Forum members.

With support from Bellcore, the Forum tested the interoperability of equipment used to support four clusters of services: emergency services; basic, enhanced, and intelligent services; management systems; and data/transport services. After a year of intensive

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planning, the Foram conducted testing at 20 teleo-owned and contracted laboratories between July 6, 1998 and December 22, 1998. Out of 1,914 test cases run by the Teleo Forum, only six resulted in Year 2000-related anomalies. Each of the six was resolved, retested and subsequently passed.

The Network Reliability and Interoperability Council (NRIC) www.nric.org BellSouth is participating with NRIC to focus on Year 2000 issues in the telecommunications industry. NRIC will assess the magnitude of Year 2000 risks and review efforts taken to address those risks, and determine what additional steps should be taken. In particular, the Council will assure that appropriate inter-network testing and network monitoring have been arranged. The Council will make recommendations to telecommunications carriers, telecommunications network users and the Federal Communications Commission.

<u>The Alliance for Telecommunications Industry Solutions (ATIS) www.stis.org</u> ATIS is focusing on testing the integrity of the public switched network. The Network Testing Committee (NTC) -- a telecommunications industry forum sponsored by the Alliance for Telecommunications Industry Solutions (ATIS) -- is conducting inter-network interoperability testing to evaluate the impact of the Year 2000 date change on the nation's public switched telephone network. Companies participating in the testing include Ameritech, US West, GTE, AT&T and Sprint, as well as six wireless service providers (Acrial Communications, AirTouch, AT&T Wireless, Bell Atlantic Mobile, BellSouth and SBC).

The Cellular Telephone Industry Association (CTIA) www.wow-now.com BellSouth participates in the CTIA, which has taken the lead in the cellular industry by conducting Y2K testing on the wireless telephone network. CTIA is planning and coordinating a series of tests that will examine connections among systems. CTIA is coordinating its efforts with the Alliance for Telecommunications Industry Solutions (ATIS), the TELCO Forum and other industry partners.

10. What is your company doing to avoid network failures that could arise due to non-compliant network providers? What safeguards are being taken? What communications channels have been opened with other network providers?

Existing network disaster recovery plans exist for failed external network providers. These plans have been in existence for many years and have been successfully enacted on several occasions. If a Year 2000 failure occurs in another network provider, BST has procedures that will put controls in place to mitigate the effects on HellSouth's network.

BellSouth Telecommunications has contacts established today with the network management centers of other major providers. These same contacts will be utilized for any Year 2008 events. There has historically been a very collaborative approach to disaster recovery within the telecommunications industry, and this will continue to be true for the Year 2000.

In addition, the magnitude of internal testing combined with the additional network testing with industry forums (Teleo Forum, ATIS, CTIA) outlined in question #9 gives BST additional assurance that mission critical network systems and elements will function properly in the Year 2000.

11. Please describe your company's efforts to work with suppliers of your company's critical hardware and software systems to ensure that each supplier's equipment is Year 2000 compliant. Have you inventoried supplier and third-party products? Have you established compliance standards? What tests (unit and system) remain to be completed to verify that suppliers' products are Year 2000 compliant, and when will they be completed? Please describe any contingency plans your company has developed to address the situation where a supplier's product is found to be non-compliant?

BellSouth Telecommunications includes in its inventory all third party software and hardware, as well as suppliers of goods and services. Critical software and hardware must undergo testing by BellSouth whether it is internally developed or vendor supplied. Even if the vendor has tested the product, the test results and the test criteria must be verified by BellSouth.

BellSouth is also updating its contracts with Year 2000 warranty language for all vendor software, hardware, and services. In addition, BellSouth Telecommunications is conducting on-site reviews of all critical suppliers, beginning in mid-March, to personally evaluate or confirm each vendor's Year 2000 readiness and compliance. Contingency plans will be developed for suppliers who do not demonstrate Year 2000 preparedness.

12. What efforts is your company making to contact and educate critical customers to ensure that their telecommunications services and customer premises equipment (CPE) are Year 2000 compliant? What tests are being conducted or can be conducted by a customer to test its equipment?

BellSouth has developed an Internet site located at www.bellsouth.com/vear2000 to communicate Year 2000 information to our customers and to the public (more than 967,000 hits since 9/3/98 ). The web site contains information about the BellSouth Year 2000 initiative, network status, and a series of frequently asked questions. Within the frequently asked questions the potential need to upgrade customer owned equipment or services that interface with BellSouth Telecommunications is addressed. BellSouth Telecommunications is informing customers that it is their responsibility to ensure that their privately owned equipment is Year 2000 compatible. BellSouth also has developed a specific Year 2000 customer care package to mail to customers which contains the same information found on our Internet site (almost 5,800 responses mailed as of 2/28/99). BellSouth Telecommunications has published Year 2000 information discussing the need to upgrade customer owned equipment in bill inserts and plans to do another bill insert in third quarter of 1999. BellSouth Telecommunications is also planning Year 2000 customer seminars for large business customers in the near future where this topic will also be discussed. Tentative sessions in Florida include April 6<sup>th</sup> in Jacksonville, April 8<sup>th</sup> in Ft. Lauderdale, April 9<sup>th</sup> in Orlando.

13. What communications channels has your company established with the Department of Emergency Services' Emergency Operations Center? With other industries/companies that depend on your company's services?

BellSouth's Year 2000 contingency plans will utilize the same interfaces with local, state, and/or federal agencies that exist today as part of existing disaster recovery plans.

14. Please describe your company's contingency or disaster recovery plans for Year 2000 related network problems and the status of such plans. If such plans are still being developed, please report the expected completion date. If such plans re complete, please bring a copy to the workshop. If such plans are not yet complete, please submit a copy to this Commission's Division of Communications prior to July 1, 1999.

BellSouth Corporation's strategy for Year 2000 contingency planning continues to focus on developing contingency plans that will enable its companies to continue to provide, maintain, and bill for their products and services in the event of a Year 2000-related disruption. In support of this strategy, BellSouth has implemented a two-tiered planning approach. The first tier will focus on four critical business processes -- Ordering, Provisioning, Maintenance/Repair, and Billing. The second planning tier will take a more Business Unit-

focused approach, meaning that each Business Unit will be responsible for identifying any additional internal processes that are critical to its business operations and for developing the appropriate Year 2000 contingency plans.

To support this effort, a master Year 2000 Contingency Planning Guide and associated workbook have been developed and are currently being rolled out. The guide instructs the BellSouth companies on how to evaluate their existing Disaster Recovery plans, which were developed primarily for natural disasters, for their effectiveness and completeness in regards to the Year 2000. Any gaps identified will be addressed and documented.

The scope of the Year 2000 Business Continuity project also includes the development of a "Zero Day" strategy and procedures which define how BellSouth will communicate and react to Year 2000 events during the critical rollover window. All Year 2000 event responses will be directed from an emergency response center during the critical century roll over period. All BellSouth employees will know where this center is and how to communicate during the "zero day" duration which will begin in late 1999 and continue through the year 2000 until the critical business processes are considered to be working in a satisfactory condition. The emergency response center will provide centralized and coordinated management and control of all communications. When a Year 2000 problem is discovered, and during subsequent recovery operations, all BellSouth Year 2000 teams and other company personnel will maintain continuous contact with the emergency response center until the contingency plan is successfully implemented and normal business operations are ultimately resumed.

Contingency plans are scheduled to be completed and tested in third quarter of 1999. Copies will be sent to the commission in June 1999.



## Year 2000 Compliance Status

#### March 19, 1999 BellSouth Telecommunications





# Y2K Compliance Program Objective

#### Ensure no interruption to the business as a result of the Year 2000 "Millennium Bug"

#### Remediation

 Review, change, and certify date compliance for all IT systems, network elements and environmental systems.

#### Interoperability Testing

- End-to-end process flow testing of "business critical" systems and network elements
- Dedicated test environment, with all system clocks set to post-2000 dates to ensure product and process compliance
- Business Continuity Planning





## Year 2000 Status

- Planning, inventory and impact analysis phases have been completed.
- Remediation and testing phases are approximately 75% complete.
- Implementation phase is approximately 65% complete.





#### Milestones

 Conversion & Testing Network-74% complete; IT-76% complete

Implementation

Network 33% complete; IT-78% complete

- Contingency Planning
  - Planning Guide and training have been completed; Assessments to be completed by 1Q99; testing to be completed during 3Q 1999. No problems expected to date.





#### **Inventory and Assessment**

• These phases are complete.



# **Critical Systems**



- These systems would include applications that (1) directly affect the delivery of primary services to BellSouth customers; (2) directly affect revenue; (3) would result in noncompliance with statutes or laws; and (4) would require significant costs to address in the case of noncompliance.
- Method of remediation involves either a change to a four year format or windowing. For BellSouth, when this latter option is used, a 60/40 fixed window is used. Specifically, 00-59 is interpreted as 2000-2059 and 60-99 is interpreted as 1960-1999.





# **Critical Systems**

- Remediation approach used for a particular application is determined on a case by case basis by the program type involved, the cost and expected life of the applications.
- No remediation problems have been identified to date.



#### Remediation



• BST is approximately 75% complete.

- Target date for completion of remediation of most mission critical applications is June 30, 1999.
- No remediation problems have been identified todate.



# Testing



• BST is approximately 75% complete.

- Outside suppliers provide all hardware and most software that comprise BST's network.
- Testing is being performed by the vendors, BST and industry groups, incl the Telco Y2K Forum.
- All internal IT software is being tested. Vendor software and hardware must undergo testing by BellSouth in addition to any certifications or test results received from the vendor.



# Testing



 Target date for completion of testing of most mission critical systems is June 30, 1999.

• No testing problems have been identified to date.





 BellSouth's is involved with both internal and industry testing efforts.

- Continued cooperation with selected entities with which BellSouth has tested (and will test), as well as collaborative forums within the industry will serve as the primary means for assuring customers of certifi cation and compliance for Year 2000.
- No testing problems have been identified to date.





 A test environment representative of the networks used by our wireless and wireline customers has been established.

- 38 unique test cases were developed which contained approximately 90 different call scenarios.
- Each call scenario was executed for up to 8 key dates including 9/9/99, 12/31/99, 1/1/00 and 2/28/00, 2/29/00 and 3/1/00.





- Tests included calls representing wireline to wireline, wireline to wireless, and wireless to wireless.
- Call types tested included E911, local, toll, 800 number, operator-assisted, calling card and international calls.
- Testing has been completed.





• No Year 2000 induced problems were identified.

• All call tests were deemed successful.

- BellSouth is a member of the Year 2000 Telco Forum. Other members include Ameritech, Bell Atlantic, GTE, SBC, US West, SNET and Cincinnati Bell.
- As a member of this Forum, BellSouth has participated in joint testing designed to evaluate the





interoperability of key network elements and support systems. The testing covered many of the types of equipment and software common to the Forum members.

 BellSouth is participating with NRIC to focus on Year 2000 issues. NRIC will assess the magnitude of the Year 2000 risks and review efforts taken to address those risks and determine what additional steps should be taken.





• ATIS is focusing on testing the integrity of the PSN.

- NTC an industry forum sponsored by ATIS in conducting inter-network interoperability testing to assess the impact of the Year 2000 date change on the PSN.
- Companies involved in this testing include GTE, Ameritech, US West, AT&T and Sprint, as well as six wireless service providers, I.e Aerial Communications, AirTouch, AT&T Wireless, Bell Atlantic Mobile, BellSouth and SBC.





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- BellSouth is the member of CTIA which has taken the lead in the cellular industry by conducting Y2K testing on the WTN.
- CTIA is planning a series of tests that will examine connections among systems.
- CTIA is coordinating its efforts with ATIS, the Telco Forum and other industry partners.



## **Network Safeguards**



 Network disaster recovery plans exist for failed external network providers. These plans have been successfully enacted on a number of occasions.

- If a Year 2000 failure occurs in another network provider BST will put controls in place to mitigate the effects on BellSouth's network.
- BellSouth has contacts established today with the network management centers of other major providers. These same contacts will be utilized for Year 2000 events.



#### **Network Safeguards**



• Historically, there has been a very collaborative approach to disaster recovery within the industry.

- This will continue to be true for the Year 2000.
- The magnitude of internal testing combined with additional industry network testing (Telco Forum, ATIS, CTIA) provides additional assurance that mission critical network systems will function properly in the Year 2000.





## **Supplier Compliance**

- Critical software and hardware must undergo testing by BellSouth whether it is internally developed or vendor supplied.
- Vendor test results must be verified by BellSouth.
- Contracts are being updated to include Year 2000 warranty language for all vendor software, hardware and services.





# **Supplier Compliance**

- On-site review of all critical suppliers are underway to evaluate each vendor's Year 2000 readiness.
- Contingency plans will be developed for suppliers who do not demonstrate Year 2000 preparedness.





# **Customer Care and Education**

- Internet site located at <u>www.bellsouth.com/year2000</u> has been utilized to share information to our customer and to the public. (more than 967,000 hits since 9/3/98).
- This site contains information about the BellSouth Year 2000 initiative, network status and a series of frequently asked questions.
- The potential need to upgrade customer owned equipment or services is addressed within the set of frequently asked questions.





## **Customer Care and Education**

- Customers are advised via the web site and also via bill inserts that it is their responsibility to insure that their privately owned equipment is Year 2000 compatible.
- Customer care packages have been also been mailed to large business customers containing the same information as found on our web site.
- Year 2000 seminars for large business customers are tentatively planned in April. Sessions will be held in Jacksonville, Ft. Lauderdale and Orlando.





- BellSouth's Year 2000 contingency plans will utilize the same interfaces with local, state and federal agencies that currently exist today as a part of existing disaster recovery plans.
- BellSouth's strategy for Year 2000 contingency planning utilizes a two-tiered approach.
  - The first tier will focus on four critical business processes -Ordering, Provisioning, Maintenance/ Repair and Billing.





- The second tier will take a more business unit focused approach, I.e. each Business Unit will identify any additional internal processes that are critical to its operations and for developing the appropriate Year 2000 contingency plans.
- Year 2000 Contingency Planning Guide and associated training is currently being rolled out. Guide instructs the BellSouth companies on how to evaluate existing Disaster Recovery plans, which were primarily developed for natural disasters, for their effectiveness with regard to the Year 2000.





- Any gaps will be addressed and documented.
- Scope of the Year 2000 Business Continuity project also includes the development of a "Zero Day" strategy and procedures which define how BellSouth will communicate and react to Year 2000 events during the critical century roll over period.





- All Year 2000 event responses will be directed from an emergency response center during the critical roll over period.
- This center will provide centralized and coordinated management and control of BellSouth's communications.

