

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of the)
Interconnection Agreement)
Negotiations Between AT&T)
COMMUNICATIONS OF THE)
SOUTHERN STATES, INC. and)
BELLSOUTH)
TELECOMMUNICATIONS, INC.,)
Pursuant to 47 U.S.C. Section 252)

DOCKET NO. 960833-TP

PETITION BY AT&T FOR
ARBITRATION UNDER THE
TELECOMMUNICATIONS ACT
OF 1996

**INDEX TO AT&T'S DOCUMENTS SUBMITTED
PURSUANT TO THE TELECOMMUNICATIONS ACT OF 1996***

Declassified

2-11-99

* Documents indexed at Tabs 346 through 435 are not included herein because they have been designated by BellSouth as containing information that is proprietary and confidential to BellSouth. Documents indexed at Tabs 292 through 345 are being submitted in a separate volume because these documents contain information that is proprietary and confidential to AT&T. See AT&T's Stipulated Protective Order, filed today.

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AT&T's POLICY ON
CUSTOMER PROVISIONING, BILLING, AND SERVICING DATA INTERFACE
STANDARDS NECESSARY FOR EFFECTIVE LOCAL SERVICE COMPETITION

I. BACKGROUND / ISSUE DEFINITION

There are significant barriers to effective local competition when interface standards are not in place for customer provisioning, billing, and servicing. The scope of this policy will address the following local connectivity options:

1. LEC Services Resale (i.e., an Alternative Local Exchange Carrier (ALEC) buys features, services, and access to facilities from the incumbent Local Exchange Carrier (LEC) at a wholesale price and resells those services to end-user customers), and
2. Unbundled loop and/or port (i.e., the ALEC leases Voice Grade (VG), or other, subscriber loop facilities and/or port from the incumbent LEC at tariffed rates and the ALEC provides the features or services either from its own switching fabric or outside plant).

II. PRINCIPLES UNDERLYING AT&T's POSITION

For effective local competition, the customer experience must be able to be provided by local service providers at least at parity with that provided by the incumbent LEC today. AT&T, to succeed in a competitive local arena, must provide its own customer servicing and billing.

III. POLICY POSITION ON DATA INTERFACES

Definitions:

For the remainder of this document, the data interfaces described will be broken down by what part of the customer serving process they fall under. *Pre-service order* refers to the information the customer representative obtains from systems and from the customer to enable a service order to be written. *Provisioning (or Service Ordering)* refers to the actual sending of a service order, the provisioning of that order's attributes in the local switching office or transport plant, and the installation of that service (if necessary) at the customer's premises. This includes receiving status of the above activities, confirmation of completion, or jeopardy reports related to each order. *Maintenance* refers to all information regarding outages, troubles, etc. and the dispatching of service repair. *Billing* refers to the transmission of usage recording data. *CARE* (Customer Account Record Exchange) is a Bellcore standard that enables the initiation and maintenance of customer account information.

Pre-Service Order and Provisioning:

Today, when a customer orders service from their local company the customer representative, while on the line with the customer, establishes which features and services are available to that customer, takes the order for the features and services desired, provides the customer with a telephone number (if a new line is being ordered), establishes the appropriate directory listing, ascertains if a service call is needed to install the line/service, and schedules a time and date for the installation to take place. AT&T work centers, along with the local company, then need to track the critical installation dates, etc. to ensure customer satisfaction. For the customer experience to be at least the same as today, all ALECs must have real-time read and write access to Telephone Line Number (TLN) and loop assignment systems, and repair systems through electronic interfaces. Real-time electronic interfaces will allow the ALEC timely entry and provisioning of

the order, and receipt of status, confirmation of order completions, and jeopardy notices prior to missed order commitments.

If the ALEC is providing service from its own switch, access to all the above interfaces may still be necessary. For example, if the ALEC is provided a block of NPA-NXXs to allow it to provide its own Telephone Number Administration, a link (although not real-time) still must be established with the incumbent LEC's Telephone Line Number Administration System¹. Also, if installation and repair are still provided by the incumbent LEC, the same need to access repair and service status systems exist.

The service order should be transmitted from the ALEC to the incumbent LEC via an electronic interface in a standard data format (that includes all data necessary for directory listings adds, changes, and deletes; E911; etc.). Although the service order process does not need to be real-time, confirmation of receipt of the service order should be sent to the ALEC within seconds of the original transmission, and the order should be completed within 1 day (if no premises installation is required) and within 4 days (if a premises installation is required).

Maintenance:

Similar to service provisioning, when a customer calls to report a trouble with their local telephone service the customer representative, while on the line with the customer, should have the ability to perform intrusive or non-intrusive testing to isolate troubles, to determine if a dispatch is required, and to schedule the dispatch. The incumbent LEC has the responsibility to monitor its scheduling to assure clearances occur within established metrics.

To obtain a parity level with the incumbent LEC, the ALECs will require notification of switching and system failures, planned network-affecting events (cable throws, switch upgrades, reassignments, etc.), and unplanned network-affecting events (tree fell on cable, fire, vandalism). Information should include which areas (NPA-NXX) are affected, and the estimated time of repair, which will enable the ALEC to predetermine customers affected by the outage and provide a proactive environment for the customer. Reasonable notice must be provided in a timely manner when changes occur to distribution plant to minimize disruptions for the customer, and to allow timely updates of customer data. Also required are data descriptions of where the Right of Ways (ROW) are located geographically, distribution plant layouts, and configuration specifics (location and size of bridge taps, electrical characteristics and performance bounds on the loop, etc) are needed. This information is needed to allow accurate statusing and repair when cable cuts or road/utility construction occurs. Other operational standards and efficient inter-company processes are needed for handling Operations Support System (OSS) connections to network elements, Connectivity Delivery, Provisioning, and Maintenance.

Billing:

For the local service resellers to bill their customers, all resellers of local service must have a right to obtain local usage recorded for their customers via standard AMA or EMI formats in a timely fashion and on the same terms and conditions as the incumbent LEC uses such data. Also, processes must be made available to the resellers of local service for processing in and out collects (e.g., a call is made within a LATA in California and is billed to a number in NY owned by a reseller. That call is rated by Pac Bell and the rated message must be transported to the reseller for billing). Today, the NPA-NXX uniquely determines the local service provider. With open local

¹ The dominant LEC in a state currently acts as the Number Administrator for all local service providers.

markets, the entire telephone number will determine the local provider of the customer. Also, without a mechanism by which a single data source housing information from all local service providers is maintained and kept current by the local service providers, it will be difficult, at best, to send the usage records to the correct local service provider for proper billing. The proposed process to have a neutral third party maintain and administer such a database which will be kept current by updates from all local service providers is referred to as the Toll Clearinghouse.

Customer Account Record Exchange (CARE):

CARE is an established standard of exchange of customer account maintenance information between LECs and Interexchange Carriers (IXCs). Information that is sent via CARE includes Preferred Interexchange Carrier (PIC) data so that IXCs and LECs keep the customer PIC data consistent and current, and Billing Name and Address (BNA) queries which enable an IXC to obtain the data necessary to bill for customers that are subscribed to another IXC but have used the former IXC's network "casually". With the advent of open local markets, there must be (i) IXC PIC processing rules established among the local service providers to avoid slamming and to encourage customer choice in IXCs as well as local service providers, and (ii) the extension of IXC CARE Standards to handle multiple local service providers in open local markets. Also, there will be a need for "Local CARE" (just as customer account transactions are processed via CARE for IXC movement, they will require similar processing to track movement among local service providers).

As with the Toll Clearinghouse process, a similar CARE Clearinghouse should be established to enable BNA requests and other CARE transmissions to be routed to the correct local service provider in the absence of this data being provided through another source. The same database can serve both the Toll and CARE Clearinghouse functions.

Other Considerations:

Further considerations apply to system access to this shared data, and the establishment of procedures for inter-company interaction, exception handling, updates & changes to data, performance and reliability concerns, and disaster handling.

Other processes or interfaces that were not addressed above, but also are important for effective local competition include:

- ALECs have write access to the card verification database
- Servicing standards must be established for processes such as directory listings, directory assistance, and customer servicing
- Access to 911 emergency number listings for directory assistance and operator service support
- Access to the Local Number Portability Database
- IXCs must be able to purchase recording and billing services when ANI is not sent to the IXC's switch

Summary:

As most of the interfaces described in this document require real-time, interactive communications, Electronic Bonding Interface (EBI) is the recommended interface mechanism. Standards work is being done currently in the Open Billing Forum (OBF) and the Electronic Communication Implementation Committee (ECIC) to accomplish these goals. Currently EBI is not expected to be

implemented fully until mid-1996 to 1997. In the interim, work must proceed to agree on acceptable alternatives that still meet the requirements outlined in this document.

It is important to differentiate between data element format standards and the physical transport medium. Generally, much is known regarding the various methods of data transmission. Electronic mail and NDM are already widely used transmission media in AT&T and elsewhere. The transmission medium for Electronic Bonding is X.25, a packet network protocol that is widely used today both within AT&T and in the industry. The major effort must focus on defining the data elements needed for each interface and then defining the data format to be used. The data elements defined will be independent of the transmission medium. Therefore, resolution of the data elements will solve most of the interface problems. Once the data elements are negotiated, the transmission medium can be decided on based on volumes and timeliness. Finally, the data format will follow and will be tailored to the transmission medium chosen.

There is a need for a consistent set of interface standards because, without a consistent set, new competitors will face built-in road-blocks which require them to develop different interfaces to potentially large numbers of different LECs, each with its own unilateral requirements. Thus, data elements should be negotiated in this light.

Although the information required to provide customers local service is the same in both LEC Services Resale and Loop Resale, there are differences in what data we need from the incumbent LEC. The most important issues for loop resale are:

- testing
- scheduling cutovers with no disruption of service
- listings (DA and E911 database)
- coordination for repair/dispatch
- [our] switch vs. [their] loop difficulties (i.e., trouble isolation)
- Local Number Portability (LNP)

Below is a table summarizing AT&T's Policy for these sets of interfaces. For the loop resale column, note that testing issues, scheduling of cutovers, dispatch coordination, and trouble isolation should be covered under the maintenance process; listings are covered under the directory listings process; and the Local Number Portability issue surrounding the mapping of the customer telephone number to the local service provider is analogous to the clearinghouse concept for usage and CARE data.

SUMMARY OF INTERFACES NEEDING LEC NEGOTIATIONS

Process	Data Needed	LEC Svc Resale	Loop Resale	Timeliness	Data Format	Transmission Medium
Pre Service Order	Service / Feature Availability	√		Real-Time	Transaction	Electronic Bonding (EBI) (Long Term) Dial-Up / On-Line (Short Term)
Pre Service Order	Telephone Number Administration	√		Real-Time	Transaction	"
Pre Service Order	Installation & Repair Schedule	√	√ ²	Real-Time	Transaction	"
Provisioning (Service Ordering)	Service Order	√		Edits / Acknowledgment in Seconds; Completion within 1 Day ³	Standard Order Data Elements	EBI (Long Term) Network Data Mover (NDM) or email (Short Term)
Directory Listings	Service Order	√		"	"	"
Maintenance	LEC Network affecting events	√	√	Real-Time	Transaction	EBI (Long Term) Dial-Up / On-Line (Short Term)
Maintenance	Loop Test	√	√	Real-Time	Transaction	"
Maintenance	Dispatch Schedule	√	√ ⁴	Real-Time	Transaction	"
Billing Usage	Recorded Messages	√		Daily (or as needed)	EMI Standard	Network Data Mover (NDM)
CARE	CARE Records	√	√	Daily	CARE 960 Byte Standard	EBI (Lg Term) NDM (Short Term)

² Needed if LEC contracted to perform repair/truck rolls. Note: Whoever we contract to do repair, we need this interface with that contracted company. There is also a need for coordination of repair with the LEC if someone other than the LEC is performing repair/truck rolls.

³ Within 1 Day if no premises installation required; Within 4 Days if premises installation required.

⁴ Needed if LEC contracted to perform repair/truck rolls. Note: Whoever we contract to do repair, we need this interface with that contracted company. There is also a need for coordination of repair with the LEC if someone other than the LEC is performing repair/truck rolls.

IV. FUTURE WORK

Alternatives may have to be accepted for the Pre-Service Order functionality that have drawbacks. For example, one alternative is to remove the need for on-line access to the telephone line number administration system of the incumbent LEC and have the LEC assign blocks of NPA-NXXs to the various ALECs. This solution is not desired since (i) there is no possibility of maintaining number portability in a resale environment without losing feature functionality, and (ii) there is no flexibility afforded the ALECs in offering vanity telephone numbers. One of the simplicities of LEC Services Resale is that Local Number Portability is inherent since the incumbent LEC still administers all the telephone number assignment. We must be careful not to substitute one problem for another (i.e., access to telephone number administration system for local number portability) by asking for blocks of NPA-NXXs.

Other data that must be accessed in read and write fashion from the incumbent LEC, such as the loop status, install scheduler, customer features/availability, are impossible to transfer to the ALEC as this data would be rendered unmaintainable.

As stated earlier in this document, since the local service provider of a customer can no longer be determined by NPA-NXX, a source must be identified and developed to ensure the mapping of the customer number to their local service provider. If this data relationship is not maintained and administered, there will be no mechanism to determine the correct local service provider for essential business operational practices, such as passing billing records to the proper biller and routing BNA (Billing Name and Address)/CARE requests/records from DXCs to the correct local service provider. The optimal position is that an industry-wide process involving number administration and record maintenance (clearinghouse) should be done by a neutral third party. In the interim, in a resale environment, the only company that has the entire view of the data is the incumbent LEC.

KEY WORK ITEMS/ACTIVITIES

Work Item	Current Negotiations	Key Results Expected	Owner(s)
Pre-Service Order	SNET; Ameritech	1. Define Short Term Solution (11/95), including performance modeling 2. Define Long Term EBI Solution (12/95)	1. Nancy Taft 2. R. Rizzo
Service Order / Provisioning	SNET; Ameritech	1. Define Short Term Solution (e-mail for SNET RESALE), including data format, performance modeling, and cost (10/95) 2. Define Loop Resale Interface for Short Term (11/95) 3. Define Long Term EBI Solution (12/95)	1. Nancy Taft 2. Nancy Taft, Bob Katz 3. OBF

Work Item	Current Negotiations	Key Results Expected	Owner(s)
CARE/PIC Data -	SNET; Ameritech; etc.	1. Define Req'ts. for LD needs (<i>Complete</i>) 2. Define Solution for data exchange (11/95)	1. Jackie Jones 2. Robin Scholl
Billing (Usage) Data	SNET; Ameritech; etc.	1. Define Req'ts. for AT&T Needs (<i>Complete</i>) 2. Define Solution for data exchange (11/95)	1. Peggy Doyle 2. Robin Scholl
Repair & Maintenance	SNET; Ameritech; etc.	1. Define Short Term Solution for data exchange (11/95) 2. Define Long Term Solution for data exchange (12/95)	1. Cathy Griffin 2. Cathy Griffin

Standard AT&T Billing Requirements
Local / Total Service Resale

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DESCRIPTION OF CHANGES

<i>DATE</i>	<i>VERSION #</i>	<i>AFFECTED PAGES</i>	<i>DESCRIPTION</i>
September 1, 1995	2.0	All	Update format to meet control procedures and update addresses
September 29, 1995	2.1	23-39	Update values and phrase codes
November 11, 1995	3.0	All	Update format, jurisdiction and bill structure
January 5, 1996	3.1	23	Change Facility Charge Type Ind
January 25, 1996	4.0	1.3, 1.4, 2.0 2.8 5.0	Changed version information be concise. Added PIC information Added payment information Rewrote to remove diskette reference
February 14, 1996	4.1	All	Modified to reflect proposed industry standards.

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7.0 SAMPLE BILL

- 7.1 Overview

EXHIBIT 1 NEW AND/OR DELETED BILL LIST

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1.0 OBTAINING AND USING THE SABR DOCUMENT

1.1 What Is The SABR Document

The Standard AT&T Billing Requirements (SABR) for Local / Total Service Resale document was created to enable AT&T and the billing entity to efficiently manage their billing data and financial transactions. The SABR document provides the billing entities with AT&T's standard business and billing principles; bill receipt and payment requirements; and, where AT&T enters the local market via Total Service Resale, billing requirements. This document does not address any type of end user billing.

The scenario termed "Total Service Resale" is as follows:

For those end users who choose AT&T as their local service provider, the Incumbent Local Exchange Carrier (ILEC) will provide all equipment and switch processing to complete local calls. AT&T takes the customer's order and forwards it to the ILEC. The ILEC then bills AT&T for the end user's basic service, calling features (i.e., call waiting, call forwarding, etc.). The ILEC will stop billing the AT&T end user and AT&T will assume responsibility for billing the end user. The end user's physical service remains unchanged and continues to receive dial tone from the ILEC.

1.2 How To Use The SABR Document

AT&T will adhere to industry standards for billing Local / Total Service Resale service once they are established. In lieu those standards, AT&T expects charges for Local / Total Service Resale billed to AT&T to be rendered like an access bill, using the additional requirements as defined further in the SABR document in conjunction with the existing industry standard guidelines for access billing. Those standard guidelines are Carrier Access Billing System (CABS) and Small Exchange Carrier Access Billing (SECAB). To order any of these documents, please call 908-699-5800 or 1-800-521-2673 and use the following reference information:

CABS VOLUME 1	-	SR OPT - 001868	CARRIER BILLING GENERAL INFORMATION
CABS VOLUME 1A	-	SR OPT - 001869	PHRASE CODES AND PHRASES
CABS VOLUME 2	-	SR OPT - 001871	SERVICE EXHIBITS
CABS VOLUME 3	-	SR OPT - 001872	BDT RECORD LAYOUTS
CABS VOLUME 3A	-	SR OPT - 001873	BDT EDITS
CABS VOLUME 4	-	SR OPT - 001874	DATA ELEMENTS
CABS VOLUME 5	-	SR OPT - 001875	MEET POINT BILLING
SECAB	-	SR OPT - 001856	SECAB DOCUMENT

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1.3 Which Industry Version To Use

For CABS, under established change management structure, some of the changes scheduled for Version 26.0 will need to occur prior to the implementation date of that Version and the additional requirements as further defined in this document, in order to accommodate billing for Local / Total Service Resale. For SECAB, billing entities must adhere to SECAB Issue 4 and the additional requirements as further defined in this document for billing Local / Total Service Resale.

1.4 Differences From The Industry Standards

Under the existing CABS structure, billing entities must document any differences to the standards for the CABS Version format. AT&T expects the billing entity to identify and provide documentation if any of the existing differences conflict with the billing requirements defined in this document.

1.5 SABR Document Revision

The SABR revisions will be developed as warranted by AT&T. All changes to these requirements will be updated and communicated to the billing entity.

1.6 Who To Contact

This document is proprietary to AT&T. All contents of this document are subject to a joint Non-Disclosure Agreement. This is a controlled document and may not be modified in any manner. It is NOT controlled in printed form and may be reproduced as needed under the auspices of the joint Non-Disclosure Agreement. Questions, comments or for additional copies contact the following:

SABR Document Manager
500 North Point Parkway, FLOC B1816
Alpharetta, GA 30202
Telephone (770) 750-8873

2.0 AT&T'S BUSINESS AND BILLING PRINCIPLES

The following AT&T principles apply to all access billing, including Total Service Resale.

2.1 ASR

Billing detail data should reflect what was provided by AT&T in the provisioning process via the Access Service Request (ASR) or negotiated ordering process.

2.2 BANs

Billing Account Numbers (BANs) may contain up to 13 alpha-numeric characters. The BAN, once established, should remain the same each month. AT&T requires 30 calendar days written notice prior to changing a BAN.

2.3 Bill Date

The Bill Date should always be present on a bill, be the same month after month, be a valid calendar date, and should not be more than one year old.

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2.4 Company Codes

The Originating Company Code or State Level Company Code must be provided to the AT&T Company Coordinator 30 calendar days prior to testing so it may be added to AT&T's internal tables.

2.5 Invoice Number

The invoice should be received within ten days of the Bill Date.

2.6 Monthly Facility Charges

Monthly facility charges are billed in advance of the Bill Date. (i.e., For a 4-1-93 Bill Date, the monthly facility charges on the bill would normally be for the period 4-1-93 thru 4-30-93).

2.7 Payment Date

Payment will be made 30 days from the Bill Date, or 20 days from receipt of the bill, whichever is greater.

2.8 PIC Charges

Charges/credits for Primary Interexchange Carrier (PIC) change charges should be billed separately from the access bill. The PIC bill should denote the PIC charges are for Local / Total Service Resale. Contact Amy Linzey at 512-343-5366 to set up billing.

2.9 Preferred Format

AT&T's preferred format in which to receive a bill is in a mechanized media, using either the CABS or SECAB format.

2.10 Preferred Payment Medium

AT&T's preferred medium for payment is through Electronic Funds Transfer. Payment information regarding where the payment should be made and to whom should be established 30 calendar days prior to the receipt of the first bill. If the payment date is the same multiple bills (i.e. Switched D bill and a Total Service Resale Bill) only one payment for the sum of all bills payable on that date will be rendered.

2.11 State Identification

All charges should reflect the state from which charges were incurred.

2.12 Switched MOU

Switched minutes of use are billed in arrears of the Bill Date. (i.e., For a 4-1-93 Bill Date, minutes of use on the bill would normally be for the period 3-1-93 thru 3-31-93.)

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2.13 Timely And Accurate Billing

AT&T expects to receive timely and accurate billing. "Timely" is defined by the following:

Bills must be received no later than 10 calendar days from the Bill Date and 20 days prior to the Payment Due Date. If AT&T receives the bill after 10 days from the Bill Date, the Payment Due Date will be extended by the number of days the bill is late. The Payment Due Date is provided on the bill and must be 30 calendar days from the Bill Date. The Payment Due Date should be a business day or reflect the following:

If the Original

Payment Due Date is:

Saturday

Sunday

Bank Holiday on Monday

Bank Holiday on Tuesday,

Wednesday, Thursday, Friday

Change Date To:

Preceding Business Day

Following Business Day

Following Business Day

Preceding Business Day

NOTE: If a company's tariff denotes a different timeframe, the dates should be reflected accordingly.

2.14 Wire Payment

AT&T will render payment via wire transfer to only one address per company.

3.0 MECHANIZED BILLING REQUIREMENTS

The following denotes AT&T's requirements for a mechanized bill which are not contained in the industry standards.

3.1 CABS Format

3.1.1 BANs

The BAN should not contain embedded spaces or low values.

3.1.2. New Or Deleted BANs

All billing entities are required to report NEW or DELETED mechanized bill activity. This information should be sent to AT&T 30 calendar days prior to the effective date of the Billing Account Number (BAN) changes. Please use the NEW AND/OR DELETED BILL LIST Form (Exhibit 1) to supply the information in a standard format. Information should be sent to:

Robyn Aubrey
500 North Point Parkway, Room B1612
Alpharetta, GA 30202

3.1.3 Bill Date

The Bill Date should not contain spaces or non-numeric values.

3.1.4 Detail Record

The bill must contain at least one detail record.

3.1.5 From/Thru Date

Any "From" Date should be less than the associated "Thru" Date and neither date can contain spaces.

3.1.6 Invoice Number

The Invoice Number must not have embedded spaces or low values.

3.2 SECAB Format

3.2.1 Required Data

All data denoted as IC preference is required.

3.2.2 Company Code

When the Company Code is not a State Level Company Code, the State Identification should be the state from which charges were incurred.

3.2.3 From/Thru Date

Any "From" Date should be less than the associated "Thru" Date and neither date can contain spaces.

3.2.4 Inventory And Rating

The SECAB Inventory and Rating Record Information for a Facility Bill will be provided monthly.

3.2.5 Multiple State/EC

In a multiple state or multiple Exchange Carrier (EC) environment, the STATE IDENTIFICATION on the Face Page (SCFAC1) Record should be populated with XX. This indicates the amounts on Summary Page 1-3 (SCSUM1, SCSUM2 and SCSUM3) Records represent the sum of multiple Summary Pages 4 and 5 (SCSUM4 and SCSUM5) Records.

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3.2.6 Sequence

The mechanized records should be sent in the following sequence. (All records have been denoted, however they should be sent only when the production of the record is applicable as described in the SECAB document.)

RECORD

SCFILE
SCHEAD
SCFAC1
SCFAC2
SCFAC3
SCFAC4
SCSUM1
SCSUM2
SCSUM3
SCDSS1

SCSUM4
SCSUM5
SCDSS2

NOTE: GROUP BY COMPANY - SCSUM4,
SCSUM5, SCDSS2; SCSUM4,
SCSUM5, SCDSS2; etc...

SCADJ1
SCOCC1
SCUSG1
SCFCTR
SCSURG
SCTAX1
SCCKTL

SCSPC1
SCSPC2
SCSPC3

NOTE: GROUP BY CIRCUIT CHARGE -
SCSPC1, SCSPC2, SCSPC3;
SCSPC1, SCSPC2, SCSPC3, etc...

SCEND1
SCEND2

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4.0 BEFORE A BILL CAN BE SENT

4.1 Sending A Mechanized Bill For The First Time

When the billing entity wants to begin billing in a mechanized format, a testing period is required before the first mechanized bill can be accepted. Each type of service which will be billed by the billing entity should be represented on a test tape and go through the testing process before that service is billed. Three months of correctly formatted bill data in a mechanized format that complies with the requirements set forth in this document should be received during the initial testing period. Any difference to this testing time frame should be negotiated. Testing results will be provided to the billing entity, who is then expected to make all associated corrections before sending additional test data.

4.2 Changing From One Version To Another In A Mechanized Format

When billing in the CABS format, there are no testing requirements when moving from one CABS Version to another. When billing in the SECAB mechanized format, one month of correctly formatted bill data that complies with the requirements set forth in this document should be received during the testing period before converting to a new version.

4.3 Changing From Any Established Mechanized Format To Another

When the billing entity wants to change from one format to another (i.e., SECAB to CABS) a testing period is required before the first mechanized bill in the new format can be accepted. Each type of service which will be billed by the billing entity should be represented on a test tape and go through the testing process before that service is billed. Three months of correctly formatted bill data in the new format which complies with the requirements set forth in this document should be received during the testing period. Testing results will be provided to the billing entity, who is then expected to make all associated corrections before sending additional test data.

4.4 Financial Assurance - Billing Certification Process

The billing entity will participate in the Billing Certification Process through the formation of a joint Process Management Team. This billing certification process utilizes Process management techniques and Statistical Process Controls (SPC) to establish both quality and financial assurance controls throughout AT&T and billing entity billing processes. This approach establishes metrics throughout the provisioning and billing process to provide information on process performance and financial performance. These metrics identify where failures and defects are occurring throughout the process. The billing entity has sole responsibility for billing accuracy. The following denotes the principle components of the Billing Certification Process.

4.4.1 Measurement Systems

The in-process metrics allows the billing entity to self-identify the quality of the billing and provisioning processes. The outputs of the measurements systems can be used to detect abnormal fluctuations and eliminate the cause.

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4.4.2 Supplier Quality Certification

The initial and subsequent reviews evaluate procedures, controls, measurements and documentation related to provisioning and billing. This will ensure the billing entity processes are performing and producing output reports according to AT&T's requirements.

4.4.3 Signed Operating Agreement

Upon completion of the Supplier Quality Certification, an operating agreement will be signed by officers of both companies to establish and concur in the ongoing operational methodology.

4.4.4 Change Management Process

This is an ongoing notification and documentation process which identifies and documents all changes to billing and the associated measurements system. Documentation of the most current processes must be in place at all times.

4.4.5 Bill Period Closure

The process by which AT&T and the billing entity jointly agree to close a specific billing period to all further analysis and financial transactions. The agreement signifies:

- * All billing has been rendered for the specific period.
- * All financial adjustments have been processed.
- * All unsupported monthly charges have been verified and resolved.

4.4.6 Process Performance Measurements

The process performance measurements are:

- * Detailed Certifications
- * In-Process Measurements
- * Process Performance Measurement
- * Flows for all Bill impacting Processes
- * Control Charts indicating Process Performance
- * Pareto Diagrams reflecting Root Causes
- * Reports of Financial Impact of Defects
- * Reports of Process Improvements

5.0 SENDING A BILL

5.1 Overview

This section describes how to send a bill formatted using the CABS or SECAB specifications. The physical requirements for providing the mechanized billing data to AT&T via electronic data transmission, cartridge (cassette), or reel tape are provided.

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5.2 Preferred Medium

It is AT&T's expectation to receive billing data via electronic data transmission. Connect: Direct (formerly known as NDM - Network Data Mover) is AT&T's preferred medium. If Connect: Direct is not available tape or paper can be used until Connect: Direct is established by the billing entity. It is AT&T's expectation the billing entity will work towards eventually using Connect: Direct.

5.3 Sending Data Transmission Via Connect: Direct

5.3.1 Setup

Any billing entity with Connect: Direct capability via a switched 56kb or T1.5 lines should contact their AT&T Company Manager to begin negotiations for data transmission. Based on negotiations with each billing entity, the AT&T data centers will be responsible for originating the calls for data transmission via switched 56kb or T1.5 lines. If a billing entity has an established Connect: Direct link with AT&T, that link can be used for data transmission if the location and applications are the same for the existing link. Otherwise, the AT&T Contact Manager should be contacted to negotiate a new link or new application for the data transmission. When sending test data, notification of the test data transmission should be made to the testing coordinator by calling 770-750-7736.

5.3.2 Requirements For Transmission

- A T1.5 or 56kb circuit to Gateway for Connect: Direct is required.
- AT&T/Alpharetta must have the billing entity's Connect: Direct Node ID and corresponding VTAM APPL ID. Any changes to the billing entity's Connect: Direct Node ID must be communicated to the AT&T Company Manager no later than 21 days before the changes take effect.
- The AT&T/Alpharetta's Connect: Direct Node ID of "NDMATTA4" and VTAM APPL ID of "NDMATTA4" must be in the billing entity's software.
- AT&T/Alpharetta will supply RACF ID and password.

5.3.3 Volume/Dataset Label Format

The format for Volume Label and Dataset Label 1 & 2 should be used as described further in this section.

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5.3.4 Dataset Name Format

The following dataset format should be used as applicable.

5.3.4.1 Production Dataset - CABS Format

AF25.AXXXXYYY.AZZZ.DDDEE

AF25. = Job Naming Convention

XXXX = Numeric Company Code

YYY = LEC Remote

.AZZZ = RAO (Revenue Accounting Office)

.DDD = .BDT (Billing Data Tape W/ Or W/O CSR)

or

.CSR (Customer Service Record)

EE = 01 (Bill Period) (optional)

thru

31 (Bill Period) (optional)

or

GA (US Postal-State Code)

5.3.4.2 Test Dataset - CABS Format

AF25.ATEST.AXXXX.DDD

AF25.ATEST. = Job Naming Convention

XXXX = Numeric Company Code

DDD = .BDT (Billing Data Tape W/ Or W/O CSR)

or

CSR (Customer Service Record)

5.3.4.3 Production Dataset - SECAB Format

AFSC.AXXXXYYY.A000.SECAB

AFSC. = Job Naming Convention

XXXX = Numeric Company Code

YYY = Alpha Company Name

5.3.4.4 Test Dataset - SECAB Format

AFSC.ATEST.XXXXX.SECAB

AFSC.ATEST=Job Naming Convention

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5.4 Sending A Paper Bill

Paper bills should be sent to the following addresses:

Paper bills thru US Mail:

AT&T
Caller Service 6908
Alpharetta, GA 30239-6908
ATTN.: AC&R Access Bill Coordinator

Paper bills sent overnight:

AT&T
500 North Point Parkway
FLOC B1404
Alpharetta, GA 30202
ATTN.: AC&R Access Bill Coordinator

5.5 Sending A Tape

5.5.1 AT&T Preference

If billing data is provided via magnetic tape, AT&T's preference is cartridge (cassette) tape.

5.5.2 Tape Data Requirement

The dataset serial number on the first header record of the IBM standard tape label must have the same format described further in this section.

5.5.3 Tape Quality

Cartridge (cassette) and reel tapes purchased for eventual presentation to AT&T should be of high quality. Specifications should be made to the suppliers that each reel of tape should be 100% tested at 20% or better "clipping" level and full width certified permanent error free at final inspection.

AT&T reserves the right to destroy a tape that has been determined to have unrecoverable errors. AT&T also reserves the right to replace a tape with one of equal or better quality.

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5.5.4 Tape Description

Cartridge (cassette) and reel tapes must be 9-track, odd parity, 6250 BPI, group coded recording mode, extended binary-coded decimal interchange code (EBCDIC).

Billing data tapes produced according to the CABS BOS must have the following record and label standards. The dataset serial number on the first header record of the IBM standard tape label must also have the following same format.

- Record length: 225 bytes (fixed length)
- Blocking factor: 84 records per block
- Block size: 18,900 bytes per block
- Labels: Standard IBM Operating System

Billing data tapes produced according to the SECAB document the following record and label standards. The dataset serial number on the first header record of the IBM standard tape label must also have the following same format.

- Record length: 250 bytes (fixed length)

A single 6 digit serial number must appear on the external (flat) surface of the tape for visual identification. This number must also appear in the "dataset serial number field" of the first header record of the IBM standard tape label. This serial number should consist of the character "V" followed by the reporting location's four digit Originating Company Code and a numeric character chosen by the sending company. The external and internal label must be the same.

The dataset name must appear on the flat side of the reel and also in the "data set name field" on the first header record of the IBM standard tape label.

The sending company's name, address, and contact should appear on the flat side of the cartridge or reel.

5.5.5 Tape Label Description

Tape labels must conform to IBM OS/VS Operating System Standards. Refer to the IBM Standard Labels Manual (GC26-3795-3) for additional information. IBM standard labels are 80-character records recorded in EBCDIC, odd parity. The first four characters identify the labels:

<u>VOL 1</u>	<u>Volume label</u>
HDR1 and HDR2	Data set header labels
EOV1 and EOV2	Data set trailer labels (end-of-volume for multi-reel files)
EOF1 and EOF2	Data set trailer labels (end-of-data-set)

The HDR1, EOV1, and EOF1 labels use the same format; the HDR2, EOV2, and EOF2 labels use the same format.

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5.5.6 Tape Packaging Requirements

Where magnetic tape shipping containers are transported in freight compartments, adequate magnetic field protection is provided by a typical 6-inch distance from any magnetic field generating device (except a magnetron-tape device). There are many shipping containers on the market, but only those with internal insulation material have been found to prevent damage. The outside of the shipping container should be clearly marked with the sending company name, contact and return address.

CAUTION: Tape canisters should not be used.

5.5.7 Where To Send The Tape

Tapes should be sent to one of the following address:

Test	AT&T 500 North Point Parkway FLOC B1104B Alpharetta, GA 30202 ATTN. Access Bill Testing Coordinator
Production- Tapes	AT&T 300 North Point Parkway FLOC 217M01 Alpharetta, GA 30202 ATTN. AC&R Access Bill Coordinator
Overnight Delivery	AT&T 500 North Point Parkway FLOC B1404 Alpharetta, GA 30202 ATTN. AC&R Access Bill Coordinator

5.5.8 Return Of A Tape

Mail-in tapes which provide billing data to AT&T will not be returned to the billing entity.

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5.5.9 Standard Volume Label Format (Vol. 1)

<u>FIELD NAME</u>	<u>CONTENTS</u>
Label Identifier (3 bytes)	The characters "VOL" identify this label as a volume label.
Label Number (1 byte)	The relative position of this label within a set of labels of the same type; it is always a 1 for the IBM standard volume label.
Volume Serial Number (6 bytes)	A unique identification code, normally numeric characters (000001-999999), but may be alpha-numeric; if fewer than 6 characters, must be left-justified. This same code should also appear on the external (flat) surface of the volume for visual identification.
Reserved (1 byte)	Reserved for future use - should be recorded as blanks.
VTOC Pointer (10 bytes)	Direct-access volumes only. This field is not used for tape volumes and should be recorded as blanks.
Reserved (10 bytes)	Reserved for future use - should be recorded as blanks.
Owner Name and Address Code (10 bytes)	Indicates a specific customer, person, installation, department, etc., to which the volume belongs. Any code or name is the volume belongs. Any code or name is acceptable.
Reserved (29 bytes)	Reserved for future use - should be recorded as blanks.

5.5.10 Standard Dataset Label 1 Format (HDR1, EOVI, EOF1)

<u>FIELD NAME</u>	<u>CONTENTS</u>
Label Identifier (3 bytes)	Three characters that identify the label are: HDR Header label (at the beginning of a dataset) EOV Trailer label (at the end of a tape volume, when the dataset continues on another volume) EOF Trailer label (at the end of a dataset).
Label Number (1 byte)	The relative position of this label within a set of labels of the same type; it is always a 1 for dataset label 1.

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5.5.10 Standard Dataset Label 1 Format (HDR1, EOVI, EOF1) (cont)

<u>FIELD NAME</u>	<u>CONTENTS</u>
Dataset Identifier (17 bytes)	The rightmost 17 bytes of the dataset name (includes GnnnnVnn if the dataset is part of a generation data group). If the dataset name is less than 17 bytes, it is left-justified and the remainder of this field is padded with blanks.
Dataset Serial Number (6 bytes)	The volume serial number of the tape volume containing the dataset. For multivolume datasets, this field contains the serial number of the first volume of the aggregate created at the same time. The serial number can be any 6 alphanumeric characters, normally numeric (000001-999999). If the number of characters is fewer than 6 characters, the code must be left-justified and followed by blanks.
Volume Sequence Number (4 bytes)	A number (0001-9999) that indicates the order of volume within the multivolume group created at the same time. This number is always 0001 for a single volume dataset.
Dataset Sequence Number (4 bytes)	A number (0001-9999) that indicates the relative position of the dataset within a multi-dataset group. This number is always 0001 for a single dataset organization.
Generation Number (4 bytes)	If the dataset is part of a generation data group, this field contains a number from 0001 to 9999 indicating the absolute generation number (the first generation is recorded as 0001). If the dataset is not part of a generation data group, this field contains blanks.
Version Number Of Generation (2 bytes)	If the dataset is part of a generation data group, this field a number from 00 to 99 indicating the version number of the generation (the first version is recorded as 00). If the dataset is not part of a generation data group, this field contains blanks.
Creation Date (6 bytes)	Year and day of the year when the dataset was created. The date is shown in the format byydd where: b = blank yy = year(00-99) ddd = day(001-366)

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5.5.10 Standard Dataset Label 1 Format (HDR1, EOVI, EOF1) (cont)

<u>FIELD NAME</u>	<u>CONTENTS</u>
Expiration Date (6 bytes)	Year and day of the year when the dataset may be scratched or overwritten. The data is shown in the format byydd where: b = blank yy = year (00-99) ddd = day (001-366)
Dataset Security (1 byte)	A code number indicating the security status of the dataset is as follows: 0 No password protection 1 Password protection Additional identification of the dataset is required before it can be read, written, or deleted (ignored if volume is RACF-defined) 3 Password protection Additional identification of the dataset is required before it can be read, written, or deleted (ignored if volume is RACF-defined).
Block Count (6 bytes)	This field in the trailer label shows the number of data blocks in the dataset on the current volume. This field in the header label is always zeros (000000).
System Code (13 bytes)	Unique code that identifies the system.
Reserved (7 bytes)	Reserved for future use - should be recorded as blanks.

5.5.11 Standard Dataset Label 2 Format (HDR2, EOVI, EOF2)

IBM standard dataset label 2 always follows dataset label 1 and contains additional information about the associated dataset.

<u>FIELD NAME</u>	<u>CONTENTS</u>
Label Identifier (3 bytes)	Three characters that identify the label are as follows: HDR Header label (at the beginning of a dataset) EOV Trailer label (at the end of a tape volume, when the dataset continues on another volume) EOF Trailer label (at the end of a dataset).

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5.5.11 Standard Dataset Label 2 Format (HDR2, EOVS2, EOF2) (cont)

FIELD NAME

CONTENTS

**Label Number
(1 byte)**

The relative position of this label within a set of labels of the same type; it is always a 2 for dataset label 2.

**Record Format
(1 byte)**

An alphabetic character that indicates the format of records in the associated dataset as follows:

- F Fixed length
- V Variable length
- U Undefined length.

**Block Length
(5 bytes)**

A number up to 32760 that indicates the block length, in bytes. Interpretation of the number depends on the following associated record format in Field 3:

- Format F - Block length (must be a multiple of the logical record length in Field 5)
- Format V - Maximum block length (including the 4 byte length indicator in the block)
- Format U - Maximum block length.

**Record Length
(5 bytes)**

A number that indicates the record length, in bytes. Interpretation of the number depends on the following associated record format in Field 3:

- Format F - Logical record length
- Format V - Maximum logical record length (including the 4 byte length indicator in the records)
- Format U - Zeros.

**Tape Density
(1 byte)**

A code indicating the record density of the tape, as follows:

Recording Density

<u>DEN Value</u>	<u>9-Track Tape</u>
3	1600 (PE)
4	6250 (GCR)

PE - is for phase encoded mode

GCR - is for group coded recording mode.

**Dataset Position
(1 byte)**

A code, indicating a volume switch, is as follows:

- 0 - No volume switch has occurred
- 1 - A volume switch previously occurred.

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5.5.11 Standard Dataset Label 2 Format (HDR2, EOVS, EOF2) (cont)

<u>FIELD NAME</u>	<u>CONTENTS</u>
Job/Job Step (17 bytes)	Identification of the job and job step that created the dataset. The first 8 bytes contain the name of the job, the ninth byte is a slash (/), and the final 8 bytes contain the name of the job step.
Tape Recording Technique (2 bytes)	A code or blanks indicating the tape recording technique used. This field is recorded as blanks for 9-track tape. The only technique available for 9-track tape is odd parity and no translation.
Control Characters (1 byte)	A code indicating whether a control character set was used to create the dataset and the type of control characters used: A Contains ASCII control characters M Contains machine control characters b Contains no control characters.
Reserved (1 byte)	Reserved for future use - should be recorded as blanks.
Block Attribute (1 byte)	A code indicating the block attribute used to create the dataset: B Blocked records S Spanned records R Blocked and spanned records b No blocked and no spanned records.
Reserved (8 bytes)	Bytes 40-42 - reserved for future use -should be blanks. Bytes 43-47 - (3420 tape units only) serial number of creating tape unit. Blank for other units.
Checkpoint Dataset (1 byte)	In VS2-Release 2, this byte contains the identifier character C if the dataset is a checkpoint dataset; the byte is blank if the dataset is not a check point dataset or in other releases of the VS systems.
Reserved (32 bytes)	Reserved for future use - should be recorded as blanks.

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6.0 SPECIFIC REQUIREMENTS FOR LOCAL / TOTAL SERVICE RESALE

6.1 Overview

The existing Carrier Access Billing System (CABS) Billing Output Specifications (BOS) and Small Exchange Carrier Access Billing (SECAB) documents provide guidelines for how to render an access bill. Additional information is required to be uniquely identified on the bill for Local / Total Service Resale. Some of the changes scheduled for CABS Version 26.0 will need to occur prior to the implementation date of that Version. A CABS paper bill example (Refer to Section 7) is provided which consists of both flat rated and usage charges on the same bill. All additional information and information which is scheduled for Version 26.0 but will need to occur prior to the implementation date of that Version has been presented in **Bold type**. The associated mechanized changes are reflected at the bottom of each page.

6.2 PIC Charges

Charges/credits for Primary Interexchange Carrier (PIC) change charges should be billed separately from the Local / Total Service Resale bill. The PIC bill should denote the charges are for Local / Total Service Resale. Contact Amy Linzey at 512-343-5366 to set up billing.

6.3 Bill Structure

The bill structure will reflect both detailed usage and flat rated data.

6.4 Account Level

6.4.1 Account Identification

The account level should uniquely identify the type of bill being rendered as "Local / Total Service Resale" and only contain charges for that service. There should be no mixture of other services on this bill. For a mechanized CABS bill, a unique Type of Account value should be provided. This field should be populated with the value "Q" for Local / Total Service Resale. For a mechanized SECAB bill, a unique Service /Feature Group ID value should be provided. This field should be populated with the value "Q" for Local / Total Service Resale.

6.4.2 CIC

CIC is not applicable and should not be populated on a CABS or SECAB Local / Total Service Resale bill.

6.4.3 Jurisdiction

Throughout the paper bill where "Jurisdiction" is identified, Local and Local Toll charges should be identified as "Local" (rather than Interstate, Intrastate, etc.). For a mechanized bill, the Jurisdiction Ind should be populated with the value "5" for Local.

AT&T
Department of Bell Services
Billing Department
Billing Charge for Bell Services

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6.5 Phrase Codes

For both the Adjustment and Other Charges and Credits section, the following additional phrase literal (phrase codes for a mechanized bill) should be used to adjust charges or bill fractional amounts.

<u>CODE</u>	<u>PHRASE LITERAL</u>
9A1	Adjustment of Auxiliary Local Line
9A2	Fractional Charge for new Auxiliary Local Line
9A3	Fractional Amount for disconnected Auxiliary Local Line
9A4	Adjustment of Hot Spare Line
9A5	Fractional Charge for new Hot Spare Line
9A6	Fractional Amount for disconnected Hot Spare Line
9A7	Adjustment of Off Premise Extension
9A8	Fractional Charge for new Off Premise Extension
9A9	Fractional Amount for disconnected Off Premise Extension
9A0	Adjustment of Private Line - Digital
9B1	Fractional Charge for new Private Line - Digital
9B2	Fractional Amount for disconnected Private Line - Digital
9B3	Adjustment of Private Line - Analog
9B4	Fractional Charge for new Private Line - Analog
9B5	Fractional Amount for disconnected Private Line - Analog
9B6	Adjustment of Trunk- First (Non PBX)
9B7	Fractional Charge for new Trunk- First (Non PBX)
9B8	Fractional Amount for disconnected Trunk- First (Non PBX)
9B9	Adjustment of Trunk- Additional (Non PBX)
9B0	Fractional Charge for new Trunk- Additional (Non PBX)
9C1	Fractional Amount for disconnected Trunk- Additional (Non PBX)
9C2	Adjustment of Trunk - First (PBX)
9C3	Fractional Charge for new Trunk - First (PBX)
9C4	Fractional Amount for disconnected Trunk - First (PBX)
9C5	Adjustment of FX Line
9C6	Fractional Charge for new FX Line
9C7	Fractional Amount for disconnected FX Line
9C8	Adjustment of DAL (Master Line Only)
9C9	Fractional Charge for new DAL (Master Line Only)
9C0	Fractional Amount for disconnected DAL (Master Line Only)
9D1	Adjustment of Direct Outward Dialing Trunk
9D2	Fractional Charge for new Direct Outward Dialing Trunk
9D3	Fractional Amount for disconnected Direct Outward Dialing Trunk
9D4	Adjustment of Main Local Line Charges
9D5	Fractional Charge for new Main Local Line
9D6	Fractional Amount for disconnected Main Local Line

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6.5 Phrase Codes (cont)

<u>CODE</u>	<u>PHRASE LITERAL</u>
9D7	Adjustment of Centrex Service
9D8	Fractional Charge for new Centrex Service
9D9	Fractional Amount for disconnected Centrex Service
9D0	Adjustment of Data Conditioning
9E1	Fractional Charge for new Data Conditioning
9E2	Fractional Amount for Data Conditioning
9E3	Adjustment of Inside Wiring - Maintenance Agreement
9E4	Fractional Charge for new Inside Wiring - Maintenance Agreement
9E5	Fractional Amount for disconnected Inside Wiring - Maintenance Agreement
9E6	Adjustment of Inside Wiring - Install/upgrade
9E7	Fractional Charge for new Inside Wiring - Install/upgrade
9E8	Fractional Amount for disconnected Inside Wiring - Install/upgrade
9E9	Adjustment of Voice Mail
9E0	Fractional Charge for new Voice Mail
9F1	Fractional Amount for disconnected Voice Mail
9F2	Adjustment of Touch-tone
9F3	Fractional Charge for new Touch-tone
9F4	Fractional Amount for disconnected Touch-tone
9F5	Adjustment of Hunting - Normal
9F6	Fractional Charge for new Hunting - Normal
9F7	Fractional Amount for disconnected Hunting - Normal
9F8	Adjustment of Hunting - Circular
9F9	Fractional Charge for new Hunting - Circular
9F0	Fractional Amount for disconnected Hunting - Circular
9G1	Adjustment of Hunting - Preferred Normal
9G2	Fractional Charge for new Hunting - Preferred Normal
9G3	Fractional Amount for disconnected Hunting - Preferred Normal
9G4	Adjustment of Hunting - Preferred Circular
9G5	Fractional Charge for new Hunting - Preferred Circular
9G6	Fractional Amount for disconnected Hunting - Preferred Circular
9G7	Adjustment of Caller ID
9G8	Fractional Charge for new Caller ID
9G9	Fractional Amount for disconnected Caller ID
9G0	Adjustment of Caller ID with Name
9H1	Fractional Charge for new Caller ID with Name
9H2	Fractional Amount for disconnected Caller ID with Name
9H3	Adjustment of Customized/Distinctive Ringing
9H4	Fractional Charge for new Customized/Distinctive Ringing
9H5	Fractional Amount for disconnected Customized/Distinctive Ringing
9H6	Adjustment of Call Forwarding
9H7	Fractional Charge for new Call Forwarding

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6.5 Phrase Codes (cont)

<u>CODE</u>	<u>PHRASE LITERAL</u>
9H8	Fractional Amount for disconnected Call Forwarding
9H9	Adjustment of Call Forwarding - Busy
9H0	Fractional Charge for new Call Forwarding - Busy
9I1	Fractional Amount for disconnected Call Forwarding - Busy
9I2	Adjustment of Call Forwarding - No Answer
9I3	Fractional Charge for new Call Forwarding - No Answer
9I4	Fractional Amount for disconnected Call Forwarding - No Answer
9I5	Adjustment of Call Forwarding - Remote
9I6	Fractional Charge for new Call Forwarding - Remote
9I7	Fractional Amount for disconnected Call Forwarding - Remote
9I8	Adjustment of Call Forwarding - Combination
9I9	Fractional Charge for new Call Forwarding - Combination
9I0	Fractional Amount for disconnected Call Forwarding - Combination
9J1	Adjustment of Call Forwarding - Selective
9J2	Fractional Charge for new Call Forwarding - Selective
9J3	Fractional Amount for disconnected Call Forwarding - Selective
9J4	Adjustment of Call Waiting/Cancel Call Waiting
9J5	Fractional Charge for new Call Waiting/Cancel Call Waiting
9J6	Fractional Amount for disconnected Call Waiting/Cancel Call Waiting
9J7	Adjustment of Speed Calling - 8 Numbers
9J8	Fractional Charge for new Speed Calling - 8 Numbers
9J9	Fractional Amount for disconnected Speed Calling - 8 Numbers
9J0	Adjustment of Speed Calling - 30 Numbers
9K1	Fractional Charge for new Speed Calling - 30 Numbers
9K2	Fractional Amount for disconnected Speed Calling - 30 Numbers
9K3	Adjustment of 3-Way Calling
9K4	Fractional Charge for new 3-Way Calling
9K5	Fractional Amount for disconnected 3-Way Calling
9K6	Adjustment of Priority Ringing
9K7	Fractional Charge for new Priority Ringing
9K8	Fractional Amount for disconnected Priority Ringing
9K9	Adjustment of Vanity Number
9K0	Fractional Charge for new Vanity Number
9K1	Fractional Amount for disconnected Vanity Number
9K2	Adjustment of Call Hold
9K3	Fractional Charge for new Call Hold
9K4	Fractional Amount for disconnected Call Hold
9K5	Adjustment of Call Screening
9K6	Fractional Charge for new Call Screening
9K7	Fractional Amount for disconnected Call Screening
9K8	Adjustment of Call Transfer

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6.5 Phrase Codes (cont)

<u>CODE</u>	<u>PHRASE LITERAL</u>
9K9	Fractional Charge for new Call Transfer
9K0	Fractional Amount for disconnected Call Transfer
9L1	Adjustment of Services Bundled -Call Waiting/Cancel Call Waiting, Call Forwarding-All Calls, 3-Way Calling
9L2	Fractional Charge for new Services Bundled -Call Waiting/Cancel Call Waiting, Call Forwarding-All Calls, 3-Way Calling
9L3	Fractional Amount for disconnected Services Bundled -Call Waiting/Cancel Call Waiting, Call Forwarding-All Calls, 3-Way Calling
9L4	Adjustment of Services Bundled -Call Waiting/Cancel Call Waiting, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Numbers
9L5	Fractional Charge for new Services Bundled -Call Waiting/Cancel Call Waiting, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Numbers
9L6	Fractional Amount for disconnected Services Bundled -Call Waiting/Cancel Call Waiting, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Numbers
9L7	Adjustment of Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling
9L8	Fractional Charge for new Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling
9L9	Fractional Amount for disconnected Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling
9L0	Adjustment of Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Numbers
9M1	Fractional Charge for new Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Numbers
9M2	Fractional Amount for disconnected Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Numbers
9M3	Adjustment of Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Circular Hunting
9M4	Fractional Charge for new Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Circular Hunting
9M5	Fractional Amount for disconnected Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Circular Hunting
9M6	Adjustment of Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Number, Distinctive Ringing.
9M7	Fractional Charge for new Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Number, Distinctive Ringing
9M8	Fractional Charge for new Customer Controlled Contingent of Four

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6.5 Phrase Codes (cont)

<u>CODE</u>	<u>PHRASE LITERAL</u>
9M8	Fractional Amount for disconnected Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Number, Distinctive Ringing
9M9	Adjustment of Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Number, Circular Hunting
9M0	Fractional Charge for new Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Number, Circular Hunting
9N1	Fractional Amount for disconnected Services Bundled -Call Transfer, Call Forwarding-All Calls, 3-Way Calling, Speed Calling-8 Number, Circular Hunting
9N2	Adjustment of Basic Directory Listing
9N3	Fractional Charge for new Basic Directory Listing
9N4	Fractional Amount for disconnected Basic Directory Listing
9N5	Adjustment of Non-Published Number
9N6	Fractional Charge for new Non-Published Number
9N7	Fractional Amount for disconnected Non-Published Number
9N8	Adjustment of Yellow Pages
9N9	Fractional Charge for new Yellow Pages
9N0	Fractional Amount for disconnected Yellow Pages
9O1	Adjustment of Non-Listed Number
9O2	Fractional Charge for new Non-Listed Number
9O3	Fractional Amount for disconnected Non-Listed Number
9O4	Adjustment of Local Directory Assistance-free of charge
9O5	Fractional Charge for new Local Directory Assistance-free of charge
9O6	Fractional Amount for disconnected Local Directory Assistance-free of charge
9O7	Adjustment of Information Call Completion
9O8	Fractional Charge for new Information Call Completion
9O9	Fractional Amount for disconnected Information Call Completion
9O0	Adjustment of Directory Assistance Exemption
9P1	Fractional Charge for new Directory Assistance Exemption
9P2	Fractional Amount for disconnected Directory Assistance Exemption
9P3	Adjustment of Dial Up Access - List Service
9P4	Fractional Charge for new Dial Up Access - List Service
9P5	Fractional Amount for disconnected Dial Up Access - List Service
9P6	Adjustment of Additional Listing
9P7	Fractional Charge for new Additional Listing
9P8	Fractional Amount for disconnected Additional Listing
9P9	Adjustment of Additional Line Listing
9P0	Fractional Charge for new Additional Line Listing
9Q1	Fractional Amount for disconnected Additional Line Listing

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6.5 Phrase Codes (cont)

<u>CODE</u>	<u>PHRASE LITERAL</u>
9Q2	Adjustment of Calling Card
9Q3	Fractional Charge for new Calling Card
9Q4	Fractional Amount for disconnected Calling Card
9Q5	Adjustment of Operated Assisted Call
9Q6	Fractional Charge for new Operated Assisted Call
9Q7	Fractional Amount for disconnected Operated Assisted Call
9Q8	Adjustment of Operated-Dialed Call
9Q9	Fractional Charge for new Operated-Dialed Call
9Q0	Fractional Amount for disconnected Operated-Dialed Call
9R1	Adjustment of Relay Service For The Disabled
9R2	Fractional Charge for new Relay Service For The Disabled
9R3	Fractional Amount for disconnected Relay Service For The Disabled
9R4	Adjustment of Person-To-Person Call
9R5	Fractional Charge for new Person-To-Person Call
9R6	Fractional Amount for disconnected Person-To-Person Call
9R7	Adjustment of Busy Line Verification
9R8	Fractional Charge for new Busy Line Verification
9R9	Fractional Amount for disconnected Busy Line Verification
9R0	Adjustment of Busy Line Verification/interrupt
9S1	Fractional Charge for new Busy Line Verification/interrupt
9S2	Fractional Amount for disconnected Busy Line Verification/interrupt
9S3	Adjustment of Collect Calls
9S4	Fractional Charge for new Collect Calls
9S5	Fractional Amount for disconnected Collect Calls
9S6	Adjustment of Third Party Billing
9S7	Fractional Charge for new Third Party Billing
9S8	Fractional Amount for disconnected Third Party Billing
9S9	Adjustment of Call Intercept Announcement Service
9S0	Fractional Charge for new Call Intercept Announcement Service
9T1	Fractional Amount for disconnected Call Intercept Announcement Service
9T2	Adjustment of Mass Announcements
9T3	Fractional Charge for new Mass Announcements
9T4	Fractional Amount for disconnected Mass Announcements
9T5	Adjustment of Alarm System Monitoring
9T6	Fractional Charge for new Alarm System Monitoring
9T7	Fractional Amount for disconnected Alarm System Monitoring
9T8	Adjustment of CO Outage Recovery-Customer Re-Route
9T9	Fractional Charge for new CO Outage Recovery-Customer Re-Route
9T0	Fractional Amount for disconnected CO Outage Recovery-Customer Re-Route
9U1	Adjustment of Customer-Controlled Contingency Routing
9U2	Fractional Charge for new Customer Controlled Contingency Routing

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6.5 Phrase Codes (cont)

<u>CODE</u>	<u>PHRASE LITERAL</u>
9U3	Fractional Amount for disconnected Customer Controlled Contingency Routing
9U4	Adjustment of Emergency Alternate Routing
9U5	Fractional Charge for new Emergency Alternate Routing
9U6	Fractional Amount for disconnected Emergency Alternate Routing
9U7	Adjustment of Calling Plan - Flat Charge
9U8	Fractional Charge for new Calling Plan - Flat Charge
9U9	Fractional Amount for disconnected Calling Plan - Flat Charge
9U0	Adjustment of Calling Plan -Minute Based
9V1	Fractional Charge for new Calling Plan -Minute Based
9V2	Fractional Amount for disconnected Calling Plan -Minute Based
9V3	Adjustment of Calling Plan - Message Based
9V4	Fractional Charge for new Calling Plan - Message Based
9V5	Fractional Amount for disconnected Calling Plan - Message Based
9V6	Adjustment of Calling Plan - Flat Rate Stepped
9V7	Fractional Charge for new Calling Plan - Flat Rate Stepped
9V8	Fractional Amount for disconnected Calling Plan - Flat Rate Stepped
9V9	Adjustment of Local Call Detail - unrated call detail
9V0	Fractional Charge for new Local Call Detail - unrated call detail
9W1	Fractional Amount for disconnected Local Call Detail - unrated call detail
9W2	Adjustment of Flat Calling Plan - Chargeable Messages
9W3	Fractional Charge for new Flat Calling Plan - Chargeable Messages
9W4	Fractional Amount for disconnected Flat Calling Plan - Chargeable Messages
9W5	Adjustment of Flat Calling Plan - All Messages
9W6	Fractional Charge for new Flat Calling Plan - All Messages
9W7	Fractional Amount for disconnected Flat Calling Plan - All Messages

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6.6 Detail Of Usage Charge Bill Section

This section of the bill would denote the charges rated by minutes of use (MOU) or per message recording. The information should be presented by End Office or Local Serving Office. The usage should be displayed to split the information between Business and Residence Service. When differing day/evening/night rates, local/zone/mileage bands, and initial/additional MOU rating structures are applicable, the charges should be broken out separately. For a mechanized CABS format, no existing usage data element exists which reflects the data as Business and Residence Service. Therefore a new indicator referred to as SERVICE IND should be populated on the Usage records with the value of "1" for Business and "2" for Residence. Refer to the bill example for record/position information.

6.7 Miscellaneous Category

The following new descriptions associated with Local / Total Service Resale should be reflected on the paper bill as applicable in the usage section. For a mechanized CABS format, no existing usage data element exists which reflects the service or feature being billed. The following values have been provided for a mechanized format and should be provided under the Miscellaneous Elements.

<u>VALUE</u>	<u>LITERAL DESCRIPTION</u>
1G	Local Directory Assistance-free of charge
2G	Information Call Completion
3G	Directory Assistance Exemption
4G	Dial Up Access - List Service
5G	Basic Directory Listing
6G	Non-Published Number
7G	Non-Listed Number
8G	Additional Listing
9G	Additional Line Listing
0G	Yellow Pages
1H	Calling Card Call
2H	Operated Assisted Call
3H	Operator-Dialed Call
4H	Relay Service For The Disabled
5H	Person-To-Person Call
6H	Busy Line Verification
7H	Busy Line Verification/Interrupt
8H	Collect Calls
9H	Third Party Billing
0H	Call Intercept Announcement Service
1I	Mass Announcements
1J	Alarm System Monitoring
2J	CO Outage Recovery-Customer Re-route
3J	Customer Controlled Contingency Routing
4J	Emergency Alternate Routing

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6.8 Customer Service Records/Inventory & Rating Information

This section of the bill would denote the flat rated monthly charges by telephone line. The charges would denote the local loop using a telephone number format instead of a circuit. Features and functions would be displayed with associated USOCs. End user location and line information will be presented as applicable. The existing CABS and SECAB mechanized fields should accommodate the provisioning of this information.

7.0 SAMPLE BILL

7.1 Overview

In the following bill example, the Total Service Resale charges are presented on a unique bill/Type of Account. The bill is comprised of a mixture of MOU and facility -based charges. Charges are further identified in each section as Local via the Jurisdiction.

The following bill example is based on a CABS format. All changes are reflected in **BOLD** and the mechanized changes are associated with each bill page. **THE DOLLAR AMOUNTS ARE FOR DISPLAY ONLY AND DO NOT MATCH THE DETAIL.**

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BILL DATE: OCT 30, 1995
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INVISIBLE COMMUNICATIONS
C/O EMILIA EARHART
109 SKYVIEW
NOWHERE, GEORGIA 10011

FOR TELCO USE:
ICSC OFC 1234

BILLING INQUIRES CALL (770) 123-4567

LOCAL / TOTAL SERVICE RESALE

*** BALANCE DUE SECTION ***

TOTAL AMOUNT OF LAST BILL		525.00
PAYMENTS APPLIED - SEE DETAIL		525.00 CR
ADJUSTMENTS APPLIED - SEE DETAIL		25.00 CR
LOCAL	25.00 CR	
TOTAL BALANCE DUE		<u>25.00 CR</u>

*** DETAIL OF CURRENT CHARGES ***

TOTAL-GEORGIA		
MONTHLY ACCESS CHARGES		420.00
FROM OCT 31 THRU NOV 30		
LOCAL	420.00	
OTHER CHARGES AND CREDITS - SEE DETAIL		50.00
LOCAL	50.00	
USAGE CHARGES - SEE DETAIL		413.39
LOCAL	413.39	
SURCHARGES - SEE DETAIL		50.00
TAXES - SEE DETAIL		25.00
TOTAL CURRENT CHARGES * DUE BY NOV 19*		<u>958.39</u>
TOTAL AMOUNT DUE		<u>933.39</u>

RELATED BDT CHANGES:

1. New Type of Account, value of Q denoting Local / Total Service Resale.
2. 10-05-10-00 (Balance Due Info): add ADJUSTMENTS APPLIED-LOCAL (Version 26)
3. 10-05-10-50 (Balance Due Info): add CR ADJUSTMENTS APPLIED LOCAL (Version 26)
4. 10-05-12-00 (Current Charges): add MONTHLY ACCESS CHARGES-LOCAL (Version 26)
5. 10-05-13-00 (Current Charges): add TOTAL OTHER CHARGES AND CREDITS-LOCAL and TOTAL USAGE CHARGES-LOCAL. (Version 26)

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BILL NO: 212 M12-1234 234
INVOICE NO: M12345678-95303
BILL DATE: OCT 30, 1995

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*** DETAIL OF PAYMENTS APPLIED ***

INVOICE NO M123456789-95206
OCT 18 95 PAYMENT APPLIED 525.00 CR
TOTAL PAYMENTS APPLIED 525.00 CR

BILL NO: 212 M12-1234 234
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*** DETAIL OF ADJUSTMENTS APPLIED ***

INVOICE NO M123456789-95206
OCT 10 95 ADJUSTMENT OF THREE-WAY CALLING FEATURE
FROM AUG 31 1995 THRU SEP 1 1995
CIRCUIT NUMBER TN 770-123-456
ABCDE 1 THREE -WAY CALLING FEATURE
LOCAL - GA 25.00 CR
TOTAL ADJUSTMENTS APPLIED 25.00 CR

RELATED BDT CHANGES:

1. 10-15-05/90 (Payments Applied): no changes.
2. 10-20-05-00: Possibly new phrase codes for the different types of features.
3. 10-20-05-00: Populate the Local value of '5' to the JURISDICTION IND.

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Local / Total Service Resale**

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*** DETAIL OF OTHER CHARGES AND CREDITS ***

				<u>AMOUNT</u>
NOV 1 95	SO B123456	PON 123456	PIU 00	
ACCESS SERVICE GROUP BEVH				
FACILITY IDENTIFICATION TN 770-567-1234				
CHARGE FOR SERVICE ADDED				
FROM OCT 1 95 THRU OCT 30 95				
ABCDE		1 THREE-WAY CALLING FEATURE		10.00
		LOCAL - GA - ZONE 1		
ACBDE		1 CALL FORWARDING FEATURE		10.00
		LOCAL - GA - ZONE 1		
LINRS		1 TOTAL SERVICE RESALE ACCESS LINE		
	20.00			
		LOCAL - GA - ZONE 1		
ONE TIME CHARGE				
FROM OCT 1 95 THRU OCT 1 95				
EFGH		1 LINE CONNECTION CHARGE		10.00
		LOCAL - GA - ZONE 1		
NET EFFECT OF SO B123456	PON 123456			
	PER MONTH	FRACTIONAL	ONE TIME	BILLED AMOUNT
	100.00	40.00	10.00	50.00
TOTAL OTHER CHARGES AND CREDITS				50.00

RELATED BDT CHANGES:

1. 10-30-15-01 (New OC&C-Phrase Code): New suffix added to make room for new OC&C AMOUNT-LOCAL (Version 26)
2. 10-30-20-00 (OC&C-USOC): Add OC&C AMOUNT-LOCAL (Version 26)
3. Though it is cared for as a type of circuit, in this example the telephone line number is provided as the facility identification.

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*** DETAIL OF USAGE CHARGES ***

*** LOCAL USAGE FOR OFFICE BEVHGA01DS0 SEP 30 95 THRU OCT 30 95 ***

RATE CATEGORY	QUANTITY	RATE	AMOUNT
BUSINESS SERVICE			
MTS			
INITIAL MOU			
DAY RATE			
0-12 MILES	9,000	.0200000	180.00
13-16 MILES	166	.0158000	2.63
17-25 MILES	51	.0024000	.13
EVENING RATE			
0-12 MILES	2,000	.0100000	20.00
13-16 MILES	10	.0100000	.10
17-25 MILES	5	.0150000	.08
OPERATOR SURCHARGES			
OPERATOR 0+			
COLLECT CALL	10	.25	2.50
CALLING CARD	20	.30	6.00
TOTAL CHARGES FOR BUSINESS			211.44
RESIDENCE SERVICE			
MTS			
INITIAL MOU			
DAY RATE			
0-12 MILES	150,00	.0100000	150.00
13-16 MILES	1,000	.0010000	1.00
17-25 MILES	500	.0024000	1.20
EVENING RATE			
0-12 MILES	4,000	.0100000	40.00
13-16 MILES	100	.0100000	1.00
17-25 MILES	50	.0150000	.75
OPERATOR SURCHARGES			
OPERATOR 0+			
COLLECT CALL	20	.25	5.00
CALLING CARD	10	.30	3.00
TOTAL CHARGES FOR RESIDENCE			201.95
TOTAL LOCAL USAGE CHARGES FOR OFFICE BEVHGA01DS0			413.39

RELATED BDT CHANGES:

- The new indicator referred to as SERVICE IND should be populated on the Usage records with the value of "1" for Business and "2" for Residence:

10-35-05-00 (Local Transport Detail - Version 26): Position 221

10-35-20-01 (Miscellaneous Usage Detail - Version 26): Position 224

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***** SUMMARY OF USAGE CHARGES FOR OFFICE BEVHGA01DS0 ***
LOCAL**

GA

TOTAL MINUTES OF USE	27,893
TOTAL OPERATOR SURCHARGES	16.50
<hr/>	
TOTAL USAGE CHARGES FOR OFFICE BEVHGA01DS0	413.39

RELATED BDT CHANGES:

1. Not required for mechanized.

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*** DETAIL OF TAXES ***

TOTAL - GA

LOCAL

<u>TYPE</u>	<u>MONTHLY ACCESS</u>	<u>USAGE</u>	<u>OTHER</u>	<u>TOTAL</u>
COUNTY	15.00	5.00	5.00	25.00
TOTAL	15.00	5.00	5.00	25.00

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*** DETAIL OF SURCHARGES ***

TOTAL - GA

LOCAL

<u>TYPE</u>	<u>MONTHLY ACCESS</u>	<u>USAGE</u>	<u>OTHER</u>	<u>TOTAL</u>
STATE	40.00	5.00	5.00	50.00
TOTAL	40.00	5.00	5.00	50.00

RELATED BDT CHANGES:

- 10-50-05/90 (Tax Detail - Version 26): The ACCESS TYPE TAX IND will have a new value of '4' to represent Local.
- 10-55-05/90 (Surcharges): This record was not modified with Version 26. Therefore a new data element referred to as ACCESS TYPE SURCHARGE IND should be added in position 168 with a value of '4' to represent Local.

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***** FACILITY ACCESS CIRCUIT LISTING *****

CIRCUIT IDENTIFICATION	AMOUNT	MPB
ACCESS SERVICE GROUP BEVH FACILITY IDENTIFICATION TN 770-567-1234	420.00	
LOCAL SUBTOTAL	420.00	
TOTAL FACILITY CIRCUIT CHARGES	420.00	
TOTAL FACILITY CIRCUITS	1	

RELATED BDT CHANGES:

1. 10-60-90-00 (Circuit Totals - Version 26) add TOTAL LOCAL CIRCUIT CHARGES.

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CUSTOMER SERVICE RECORD
(CSR)

212 M12-1234 234
BILL DATE: 10-30-95
PAGE 2

INVISIBLE COMMUNICATIONS

—SERVICE AND FEATURES—

SVC ESTBL	QTY	CODE	DESCRIPTION	TAX	AMOUNT	ACTY DATE
100195		ASG	BEVH			
100195	1	LINRS	/TN 770-567-1234/ PIU 00/ CKR 101110X1234X123/ SN END USER/ SA 123 MAIN/ TER 1/ CWF 1/ ZONE 1 LOCAL 100 % x 1x 100.00		100.00	100195*
100195	1	ABCDE	/TN 770-567-1234/ LOCAL 100% x 1 x 20.00		20.00	100195*
100195	1	ACBDE	/TN 770-567-1234/ LOCAL 100% x 1 x 20.00		20.00	100195*
100195	1	LINBS	/TN 770-000-1234/ PIU 00/ CKR 102220X1234X123/ SN END USER/ SA 321 MAIN/ TER 1/ CWF 1/ ZONE 1 LOCAL 100 % x 1x 200.00		200.00	100195
100195	1	ABCDE	/TN 770-567-1234/ LOCAL 100% x 1 x 40.00		40.00	100195
100195	1	ACBDE	/TN 770-567-1234/ LOCAL 100% x 1 x 40.00		40.00	100195
					LOCAL SUBTOTAL	420.00
					LOCAL TOTAL	420.00
					ACCOUNT TOTAL	420.00

RELATED BDT CHANGES:

1. 40-15-20-01 (CSR-USOC): add PERCENT LOCAL USAGE and LOCAL BILLED AMOUNT.
2. 40-15-25-00 (CSR-Subtotals): add LOCAL SUBTOTAL.
3. 40-15-35-00 (CSR-Totals): add LOCAL TOTAL

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**Standard AT&T Billing Requirements
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OPTION B - Do to the size of the bill when providing line per line information, a suggested compromise being looked at is to provide the TOTAL SERVICE RESALE detail information on a "summary" level. The differences in the bill are in the OC&C and CSR sections. The Circuit Listing Page/record would not be required.

BILL NO: 212 M12-1234 234
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BILL DATE: OCT 30, 1995

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*** DETAIL OF OTHER CHARGES AND CREDITS ***

				<u>AMOUNT</u>
NOV 1 95	SO B123456	PON 123456	PIU 00	
ACCESS SERVICE GROUP BEVH				
CHARGE FOR THREE-WAY CALLING FEATURE ADDED				
FROM OCT 1 95 THRU OCT 30 95				
ABCDE		572	THREE-WAY CALLING FEATURE	10.00
LOCAL - GA - ZONE 1				
NOV 1 95	SO B123456	PON 123456	PIU 00	
ACCESS SERVICE GROUP BEVH				
CHARGE FOR CALL FORWARDING FEATURE ADDED				
FROM OCT 1 95 THRU OCT 30 95				
ACBDE		687	CALL FORWARDING FEATURE	10.00
LOCAL - GA - ZONE 1				
NOV 1 95	SO B123456	PON 123456	PIU 00	
ACCESS SERVICE GROUP BEVH				
CHARGE FOR RESIDENCE LINE SERVICE ADDED				
FROM OCT 1 95 THRU OCT 30 95				
LINRS		2000	RESIDENCE ACCESS LINE	20.00
LOCAL - GA - ZONE 1				
ONE TIME CHARGE				
FROM OCT 1 95 THRU OCT 1 95				
EFGH		2000	LINE CONNECTION CHARGE	10.00
LOCAL - GA - ZONE 1				
NET EFFECT OF SO B123456	PON 123456			
PER MONTH	FRACTIONAL	ONE TIME	BILLED AMOUNT	
100.00	20.00	10.00	30.00	
TOTAL OTHER CHARGES AND CREDITS				50.00

RELATED BDT CHANGES:

1. 10-30-15-01 (New OC&C-Phrase Code): new suffix added to make room for new OC&C AMOUNT-LOCAL
2. 10-30-20-00 (OC&C-USOC): add OC&C AMOUNT-LOCAL.

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OPTION B

CUSTOMER SERVICE RECORD
(CSR)

212 M12-1234 234
BILL DATE: 10-30-95
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INVISIBLE COMMUNICATIONS

---SERVICE AND FEATURES---

SVC ESTBL	QTY	CODE	DESCRIPTION	TAX	AMOUNT	ACTY DATE
100195		ASG	BEVH			
100195	1	LINRS	/ / PIU 00/			100195*
100195	1	LINBS	/ / PIU 00/			100195
			CKR 102220X1234X123/ SN / SA / TER 1/ CWF 1/ ZONE 1			
			LOCAL 100 % x 1 x 200.00		200.00	
100195	1	ABCDE	/ /			100195
			LOCAL 100% x 1 x 40.00			40.00
100195	1	ACBDE	/ /			100195
			LOCAL 100% x 1 x 40.00			40.00
			LOCAL SUBTOTAL		420.00	
			LOCAL TOTAL		420.00	
			ACCOUNT TOTAL		420.00	

RELATED BDT CHANGES:

1. 40-15-20-01 (CSR-USOC): add PERCENT LOCAL USAGE and LOCAL BILLED AMOUNT.
2. 40-15-25-00 (CSR-Subtotals): add LOCAL SUBTOTAL.
3. 40-15-35-00 (CSR-Totals): add LOCAL TOTAL

**Standard AT&T Engineering Requirements
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EXHIBIT 1

MAY 1995

NEW AND/OR DELETED BILL LIST

COMPANY NAME: _____

ACTION	COMPANY CODE	TOA /FG	BILLING NO. /CUST. CODE	X-REF BILLING NO. /CUST. CODE	ST.	LATA	EFFECTIVE OR FINAL BILL DATE	CYCLE DAY	MEET POINT? Y OR N	MPB CO. CODES

COMMENTS: _____

CONTACT NAME: _____ **CONTACT TELEPHONE NUMBER** _____

200365

LOCAL RESALE
DATA TRANSFER REQUIREMENTS
VERSION 2.0
MARCH, 1996

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3DS
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ATTACHMENT E- MESSAGE VALIDATION EMR DETAIL ERROR REPORT (A7289)

ATTACHMENT F- SPECIAL FEATURES STAR SERVICES

SECTION 1 - PROJECT SCOPE

1.1 GENERAL

This program addresses the transmission of a Local Service Provider's (LSP) usage to AT&T. The specific usage addressed within this program is contained in Section 2. AT&T will rate and bill the intraLATA toll and local usage recorded by the LSP. In addition, AT&T will process and bill the rated incollects sent by the LSP.

AT&T will secure contractual agreements to rate and/or bill the LSP recorded intraLATA usage.

1.2 USAGE SUMMARY

Messages will be transmitted, via a direct feed, to AT&T in standard EMR format. The following is a list of EMR records that AT&T can expect to receive from the LSP:

Header Record	20-20-01
Trailer Record	20-20-02
Detail Records*	01-01-01, 06, 07, 08, 09, 16, 18, 31, 32, 33, 35, 37,80, 81, 82, 83 10-01-01, 06, 07, 08, 09, 16, 18, 31, 32, 35, 37, 80, 81, 82, 83
Credit Records	03-01-XX
Rated Credits	41-01-XX
Cancel Records	51-01-XX
Correction Records	71-01-XX

*Category 01 is utilized for Rated Message; Category 10 is utilized for Unrated Messages

In addition, the LSP should provide a 42-50-01 Miscellaneous Charge record to support the Special Features Star Services (see Attachment F for specific details) if these features are part of the LSP's resale product..

For detailed information regarding EMR, refer to the current version of the BellCore Practice BR010-200-010 document.

1.3 DOCUMENT CONTENT

This document describes baseline requirements for the transfer of LSP recorded, unrated usage to AT&T. Testing requirements and the reports needed to ensure data integrity are also included. Additional requirements and implementation details may be identified for conditions unique to the LSP. Modifications and/or exceptions to this document must be negotiated and mutually agreed upon by the LSP and AT&T.

SECTION 2 - LOCAL SERVICE PROVIDER UNRATED USAGE TO BE TRANSMITTED TO AT&T

2.1 GENERAL

This section addresses the types of usage to be transmitted by the LSP to AT&T for AT&T rating and billing.

2.2 LOCAL SERVICE PROVIDER UNRATED USAGE TO BE TRANSFERRED TO AT&T

2.2.1 USAGE TO BE TRANSFERRED

The following messages recorded by the LSP are to be transmitted to AT&T in unrated format. The LSP recorded usage is defined as:

- intraLATA - Local

- intraLATA - Toll

NOTE: Rated incollect messages should be transmitted via the direct feed and can be intermingled with the unrated messages. No special packing is needed.

At the discretion of AT&T, any of the above mentioned messages that cannot be rated and/or billed may be returned to the LSP via a direct returns feed. Returned messages will be sent to the LSP in EMR format. Standard EMR return codes will be utilized.

File transfer specifications are included within Section 3.

2.2.2 LOCAL SERVICE PROVIDER USAGE

The LSP usage in a local resale environment includes all intraLATA toll and local usage. The LSP will provide AT&T with unrated EMR records associated with all intraLATA toll and local usage which they record on AT&T's behalf.

2.2.2 LOCAL SERVICE PROVIDER USAGE (con't.)

Any Category, Group and/or Record types approved in the future for the LSP will be included if they fall within the definition of this local resale phase. AT&T shall be given notification of its use within the negotiated timeframes.

NOTE: The LSP messages will be packed using the packing criteria outlined in section 3.4.8. It is important to note that all LSP messages will be packed together (intermingled) based on the appropriate AT&T Send To/Bill To RAO combination. Specific categories, groups, and record types will not be packed separately.

SECTION 3 - LOCAL SERVICE PROVIDER TO AT&T USAGE FEED

3.1 GENERAL

This section contains the information required for the LSP to transmit the usage defined in Section 2 to AT&T. This section specifically addresses the dataset requirements and processing.

3.2 DETAILED EMR RECORD EDITS

AT&T will perform detailed record edits on the unrated and rated messages upon receipt from the LSP. Messages that fail these edits may be returned to the LSP.

3.3 DUPLICATE RECORD CHECKS

AT&T will perform record checks on the unrated and rated messages to validate that duplicate messages are not sent by the LSP to AT&T for rating and/or billing.

3.4 LOCAL SERVICE PROVIDER TO AT&T USAGE FEED

3.4.1 USAGE DATA TRANSPORT REQUIREMENTS

The LSP will provide the transport facility between the LSP location and the AT&T location. It is AT&T's intent that usage data be transmitted via CONNECT:Direct whenever possible. In the event usage transfer cannot be accommodated by CONNECT:Direct because of extended (one business day or longer) facility outages, or if facilities do not exist, the LSP will contract for a courier service to transport the data via tape.

The LSP will provide AT&T with contacts, Remote Identifiers (IDs), and expected usage data volumes for each sending location.

AT&T will provide contacts responsible for:

- Receiving usage transmitted by the LSP
- Receiving usage tapes from a courier service in the event of a facility outage.

3.4.2 PHYSICAL CHARACTERISTICS

Data transported to AT&T on tape or cartridge via a courier will have the physical characteristics indicated in Attachment A. AT&T's intent is for variable block format (2,476 bytes) with a LRECL of 2472.

3.4.3 DATA DELIVERY SCHEDULES

Data will be delivered to AT&T by the LSP daily (Monday through Friday) or as negotiated. AT&T and/or LSP Data Center holidays are excluded. The LSP and AT&T will exchange schedules of designated Data Center holidays.

3.4.4 RESENDING DATA

AT&T will notify the LSP of resend requirements if a pack or entire dataset must be replaced due to pack rejection, damage in transit, dataset name failure, etc.

3.4.5 PACK REJECTION

Critical edit failure on the Pack Header or Pack Trailer records will result in pack rejection (e.g., detail record count not equal to grand total included in the pack trailer). Notification of pack rejection will be made by AT&T within one business day of processing. Rejected packs will be retransmitted to AT&T by the LSP

3.4.6 HELD PACKS AND MESSAGES

AT&T and the LSP will track pack number to control input based upon invoice sequencing criteria. The LSP will be notified of sequence failures identified by AT&T and resend procedures are to be invoked.

3.4.7 DATA CONTENT REQUIREMENTS

EMR is the format to be used for usage data provided to AT&T.

NOTE: Prior to July 1, 1996, the usage data sent will be compacted, using standard compaction procedures described in Attachment B. Effective July 1, 1996, compaction will be eliminated.

3.4.8 RAO PACKING REQUIREMENTS

A pack shall contain a minimum of one message record or a maximum of 9,999 message records plus a pack header record and a pack trailer record. A file transmission contains a maximum of 99 packs. A dataset shall contain a minimum of one pack. The LSP will provide AT&T one dataset per sending location, with the agreed upon RAO/OCN populated in the Header and Trailer records.

Within the Header and Trailer records, the FROM RAO identifies the location that will be sending usage to AT&T. The LSP will populate the FROM RAO field with the unique numeric value identifying the location that is sending the data to AT&T. The LSP will populate the Send To/Bill To RAO fields with the appropriate AT&T RAO values. Also, Pack Header and Trailer will have the OCN appropriately populated.

The FROM RAO, OCN, and Remote Id. will be used by AT&T to control invoice sequencing and each will have its own invoice controls. The FROM RAO will also be used to determine where the message returns file, containing any misdirected and unguidable usage, will be sent.

The file's Record Format (RECFM) will be Variable Block (VB) Size 2,476 and the Logical Record Length (LRECL) will be 2,472 bytes. Compaction requirements can be found in Attachment B.

AT&T has no special sort requirements for the packs sent by the LSP.

3.4.9 DATASET NAMING CONVENTION

The LSP will transmit the usage to AT&T using the following dataset naming conventions. The dataset name (DSN) will be partitioned into five nodes, separated by periods as follows:

NODE 1.BB03PX*N**
NODE 2.IBMUP
NODE 3 (To be determined during negotiations)
NODE 4.USAGE
NODE 5.G*NNVV*00* (Generational Dataset to be incremented by sender).

*The italicized "N" represents numeric fields determined during negotiations.

3.4.10 CONTROL REPORTS

AT&T accepts input data provided by the LSP in EMR format in accordance with the requirements and specifications detailed in this section of the document. In order to ensure the overall integrity of the usage being transmitted from the LSP to AT&T, Data Transfer Control Reports will be required. These reports shall be provided by AT&T to the LSP on a daily or otherwise negotiated basis and reflect the results of the processing for each pack transmitted by the LSP.

MESSAGE VALIDATION REPORTS

AT&T will provide the following three daily (or otherwise negotiated) Message Validation reports to the designated LSP System Control Coordinator. These reports will be provided for all data received within the LSP Local Resale Feed and will be transmitted Monday through Friday whether or not there have been any files transmitted.

3.4.10.1 MESSAGE VALIDATION PACK REJECT REPORT (A7287)

This report provides information on packs rejected by AT&T. It lists the header and trailer record of each rejected pack and indicates the error codes and the associated error message which explains why the pack was rejected.

An example of the report and a list of Valid Error Codes and associated error messages are provided in Attachment C.

3.4.10.2 MESSAGE VALIDATION PACK ACCEPTED REPORT (A7288)

This report provides vital statistics and control totals by Record ID, Type of Service, Message Counts and Record Counts, for all valid, rejected and dropped messages. The information is provided in the following report formats and control levels:

1. LSP Total Messages
2. LSP Total Records
3. RAO Total Messages
4. RAO Total Records
5. Pack Total (Record Counts and Message Counts)

The first four report formats include percentages that indicate the relationship of the daily input volume by Record ID and Type of Record to the total input volume provided by an RAO and the LSP.

An example of the report is provided in Attachment D.

3.4.10.3 MESSAGE VALIDATION DETAIL ERROR REPORT (A7289)

An EMR Detailed Error Report is generated for each pack/ invoice that is received and processed by AT&T. The report lists, in vertical format, the complete 175 byte EMR record that has failed to pass the initial edit criteria. It prints this detailed information only for the first five EMR records that share a common error condition. The error condition is flagged on the report by one of two possible error codes preceding the field value. The error codes are:

- (C) DENOTES CRITICAL ERRORS
- (I) DENOTES INFORMATION ERRORS

The last two pages of the report for a given pack/invoice provide the following control totals:

- Total Errors for each Field
- Total Records Received
- Total Records Dropped
- Total Records rejected to MIU
- Pack Reject Rate
- Total Default Count (represents the number of Files on all of the input records that had to be programmatically altered to meet the EMR standards and specifications.)

If the entire pack/invoice has been rejected because of a Critical Error Rate greater than 0.5%, the last page of the report will display such a statement enclosed in asterisks.

An example of the report is provided in Attachment E.

3.4.10.4 CONTROL REPORTS - DISTRIBUTION

Since the LSP is not receiving control reports, dataset names will be established during detailed negotiations.

SECTION 4 - AT&T PROCESSING REQUIREMENTS

4.1 GENERAL

This section contains requirements for AT&T processing of LSP usage that has been transmitted to AT&T for billing.

4.2 AT&T RATING PROCESS

4.2.1 MESSAGE RATING

AT&T will rate any individual messages (as defined in Section 2), that have not already been rated by the LSP, prior to transmitting the usage to a billing environment within AT&T.

4.2.2 APPLICATION OF TAXES/FEES/SURCHARGES

AT&T will apply taxes, fees and surcharges as appropriate for the individual messages and/or customer accounts. The application of all taxes, fees and surcharges will be applied on all intraLATA local and toll usage received from the LSP.

4.2.3 DUPLICATE MESSAGES

AT&T has existing duplicate checks as part of their message processing or billing functions. AT&T will perform these checks on the rated/unrated messages sent by the LSP. Duplicate message disposition procedures and reports will be identified by AT&T during negotiations.

4.2.4 RECORD EDITS

4.2.4.1 AT&T RECORD EDITS

AT&T will perform detailed record edits on the rated and unrated messages prior to transmitting them to the billing environment. Rated & unrated records that do not pass AT&T edits will be returned to the LSP.

4.2.4 RECORD EDITS (con't.)

4.2.4.2 LOCAL SERVICE PROVIDER RECORD EDITS

If the LSP has existing detailed record edits for rated and unrated messages, the LSP is to perform these edits.

Rated and unrated records that do not pass AT&T edits will be returned to the LSP. The LSP will attempt to perform error correction on all records requiring such action as agreed upon through the detailed negotiations process.

4.2.5 AT&T TO LOCAL SERVICE PROVIDER MESSAGE RETURNS

At the discretion of AT&T, messages that have been sent to AT&T by the LSP that cannot be guided to an AT&T billed account or error in processing will be returned to the LSP with the appropriate negotiated return codes.

4.2.6 CANCEL/CORRECTION RECORDS

AT&T, upon receipt of cancel/correction records, will perform their current matching functionality to identify the original message to be canceled/corrected. (Processing will be dependent upon individual negotiations.)

SECTION 5 - TEST PLANS AND ACTIVITIES

5.1 GENERAL

This section defines the LSP and AT&T activities which are required prior to the implementation of this project. The tests and activities described are necessary to ensure a smooth, accurate and well-documented conversion. Specific test dates will be identified through the negotiations process.

5.2 INTERFACE TESTING

The purpose of this test is to ensure that the usage described in Section 2 can be sent by the LSP to AT&T and can be accepted and processed by AT&T. The LSP will provide a test file to AT&T's designated Regional Processing Center (RPC) in the format that will be used for live day-to-day processing. The file will contain one full day's production usage. The format of the file will conform to the requirements shown in Section 3. AT&T will review the file and verify that it conforms to its data center requirements. AT&T will notify the LSP in writing whether the format is acceptable. AT&T will also provide the LSP with the agreed upon control reports as part of this test.

5.3 OPERATIONAL TEST

The purpose of this test is to ensure that volumes of usage in consecutive sequence can be extracted, distributed, and processed by the LSP and AT&T.

The LSP is required to provide AT&T with LSP recorded, unrated intraLATA local and toll usage (as defined in section 2) for a minimum of 5 consecutive days. AT&T will provide the LSP with the message validation reports associated with test usage.

AT&T will rate and process the unrated intraLATA toll and local usage. AT&T will process this data to test bills. AT&T may request that the test usage contain specific usage volumes and characteristics to ensure a complete test. Specific usage volumes and characteristics will be discussed during detailed negotiations.

5.4 TEST FILE TRANSPORT

Test data should be transported via CONNECT:Direct whenever possible. In the event that courier service must be used to transport test media, the physical tape characteristics to be used are described in Attachment A.

SECTION 6 - POST DEPLOYMENT ACTIVITIES

6.1 GENERAL

Requirements for ongoing maintenance of the usage feeds between AT&T and the LSP are described in this section. Included are minimal requirements for day to day control of the regularly scheduled transfer of LSP unrated and rated usage data and procedures for introducing and verifying AT&T/LSP System Changes.

6.2 CONTROL MAINTENANCE AND REVIEW

6.2.1 PERIODIC REVIEW

Control procedures for all usage transferred between the LSP and AT&T will require periodic review. This review may be included as part of an annual audit of the LSP by AT&T or as part of the normal production interface management function. Breakdowns which impact the flow of usage between the LSP and AT&T must be identified and jointly resolved as they occur. The resolution may include changes to control procedures, as similar problems would be avoided in the future. Any changes to control procedures would need to be mutually agreed upon by AT&T and the LSP.

6.2.2 RETENTION OF RECORDS

The LSP shall maintain a machine readable back-up copy of the message detail provided to AT&T for a minimum of forty-five (45) calendar days. AT&T will maintain the message detail received from the LSP for a minimum period of forty-five (45) calendar days. Designated AT&T personnel will provide these records to the LSP or its authorized agents upon written request. The LSP will also provide any data back to AT&T upon their written request.

6.3 LOCAL SERVICE PROVIDER SOFTWARE CHANGES

When the LSP plans to introduce any software changes which impact the format or content structure of the usage data feed to AT&T, designated LSP personnel will notify AT&T no less than 120 calendar days before such changes are implemented.

The LSP will communicate the projected changes to the appropriate groups in AT&T so that potential impacts on AT&T processing can be determined.

6.3 LOCAL SERVICE PROVIDER SOFTWARE CHANGES (con't)

AT&T personnel will review the impact of the change on the entire control structure as described in Section 6.6, Post Conversion Test Plan. AT&T will negotiate any perceived problems with the LSP and will arrange to have the data tested utilizing the modified software.

If it is necessary for the LSP to request changes in the schedule, content or format of usage data transmitted to AT&T, the LSP will notify AT&T.

6.4 AT&T REQUESTED CHANGES

If it is necessary for AT&T to request changes in the schedule, content, or format of the usage data transmitted from the LSP, AT&T will notify the LSP

When the negotiated changes are to be implemented, AT&T and/or the LSP will arrange for testing of the modified data as described in Section 6.6, Post Conversion Test Plan.

6.5 AT&T SOFTWARE CHANGES

When AT&T plans to introduce any software changes which may impact the format or content structure of the usage data transmitted from the LSP, AT&T will notify the designated LSP personnel, no less than 120 calendar days before such changes are implemented.

The AT&T contact will communicate the projected changes to the appropriate groups in the LSP so that potential impacts on the LSP processing can be determined.

AT&T will negotiate any perceived problems with the LSP and will arrange to have the data tested utilizing the modified software.

Altering the 120 day window for introducing software changes can be negotiated by both companies, dependent upon the scope and impact of the change.

6.6 POST-CONVERSION TEST PLAN

The test plan described below is designed to encompass all types of changes to the usage data transferred by the LSP to AT&T and the methods of transmission for that data.

6.6.1 LOCAL SERVICE PROVIDER SYSTEM CHANGE DESCRIPTION

As the first step of a change to the Project, the LSP should provide AT&T with an overall description of the change, stating the objective and a brief explanation of the reasons for the change.

During the initial negotiations regarding the change, the LSP should provide a list of the specific records and/or systems impacted by the change to designated AT&T personnel.

Finally, the LSP should also provide AT&T a detailed description of the changes to be implemented. It should include sufficient detail for designated AT&T personnel to analyze and estimate the effects of the changes and to design tests to verify the accuracy of the implementation.

6.6.2 CHANGE NEGOTIATIONS

AT&T shall be notified in writing of all proposed negotiations initiated by the LSP. In turn, AT&T will notify the LSP of proposed change negotiations initiated by AT&T.

After formal notification of planned changes, whether originated by the LSP or AT&T, designated AT&T personnel will schedule negotiation meetings as required with designated LSP personnel. The first meeting should produce the overall change description (if not previously furnished) and the list of records and/or systems affected.

In subsequent meetings, the LSP should provide the detailed description of changes to be implemented. After reviewing the described changes, designated AT&T personnel will negotiate a detailed test procedure with the LSP.

6.6.3 CONTROL CHANGE ANALYSIS

Based on the detailed description of the changes provided by the LSP, and the review of the projected changes by AT&T, designated AT&T personnel will:

- Determine the impact of the changes on the overall structure.

6.6.3 CONTROL CHANGE ANALYSIS (con't.)

- Determine whether any single change has a potential control impact (i.e., high error rate on individual records that might result in pack rejection).
- Determine whether any controls might be adversely affected.
- Arrange for appropriate control structure changes to meet any of the above conditions.

6.6.4 VERIFICATION OF CHANGES

Based on the detailed description of changes furnished by the LSP, designated AT&T personnel will:

- Determine the type of change(s) to be implemented.
- Develop a comprehensive test plan.
- Negotiate scheduling and transfer of modified data with the LSP.
- Negotiate testing of modified data with the appropriate AT&T RPC.
- Negotiate processing of verified data through the AT&T Billing System with the RPC.
- Arrange for review and verification of testing with appropriate AT&T groups.
- Arrange for review of modified controls, if applicable.

6.6.5 INTRODUCTION OF CHANGES

When all the testing requirements have been met and the results reviewed and accepted, designated AT&T personnel will:

- Negotiate an implementation schedule.

6.6.5 INTRODUCTION OF CHANGES (con't.)

- Verify the existence of a contingency plan with the appropriate AT&T RPC.
- Arrange for the follow-up review of changes with appropriate AT&T personnel.
- Arrange for appropriate changes in control documentation, if applicable.
- Arrange for long-term functional review of impact of changes on the AT&T Billing System, i.e., accuracy, timeliness, and completeness.

SECTION 7 - ATTACHMENTS

SUMMARY OF ATTACHMENTS

**ATTACHMENT A - PHYSICAL CHARACTERISTICS OF DATA TAPES/
CARTRIDGES**

ATTACHMENT B - COMPACTING REQUIREMENTS

ATTACHMENT C - MESSAGE VALIDATION PACK REJECT RE PORT (A7287)

ATTACHMENT D - MESSAGE VALIDATION PACK ACCEPTED REPORT (A7288)

**ATTACHMENT E - MESSAGE VALIDATION EMR DETAIL ERROR REPORT
(A7289)**

ATTACHMENT F - SPECIAL FEATURES STAR SERVICES

ATTACHMENT A

PHYSICAL CHARACTERISTICS OF DATA TAPES/CARTRIDGES

Data transported to AT&T by the LSP, or to the LSP by AT&T, on tape or cartridge via a courier will have the following physical characteristics:

Tape:	9-track, 6250 (or 1600) BPI (Bytes per inch)
Cartridge:	38,000 BPI (Bytes per inch)
LRECL:	2,472 bytes
Parity:	Odd
Character Set:	Extended Binary Coded Decimal Interchange Code (EBCDIC)
External labels:	Exchange Carrier name, Dataset Name (DSN) and volume serial number
Internal labels:	IBM Industry OS labels will be used. They consist of a single volume label and two sets of header and trailer labels.
One file per sending location with variable length records	104 bytes EMR compacted format plus modules as applicable.

ATTACHMENT B

COMPACTION REQUIREMENTS

COMPACTION FORMAT: Pack Header and Trailer Records

EMR Positions	Compacted Positions	Bytes	Usage*	Description Category & Group
1-4	1-2	2	B	Filler
5-11	3-6	4	B	Filler
12-18	7-10	4	B	Filler
19-25	11-14	4	B	Filler
26-32	15-21	7	AN	Filler
33-39	22-28	7	AN	Filler
40-46	29-35	7	AN	Filler
47-53	36-42	7	AN	Filler
54-60	43-49	7	AN	Filler
61-68	50-57	8	AN	Filler
69-77	58-61	4	B	Filler
78-86	62-65	4	B	Filler
87-95	66-69	4	B	Filler
96-104	70-73	4	B	Filler
105-113	74-77	4	B	Filler
114-122	78-81	4	B	Filler
123-127	82-85	4	B	Filler
128-141	86-104	19	AN	Filler
142-175	Truncated for transmission			

COMPACTION FORMAT: Message Detail Records

EMR Positions	Compacted Positions	Bytes	Usage*	Description Category & Group
1-4	1-2	2	B	Filler
5-13	3-6	4	B	Filler
14-22	7-10	4	B	Filler
23-31	11-14	4	B	Filler
32-40	14-18	4	B	Filler
41-49	19-22	4	B	Filler
50-58	23-26	4	B	Filler
59-67	27-30	4	B	Filler
68-76	31-39	9	AN	Filler
77-85	40-43	4	B	Filler
86-94	44-47	4	B	Filler
95-103	48-51	4	B	Filler
104-112	52-55	4	B	Filler
113-149	56-92	37	AN	Filler
150-158	93-96	4	B	Filler
159-167	97-100	4	B	Filler
168-175	101-104	4	B	Filler

* Usage: B = Binary AN = Alphanumeric

Modules will not be compacted.

* Compaction will be eliminated effective 7/1/96.

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ATTACHMENT C (CONT'D)

MESSAGE VALIDATION PACK REJECT REPORT (A7287)

ERROR CODE	ERROR MESSAGES
EC01.2	First record after trailer is not a Pack Header.
EC03.2	From RAO is not numeric.
EC04.3	Invoice number on header invalid.
EC04.5	Company ID not numeric.
EC04.6	Independent company ID is not numeric.
EC04.7	Header Record ID is invalid.
EC04.8	Trailer Record ID is invalid.
EC04.9	Trailer Record count invalid.
EC05.0	Duplicate pack.
EC05.1	Old Pack.
EC05.2	RAO not found on table.
EC07.3	Error rate greater than invoice file threshold for RAO invoice number.
EC12.0	Remote ID in Dataset is not valid.
EC20.0	No detail records in pack.
EC13.0	Invalid status on Pack Header.
EC27.0	Pack exceeds limit of 9,999 detail records.
EC40.9	Pack Header record is missing.
EC41.0	Trailer record is missing.
EC42.0	Trailer message volume is not equal to accumulated message volume.
EC44.0	Header/Trailer date is invalid.
EC45.0	From RAO on Trailer Record is not equal to the from RAO on Header Record.
EC48.0	Invoice number on Trailer Record is not equal to the invoice number on the Header Record.

ATTACHMENT D - MESSAGE VALIDATION PACK ACCEPTED REPORT (A7288)

MM/DD/YY-----HH:MM:SS

RETEN CODE: 01R-00300

COMPANY	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	FROM RAO	INVOICE NO.	DATE CREATED	TOTAL RECORDS RECEIVED
		999	99	MM/DD/YY	ZZ ZZ9

RECORD ID	TYPE OF RECORD	RECORD COUNTS				MESSAGE COUNTS			
		VALID	REJECTED	DROPPED	TOTAL	VALID	REJECTED	DROPPED	TOTAL
010102	OUTWATS (NON-SMDR)	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010103	OUTWATS (SMDR)	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010104	800 SERVICE	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
TOTAL WATS/800									
010101	MTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010106	NON-DIAL CONFER BRIDGE	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010107	NON-DIAL CONFER LEG RECORD	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010108	DIAL CONFERENCE BRIDGE	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010111	ALLIANCE (AGTC)	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010116	DIAL-IT SERVICE	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010132	DIRECTORY ASSISTANCE	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010180	MARINE/AIRCRAFT	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010181	RADIO LINK	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010182	MARINE NON-DIAL CONFER BRIDGE	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010183	MARINE NON-DIAL CONFER LEG REC.	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
0101XX	OTHER MTS RECORDS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
TOTAL NORTH AMERICAN MTS									
010201	IOTC/IDD MTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
0102XX	IOTC/IDD OTHERS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010301	IOTC BFC MTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
0103XX	IOTC BFC OTHERS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010401	IOC MTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
0104XX	IOC OTHERS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
010501	IOC MTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
0105XX	IOC OTHERS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
TOTAL OVERSEAS MTS									
015002	OUTWATS LINE SUMMARY	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
015004	800 LINE SUMMARY	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
015032	DIR. ASSISTANCE LINE SUMMARY	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
TOTAL OVERSEAS MTS									
03XXXX	CREDIT REQUESTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
51/52	CANCEL REQUESTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
71/72	CORRECTION REQUESTS	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9
INVALID RECORD IDENTIFICATION			ZZ ZZ9				ZZ ZZ9		ZZ ZZ9
PACK TOTALS		ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9	ZZ ZZ9

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AT&T
 FORM NO. IMP1010
 REPORT NO. A7200

ALPHARETTA 061

NETEN CODE: 010-0100

COMPANY: 0000 KXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

FROM RAG: 000 PL. ST. TO: KXXXX INVOICE NO: 00

FIELD NAME

CRITICAL
 ERRORS

INFORMATIONAL
 ONLY

INFORMATIONAL
 DEFAULT

TOTAL ERRORS
 EACH FIELD

TOTALS FOR THIS INVOICE

INDICATOR 10
 INDICATOR 11
 INDICATOR 12
 INDICATOR 13
 INDICATOR 14
 INDICATOR 15
 INDICATOR 16
 INDICATOR 17
 INDICATOR 18
 INDICATOR 19
 INDICATOR 20
 SERIAL NUMBER
 OPERATOR UNIT
 RECORD PT. ID.
 BILLING RAG
 BILLING NO.
 FM PLACE/SHIP
 TO PLACE ADDRESS
 TO PLACE/SHIP
 LIBRARY CODE
 SETTLEMENT CODE
 IX CARR. ID.
 INDICATOR 21
 INDICATOR 22
 INDICATOR 23
 INDICATOR 24
 INDICATOR 25
 INDICATOR 26
 INDICATOR 27
 INDICATOR 28
 INDICATOR 29
 INDICATOR 30
 RATE CL MSG TYPE
 VS MODULE
 NON-NUMERIC RCD

738

187

188

TOTAL RECORDS RECEIVED 42,434
 TOTAL RECORDS DROPPED 148
 TOTAL RECORDS REJECTED TO HQU 738
 PACK REJECT RATE 0.017
 ERROR THRESHOLD 0.008
 EDIT PATH 1
 INPUT FILE NUMBER 10
 SPAN NUMBER 000

.....
 * THIS PACK HAS BEEN REJECTED.
 * THE PACK REJECT RATE EXCEEDS
 * THE ERROR THRESHOLD.

*** TOTALS ***

710
 18

NDIAE06.L1270A.IMP10.AMSGERR.00004V00
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SPECIAL FEATURES STAR SERVICES

The following are STAR Services supported by these Local Resale requirements to date. When identified, additional services can be negotiated to be included in this Resale offer.

- 1) Busy Redial/..... This feature allows a customer to redial a number when a Busy signal is encountered.
Last Number Redial
- 2) Call Return/Missed Call Dialing..... This feature allows a customer to automatically return the most recent incoming call, even if it is not answered.
- 3) Call Trace This feature allows the tracing of nuisance calls.
- 4) 3-Way Calling..... This feature allows for three (3) Parties to communicate on one line.
- 5) Automatic Redial..... This feature allows a customer to automatically redial the last number dialed.

To provide for the transfer and billing of these features the following requirements apply:

For all "per use" STAR Features the 'Miscellaneous Charge Line Summary Non -Detail Charge' 425001 record should be used and be populated as follows:

CONNECT TIME	POSITIONS 55 - 60	MUST BE POPULATED
MISCELLANEOUS TEXT CODE	POSITIONS 168 - 172	1) BUSY REDIAL/LAST NUMBER REDIAL POPULATE WITH '00001'
MISCELLANEOUS TEXT CODE	POSITIONS 168 - 172	2) CALL RETURN/LAST NUMBER REDIAL POPULATE WITH '00002'
MISCELLANEOUS TEXT CODE	POSITIONS 168 - 172	3) CALL TRACE POPULATE WITH '00003'
MISCELLANEOUS TEXT CODE	POSITIONS 168-172	4) 3-WAY CALLING POPULATE WITH '00004'
MISCELLANEOUS TEXT CODE	POSITIONS 168-172	5) AUTOMATIC RETIAL POPULATE WITH '00005'

NOTE: For fields not specifically defined, the standard EMR format for a 425001 record should be used.

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**OLEC-to-BELLSOUTH ORDERING GUIDELINES
RESALE**

ANNOYANCE CALL CENTER

When an end user receives **Threatening, Abusive, or False Report** calls, they should be referred to the BellSouth Annoyance Call Center (ACC). Examples of these type calls are:

Threatening Calls - Calls where there is a threat or intent that poses to be harmful on a life, property, bomb threat, etc.

Abusive Calls - Calls that are intended to annoy or embarrass by using obscene or harassing language; harass by hanging-up, heavy breathing or dead silence; repeated calls on answering machines, voice mail or other lines in the home.

False Report Calls - When a caller represents himself (herself) as a law enforcement officer, hospital staff, or school official and advises that a child, spouse, etc. has been injured or killed in an accident.

BellSouth will cooperate fully with Resellers in the disposition of annoyance calls received by the Reseller's end users. Because of the nature of their work, the Annoyance Call Center will need to work directly with the Reseller end user to resolve any problems. BellSouth will expect Resellers to take appropriate corrective action with their end users in those cases where the 'annoyance call' is originated by the Reseller's end user. Failure of the Reseller's end user to cease annoyance or harassing calls will result in disconnection of the end user's service.

The Annoyance Call Center does not handle referrals concerning Misdirected, Debt Collection, or Solicitation Calls.

State	Annoyance Call Center
Alabama, Kentucky, Louisiana, Mississippi, Tennessee	557-6222 Central Time: 7:30 AM - 5:30 PM Monday - Friday
Florida, Georgia, North Carolina, South Carolina	780-2969 Eastern Time: 7:30 AM - 5:00 PM Monday - Friday

**Local Directory Assistance
Technical Plan**

**For a 411 Call
with
Mixed Local & Long Distance Queries**

Draft 1

March 8, 1996

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March 8, 1996

1. INTRODUCTION (LCM)

Many changes are taking place in the telecommunications industry due to the impending restructuring and opening up of the local telecommunications markets. AT&T is planning to enter several local markets in 1996 through LEC Service Resale and resale of LECs local loop facilities connected to AT&T local infrastructure. In support of AT&T's local market plans, Issue 1.0 of the Local Directory Assistance (DA) Technical Plan (Approved Copy, 2/8/96) addresses a specific set of assumptions and desirable features for market entry. This document proposes an alternative service architecture to meet the needs of the recent view of offering 411 service which would honor a fixed number of intraLATA (toll and local) and interLATA (long distance) listing requests for ONE local DA (e.g., 411 or 555-1212) call.

In the remainder of this document, the term "Issue 1.0 document" refer to the Local Directory Assistance Technical Plan Issue 1.0¹ document. The terms "local DA call" and "411 call" are used interchangeably to mean a DA call dialed with 411 or 555-1212.

This document is NOT intended as a replacement of the Issue 1.0 document, but as a supplement planning document for the variation in the set of assumptions and required capabilities to provide additional planning information to the Issue 1.0 document. The reason for this arrangement is due to the continually changing climate in the local service market arena which necessitate considerations of various capabilities for market entry.

1.1 Overview

This document assumes the same basic service architecture as described in the Issue 1.0 document. The changes are in the areas where modifications to the original plan are necessary to satisfy new assumptions of honoring both local and long distance listing requests to a single local DA call, as per Product Management request. For the list of service assumptions, please refer to the section on "Service Assumptions" (Section 2.3.1).

This document assumes the offering of local Directory Assistance (DA) service using AT&T's long distance National DA platform (NDAP). This service would enable customers to experience the AT&T brand for local DA service. AT&T local service residential and business customers dial a locally-supported directory assistance number to obtain a pre-determined maximum number of local-area and long distance telephone listings with optional call completion offer.

The proposed plan assumes the same access architecture as described in the Issue 1.0 document for the Local End Office to route local DA calls to the NDAP platform (a vendor platform with external vendor DA agents and listing database) which is currently servicing AT&T's long distance DA calls. The regional 5ESS® / OSPS is used for call completion. The plan considers both the LEC Service Resale and Loop Resale arrangements with the leased loop terminated at the LEC MDF and hand-off to the AT&T local end office.

1.2 Purpose

The purpose of this document is to provide Local Service planners and Product Management with a service architecture proposal to implement the AT&T branded local DA service with the new service assumptions stated in the "Service Assumptions" section. It also provides input for engineering, development, provisioning, operations, testing, and Methods and Procedures (M&Ps).

This plan:

1. assesses the feasibility of using the service architecture documented in the Issue 1.0 document to support the capability of local DA calls that can support a mix of local-area and long-distance listing requests.

¹ Mui, L.C. (Coordinator), Local Directory Assistance Technical Plan, Issue 1.0, Approved Copy, 2/8/96.

2. identifies any development efforts that are required to support the new set of service assumptions.

1.3 Terminology (ALL)

The following terms are used throughout the document.

Local Service - Consists of switch-based features and other services (for example, local Operator Services) which have been traditionally offered by the LEC to residential and business customers. AT&T will offer these features and services to the AT&T residential and business customers via a local tariff filing, as it enters the local market.

Local End Office - refers to the switch where customer lines terminate. In this document, references are made to the LEC End Office in the LEC Service Resale environment and AT&T Local End Office in the Loop Resale environment.²

LEC Service Resale - Local Service is provided using LEC network services.

Loop Resale - In this type of architecture, AT&T leases the loop facilities to the end customers home, but purchases and manages its own local end office switch. To the customer, AT&T can now be the sole provider of local, intraLATA toll, and long distance service. The strictest definition of the term "loop resale" includes only local and intraLATA toll traffic served by an AT&T purchased and managed local end office switch with leased loop facilities to the customer's homes or businesses.³

IntraLATA call - A call placed (originating and terminating) within a single LATA. IntraLATA calls fall into two categories: local (non-toll) and toll calls. The local calls are referred to as intraLATA local calls and are those that are placed to (NPA) NXXs in the AT&T customer's local calling area. These calls normally do not incur charges based on the distance of the call or the duration of the call. The toll calls are referred to as intraLATA toll calls and are those calls that are placed to (NPA) NXX's located, with few exceptions, within the AT&T customer's LATA. These calls incur charges allowed by state tariffs, for both distance and duration.

In the remainder of this document, the terms "intraLATA call", "intraLATA toll call", and "intraLATA local call" are used. The term "intraLATA calls" refers to both the "intraLATA local calls" and "intraLATA toll calls".

AT&T Directory Assistance For Any DistanceSM service - AT&T Directory Assistance service accessed by dialing 900-555-1212 anywhere in the country.

In this document, 900-555-1212 calls refer to calls handled by the AT&T Directory Assistance For Any DistanceSM service (also known as Project Zebra).

Local Directory Assistance - Service provided when customer dials a locally-supported directory assistance number (e.g., 411, 555-1212) to obtain up to a pre-determined maximum number of interLATA, intraLATA toll and / or intraLATA local telephone listings.

Directory Assistance Call Completion (DACC) - Optional offer to dial one of the listings retrieved as a result of a Directory Assistance call.

² The Local End Office is sometimes referred to as the "Local Switch Office (LSO)" in other documents that address Local Service.

³ T. E. Adams, et. al., Loop Resale Technical Plan, Draft 3.0, December 22, 1996.

Mixed local / long distance listing requests - the capability for customer to call 411 to request up to a pre-determined maximum number of interLATA, intraLATA toll and / or intraLATA local telephone listings.

1.4 Scope

This document covers the technical planning information for providing local directory assistance (DA) service offering a mix of local and long distance listing requests for local residential and business customers who choose AT&T as their local service provider.

- This plan addresses local DA service which are available to AT&T local customers who dial "411 or 555-1212 (depending on the geographic region) to reach local DA service.
- The internal 900 number used in the architecture should not be published, and customer should not be dialing the internal 900 number.
- It is assumed that customers currently dialing to reach the AT&T DA service via the dial-strings "NPA-555-1212" or "900-555-1212" are not impacted by this plan.
- This plan considers both the LEC Service Resale and Loop Resale with the leased loop terminated at the LEC MDF and hand-off to the AT&T local end office.
- BCS access options considered currently for Loop Resale, which affect the access arrangement from the Customer Premise Equipment to the end office switch, will be compatible with the 411 calls at the end office in the LEC Service Resale and Loop Resale arrangements.⁴ Therefore, the limitation to the basic Loop Resale arrangement, as stated in the Issue 1.0 document, is no longer applicable. Instead, the term "Loop Resale" includes the various access arrangements defined in the Loop Resale Technical Plan, Draft 3.0.

1.5 Guide to the Document

This document contains the following sections:

1. INTRODUCTION section provides a brief description of the planning effort, the purpose, the scope, and the structure of the document.
2. SERVICE DESCRIPTION section provides a definition of the local DA service, the mixed local and long distance listings request option, service assumptions, call volume assumptions, target market, as well as any restrictions and limitations of the proposed service.
3. HIGH-LEVEL ARCHITECTURE DESCRIPTION section provides an overview of the selected architecture.
4. TECHNICAL DESCRIPTION section provides the technical description of the access architecture and call flows.
5. AMA RECORDING / BILLING section provides a description of the recording and billing impacts.
6. NATIONAL DIRECTORY ASSISTANCE PLATFORM section describes the needed enhancements and Methods & Procedures changes.
7. FEATURE INTERACTIONS section describes interactions with other features.
8. PERFORMANCE section describes any performance impacts.
9. OPERATIONS section describes the service operations strategy.

⁴ Data provided by M. S. Huq, S. Ganesan, P. Zahray.

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10. TIME / COSTS ASSESSMENTS section provides an assessment summary of efforts needed to routing local Operator Service traffic to the AT&T 5ESS® OSPS platform for handling.
11. BCS IMPACTS section provides an assessment of BCS-specific impacts.
12. ISSUES section provides a list of issues that have been identified. Most of the issues are expected to be resolved. A few others may remain as suggestions for future implementation.
13. REFERENCES section lists documents referenced.
14. GLOSSARY section lists acronyms and abbreviations.

2. SERVICE DESCRIPTION (LCM)

2.1 Service Definition

This is an AT&T branded local Directory Assistance (DA) service that would allow AT&T local service customers to dial a locally-supported directory assistance number (e.g., 411, 555-1212⁵) and obtain up to two local-area telephone listings with optional Directory Assistance Call Completion (DACC) to one of the listings. The local directory assistance calls are routed by the Local End Office over the AT&T Switched Network (ASN) to the National Directory Assistance (NDA) platform (a vendor platform with external vendor DA agents, and listing database) which is currently servicing long-distance DA calls.

DA agents must be able to identify a local DA call. Customers making local DA calls will also be able to request long distance information.⁶ Local customers will be permitted some number of "free" DA calls each billing cycle (the number of these "free" DA calls will likely vary by area within the broad framework or guidelines provided by the PUC (Public Utility Commission). Customers who exceed the number of "free" DA calls for the billing period will be charged a flat rate for the subsequent calls. Furthermore, the call completed via the DACC capability must be appropriately billed for call completion.

The ability to price local DA Call Completion at a rate different from the LD Call Completion charge is required.

The local DA service offering is being considered for the LEC Service Resale and Loop Resale environment. The development effort required, as summarized in the "TIME / COSTS ASSESSMENTS" section, is expected to result in a significantly longer lead time for both the LEC Service Resale and Loop Resale.

Direct Measures of Quality for this service should be consistent with those utilized in the Long Distance (LD) segment of end-to-end service.

The local DA service planning to implement capabilities to re-use the LD DA platform for local DA is a shared objective for local and LD businesses and cost reduction.

This Plan builds upon the Local Directory Assistance Technical Plan, Issue 1.0, but addresses the option to mix local and long distance listing requests, as specified in the following section 2.2.

2.2 Mixed Local / Long Distance Listing Request Options

The following description is provided by Product Management for the option to mix local and long distance listing requests:

⁵ Either 411 or 555-1212 is the dial-up access number to satisfy LEC parity for the local geographic area..

⁶ Pending Product Management decision based on regulatory and economic evaluations.

1. Local DA Product Management would like to offer unrestricted directory assistance to customers as long as a PUC or a legislative body does not preclude this. This means that a customer dialing "411" (or 555-1212 in some geographic regions) may request a mix of intraLATA and interLATA directory listings in one 411 call. For each 411 call, customer may request two interLATA listings, two intraLATA listings, or one interLATA / one intraLATA listings.

Call handling and call completion assumptions and criteria, as summarized in the local DA Technical Plan, are not changed. That is, up to two listings may be requested for each 411 call, and call completion is an option for the second of the two requested listings.

2. The current LEC environment permits two listings per customer call. The Excell platform can accommodate as many as 8 listings per customer call (for Directory Assistance at any Distance or 900-555-1212 service). Local DA will offer to customers as many listings per calls as the platform permits. However, customers will have to pay for the additional listings. Customers will be billed for every two listings given during a single call. Additionally, the flexibility should be built into the billing system so that we could change the quantity of listings given per call.
3. On the customer's bill, a call placed to 411 will be considered "local directory assistance". Calls placed to NPA-555-1212 or 900-555-1212 will continue to appear on the bill as it does today.

2.3 Assumptions (LCM)

2.3.1 Service Assumptions

Service assumptions listed below will consist of two parts: Section 2.3.1.1 lists assumptions from Issue 1.0 that remain unchanged, and Section 2.3.1.2 lists the assumptions added to support the mixed local and long distance listings requests capability.

2.3.1.1 Issue 1.0 Assumptions

1. AT&T's local DA service will match that of the incumbent LEC traditional "411" service in terms of:
 - customer dialing format (e.g., 411, 555-1212 etc.)
 - pricing criteria dictated by regulators (e.g., the number of free calls).
 - availability of call completion service.
2. AT&T will provide local DA service for both LEC service resale and loop resale local service architectures.
3. The DA call and the optional call completion are billed to the calling number.
4. Call Completion charge for the "411" service may be different from LD Call Completion charge.
5. Customers dialing NPA-555-1212 will receive long distance DA service.
6. Customers dialing 900-555-1212 will receive the *Directory Assistance For Any DistanceSM* service.
7. The 900-NXX-XXXX number for local DA is an internal number, and not advertised. However customers dialing this number will get the local DA service.
8. Each local DA call is recorded.
9. The option of using more than one terminating 4ESSTM switch is considered in this Plan to provide multiple egress for local DA traffic to eliminate having the switch as a single point of failure. The use of multiple terminating 4ESSTM switch can be relaxed for market entry if it would result in significant simplification.
10. The option for local pricing to be different from long distance should be available. At this time the pricing of local DA is not yet determined. Local DA pricing may be equal to or different from long distance DA pricing, or equal to the LEC pricing.⁷

⁷ As per H. Rubnitz, 12/4/95.

11. Also refer to "Restrictions and Limitations" section below.

2.3.1.2 New Assumptions for Mixed Local / LD Listing Requests

The following assumptions were made for the planning of the capability to mix local and long distance listings in one 411 call.

1. For each 411 call, customer can request up to two listings for a single charge (as is already stated in the Local DA TP, Issue 1.0).
2. Development on the vendor NDA platform and the 5ESS® OSPS are required to set indicator for the type and number of local and / or long distance listing requests in the DA AMA record for all 411 DA call. This is additional development to the setting of an indicator in the Call Completion AMA record to identify Local DA Call Completion (as is already stated in the Issue 1.0 document). Customers making local DA calls will be able to request long distance information in addition to local information.
3. When customer requests a mix of local and long distance listings, the total number of listing requests must not exceed the allowable number of requests for each 411 call.
4. Possibility can exist that PUC in one geographic region may (a) not allow the servicing of both local and long distance listing requests for a 411 call, (b) allow the servicing of both local and long distance listing requests, and do not require separate pricing structure for local or long distance calls, or (c) allow the servicing of local and long distance listing requests, but require separate pricing structure for each category.
5. Customer's subscription to extended calling area coverage has no impact on 411 coverage. The only impact would be the billing of the completed call which is handled by the downstream rating and billing systems.
6. To handle the case of up to 8 listing requests, a total of four 411 DA charges are recorded. Call completion will be offered on the last requested listing provided it is a dialable number.

2.3.2 Restrictions and Limitations

This document does not add any limitation to those listed in the Local DA Technical Plan Issue 1.0 document.

2.4 DA Call Volumes Assumptions (LCM)

The following call volume assumptions are as listed in the Local DA Technical Plan Issue 1.0 document.

1. Call completion take-rate of 30% is assumed.
2. Local residential and business DA Traffic volume data used in the planning are based on forecasted local DA call volumes from Product Management.
3. Local (residential and business) and long distance DA busy hours coincide.

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3. HIGH-LEVEL ARCHITECTURE⁸

This section summarizes the important aspects of the high-level architecture to provide background information for this document. For more detailed description of the Local DA Service, please refer to the Local DA Technical Plan Issue 1.0.

If local Directory Assistance is provided by AT&T, local DA calls from AT&T customers are routed to the AT&T Switched Network (ASN) by the LEC End Office in the LEC Service Resale environment, or by the AT&T Local End Office in the Loop Resale environment

These calls will be routed via the ASN to the National Directory Assistance Platform (NDAP) currently located in the Phoenix Work Center, Phoenix, Arizona, and / or other NDAP platform sites to be established. All local DA calls will, in addition, be offered the option of Directory Assistance Call Completion (DACC).

The customer-dialed digits (e.g., 411 or 555-1212) are translated into a unique 900-number (900-NXX-XXXX) reserved for local DA use. The originating 4ESSTM switch will translate the 900-number to a network routing number (e.g. 719-030-XXXX). For clarity, 900-NXX-XXXX and 719-030-XXXX are used throughout this document. The actual routing number⁹ to be assigned to local DA service will share the same first six digits (e.g. 719-030) with the routing number of "719-030-1212" used by the *AT&T Directory Assistance For Any Distance*SM service. It is planned that the 7th digit in the network routing number for local DA will be a digit not equal to "1".

Local DA calls are routed to the NDAP via the Regional 5ESS[®] OSPS. To accomplish this routing, the Local End Office will translate the customer-dialed digits into a 900-NXX-XXXX and will route the call to the originating 4ESSTM switch. The originating 4ESSTM switch will translate the 900 number to a network routing number format (e.g., 719-030-XXXX) using the HI-CAP Originating Table (HOT). The originating 4ESSTM will route the call using RTNR to the terminating 4ESSTM serving the Regional 5ESS[®] OSPS. The terminating 4ESSTM will route the call to the Regional 5ESS[®] OSPS LS over a dedicated FG-D SA trunk.

This architecture supports more than one requests per call. Initially local DA will offer up to two requests. If the customer desires information for two listings, the customer must so inform the NDAP agent at the beginning of the call. When two listings are requested, the agent will request City and Name information and provide the first listing verbally, then prompt for the second listing.

Using M&P, the platform can actually support up to eight listings with the last listing being prompted for optional call completion.

3.1 Routing / Egress Architecture for Local DA Service (GD)

The routing / egress architecture is based on the current NDA Platform supporting *AT&T Directory Assistance For Any Distance*SM (900-555-1212) service. The architecture will provide "multiple routes" or "egress" and will eliminate the terminating 4ESSTM as a single point of failure.

⁸ The information in Section 3 to Section 3.3 are extracted from the Local Directory Assistance Technical Plan Issue 1.0 (Approved Copy, 2/8/96).

⁹ As per conversation with G. Kansianic and D. McChristian 1/96.

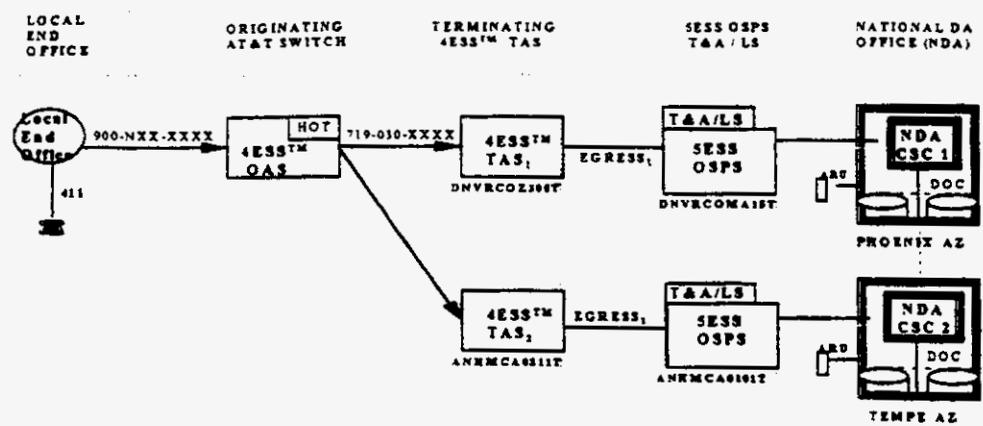


Figure 2: High level access/egress architecture for Local DA Service

3.2 FGD Trunk Group to Regional 5ESS (LCM)

The local DA 900-number (900-NXX-XXXX) is translated into a unique routing number of 719-030-XXXX sharing the same first six digits with the network routing number of 719-030-1212 assigned to the *Direction Assistance For Any Distance*SM (900-555-1212) service but the 7th digit will be a digit other than "1". The local DA traffic may be carried by the existing dedicated FGD SA trunk group used by the *Direction Assistance For Any Distance*SM platform. Analysis indicated that there is no need to have a separate dedicated FGD SA trunk group¹⁰ for local DA traffic.

3.3 Using 5ESS@ OSPS for DACC (TAD)

After the customer dials the appropriate valid local DA number (e.g., 411, 555-1212, etc.), the Local End Office will convert the call to a 1+900-NXX-XXXX format and will route the call to the originating 4ESS™ switch. The originating 4ESS™ then translates the 900 number to a number 719-030-XXXX using the HiCAP Originating Table (HOT). (The new number will be associated with a new trunk group or groups between the terminating 4ESS™ and the Regional 5ESS@ OSPS LS.) The originating 4ESS™ will route the call using Real Time Network Routing (RTNR) to the terminating 4ESS™. Based on the number, the terminating 4ESS™ switch will route the call over the FGD SA trunk group to the Regional 5ESS@ OSPS LS.

¹⁰ As per conversation with D. McChristian 1/96.

3.4 Call Servicing Center

Local Directory Assistance calls received at the Regional 5ESS® OSPS will be routed to the Call Servicing Center (CSC) based on the digit analysis of the received called number. The CSC consists of a serving team of agent attendants occupying vendor supplied terminals that are served by a 5ESS® OSPS Remote Integrated Service Unit (RISLU) via a Position Switching Module (PSM), and a Listing Services Database (LSDB). A LSDB is a vendor supplied data base for directory assistance information. The 5ESS® OSPS PSMs are connected to an LSDB through the Call Processing Data Links (CPDLs). The CPDL is used by the OSPS to notify the vendor's equipment of a new call and is used by the vendor's equipment to request the 5ESS® Switch to transfer a call to an external Audio Response Unit (ARU). All together the components make up what is called the National Directory Assistance Platform (NDAP).

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AT&T Proprietary (Restricted)

March 8, 1996

4. TECHNICAL DESCRIPTION

4.1 Description of the Mixed local / LD Listings Request Option (LCM)

This plan considers the various arrangements for offering the capability to allow customers to request any combination of local (e.g., intraLATA toll and intraLATA local) and long distance (e.g., interLATA) listings up to a pre-determined maximum of requests per 411 call. Since there is no available PUC ruling which dictates if such an offer is permissible or related rating requirements, this plan considers three options referred to as Options (1), (2), and (3) in the remainder of this document.

Option 1 - PUC allows only IntraLATA toll/local listing requests for 411 calls

(listing 1 = intraLATA, listing 2 = intraLATA)
or
(listing 1 = intraLATA)

There are no AMA impacts here. It is assumed that a single AMA record means 1 or 2 DA requests were made.

Impacts:

Excell Platform: (a) needs to decide if listing requested is interLATA or intraLATA toll/local.

(b) do not allow interLATA requests.

(c) set indicator to "N" on screen for agent M&P to disallow interLATA request.

CPDL message: no additional requirement (same as stated in Issue 1.0 document).

5E/OSPS: no additional requirement (same as stated in Issue 1.0 document).

agent M&P: will disallow LD requests when indicator is set to "N" on screen to disallow interLATA request.

billing: no additional requirement (same as stated in Issue 1.0 document).

Option 2 - PUC allows both InterLATA and IntraLATA toll/local listing requests for 411 calls and does not require separate rating for InterLATA and intraLATA DA listings.

(listing 1=interLATA, listing 2=intraLATA toll/local)
or
(listing 1=interLATA, listing 2=interLATA)
or
(listing 1=intraLATA toll/local, listing 2=intraLATA toll/local)
or
(listing 1=intraLATA toll/local, listing 2=interLATA)
or
(listing 1=intraLATA)
or
(listing 1=interLATA)

Again, no AMA impacts here. The same charges apply to each AMA record as in Option 1.

Impacts:

Excell Platform: do not need to decide if listing requested is intraLATA toll/local.

CPDL message: no additional requirement (same as stated in Issue 1.0 document).

5E/OSPS: no additional requirement (same as stated in Issue 1.0 document).

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agent M&P: will allow both LD and intraLATA toll/local requests.
 billing: no additional requirement (same as stated in Issue 1.0 document).

Option 3 - PUC allows both InterLATA and IntraLATA toll/local listing requests for 411 calls and requires separate rating for InterLATA and IntraLATA DA listings.

(listing 1=interLATA, listing 2=intraLATA toll/local)
 or
 (listing 1=interLATA, listing 2=interLATA)
 or
 (listing 1=intraLATA toll/local, listing 2=intraLATA toll/local)
 or
 (listing 1=intraLATA toll/local, listing 2=interLATA)
 or
 (listing 1=intraLATA)
 or
 (listing 1=interLATA)

In this case, there are AMA recording impacts.

Impacts:

Excell Platform: (a) needs to decide if listing requested is interLATA or intraLATA toll/local.
 (b) pass indicator back to SE/OSPS to indicate if interLATA or intraLATA listing.
 (c) retrieve listing (and call completion if selected for the last requested listing).

CPDL message: additional requirement to be defined.

SE/OSPS: additional requirement to be defined.

agent M&P: will allow both LD and intraLATA toll/local requests.

billing: identify interLATA and intraLATA calls and apply separate charge.

For each of the three options, the handling of up to 8 calls assumes that it is equivalent to four 411 DA charges. Call completion will be offered on the last requested listing if it is a dialable number.

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4.2 Call Flows (TAD)

The following is the call flows for Local DA Using 5ESS®/OSPS for DACC. The term "Local End Office" refers to either the LEC End Office as in the LEC Service Resale environment, or the AT&T Local End Office as in the Loop Resale environment. Details on the routing of the local DA call to the ASN are described in the preceding section on "Access Architecture" and are not repeated here.

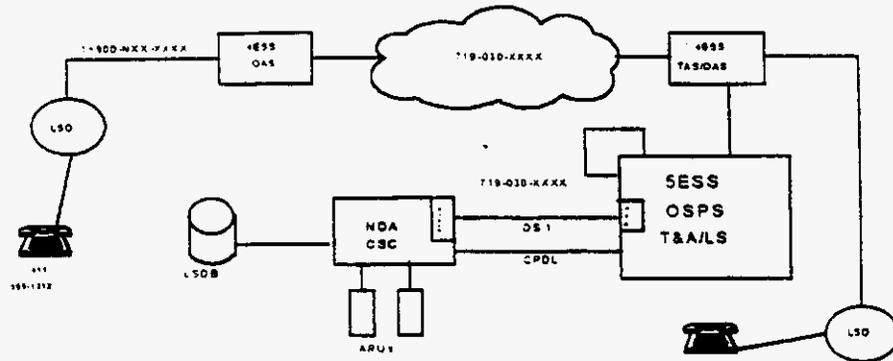


Figure 3: Local DA Using NDA Platform and 5ESS® OSPS for DACC

1. Customer goes off hook.
2. Local End Office looks up customer record.
3. Local End Office transmits dial tone.
4. Local End Office does Originating Line Screening.
5. Customer Dials one of the locally supported access codes, i.e., 411, 1+411, or 555-1212.
6. Local End Office converts local DA call to 1+900-NXX-XXXX and routes the call to the ASN.
7. Local End Office generates an AMA Access call record at this time.
8. The call is routed to a 4ESS™ Originating Access Switch (OAS).
9. 4ESS™ OAS translates the 900 number to a 719-030-XXXX number using the HI-CAP Originating Table (HOT). The new routing number will be associated with the existing trunk group (used by the *Directory Assistance For Any Distance*™ service) between the 4ESS™ Terminating Access Switch (TAS) and the Regional 5ESS® OSPS LS.
10. 4ESS™ OAS routes call using Real Time Network Routing (RTNR) to the 4ESS™ TAS.
11. 4ESS™ OAS generates an AMA 900 call record.

12. 4ESS™ TAS receives call, routes it over the existing FG-D SA trunk group to the Regional 5ESS® OSPS LS. The 4ESS™ to 5ESS® trunk group (from step 9) utilizes MF Feature Group D for Special Applications (FGD SA) signaling.¹¹ & ¹²
13. The Regional 5ESS® OSPS has both Listing Services (LS) and Toll and Assistance (T&A) capabilities. The T&A application will not be accessed because local billing will not be available.
14. Based on the digit analysis, of the received called number, i.e., 719-030-XXXX the 5ESS® OSPS will apply listing services to the call.
15. The Regional 5ESS® OSPS LS places the call in a DA serving team queue awaiting the next available LS attendant. **NOTE:** The DA serving team is remotely located from the host 5ESS Switch. A Remote Integrated Services Line Unit (RISLU), located in the NDAP, is digitally connected over DS1 links to the host Position Switching Module (PSM) in the Regional 5ESS®.
16. The 5ESS® OSPS LS provides OLS and will evoke the use of an AILS query if the NPA NXX of the ANI is foreign to the Regional OSPS.
17. The attendant when attached, sees a screen depicting the results of the OLS screening in step 16. In addition, information will be displayed informing the attendant that the call is a local DA call. The NPA-NXX should be available to the attendant. This should allow for a faster local listing retrieval.
18. The attendant prompts the caller for city/locality and requested listing if a local DA call or state, city, and requested listing if other than local. As with the NDA offering, one (1) to eight (8) listings may be requested. In all cases, the regulatory requirements of the state from which the call originated will be followed. Information concerning the originating states regulations and pricing will be displayed to the attendant from data retrieved from the Local Exchange Routing Guide (LERG) or equivalent information source.
19. If more than one listing is requested, the attendant must insure that all but the last listing be given verbally. The last listing is provided by an Automatic Response Unit (ARU).
20. The attendant launches a query for the requested number to the Listing Services Data Base (LSDB).
21. The attendant will take the following actions in response to LSDB queries.
 - (a) If the listing is not blocked, but no listing is found for a valid request (e.g., an unlisted number), the attendant will inform the customer and the 411 call is billable just like other requests with the listing found. The agent presses the RECRD TICKT key generating an AMA record for the attendant, then releases from the call or asks for another listing.
 - (b) If listing is blocked due to state regulatory requirements, the attendant so informs the customer then releases from the call or asks for another listing.
 - (c) If a valid listing is found, and the customer has requested multiple listings, the attendant will quote the listing verbally. After the second, fourth, and sixth listings if requested, the attendant will press the RECRD TICKT key which will generate an AMA record for the DA call. On the final listing, the attendant will release the call to the ARU. The release to the ARU triggers the generation of an AMA record for the DA query in the Regional 5ESS®.
 - (d) If an ARU is not available, the attendant will press RECRD TICKT and then release from the position.
22. If automated listing, the LSDB sends a Transfer Request Message to the 5ESS® OSPS LS.
23. The 5ESS® OSPS LS selects an ARU port and sends an ARU Port Select / Call Completion ARU Port Select Message to the LSDB.

¹¹ Dunn, T. A. et al., "FG-D Incoming Signaling for Special Applications, Releases 1&2, Technical Plan," June 15, 1994.

¹² J. J. Rielinger, OSPS FSD 01-38, "FG-D Incoming Signaling for Special Applications, Release 2," Issue 1 January 1994.

24. The ARU plays the retrieved listing number to the caller, prompts for call completion, waits 3 seconds and repeats the listing number.
25. If the caller does not accept call completion, i.e., caller enters DTMF "2" or does nothing, the ARU times out and goes on-hook and the call is terminated.
26. If the caller accepts call completion, i.e., caller enters DTMF "1" the ARU will forward this response to the LSDB in the form of a data message.
27. The LSDB sends a **Call Complete Request Message** to the 5ESS® OSPS. The 5ESS® OSPS now switches from the LS application to T&A application.
28. The 5ESS® OSPS LS and the LSDB each release their trunk to the ARU.
29. The 5ESS® OSPS T&A proceeds to complete call as per current capabilities.
 - (a) OLS is done using ALS query if necessary.
 - (b) T&A routes call to ASN via appropriate 4ESS OAS.
 - (c) If answer supervision is returned, 5ESS OSPS generates an AMA billing record for the call completion leg of the call.
 - (d) When a calling or called party disconnect is received, the 5ESS® OSPS closes the AMA billing record which includes the call completion module. NOTE: The AMA billing record needs to be uniquely identified so that the call completion charge may be different from LD rates, if necessary.
30. Call flow terminates.

(NOTE: The attendant will depress RECD MSG key after each verbally given (up to seven) listing, and the transfer to ARU key for the final listing requested whether it be 2, 3, 4, 5, 6, 7 or 8.

For Local Number Portability (LNP) impacts on call completion, please refer to the Issue 1.0 document.

5. AMA RECORDING / BILLING (ECB)

The terminating 5ESS/OSPS will generate all billable AMA recording. One or more AMA records for DA requests and, possibly one AMA record for the Call Completion portion will be generated.

5.1 Recording Impacts

5.1.1 AMA Recording Option 1

For this option, it is assumed that only Local DA listings are permitted for all jurisdictions or areas regulated by some PUC. With this option, there will be no additional AMA recording development needed at the 5ESS/OSPS. The DA AMA record will look very similar to the 1+900-555-1212 DA AMA record but with the Terminating NPA and Terminating Number fields set to the appropriate routing number for '411' calls ('719-030-XXXX' format).

Each DA AMA record will represent 1 or 2 requests for DA listings. The billing system will bill the caller for each DA AMA record processed. The bill will show each '411' call.

5.1.2 AMA Recording Option 2

This option permits both Local DA and LD DA listing requests but bills the requests equally. There should be no AMA recording or billing differences between this option and option 1 noted above. The only difference is the permission to give both Local DA and LD DA listings by the Volt Delta Resources.

Each DA AMA record will represent 1 or 2 requests for Local and/or LD DA listings. The DA AMA record will look very similar to the 1+900-555-1212 DA AMA record but with the Terminating NPA and Terminating Number fields set to the appropriate routing number for '411' calls ('719-030-XXXX' format). The billing system will bill the caller for each DA AMA record processed. The bill will not be able to distinguish between Local DA and LD DA requests.

Each DA AMA record will represent 1 or 2 requests for DA listings. The billing system will bill the caller for each DA AMA record processed. The bill will show each '411' call.

5.1.3 AMA Recording Option 3

Option 3 permits the same requests as Option 2 above but the billing system will rate the 2 types of DA requests differently. This option requires development of the CPDL messaging between Volt Delta Resources and the 5ESS/OSPS, the 5ESS/OSPS AMA handling, RICS and the remaining billing system.

The 5ESS/OSPS will receive CPDL messages from the Volt Delta Resources and generate 1 AMA record for each type of DA request made.

Since there could be 2 types of DA requests possible (local DA and LD DA) per call, there could be 2 DA AMA records for a single '411' DA call. Each of these DA AMA records would have appended an AMA module that contains the type of request (either local or LD) and the count of requests made for each type. If a caller made 1 or more requests only for local DA, only 1 DA AMA record would be created. If a caller made 1 or more requests only for LD DA, only 1 DA AMA record would be created. For a mixture of local and LD DA requests, there will be 2 DA AMA records created.

The 5ESS/OSPS will receive CPDL messages containing the types of requests (Local or LD) made and the count of each type of request made. Each DA AMA created by the 5ESS/OSPS will contain an AMA Module (module code to be determined) that will identify which type of DA request (either local or DA) was made. The DA AMA module will also contain the count of requests made.

5.1.4 Recording Option to be Developed

Since the above 3 options are to be determined by local PUC decisions, Option 3 will have to be developed to handle all Local DA AMA recording. If the PUC decides that Option 1 will be permitted in a particular state, Option 3 AMA recording will generate one DA AMA record with an AMA Module containing the type of request (Local DA) and the number of requests made. Similarly, if the PUC decides that Option 2 will be permitted in a particular state, Option 3 AMA recording will generate 1 or 2 AMA records with the appropriate AMA Modules appended to indicate the types of requests (Local DA or LD DA) and the respective counts of such requests.

The following are major AMA record values to identify a Sent Paid DA AMA record. This AMA record will be generated by the 5ESS/OSPS for each type of DA request made by the caller. If the caller requests both Local DA and LD DA information, 2 such AMA records will be generated with the appropriate AMA Module (described below) appended.

AMA Table Description	Value
Structure Code	1200

Call Code	033
Answer Indicator	0 = Answered
Elapsed Time	0
Terminating NPA/Number	719-033-XXXX, where XXXX is unique to '411' DA calls

The following is the layout of the suggested AMA Module that will be appended to the above AMA record to identify the type of DA requests (either Local or LD) and the number of requests made for each type of DA request.

AMA Table Description	AMA Number	Table Value
Module Number	88	??
Type of Request	??	'XXX' = Local DA, 'YYY' = LD DA
Number of Requests	??	001 thru 999

The values '018' and '019' for 'XXX' and 'YYY', respectively, are currently being used for the CPDL messaging. These values are subject to change and they have to be agreed to by Bellcore.

5.2 Billing Impacts

5.2.1 Recorded Information Collection System (RICS) Impacts

For Option 3 AMA recording, RICS will see AMA records very similar to the "Directory Assistance at Any Distance" project (1+900-555-1212) but with the Terminating NPA and Terminating Number unique to '411' Local DA. Also, RICS will have to process the AMA Module appended to the AMA record. If a caller requests 1 or more number of Local DA requests, the AMA Module will contain the Type of Request value set to 'XXX' with the Number of Requests set to the count of these requests. If the same caller requests 1 or more number of LD DA requests, the AMA Module will contain the Type of Request value set to 'YYY' with the Number of Requests set to the count of these requests.

5.2.2 Message Processing System (MPS) Impacts

5.2.2.1 MPS Rating of Options 1 and 2 EMI Records

MPS will be receiving EMI records from RICS as it does today. Since there will be no field in the EMI record to denote Local DA or LD DA requests, MPS will assume each EMI record is a single '411' DA request and rate the EMI record as such. MPS will assume 1 EMI record per '411' call.

5.2.2.2 MPS Rating of Option 3 EMI Records

MPS will be receiving the EMI records from RICS and rate them. The EMI record will contain an indicator identifying the type of request and a count of the number of such requests. One or 2 EMI records can be expected for a single '411' call. MPS will rate the Local DA requests differently from the LD DA calls. Note that if Option 3 AMA Recording is used for either Option 1 or Option 2, MPS will still be able to handle rating of the EMI records.

5.2.3 Local Billing System Impacts

For Options 1 and 2, the billing system will put each call on a separate line with some label indicating these lines are for '411' calls.

For Option 3, the billing system will put each call on 1 or 2 lines depending on whether the '411' call resulted in either only Local DA requests, only LD DA requests or a combination of types of requests. Each line on the bill will indicate the type of request made, the number of requests made and the cost for the requests.

5.3 5ESS/OSPS handling of the CPDL Module 856¹³

- The software initially sets the value for AMA Table 283 to '000' - this is invalid as the values should range from '001' through '999.'
- When the 5ESS/OSPS receives the CPDL Module 856, it takes the value in the module and populates AMA Table 283 of AMA Module 321.
- The 5ESS/OSPS does not evaluate the value used from the CPDL Module 856. Its value ranges from '001' through '999.'
- If the 5ESS/OSPS does not receive the CPDL Module 856 and the caller wants call completion, there will be no value to put into AMA Table 283, AMA Module 321. The 5ESS/OSPS will mark the AMA as invalid (it puts the value 'AB' in the Hexadecimal Identifier of the AMA record). In short, it looks like no 5ESS/OSPS development is needed to handle the AMA Module 321, AMA Table 283 value that the Local DA service has requested for Call Completion.

5.4 Billing Impacts

There are several areas in which billing is impacted and is discussed in the following sections.

5.4.1 Recorded Information Collection System Impacts

The AMA records for local DA (always Sent Paid) and LD Sent Paid (made via 1+900-555-1212) will contain AMA module 321. It is not possible for the Recorded Information Collection System (RICS) to distinguish one AMA record from the other. RICS would create the same EMI record for both cases. By assigning different values as the Service ID for local DA and LD Sent Paid in the AMA Module 321, it is possible to distinguish one AMA record from the other. This solution makes it possible for pricing local DA Call Completion at a rate different from that of LD DA Call Completion.

¹³ Conversation with T. O'Malley 2/23/96.

5.4.2 Message Processing System Impacts

The Message Processing System (MPS) will rate each local DA EMI record uniformly. All local DA calls that result in Call Completion will be rated as per tariff.

5.4.3 Local Billing System Impacts

5.4.3.1 CCS Billing

- The Local Billing System (LBS) will have to accumulate the local DA calls for each customer. LBS will allow a specific number of free local DA calls per customer per billing period.
- The bill image will show the total number of chargeable local DA calls (the number of local DA calls above the allotted number of free local DA calls).

5.4.3.2 BCS Billing (MSH)

Same as stated in Local DA Technical Plan Issue 1.0 document.

6. NATIONAL DIRECTORY ASSISTANCE PLATFORM

6.1 Required Platform Capabilities (LCM)

The following NDA platform capabilities¹⁴ are required to provide local directory assistance using the 5ESS and OSPS based architecture:

1. The Platform shall receive the local DA traffic via the same trunk group as the 900-555-1212 traffic. Implementation, however, shall allow for potential of routing the local DA traffic via a different trunk group, if the need arises in the future.
2. The Platform shall be able to identify incoming local Directory Assistance (DA) traffic and distinguish them from the existing incoming platform traffic. Local DA traffic is identified by a unique routing number to be assigned for local DA traffic. The routing number will share the same first six digits (currently 719-030) with the existing 900-555-1212 traffic.
3. The Platform shall be capable of translating a routing number delivered to the platform into a 900-NXX-XXXX number (900-NXX-XXXX refers to the unique 900-number to be assigned to local DA). Although one routing number is anticipated at this time, the implementation should provide the flexibility for additional routing number and 900-NXX-XXXX pair(s) for local DA, if the need arises. (The estimated maximum number of routing numbers for local DA service is 10. Only one is anticipated at this time).

¹⁴ (a) L. C. Mui, "Excell Requirements for Local DA", email to J. Tessier, 2/2/96.

(b) J. Tessier to Excell Agent Services, "Excell DA Platform Change Request #JT-001", 2/2/96.

(c) E. C. Berberich, "Requirements for CPDL link to 5ESS for 411 Service", October 30, 1995.

(d) C. Apple, J. Tessier, "Excell DA Platform Change Request # CWA-003", December 13, 1995.

4. For a specific routing number, the Platform shall be capable of displaying a character string XXXX to indicate local DA service in the existing field for Service Type (currently used to display existing service types) on the agent screen. The specific value of the character string XXXX is populated on a call-by call basis.
5. The value of the character string XXXX shall be populated for each local DA call as identified by the unique local DA routing number.
6. For the 900-555-1212 service, the called number 900-555-1212 is displayed on the screen. The local DA called number (i.e., 900-NXX-XXXX) shall also be displayed in the same display field on the screen.
7. The Platform will receive and display the customer's ANI (same as for the 900-555-1212 service).
8. For the local DA traffic, the Platform shall be able to use the NPA in the customer's ANI to determine and display the state and default locale information. The DA agent shall not prompt caller for state information.
9. For local DA calls, the Platform shall be able to determine by comparing the NPA-NXX of the calling number (customer's ANI) and the City/State combination of the requested listing to determine if the customer request is for a long distance or local (intraLATA toll and intraLATA local) directory listing. This information can be derived from the LERG (Local Exchange Routing Guide) or equivalent information source.
10. An option, selectable on a state-by-state basis, shall be provided to specify if the Excell Directory Assistance platform is required to determine if the customer requested listing is for a long-distance or local (intraLATA toll or intraLATA local) listing. For clarity, this option will be referred to as the LDA-LISTING-TYPE-DETERMINATION option (default is YES). If the LDA-LISTING-TYPE-DETERMINATION option is set to YES, the Platform shall determine if the requested listing is for a long distance or local (intraLATA toll and intraLATA local) directory listing.
11. An option, selectable on a state-by-state basis, shall be provided to specify if the Platform should honor a listing request if the customer requested listing is for a long-distance listing. For clarity, this option will be referred to as the LDA-LD-PERMITTED option (default is NO). If LDA-LD-PERMITTED option is set to YES, honor either local (intraLATA toll or intraLATA local) or long-distance request. Otherwise, honor only local requests. If the LDA-LS-PERMITTED option is set to NO, an LD-CALL indicator set to "N" (NO) shall be displayed on the screen if the call is a long distance listing. When this indicator is displayed, Methods and Procedures (M&Ps) shall be defined for agents to turn down the customer listing request.
12. The Listing Access Complete Data Message (EIS to PSM) must be populated with the LISTING SERVICES MODULE [855C] (refer to RECORDING section for details). NOTE: The LISTING ACCESS COMPLETE Data Message is sent to the SESS/OSPS after the Agent presses the "Record Ticket" or the call is released. For local DA calls, the Listing Services Call Completion Module shall be populated and sent to the SESS/OSPS by the Platform. The SESS/OSPS shall translate the Module Code value "856C" into "321C" to properly identify the Call Completion AMA Module.

6.2 Agent Platform and Database Architecture (JT)

6.2.1 Call Servicing Center (CSC)

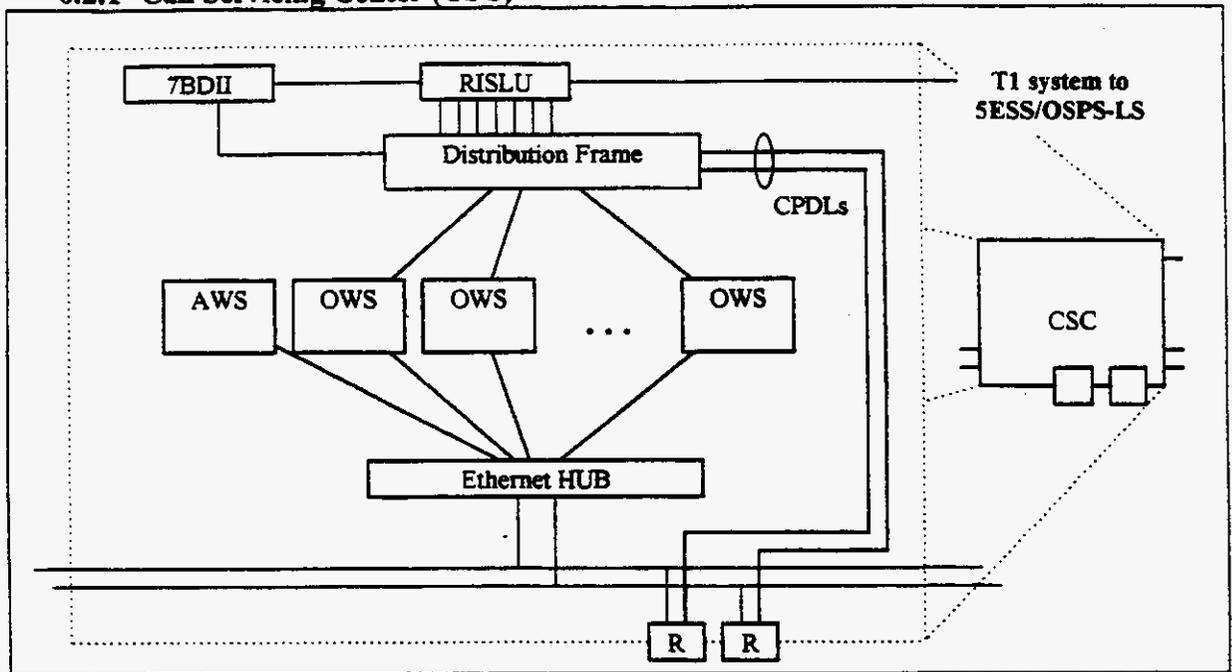


Figure 4: Structure of a CSC

The CSC is where the Directory Assistance agents are located. The Directory Assistance call terminates within the CSC. The CSC uses a data connection with a DOC to obtain listings and service the call.

6.2.1.1 Functional description of a CSC

A call arrives on the T1 carrier system from the 5ESS/OSPS-LS. The T1 carrier system enters the RISLU where the individual calls are isolated. The Distribution Frame routes each individual call to an OWS, while the 7BDII handles the CPDLs.

Each OWS services one call at a time.

There are two routers to provide reliability. If one fails, the other can be used instead.

6.2.1.2 Components of a CSC

T1 System	This system is a specially provisioned ISDN PRI interface with 23 B channels and 4 D channels (written 23B+4D vs. 23B+D for regular PRI). All these channels are multiplexed together on the T1 carrier at the DS1 level (24 x 64 kbps). Each B channel carries a voice signal at 64 kbps. Each D channel carries a data signal at 16 kbps and is used for control messages.
RISLU	Demultiplexes the individual B channels from the T1 carrier system.
7BDII	Demultiplexes the individual D channels from the T1 carrier system. Each channel is also brought down from a 16 kbps D channel to a 9.6 kbps CPDL channel for call processing messages.
Distribution Frame	Routes the B channels to the OWSs and the CPDLs to the routers.
OWS	Operator WorkStation. Used by the agent to service a call.
AWS	Administration WorkStation. Used by the vendor to manage the CSC.
Ethernet HUB	Provides connectivity within the CSC, and allows the workstations to access the DOC through the routers.
Router (R)	Connects the CSC to one or more DOCs.
Site LAN	Interconnects part of the components on the site. With this LAN, it is possible to add new equipment to the site and to connect them with the other components already in place.

6.2.2 Data Operations Center (DOC)

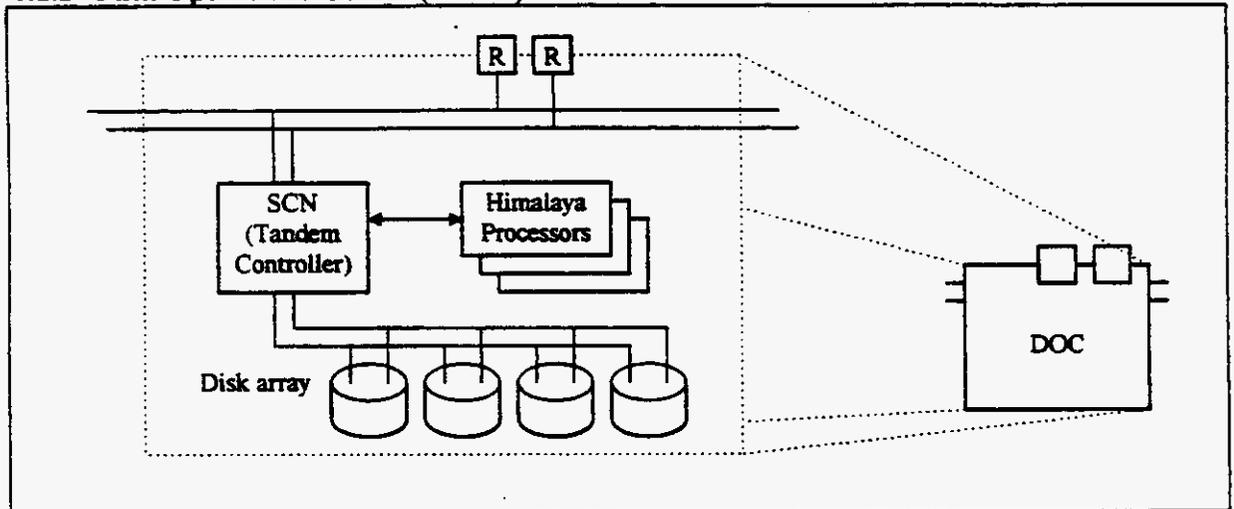


Figure 5: Structure of a DOC

The DOC is where the LSDB is located. The CPDLs terminate within the LSDB, as well as the data channels for the OWSs. The DOC distributes the LSDB among multiple disks, including a mirror image of the data, so that failure of a single disk does not mean that data becomes unreachable.

6.2.2.1 Functional description of a DOC

A search request comes to the SCN for processing. The SCN dispatches it to an available Himalaya Processor, which then searches the LSDB in parallel with other Himalaya Processors. The resulting matches are sent back to the originating OWS. The SCN also controls the VFNs for the playing of announcements and listings. There are two routers to provide reliability. If one fails, the other can be used instead.

6.2.2.2 Components of a CSC

SCN	Coordinates and manages operations on the listings DB.
Himalaya Processors	Performs searches in the listings DB.
Disk array	Contains the listings DB. Each entry is mirrored on a separate disk to prevent failures in one disk from making information unavailable.
Router (R)	Connects the DOC to one or more CSCs and other DOCs.
Site LAN	Interconnects part of the components on the site. With this LAN, it is possible to add new equipment to the site and to connect them with the other components already in place.

6.2.3 Dual-DOC Architecture

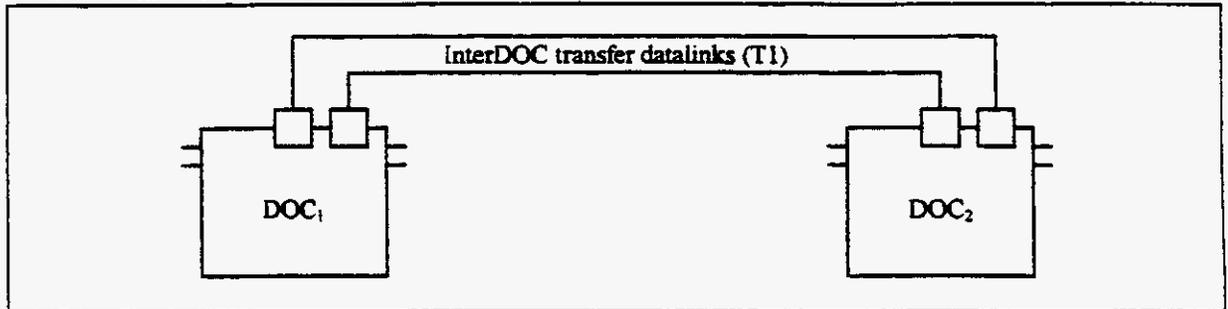


Figure 6: Dual-DOC Architecture

Each DOC contains a complete replica of the entire LSDB. In case DOC₁ fails, DOC₂ has to be able to handle DOC₁'s traffic in addition to its own, and *vice versa*. The InterDOC transfer datalinks are used to divert traffic from one DOC to the other, as well as to keep them synchronized.

6.2.4 CSC-DOC Interconnections

In addition to CSCs and DOCs, the vendor site can also contain voice feature nodes (VFN), which are a type of auto-response units (ARU). These VFNs are under the control of the SCNs in the DOCs, and a message pathway must therefore exist between the VFNs and the SCNs.

VFNs can be located either:

1. at the agent DOC site
2. at the 5ESS/OSPS-LS
3. at the agent CSC site

These three cases are illustrated below in examples that include three (3) CSCs and a Dual-DOC. This by no means implies limitations on the number of CSCs and/or DOCs and are only used for illustrative purposes.

The current configuration being used is the first one, with the VFNs located at the DOC site. Further study is required to determine which solution is most desirable in the long term, taking into account the following factors:

- availability
- reliability
- operational mode transition smoothness
- performance degradation under successive component failure
- life cycle costs
- testability
- deployment speed

6.2.5 Configuration with VFNs at the agent DOC site

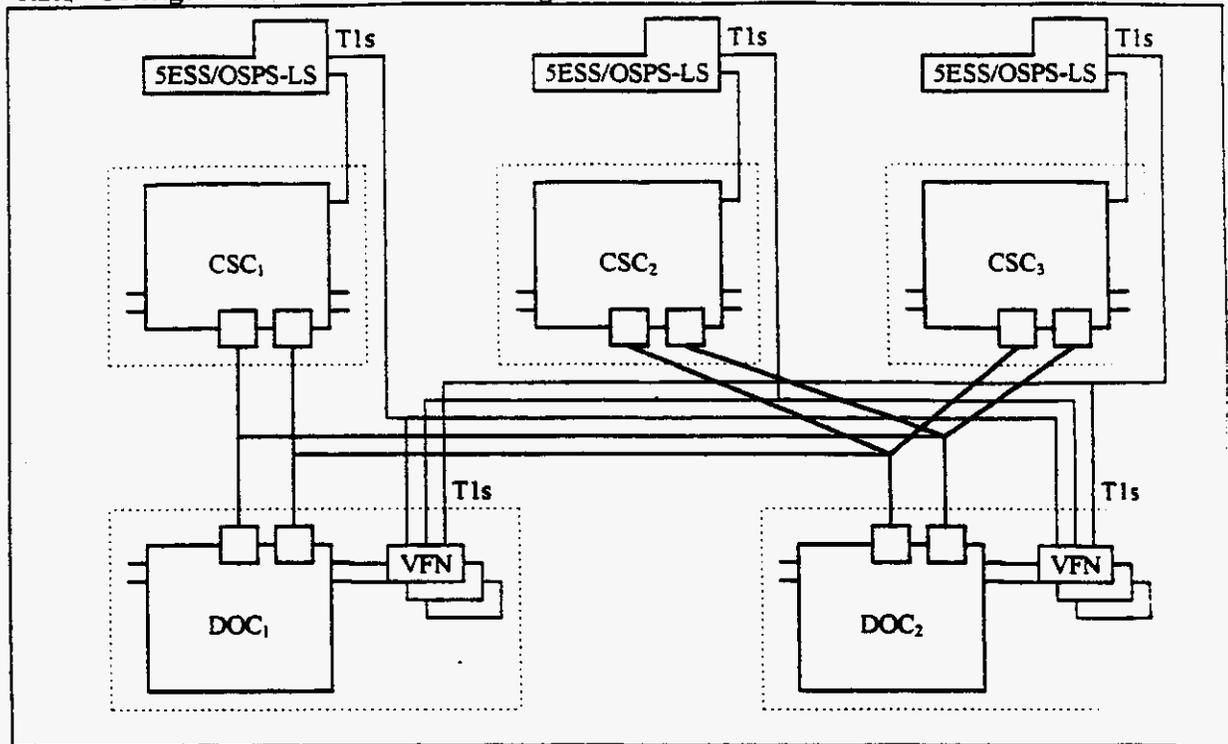


Figure 7: VFNs at DOC site

The VFNs in each DOC must have T1 links to each 5ESS/OSPS-LS that uses a CSC. Since both DOCs serve all CSCs, so must the CFN pools. The dotted squares delimit the various sites and what each contains. This is the current configuration being used by Excell Agent Services.

6.2.6 Configuration with VFNs at the agent CSC site

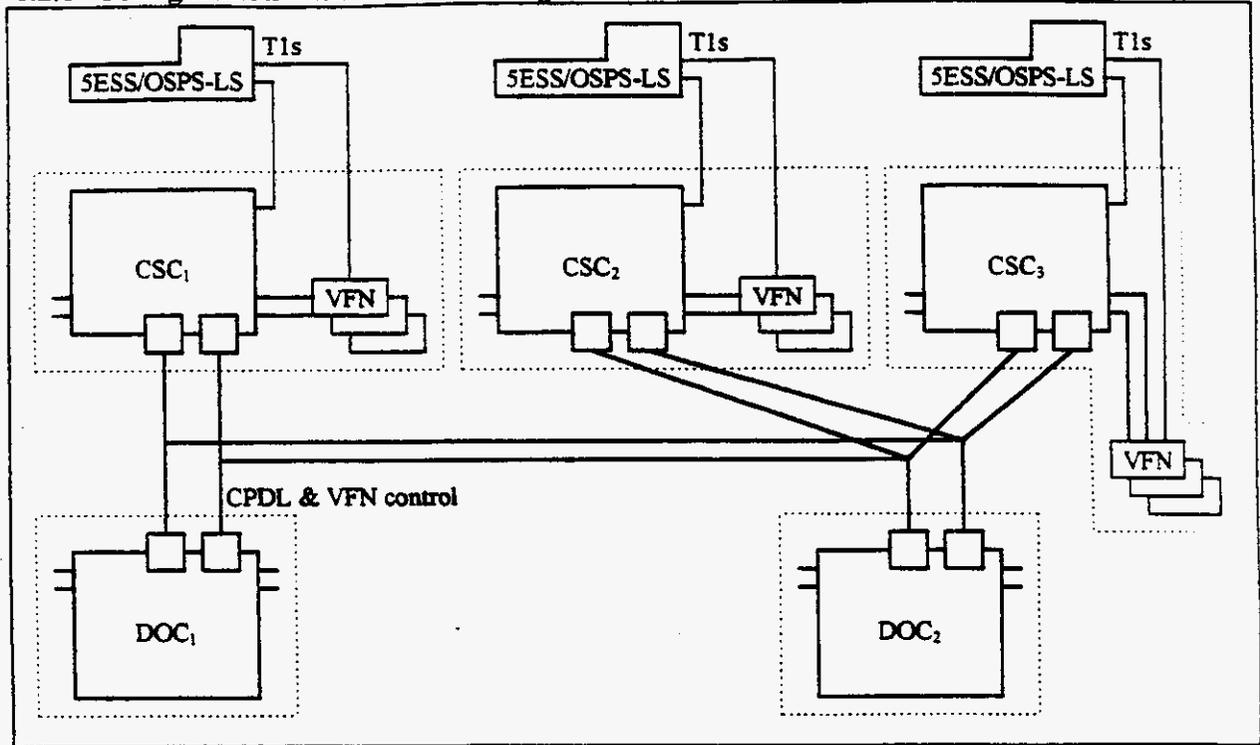


Figure 8: VFNs at CSC site

In this configuration, each VFN pool is associated with only one 5ESS/OSPS-LS, the one associated with its CSC's site. But in this configuration, greater bandwidth is required by the routers and the InterDOC transfer datalinks as they must also carry VFN control messages in addition to CPDL and listing traffic.

6.2.7 Configuration with VFNs at the 5ESS/OSPS-LS site

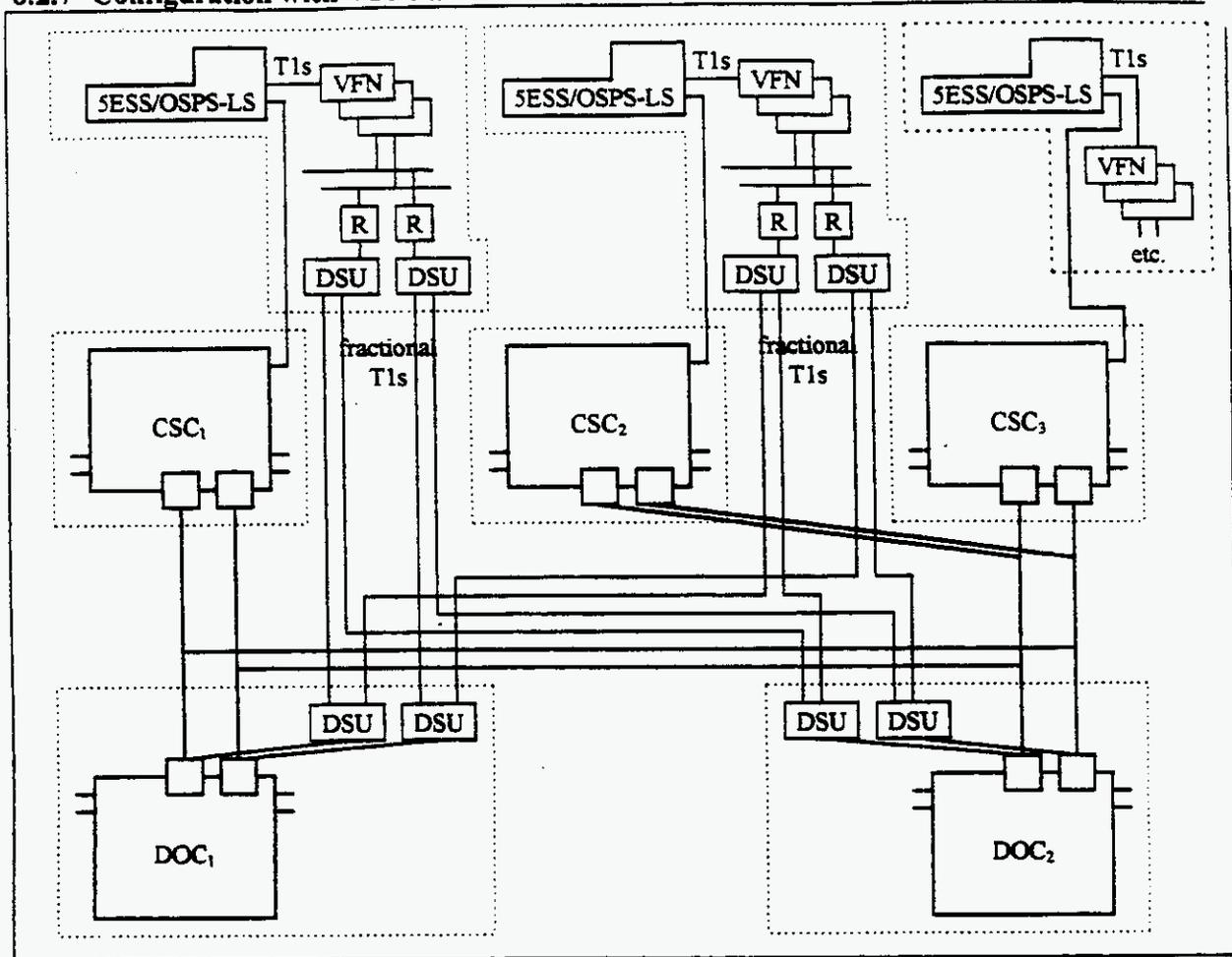


Figure 9: VFNs at 5ESS/OSPS-LS site

6.3 Agent Platform / 5ESS OSPS Interface Specifications (JT)

6.3.1 Description of Current CPDL

The following descriptions are taken from version 4.0 of the 5ESS SWITCH AND 5ESS-2000 SWITCH - OPERATOR SERVICES POSITION SYSTEM - CALL PROCESSING DATA LINK - INTERFACE SPECIFICATION, dated December 1995. They have been modified to reflect the way they are implemented in the platform provided by Excell Agent Services.

The first tables gives a brief description of the CPDL message types used in local Directory Assistance. It also indicates which message types can contain data modules, and which cannot. It finally tells whether the OSPS or the LSDB originates a given message type. OSPS, here, is taken to mean the 5ESS/OSPS-LS responsible

for the Directory Assistance service. The LSDB is the vendor platform that provides the Directory Assistance service, including the Directory Assistance agent.

The second table is a reproduction of table 4-21 from the source document mentioned above. It indicates, in a context of AMA recording, which data modules can be used in which message type.

The tables are followed by a number of figures that show the flow of control between various components during a Directory Assistance call. The following notation is used:

- Time flows vertically from top to bottom. All time is relative and is used solely to illustrate sequencing.
- Each participant is illustrated by a vertical line.
- A single line denotes no activity at a given time.
- A split line (or box) denotes some activity at a given time.
- A labeled arrow indicates a flow of information, in the direction of the arrow, between two processes.
- CPDL messages are written in SMALL CAPITALS.
- Agent key presses are written in SMALL CAPITALS in between square brackets ('[' and ']'). Eg. [ENTER]
- Text written in the Times font is indicative only.

The figures illustrate the following cases:

1. Three listing with two verbal releases and one release to an ARU
2. One listing with verbal release due to ARU failure
3. One listing with release to an ARU and Call Completion

Each figure is followed by a short description of the various steps that take place in that example. Each step is numbered according to the figure to which it relates. For example, step 2-5 is the fifth step of Figure 2.

6.4 Summary tables

CPDL provides the following messages. Note that the complete CPDL specification include other messages that are not being shown here.

Name	Description	DM	Sender
ACTION CONFIRMED	Acknowledges a previous LISTING ACCESS COMPLETE message.		OSPS
ACTION DENIED	Signified to the LSDB that a previously requested action cannot be completed. It can be used in response to TRANSFER REQUEST, LISTING ACCESS COMPLETE or REQUEST POSITION RELEASE messages.		OSPS
ARU PORT SELECT	In response to a TRANSFER REQUEST that does not request call completion, or if call completion checks fail on on a TRANSFER REQUEST that does request call completion.		OSPS
CALL COMPLETION ARU PORT SELECT	In response to a TRANSFER REQUEST that does request call completion.		OSPS
COMPLETE CALL	Used to request call completion to a number that was specified in a previous TRANSFER REQUEST message. See tables 4-21 and 4-22 for permitted data modules.	✓	LSDB
DISCONNECT	Used to tell the LSDB that its participation in the call is terminated (eg. user hangs up).		OSPS
LISTING ACCESS COMPLETE	Indicates that a listing was verbally released to the caller. See tables 4-21 and 4-22 for permitted data modules.	✓	LSDB
POSITION SEIZURE	Indicates that an operator is handling a call. Tells the LSDB to create a record for the call.		OSPS
REQUEST POSITION RELEASE	Used when the operator requests release of the call through the "request position release" (RPR) key on the KDT.		LSDB
TRANSFER REQUEST	Used to transfer the call to another destination (eg. ARU). See tables 4-21 and 4-22 for permitted data modules.	✓	LSDB

The following table is a copy of table 4-21, dealing with the data modules for AMA recording.

Module Name	ID	LISTING ACCESS COMPLETE	TRANSFER REQUEST	COMPLETE CALL
Call completion class of charge	804c	*	*	x
FGD carrier ID	811c	autocollect	autocollect	x
Last	000c	✓	✓	✓
Listed/referral number	801c	*	*	x
Listing service	855c	*	*	x
Listing service call completion	856c	x	x	✓

✓ ... always

* ... as required

x ... never

200425

6.5 Example figures

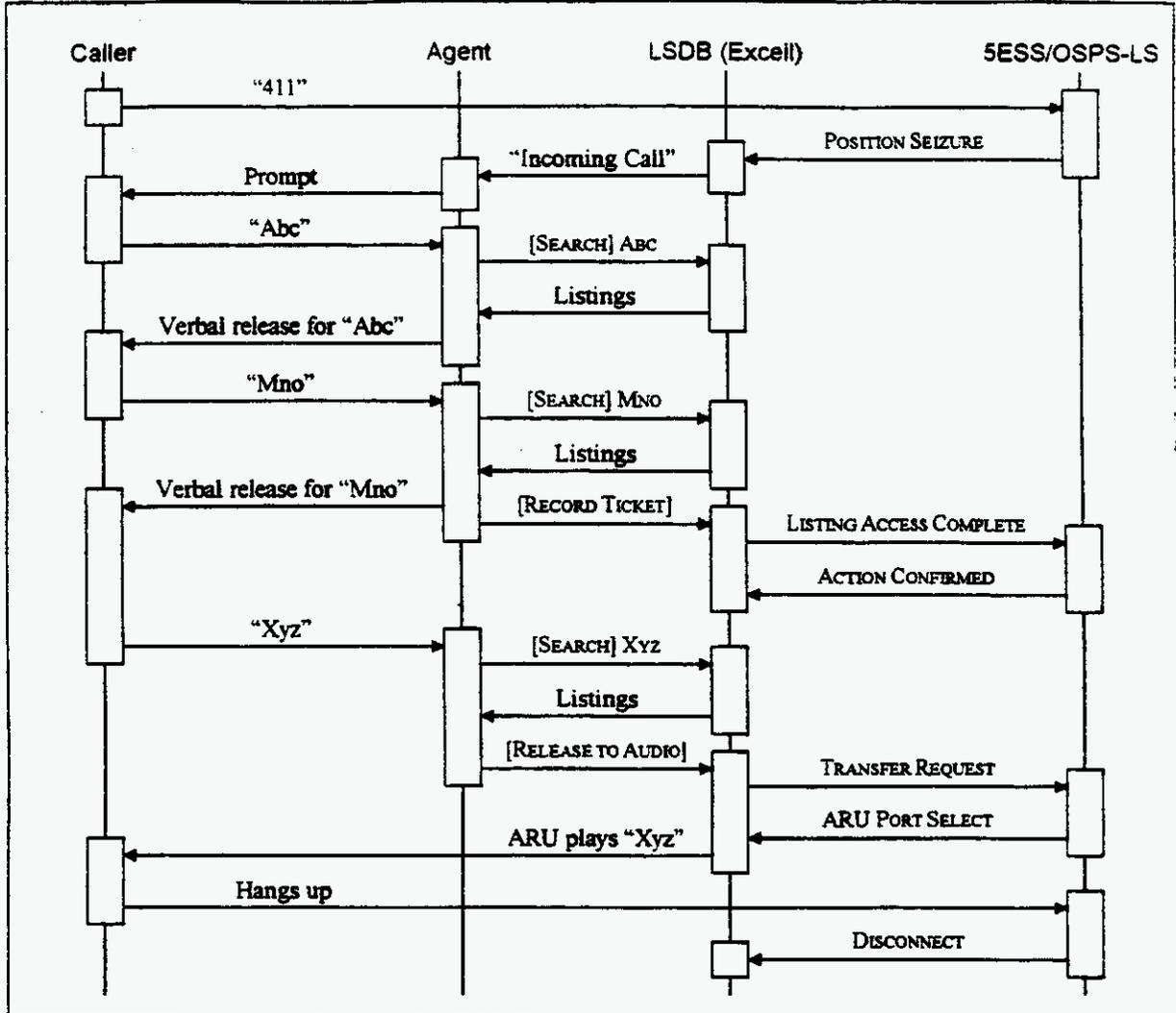


Figure 10: Three listing with two verbal releases and one release to an ARU

Notes for Figure 10: Three listing with two verbal releases and one release to an ARU

- 1-1. The caller gets connected to the 5ESS/OSPS-LS by dialing an access number (eg. "411").
- 1-2. The 5ESS/OSPS-LS sends a Position Seizure CDPL message to the LSDB.
- 1-3. The LSDB prints the string "Incoming Call" (or equivalent) on the agent's screen.
- 1-4. The agent prompts the caller for the first search criteria to be used.
- 1-5. The agent presses the appropriate [Search] key on his/her keyboard to retrieve listings from the LSDB.
- 1-6. The agent selects the appropriate listing and releases it verbally key. This operation occurs for every odd release that is not the last release for the call.
- 1-7. The agent prompts the caller for the second search criteria to be used.
- 1-8. The agent presses the appropriate [Search] key on his/her keyboard to retrieve listings from the LSDB.
- 1-9. The agent selects the appropriate listing, releases it verbally, and presses the [Record Ticket] key. This operation occurs for every even release that is not the last release for the call.
- 1-10. The LSDB sends a Listing Access Complete CPDL message to be sent back to the 5ESS/OSPS-LS, indicating information to be added to the AMA record for the call. This message contains the Listing services (855c) data module with the information for the AMA records.
- 1-11. The 5ESS/OSPS-LS acknowledges with an Action Confirmed CPDL.
- 1-12. The agent prompts the caller for the third search criteria to be used.
- 1-13. The agent presses the appropriate [Search] key on his/her keyboard to retrieve listings from the LSDB.
- 1-14. The agent then selects the appropriate listing and presses the [Release to Audio] key key. This operation occurs only for the last release, regardless of whether it is odd or even.
- 1-15. The LSDB sends a Transfer Request CPDL message to be sent back to the 5ESS/OSPS-LS, requesting that the call be transferred to an ARU. The message identifies a group of ARUs, not necessarily a particular ARU. This message contains the Listing services (855c) data module with the information for the AMA records.
- 1-16. The 5ESS/OSPS-LS selects an ARU and acknowledges with an ARU Port Select CPDL message, at which point the agent is released from the call.
- 1-17. The LSDB instructs the ARU to play the announcement.
- 1-18. When the caller hangs up (by going on-hook), the 5ESS/OSPS-LS sends a Disconnect CPDL message to the LSDB to indicate that the call processing is over.

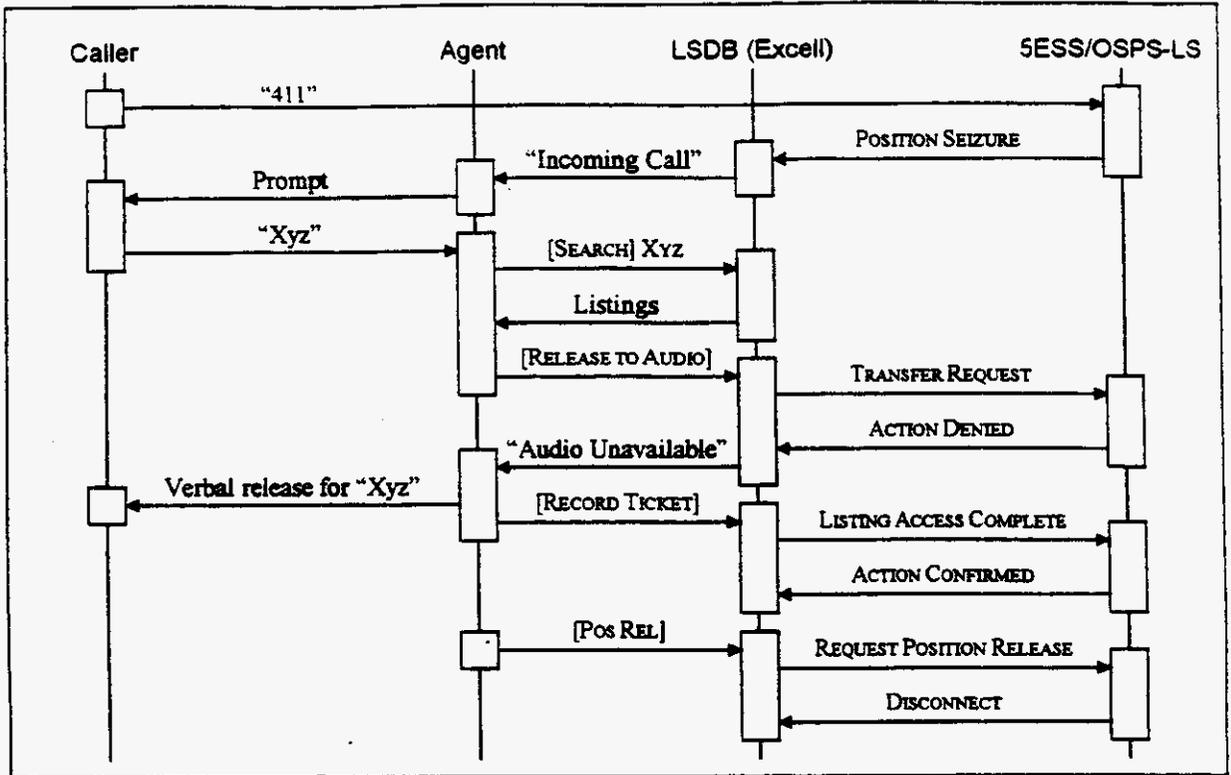


Figure 11: One listing with verbal release due to ARU failure

Notes for Figure 11: One listing with verbal release due to ARU failure

- 2-1. The caller gets connected to the 5ESS/OSPS-LS by dialing an access number (eg. "411").
- 2-2. The 5ESS/OSPS-LS sends a POSITION SEIZURE CDPL message to the LSDB.
- 2-3. The LSDB prints the string "Incoming Call" (or equivalent) on the agent's screen.
- 2-4. The agent prompts the caller for the search criteria to be used.
- 2-5. The agent presses the appropriate [SEARCH] key on his/her keyboard to retrieve listings from the LSDB.
- 2-6. The agent then selects the appropriate listing and presses the [RELEASE TO AUDIO] key.
- 2-7. The LSDB sends a TRANSFER REQUEST CPDL message to be sent back to the 5ESS/OSPS-LS, requesting that the call be transferred to an ARU. The message identifies a group of ARUs, not necessarily a particular ARU. This message contains the Listing services (855c) data module with the information for the AMA records.
- 2-8. The 5ESS/OSPS-LS responds with an ACTION DENIED CPDL message, indicating that no ARU is available. It discards the TRANSFER REQUEST CPDL message, including the Listing services (855c) data module that was contained in it.
- 2-9. The LSDB prints the string "Audio Unavailable" (or equivalent) on the agent's screen.
- 2-10. The agent then selects the appropriate listing, releases it verbally, and presses the [RECORD TICKET] key.
- 2-11. The LSDB sends a LISTING ACCESS COMPLETE CPDL message to be sent back to the 5ESS/OSPS-LS, indicating information to be added to the AMA record for the call. This message contains the Listing services (855c) data module with the information for the AMA records.
- 2-12. The 5ESS/OSPS-LS acknowledges with an ACTION CONFIRMED CPDL.
- 2-13. The agent presses the [POS REL] key on his/her keyboard to terminate the call.
- 2-14. The LSDB sends a REQUEST POSITION RELEASE CPDL message to be sent back to the 5ESS/OSPS-LS, requesting that the call be terminated.
- 2-15. The 5ESS/OSPS-LS sends a DISCONNECT CPDL message to the LSDB to indicate that the call processing is over.

6.6 Handling of call completion

Call completion is handled by the following steps, some of which have already been described as part of Figure through Figure .

1. The 5ESS/OSPS-LS sends a Position Seizure CPDL message to the LSDB to indicate that a call has arrived.
2. The agent handles the call and retrieves the desired listing. The agent then presses the [RELEASE TO AUDIO] key to transfer the call to an ARU.
3. The LSDB sends a TRANSFER REQUEST CPDL message to the 5ESS/OSPS-LS. This message has two special fields that help the 5ESS/OSPS-LS in handling the remainder of the call:

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Field	Description
destination ID	This field indicates where the call is to be transferred. It should indicate a group of ARUs for which call completion screening is needed.
alternate destination ID	This field indicates an alternate destination for the call, should the one provided through the destination ID field prove unusable. It should indicate a group of ARUs that will not prompt for call completion.

4. Call completion is performed, and the next action depends on the result of this screening.
 - a) If the screening passes, an available ARU is selected from the group designated by the "destination ID" field and the 5ESS/OSPS-LS sends a CALL COMPLETION ARU PORT SELECT CPDL message back to the LSDB, indicating which specific ARU was selected.
 - b) If the screening fails, an available ARU is selected from the group designated by the "alternate destination ID" field and the 5ESS/OSPS-LS sends a ARU PORT SELECT CPDL message back to the LSDB, indicating which specific ARU was selected.

In either case, if no ARU is available, the 5ESS/OSPS-LS discards the TRANSFER REQUEST CPDL message and sends back an ACTION DENIED CPDL message to the LSDB. The remainder of the call is then handled as was shown in Figure .

5. The LSDB then plays the listing, -using the ARU designated by the response it got to the TRANSFER REQUEST CPDL message.
 - a) If the LSDB received a CALL COMPLETION ARU PORT SELECTED CPDL message, it then waits to see if the caller will accept call completion.
 - b) If the LSDB received an ARU PORT SELECTED CPDL message, the processing stops after the listing as been played.

The remaining steps apply only if the call completion screening was successful.

6. If the caller refuses call completion, the call terminates here. If he/she accepts the call completion, the LSDB then sends a COMPLETE CALL CPDL message to the 5ESS/OSPS-LS, asking for the caller to be connected with the listed number.
7. The 5ESS/OSPS-LS sends a DISCONNECT CPDL message to the LSDB, terminating its participation on the call.

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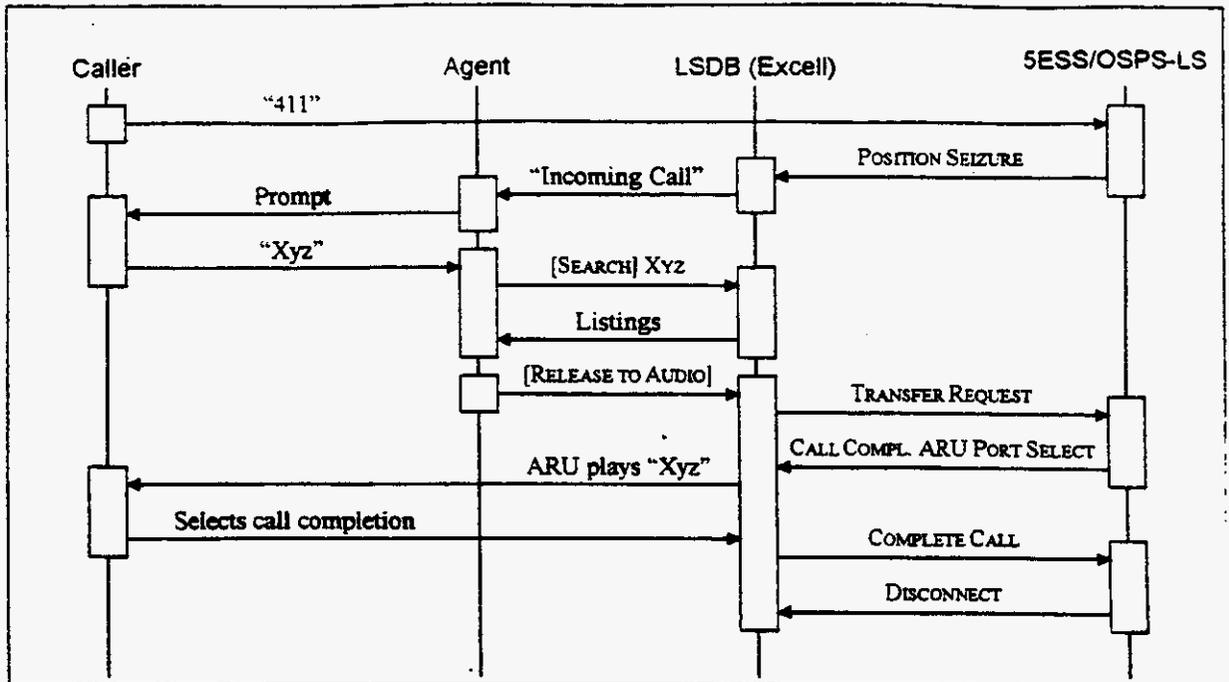


Figure 12: One listing with release to an ARU and Call Completion

Notes for Figure 12: One listing with release to an ARU and Call Completion

- 3-1. The caller gets connected to the 5ESS/OSPS-LS by dialing an access number (eg. "411").
- 3-2. The 5ESS/OSPS-LS sends a POSITION SEIZURE CDPL message to the LSDB.
- 3-3. The LSDB prints the string "Incoming Call" (or equivalent) on the agent's screen.
- 3-4. The agent prompts the caller for the search criteria to be used.
- 3-5. The agent presses the appropriate [SEARCH] key on his/her keyboard to retrieve listings from the LSDB.
- 3-6. The agent then selects the appropriate listing and presses the [RELEASE TO AUDIO] key.
- 3-7. The LSDB sends a TRANSFER REQUEST CPDL message to be sent back to the 5ESS/OSPS-LS, requesting that the call be transferred to an ARU. The message identifies a group of ARUs, not necessarily a particular ARU. This message contains the Listing services (855c) data module with the information for the AMA records.
- 3-8. The 5ESS/OSPS-LS selects an ARU and acknowledges with a CALL COMPLETION ARU PORT SELECT CPDL message, at which point the agent is released from the call. A call completion screening is performed first, and if it fails, the call behaves as described in Figure with an ARU PORT SELECT CPDL message instead of the CALL COMPLETION ARU PORT SELECT CPDL message.
- 3-9. The LSDB instructs the ARU to play the announcement, followed by a prompt for call completion.
- 3-10. The caller indicates that he/she wants the call to be completed.
- 3-11. The LSDB sends a COMPLETE CALL CPDL message to be sent back to the 5ESS/OSPS-LS, requesting that the call be connected. This message contains the Listing services call completion (856c) data module with the information regarding call completion for the AMA records.
- 3-12. When the caller is connected to the remote party, the 5ESS/OSPS-LS sends a DISCONNECT CPDL message to the LSDB to indicate that the call processing is over.

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6.7 Proposed modifications

In order to make this service more flexible, we would like to introduce the following modifications. These will require development in the LSDB at the vendor site, as well as some SESS/OSPS-LS development to capture the added information properly.

1. The LSDB shall keep track of the type of each request that is being relieved. For each type, a counter shall be maintained that counts the number of requests of this type that have taken place for the current call.
2. When the agent presses either the [RECORD TICKET] or the [POS REL] key, the LSDB shall send the content of each non-null counter to the SESS/OSPS-LS. Each counter shall be placed in a Listing service (855c) data module and those modules shall be placed in LISTING ACCESS COMPLETE CPDL messages, as many as it takes to send all the Listing service (855c) data modules.
3. As each LISTING ACCESS COMPLETE CPDL message is acknowledged by the SESS/OSPS-LS with an ACTION CONFIRMED CPDL message, the counters corresponding to the Listing service (855c) data modules contained in that CPDL message shall be reset to 0.
4. When the agent presses the [RELEASE TO AUDIO] key, the LSDB shall send the content of each non-null counter to the SESS/OSPS-LS. Each counter shall be placed in a Listing service (855c) data module. All but the last one of those modules shall be placed in LISTING ACCESS COMPLETE CPDL messages, as many as it takes to send all but one of the Listing service (855c) data modules. The last Listing service (855c) data module shall be placed in the TRANSFER REQUEST CPDL message resulting from the key press.
5. All other call processing shall remain unchanged.

Call scenarios

With these modifications, it becomes possible to handle the following scenarios:

1. The agent handling a call can press the [RECORD TICKET] key after each single listing that is released. This results in a LISTING ACCESS COMPLETE CPDL message being sent to the SESS/OSPS-LS for each individual request. The counter in the Listing service (855c) data module will always have a count of "1". This scenario generates a lot of traffic on the CPDLs, but ensures that the SESS/OSPS-LS gets the records as soon as possible. This might be desirable in order to prevent fraudulent use of the directory assistance service.
2. The agent handling a call never presses the [RECORD TICKET] key. The information is gathered for the duration of the call and only passed to the SESS/OSPS-LS when the agent presses either the [POS REL] or the [RELEASE TO AUDIO] key. This scenario tries to minimize the CPDL traffic required. A security concern might be raised if the caller hangs up before the agent can press the trigger for information transfer. At that point, the LSDB receives a DISCONNECT CPDL message from the SESS/OSPS-LS and gets disconnected. Some recovery mechanism is required for the SESS/OSPS-LS to maintain the connection until the LSDB has finished transferring all the data. It is not clear if this capability is in place in today's SESS/OSPS-LSs.
3. A combination of the above two scenarios can also be used to balance each's advantages vs. their respective disadvantages.

What happens if the caller asks for two listings, receives the first one verbally, and then hangs up before the operator has hit any CPDL generating trigger? Even though an AMA record has been opened in the SESS/OSPS-LS for the call, the SESS/OSPS-LS has no way of putting the request type information in that AMA record. In the current situation, this is not a problem since the service is differentiated based on its routing number, and all elements in a given service have the same rating (for billing). But we are now

introducing variations in that rating, and we must ensure that the information makes its way from the LSDB to the 5ESS/OSPS-LS.

The first two scenarios are illustrated in the following two figures. The steps are the same as the ones in Figure , so we will not duplicate them.

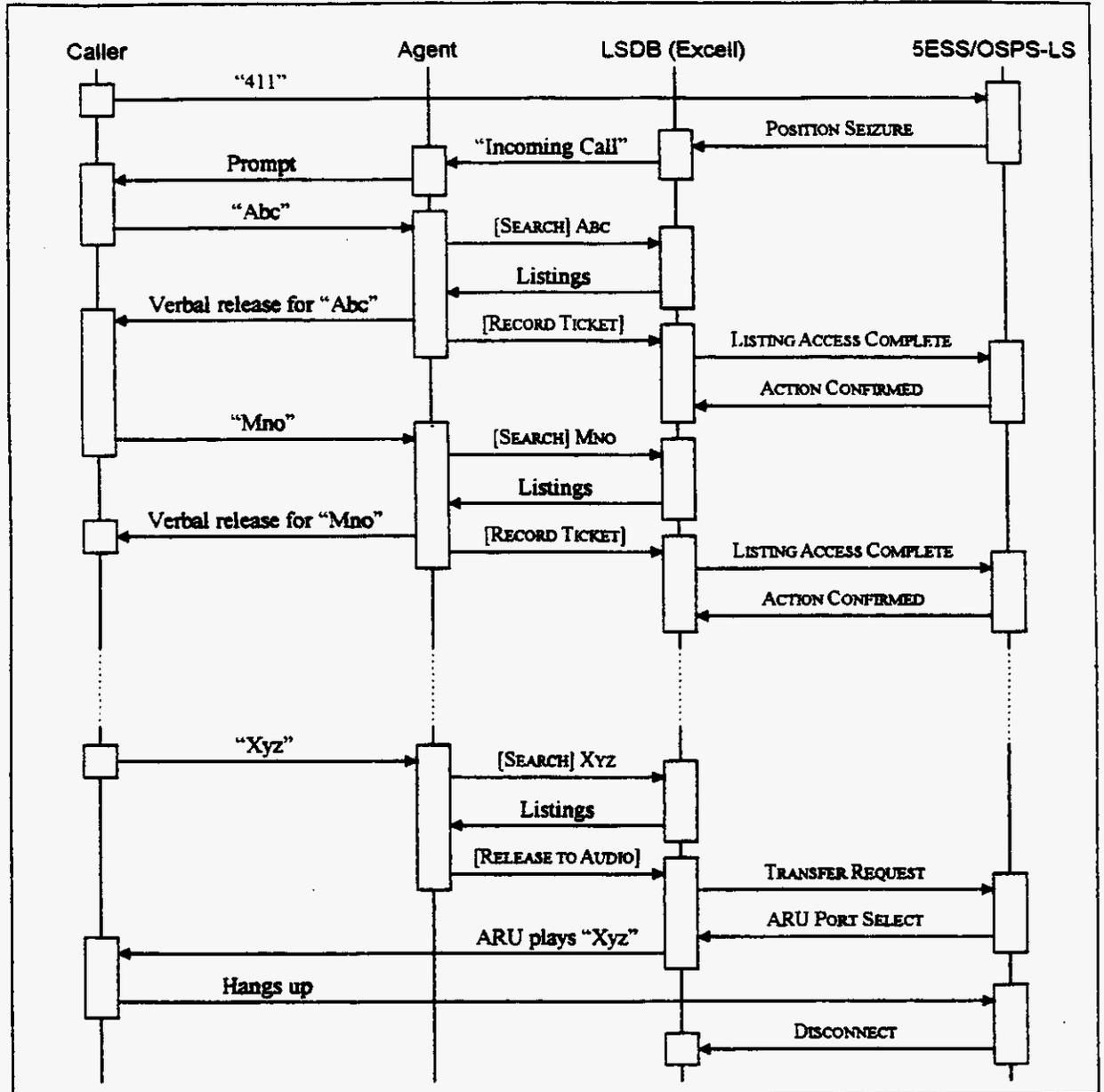


Figure 13: Many listings according to scenario #1

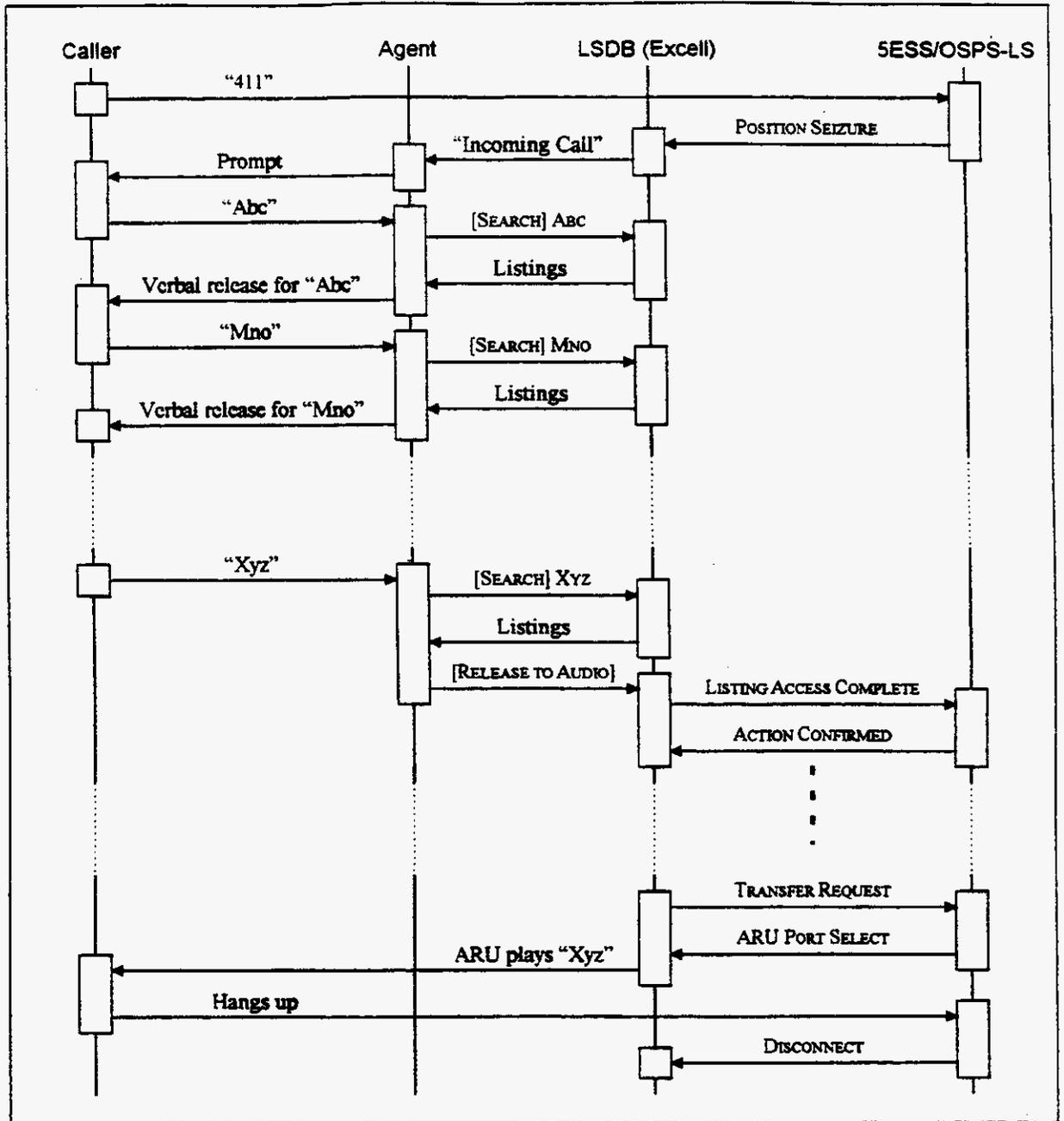


Figure 14: Many listings according to scenario #2

7. FEATURE INTERACTIONS

7.1 Multiquest Interaction (GD / LCM)

A unique 900-number has been assigned by Multiquest for local DA use.

7.2 Network Access Interruption Interaction (GD)

As described in Section 8.1, Network Access Interruption (NAI) Interaction, of the Issue 1 document, local DA "411" or "555-1212" traffic routed on "900-NXX-XXXX" will receive appropriate NAI treatment at the 4ESS™ OAS, but will not be eligible for any CLDADJ treatment. (Note that NAI treatment for DA LD call completion is provided at the Regional 5ESS® OSPS.

Any NAI changes applicable to "900-555-1212" should apply to "900-NXX-XXXX". Specifically, CLDADJ supported ANI-based services should not apply for "900-55-1212" and "900-NXX-XXXX" traffic since network billing recording is handled at the Regional 5ESS® OSPS for both DA and LD call completion.

Any issues associated with the proposal to remove the FEN Block on "900 services" (to receive AT&T Call / Bill Organizer treatment at CLDADJ) should not apply to both "900-555-1212" and "900-NXX-XXXX". (CCS DA Product Management is aware of this issue and is expected to get involved in the resolution.)

There seems to be no critical concerns associated with NAI treatment at the 4ESS™ OAS (other than the potential issues resulting from removing FEN Block to send "900 services" to the CLDADJ for ANI-based service treatment).

7.3 CLD Adjunct Interaction (LCM)

Please refer to Issue 1.0 document.

7.4 National DA Platform Interaction (LCM)

Please refer to Issue 1.0 document.

7.5 Special Network Accessibility Platform Interaction (ECB)

Please refer to Issue 1.0 document.

7.6 LOCAL NUMBER PORTABILITY IMPACTS (LCM)

Please refer to Issue 1.0 document.

8. PERFORMANCE

Performance assessment to be provided.

9. OPERATIONS

Operational impacts assessment to be provided.

10. TIME / COSTS ASSESSMENTS (LCM)

In the Issue 1 document, the forecast¹⁵ of 1.1 million residential customers by year-end 1996 was used. For the new set of data, the call volume data used is 13.8 M residential and 8.8 M business annual local DA calls in 1996, and 170.9 M residential and 42.1 M business local DA calls in 1997. The network impact and NDAP facility add-on requirements were used to reflect the specified demand.

In the LEC Service Resale, the ability to route all AT&T customers' local DA traffic to the AT&T NDAP is subject to negotiation with the incumbent LEC.

10.1 National DA Platform Service Costs

(The data in this section is from the Issue 1.0 document and stated here for completeness.)

Directory Services Product Management provided an estimated cost of 27 1/2 cents per message for CCS local service to access the National DA platform. This cost is based on a 25 cents / message cost (agent fees for handling the call and the listing charge) under the recently implemented vendor agreements and a 10% additional charge for OA&M and training expenses.

Additional expense may be necessary if the servicing of local DA calls imposes significant additional work for the customer care center.

10.2 Network Access Charge

(The data in this section is from the Issue 1.0 document and stated here for completeness.)

For the LD Directory Assistance calls, AT&T pays a network access charge of \$0.04 / minute to the LEC at whose End Office the customer line terminates. In the case of Loop Resale, the End Office is the AT&T Local End Office. In the case of LEC Service Resale, the network access charge may be negotiated as part of a package for the LEC to route the local DA calls to the AT&T network.

¹⁵ Forecast data from H. Rubnitz.

10.3 Core Network Costs

(The data in this section is from the Issue 1 document and stated here for completeness.)

A Core Network impact study¹⁶ was done to assess the inter-toll impact of the local DA traffic to the existing busy-hour traffic. The study results indicate there is network traffic impact since the local DA busy-hour traffic is coincident to the network's busy-hour traffic. This translates into additional trunking requirements and associated costs (capital, provisioning, and maintenance). In the remainder of this section, the major trunking and equipment costs from the Ingress trunk side of the AT&T End Office (through the ASN) to the Egress trunk side of the AT&T End Office

	1996	1997 Incremental
Residential customers	1,100,000	9,500,000
Residential DA calls (monthly)	2,518,230	21,748,350
Business customer lines	700,000	1,550,000
Business DA calls (monthly)	1,602,510	3,548,415

The following are core network costs for the cases of (a) Denver site only, and (b) Denver + California sites. In each case, consider the cases of DA with 0%, 12%, and 30% call completion, and list the Capital (additional trunking and terminations required to handle the local DA traffic and optional call completion), Provisioning (trunk provisioning), and Maintenance costs. This set of data is based on year-end residential subscribers in 1996 = 1,100,000. The data summarized below considered network costs for the 0%, 12%, and 30%-call completion take rates.

	<--- 0% Comp. ----->		<-- 12% Comp. ----->		<-- 30% Comp ----->	
	1996 cost	Incr 1997	1996 cost	Incr 1997	1996 cost	Incr 1997
	(Million \$)	(Million \$)	(Million \$)	(Million \$)	(Million \$)	(Million \$)
(Denver Only)						
Capital	1.369	8.214	2.901	22.591	7.260	56.497
Provisioning	0.063	0.381	0.134	1.045	0.336	2.614
Maintenance	0.161	0.970	0.341	2.661	0.855	6.653
(Denver + California)						
Capital	1.405	8.375	2.918	22.805	7.332	57.050
Performance	0.065	0.391	0.135	1.058	0.340	2.646
Maintenance	0.167	0.995	0.344	2.693	0.866	6.736

¹⁶ Core Network impact study by P.K. Eswaran, 12/8/95.

There should not be any additional network facility impact if the 411 service is to handle both local and long distance listing requests and call completion, provided the forecasted 411 call volume does not change.

10.4 Add-On Facility Costs for NDAP Platform

(The data in this section is from the Issue 1 document and stated here for completeness.)

The projected residential local subscribers forecast was also used to assess facilities impact¹⁷ on the NDAP platform

The call volume data used is based on y/e total residential customers of 1.1 M in 1996 and 10.6 M in 1997, and y/e total business lines of 0.7 M in 1996 and 2.25 M in 1997. This translates into 13.8 M residential and 8.8 M business annual local DA calls in 1996, and 170.9 M residential and 42.1 M business local DA calls in 1997. Based on the projected local DA call volume, it is estimated that a total of 200 additional agent positions need to be added by year-end 1996, and a total of 1424 (including the 200 positions in 1996) agent positions are needed by year-end 1997 due to the local DA traffic. Agent Work Time of 60 seconds and 30% call completion rate are assumed.

	1996	1997 Incremental
Agents positions Requirements for local DA:		
Capital	\$ 0.9 M	\$ 5.8 M
RTU	\$ 0.3 M	\$ 1.5 M

The capital¹⁸ dollar estimate covers the add-on switching equipment up to the point of interface at the vendor location, and include power for the CSC for switching, the RISLUs (Remote Integrated Service Line Units) and PSMs (Position Switching Modules) for the additional agent positions and trunking required. It does not (based on the current traffic volume forecast) include any associated capital unless 5ESS® OSPS equipment is required. Since a switch augment is required, at least 34 weeks should be allowed.

An evaluation of facility impact, if any, was done¹⁹ and it was determined that if the forecasted 411 call volume does not change, then there should not be additional facility impact if the 411 service is to handle both local and long distance listing requests and call completion.

10.5 Network Routing and Provisioning Costs

(The data in this section is from the Issue 1.0 document and stated here for completeness.)

¹⁷ Facility impact study on the NDAP platform was done by J. Alexander, 12/8/95.

¹⁸ Vendor (e.g. Excell) is responsible for agent positions; agent positions are not included in the capital cost estimate.

¹⁹ Analysis was done by J. Alexander, 2/96.

The 4ESS™ Network routing translations for 900-NXX-XXXX local DA calls will be similar to the AT&T *Directory Assistance for Any Distance*™ service (900-555-1212) and assignment of unique non-dialable routing number 719-030-XXXX (with the leading digit of XXXX set to a digit other than "1") will be done as part of HI-CAP Originating Table (HOT) translation.

Routing provisioning will be done by the appropriate OS process associated with Multiquest 900. Initial contact with Multiquest organization has been established to assess time and costs. The cost item is currently negotiated by CCS Product Management.

10.6 Development Costs

(The data in this section is from the Issue 1 document and stated here for completeness.)

NOTE changes in the following cost items from Issue 1 cost data (listed in table below):

- 5ESS OSPS DACC recording change (received PASS 2 estimate)
- EXCELL / Volt Delta development estimate to include all 3 options of mixed local / LD listing requests
- 5ESS OSPS 411 AMA recording change (TBD)

The development efforts to support local DA are listed below. Costs for switch development are listed in this section if the development is needed on AT&T switches. Development needed for LEC End Office are listed in the subsequent section titled "Other Costs".

- (FOR Loop Resale Only)
5ESS® switch development is needed to restore carrier ID to properly route 411 calls to the AT&T 4ESS™ OAS (Item 1) -- This effort is listed here (for the Loop Resale case) to restore the carrier ID which is not properly set when the dialed "411" digits is converted to the "900-NXX-XXXX" number. The SAME development effort is listed in the "Other Costs" section below for the LEC Service Resale environment to set the carrier ID so that the DA call can be properly routed to the AT&T 4ESS™ switch (OAS) as described in the "Access Architecture" section. An alternative to the 5ESS® development is to direct route all DA calls to the 4ESS™ OAS assuming proper engineering of trunks, and that there is no call overflow to an access tandem.
- 5ESS® OSPS development is required to identify the call as a local DA call in the AMA record, using indicator value passed by the EXCELL Listing Service Database (LSDB) to the switch to identify local DA calls (Item 2). This development is required in order to charge for DA Call Completion at a rate different from the LD DA call completion rate.
- Enhancements in the NDA platform to handle local DA calls, and to support local DA call completion (Item 3). If the decision is to mix long distance and local DA calls without any requirement to differentiate for purposes of DA agent / location routing and AMA recording, then a portion of the development may not be needed. However, such a decision can be made only if there is no regulatory requirements to differentiate the long distance and local DA service, and if there is no conflicting interest between the long distance and local DA revenue stream.
- Recording / billing changes.

The following summarizes a rough estimation of the development costs:

Name of Development	Costs Estimated (Rough approximation)	Time
1. 5ESS® (route 411 calls to ASN)	\$ 1.6 M (5E12), or \$1.8 M (5E11 software update 3Q 96)	3Q96 (if 5E11 software upgrade) or 4Q97 (if 5E12) ²⁰
2. 5ESS® OSPS (DACC charge recording change)	less than \$0.9 M (Pass 2 estimate)	6/96 if committed by 3/96.
3. EXCELL / Volt Delta (dev)	\$476K (development), \$10K monthly maintenance.	TBD
4. RICS (identify local DACC and suppress billing of 900-NXX-XXXX AMA records)	TBD	TBD
5. 5ESS® OSPS (411 AMA recording change)	TBD	TBD

• 4ESSTM assessment: Based on current architecture assumptions, no 4E development is needed for call processing. The "routing / provisioning" is provided as part of "Multiquest 900 process".²¹

• 5ESS® assessment: No additional 5ESS® support or development cost other than the item listed in the Development Costs section above, and for which estimates was already provided.²²

• SNOW-T development for dedicated trunk group provisioning: No development cost included for provisioning a new trunk type modifier since local DA will not require the provisioning of a new dedicated FGD trunk group between the terminating 4ESS switch and the 5ESS® OSPS Listing Service switch.

* Estimate for Multiquest support: currently being negotiated by CCS Product Management (H. Rubnitz) with the respective Product Management organizations (Multiquest and Directory Services). The capabilities required include: (a) OAS will use its HI-CAP Originating Table (HOT) to translate the new 900-NXX-XXXX number to a unique routing number, and (b) the ability to translate the 900-NXX-XXXX number to two routing numbers in fixed proportion.

* SNOW-R provisioning support may not be needed if network provisioning is handled as part of the HI-CAP Originating Table (HOT) support.

• MPS and local billing systems changes need to be worked with CIO - V. Franco organization.

• Estimates for other support from Operation Support Systems (OSSs) – to be determined. It is expected that the OSS support needs are very similar to that of the AT&T Directory Assistance For Any DistanceSM service (900-555-1212).

²⁰ rough time estimate assuming received go-ahead for development in 12/95 time frame.

²¹ As per G. Dengel, 11/20/95 email.

²² As per T. Dunn, 11/19/95 fax.

- Estimates for the needed NVT testing and other deployment expenses -- to be determined.

10.7 Other Costs

(The data in this section is from the Issue 1 document and stated here for completeness.)

In the LEC Resale environment, when the Local End Office is a 5ESS® or 1A ESS, there is a need for switch development to correctly route the call to the AT&T 4ESS™ switch (OAS). Since the switch is a LEC End Office, part of negotiation should include defining the responsible company that would pay for the development. These costs (listed below) are therefore NOT listed at this time as part of AT&T's development costs in the immediately preceding section.

The following is a description of the required switch (5ESS® and 1A ESS™) development:

- When using a unique Line Class Code and "Rate and Route" translations to separate and alter the default route (LEC) of the local AT&T customer's Directory Assistance (411) traffic, and to route these calls to the AT&T 4ESS™, development is needed to enhance the route index to provide a carrier code for outpulsing on indirect equal access trunks. This carrier code would also be used by access recording. Enhanced route index should be able to go over the same route that existing FGD routing does.
- The same capability should exist on the 1A ESS™ switch so that 411 calls from the 1A ESS™ end office can be routed to an equal access 4ESS™ switch.

Name of Development	Costs Estimated (Rough approximation)	Time
1. 5ESS® (route 411 calls to ASN)	\$ 1.6 M (5E12), or \$1.8 M (5E11 software update 3Q 96)	3Q96 (if 5E11 software update) or 4Q97 (if 5E12)
2. 1A ESS (route 411 calls to ASN)	\$ 5.7 M (for LEC Service Resale)	TBD (3Q96 or 1Q97)

11. BCS IMPACTS ASSESSMENT (MSH)

The Local DA Technical Plan has been reviewed by the BCS team²³ and found that BCS access methods other than the LEC analog loop would also be compatible with the Local DA Plan without any modification.

It is therefore appropriate that the earlier restriction placed on the scope of the Local DA Technical Plan can now assume a broad definition of Loop resale as defined in the Loop Resale Technical Plan , Draft 3.0, December 21, 1995, Coordinator Troy Adams. The Loop Resale configuration now includes includes access loops (the component between the customer premises and the AT&T LSO) configured in multiple ways:

²³ rough 5ESS® time estimate assuming received go-ahead for development in 12/95 time frame.

²⁴ rough 1A ESS time estimate assuming received go-ahead for development in 12/95 time frame.

²⁵ BCS connectivity options evaluated by P. Zahray, S. Ganesan, M. S. Huq, as per P. Zahray email 2/23/96

- Analog loops leased from the incumbent LEC, unbundled at the LEC LSO and extended to the AT&T LSO.
- Connectivity provided directly from the customer premises to the AT&T LSO through AT&T built SONET transport facilities.
- "Hub and Spoke" arrangements where the connectivity is provided by a combination of AT&T built SONET transport and built or leased "spokes" off the SONET rings.

12. ISSUES (ALL)

1. Do we need to separate the analysis of intraLATA toll and intraLATA local or can we assume that as local service provider we are the default carrier for both intraLATA local and intraLATA toll calls ?
2. Also, do we need to provide equal access for customers who may be Piced to another carrier for intraLATA toll and / or interLATA traffic? Currently the NDAP platform does not have this type of customer information.
3. If a local customer requests AT&T to block 900 number usage, his 411 calls will fail due to the internal use of the 900-number in the architecture.

13. REFERENCES

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14. GLOSSARY

AILS	Automatic Inward Line Screening
ANI	Automatic Number Identification
CAP	Competitive Access Provider
CAT	Contract and Access Tariff
CLD	Consumer Long Distance
CPDL	Call Processing Data Link
CSC	Call Servicing Center
DA	Directory Assistance
DACC	Directory Assistance Call Completion
DMOQ	Direct Measure of Quality
DOC	Data Operations Center (Listing Service Data Base)
DTMF	Dual Tone Multifrequency
EO	End Office
FGD	Feature Group D
HAS	Hand-off AT&T Switch
HOT	HI-CAP Originating Table
LATA	Local Access and Transport Area
LBS	Local Billing System
LD	Long Distance
LEC	Local Exchange Carrier
LERG	Local Exchange Routing Guide
LNP	Local Number Portability
LS	Listing Service
LSP	Local Service Provider
LSDB	Listing Service Database
LSO	Local Switch Office
MDF	Main Distributing Frame
MPS	Message Processing System
NDAP	National Directory Assistance Platform
NAI	Network Access Interruption
NPA	Numbering Plan Area
OAS	Originating AT&T Switch
OLI	Originating Line Indication
OLS	Originating Line Screening
OSPS	Operator Service Position System
PCP	Positive Call Processing
PSM	Position Switching Module
PUC	Public Utility Commission
RICS	Recorded Information Collection System
RISLU	Remote Integrated Services Line Unit
RTNR	Real Time Network Routing

RTU	Right To Use
SA	Special Applications
SDN	Software Defined Network
SNOW-R	Service Now - Routing
SNOW-T	Service Now - Trunking
T&A	Toll and Assistance

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Pamela A. Nelson
District Manager
Access Supplier Management

Room 12W54
Promenade II
1200 Peachtree St., NE
Atlanta, GA 30309
404 810-3100

March 13, 1996

Mr. Robert Scheye
Senior Director Strategic Management
BellSouth
Room 11A15 SBC
675 W. Peachtree Street, NW
Atlanta, GA 30375

Dear Bob,

As discussed in our letter dated March 4, 1996 to Mr. Ackerman and also at Monday's meeting, we would like to convene our working level negotiator teams on Friday, March 15, 1996. If Friday is not convenient for you, please indicate which day during the week of March 18, 1996 your team can meet.

~~The AT&T attendees at the meeting will be the team Jim Carroll reviewed with you Monday - Preston Foster, Greg Follensbee, Sylvia Anderson, Andre Mule, Mason Fawzi, Neil Brown and Pam Nelson.~~ This is AT&T's negotiation team chartered by Mr. Carroll and responsible for direct interface with the BellSouth negotiation team. Please call me to confirm the members of your team.

As you requested, AT&T will review priority requirements for Total Services Resale. We will also be in a position to outline the Unbundled loop and Interconnection priority requirements. Attached is an outline of the critical elements.

The end in mind for this next meeting is to build from Monday's meeting and establish the working relationship between our respective teams, define the process for negotiation, review the requirements and begin the detailed negotiations. We see this meeting as the foundation for managing negotiations going forward.

To conclude, please call me on 404/810-3100 or page me on 1-800-442-0187, pin number 2496527 to let me know the date, time and make up of your team. We are delighted to host the meeting at our location.

Sincerely,

Kathy Jaber for Pamela A. Nelson

Attachment

cc: C. Coe
R. Robertson
AT&T Executive Team
AT&T Core Team Members

200448

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REQUIREMENT PRIORITY

PRICE AND COMPENSATIONS

Unbundled basic network elements must be priced at Total Service Long Run Incremental Costs (TSLRIC). Retail services must be made available at wholesale prices, providing for discounts from existing retail prices.

RESALE

All basic network functions and all products and services BellSouth offers at retail to subscribers must be available for unrestricted resale.

NETWORK OPERATIONS

Service Ordering, Provisioning and Maintenance Procedures must be provided that support electronic, real time interfaces to customer services information for pre-ordering, ordering, provisioning, and maintenance/repair information. Such systems and resources should operate at parity with the services offered by BellSouth.

NETWORK ARCHITECTURE AND SERVICES

The availability of all products and services, features and functionality offered by BellSouth to end users today. Included in this requirement is inside wire, service warranty, disaster recovery procedures and payphone service.

^{LAM} Billing and CARE, Security and Access Billing data transfer requirements and information to enable AT&T to efficiently manage local and intraLATA toll resale billing data and financial transactions.

Service Quality Standards of BellSouth and AT&T are fundamental requirements that must be met in all areas of negotiations and are essential to reaching agreement.

INTERCONNECTION AND NETWORK ELEMENTS

notes
Unbundled Access: Access to network elements on an unbundled basis at appropriate points in the network at terms and conditions that are equal to what Bellsouth provides itself. *any tech. specified*

Collocation: Physical collocation of equipment necessary for interconnection or access to unbundled network elements at BellSouth's premises, unless such physical collocation is not practical for technical reasons or because of space limitations, in which case BellSouth will provide for virtual collocation.

Dialing Parity: Access to telephone numbers, operator services, directory assistance, and directory listings, with no unreasonable dialing delays. Provision of dialing parity equal to what BellSouth provides its end users.

Interconnection of Networks: Provision of interconnection for the transmission and routing of telephone service and exchange access at any technically feasible point with BellSouth's network, that is at least equal in quality to that provided by BellSouth to itself.

Access to Rights-of-Way: Access to poles, ducts, conduits, and rights-of-way that are consistent with Section 224 of the federal Telecommunications Act.

Proprietary and Confidential Information

Subject to a BellSouth and AT&T nondisclosure agreement and should not be shared except as provided thereto

200449

REQUIREMENT PRIORITY

Reciprocal Compensation: Reciprocal compensation arrangements for the transport and termination of telecommunications.

Number Portability: Number portability that permits a subscriber to retain its existing telephone number. Interim number portability arrangements that provide for as little impairment of functioning, quality, reliability and convenience as possible.

Proprietary and Confidential Information

Subject to a BellSouth and AT&T nondisclosure agreement and should not be shared except as provided thereto

200450

March 21, 1996

To: Core Team
Law & Government Affairs State Directors

Re: BellSouth and AT&T Interconnection
Negotiations

As promised, attached are minutes of AT&T's first negotiating session with BellSouth held on March 11, 1996.

Loretta A. Cecil

Attachment

cc: R. A. Briney
W. J. Carroll
G. V. Coker
T. R. Phillips
M. W. Tye
D. J. Winegard

200451 309

Monday, March 11, 1996

1:00 p.m. to 3:20 p.m.

Memorandum to File

Re: 1st Interconnection Negotiations Meeting Between AT&T and BellSouth

Attendees: AT&T: W. J. Carroll, Vice President-LSO Southern Region
L. A. Cecil, Law and Government Affairs Vice President
P. Nelson, District Manager

BellSouth: J. M. Baker, Sales Vice President, Interconnection
R. B. Robertson, Marketing Vice President
R. C. Scheye, Strategic Management
Q. Sanders, Director-AT&T Regional Account Team

Place: AT&T Offices, 4th Floor, 1200 Peachtree Street, N.W., Atlanta,
Georgia

This meeting followed AT&T's March 4, 1996 letter to BellSouth requesting the commencement of interconnection negotiations in Georgia, Florida, North Carolina and Tennessee (See Attachment 1) in accordance with the Telecommunications Act of 1996.

Jim Carroll opened the meeting indicating that Pam Nelson was attending for AT&T in lieu of Bill West. Jim stated that he had telephoned Charlie Coe at BellSouth earlier in the day to advise that Pam would be attending in Bill's place. Richard Robertson acknowledged that he had received this information and thanked Jim for advising BellSouth of the change in attendees.

Richard next asked Jim about Jim's organization, the Local Services Organization ("LSO"). Jim described his organization as a "product organization" supported by matrix management. Jim indicated that he had responsibility for AT&T's local entry in nine southern states and handled all interconnection relationships: local exchange carriers, as well as competitive access providers, cable companies and joint venture arrangements. Jim indicated his organization also had responsibility for local entry construction efforts via the customer connectivity organization.

Bob Scheye asked Jim if he was AT&T's "geographic manager." Jim responded "sort of," then explained the various matrix relationships that exist in AT&T's Southern Region.

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Jim next discussed the agenda for today's meeting and referred to Attachment 2. Jim said he preferred an informal meeting and encouraged BellSouth to take breaks as needed. He also advised BellSouth that AT&T would make a room available to them if they wanted to talk privately.

Jim told BellSouth that we were in "Day 8" of the process for interconnection negotiations under the new federal act. Jim then confirmed that AT&T had sent four separate letters to BellSouth on March 4, 1996 requesting interconnection negotiations in four states: Georgia, Florida, North Carolina and Tennessee.

Bob Scheye then asked if we sent one or four letters. Jim responded four - all sent to Duane Ackerman at BellSouth. Jim asked if BellSouth would like AT&T to resend the letters and both Bob Scheye and Richard Robertson said no.

Jim then advised BellSouth that AT&T's intent was to reach agreement with BellSouth on interconnection agreements which would be submitted to the respective PUCs for approval. Jim said AT&T hoped BellSouth would adopt an "expeditious" approach to the negotiations, being "more aggressive" than in past negotiations. Jim said we needed to reach agreement as soon as possible and no later than mid July, 1996.

Jim then advised that he talked with Charlie Coe last week and had suggested to Charlie that AT&T and BellSouth's pre-legislation negotiations should be our foundation or "starting point" for interconnection negotiations under the new federal act.

Jim next asked Loretta Cecil to talk about how AT&T and BellSouth should handle the exchange of each other's confidential information during the interconnection negotiations. Loretta stated that although she was aware that AT&T and BellSouth had been operating under an existing non-disclosure agreement relative to the pre-legislation negotiations, she indicated that this agreement did not contemplate negotiations ending up in arbitrations before the various PUCs. Loretta indicated that AT&T was still reviewing the existing agreement for modification to cover sharing confidential information with the PUCs if the negotiations end up in arbitration.

Bob Scheye then indicated that BellSouth's normal practice was to share confidential information under a written (or oral) agreement with each party free to share the other party's confidential information internally, but not free to disclose the other party's confidential information with any PUC. Bob stated "this makes our negotiations 'confidential' where the parties are in a better position to freely and openly negotiate." Loretta then questioned the legitimacy of this

200453

approach given that the PUCs are responsible for resolving differences between the parties through the arbitration process.

Loretta asked Bob Scheye and Richard Robertson who she should deal with in the BellSouth Law Department to further discuss the non-disclosure agreement. They referred her to Hank Anthony (335-0789).

Loretta next discussed the process of producing documents in response to document requests. She indicated that AT&T would prefer that the parties provide copies of documents to the other on reasonable timeframes rather than having to go to the other party's offices to review original documents. She also requested responsive documents be appropriately labeled and identified as to which requests the documents are responsive. Additionally, she stated that there would be times when the parties would need to make their representatives available to explain or "walk through" the documents. Bob Scheye and Richard Robertson agreed to all of the foregoing relative to exchanging documents.

Jim Carroll next moved to the bullet point "Business" in Attachment 2 and said he wanted to discuss AT&T's expectations of how the interconnection negotiations should proceed.

With respect to expectations, Richard Robertson said it would be helpful if AT&T could prioritize the most important things it hoped to get out of negotiations and why AT&T "needed these things." He indicated that if BellSouth understood the "whys" behind the "wants," BellSouth would be able to better "think through" the negotiations and clearly communicate with AT&T.

Richard then said that he and Bob Scheye were not part of the "retail group" at BellSouth and that AT&T could feel comfortable sharing business plans and strategies with him and Bob -- they wouldn't get back to our competitors at BellSouth. Richard then explained that Joe Baker was BellSouth's Regional Vice President for interconnection issues and that Quinton Sanders was BellSouth's Sales Executive for AT&T and that it was up to Joe and Quinton to look out for AT&T's interests at BellSouth.

The discussion then moved back to expectations. Richard Robertson indicated that in the past AT&T had told them that it would need BellSouth to "handle up to of 20,000 orders on the first day" and then "only two orders actually got placed." He said BellSouth incurred significant capital expenses to take care of these forecasted orders. He said that AT&T needed to be "reasonable" in its expectations of BellSouth.

Jim Carroll responded by saying that AT&T would continue to provide forecasts with the understanding that "there's no such thing as a future fact." Jim indicated that AT&T would be happy to sell long distance services to BellSouth

200454

(which BellSouth could resell) without a forecast. Jim further indicated that flexibility with respect to forecasting is required in a competitive market. Jim also indicated that entering into an agreement with BellSouth "doesn't do us any good if BellSouth can't deliver on its commitments."

Richard Robertson then indicated that BellSouth would prefer to negotiate on a "regional basis" and only separately negotiate issues that vary on a state by state basis.

Jim Carroll then stated that from AT&T perspective:

- products & services would be negotiated on a regional basis with exceptions identified state by state.
- interconnection arrangements and conditions would be negotiated on a regional basis.
- process and studies to understand and agree on costs would be done on a regional basis.
- prices would be negotiated on a state by state basis.

Everyone agreed to this approach.

Loretta Cecil then asked how AT&T and BellSouth would document those issues on which the parties had already reached agreement through their pre-legislation negotiations.

Richard Robertson said he anticipated that AT&T and BellSouth would sign a "stipulation" similar to what BellSouth has done in Florida with other interconnection arrangements. Richard then urged AT&T to look at these interconnection stipulations in that they might address the bulk of the issues for AT&T on interconnection. Loretta Cecil questioned whether these interconnection agreements cover resale and Richard Robertson responded that the Florida stipulation only covers interconnection of the network. He acknowledged that to date AT&T's and BellSouth's negotiations have been focused on resale. He then said most of the carriers BellSouth is dealing with are not focused on resale.

Bob Scheye then reiterated that it would be helpful if the parties could prioritize the most significant issues and work those first.

Jim Carroll next said it was AT&T's intent to conduct negotiations in a professional business-like manner and that it was not AT&T's intent to negotiate in the press. He indicated that we would conduct the negotiations in a spirit of openness designed to reach agreement, i.e., a win-win for both parties and that AT&T would protect BellSouth's proprietary and confidential information consistent with whatever agreement we eventually execute. Jim further indicated that dialogues with the PUCs are expected and acceptable and that

public relations contacts and press inquiries would be handled in the normal course of business subject to the above; i.e., no intent to negotiate in the press and subject to the terms of the nondisclosure agreement executed by the parties.

Richard Robertson and Bob Scheye both stated they agreed with Jim's "press" proposal and that although they would confirm with the press that negotiations were in fact taking place, they would not further comment. Jim then closed out this topic by indicating that if in the future either party believed it needed to disclose more details of the negotiations to the press, then it would be free to do so after first advising the other party that it was going to provide additional details.

Jim Carroll next moved to "Scope of Negotiations" on Attachment 2, indicating that the negotiations needed to be handled expeditiously and that AT&T had established a negotiations "Core Team" which was supported by several sub-teams. Jim then referred to Attachment 3, identifying Preston Foster as AT&T's Core Team Leader and Pam Nelson as AT&T's lead negotiator for Network Operations and Interconnection issues and Neil Brown as AT&T's lead negotiator for all Pricing issues.

Jim stated that many areas and sub-areas could and would be worked in parallel, including Price and Network Operation and Interconnection issues. Additionally, Jim stated that within each of these major areas, many elements like collocation, electronic interfaces, billing, etc. could be worked in parallel in order to maximize our efforts and time. Jim also stated that significant resources would be required of both parties to succeed. Notes used by Jim Carroll during the meeting to cover these issues are attached as Attachment 4.

Richard Robertson asked about Preston Foster's background and Jim responded that Preston was in the LSO organization and was just back from an assignment for AT&T in Washington, D.C. Richard then said he knew an individual named Preston Foster and was curious as to whether it was the same individual – after further discussion, Richard concluded it was the same individual he knew from the past.

Richard Robertson then handed out a yellow chart (See Attachment 5) which he said identified BellSouth's negotiating team.

With respect to interconnection, Richard then asked when AT&T would get its interconnection requirements to BellSouth. Pam Nelson responded the end of this week or next week. Pam Nelson added that it would be a good idea for AT&T and BellSouth to quickly meet and also go over the Florida stipulation on interconnection mentioned earlier.

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Regarding total services resale, Jim Carroll indicated that AT&T wanted "specificity" from BellSouth on all retail services offered by BellSouth, both regulated and unregulated.

Jim also said AT&T wanted BellSouth's retail offers to be made available at wholesale rates -- prices discounted and below BellSouth's commercial prices, and that AT&T also needed electronic interfaces that allowed us to respond to customers better than or at least equal to BellSouth's capabilities to meet customer needs. Jim also said AT&T expected all end users interfaces to be branded "AT&T." Richard Robertson asked if this included "trucks" and Jim Carroll said yes.

With respect to unbundling the network, Jim Carroll said AT&T wanted access to eleven Basic Network Functions ("BNFs") and that AT&T would be describing these in writing to BellSouth. Jim mentioned the following in particular: loop distribution, loop concentration, switching, operating systems support, transport links and common signaling.

Jim Carroll next said AT&T expected these eleven BNFs to be priced distinctively and at TSLRC; and that AT&T again would be looking for superior electronic interfaces and AT&T branding.

Jim then moved to access charges and indicated that AT&T would be looking at access costs also based upon TSLRC. Richard Robertson said "that's where we'll have the most difficulty."

Jim then addressed dialing parity and said AT&T would be looking for BellSouth to provide local toll prescription by a certain date. He said AT&T also expected customers to be able to keep their same telephone numbers without financial or performance penalties to customers or AT&T and access to directory assistance and other listings.

With respect to poles, conduits and ducts, Jim Carroll indicated that AT&T would establish its requirements; needed pricing at TSLRC and with physical collocation.

Jim concluded this part of the discussion by indicating that AT&T expects timely notification of all changes to BellSouth's retail offerings and network changes.

Jim then asked Pam Nelson to summarize the pre-legislation discussions between AT&T and BellSouth. Pam showed a negotiation binder to the group and indicated that the binder was divided into four categories: agree, pending, probable and disagree. She said that AT&T and BellSouth were working under Version 4 of the Status of Negotiations and provided the group with a copy of

Version 4 (See Attachment 6). Pam also gave the group a Summary Status of the negotiations (See Attachment 7).

As to Version 4, Pam explained that the yellow highlighted items were the ones where AT&T and BellSouth had reached agreement.

Bob Scheye then stated that this is where the expectations of AT&T becomes an issue. Bob indicated that Version 4 shows there are 216 issues on total services resale alone. He said he expected AT&T to put a similar number on the table relative to AT&T getting access to BellSouth's unbundled network. Bob said other carriers limit their issues to a dozen or so – they cover just enough issues to get into business and leave the other details to be worked out later. He again emphasized that most other carriers "are not at AT&T's level of detail." Bob said in a perfect world all these details could be worked, and would be worked eventually, but that it was not reasonable to assume all the details could be worked in the next few months. Bob urged AT&T to focus and resolve only those minimum issues necessary to get into the local business.

Jim Carroll responded that pre-legislation negotiations to date had been disappointing and that this would need to dramatically improve given the timelines under the new federal legislation. Jim offered to have AT&T and BellSouth's negotiating teams get together as soon as possible and agree upon many of the outstanding issues.

Jim mentioned there had not been much progress made recently with respect to electronic interfaces and that this was slowing down readiness trials. Jim advised that AT&T would not jeopardize its brand by going into service before a "quality service" could be offered to customers. Jim then told Richard Robertson that if BellSouth had a different approach from readiness testing that would allow AT&T to get into the market earlier without service problems, to let us know.

Jim also said the parties need to avoid getting into a "Catch-22" on interconnection issues. He gave the example of local loops being tied up in the OFB forum where a decision may not be made for three or four years. Jim reiterated that we must move ahead on interconnection issues while various groups study the issues.

Jim then left the meeting for a few minutes. While he was away, Bob Scheye said he wanted to mention another issue. As he put it, "both AT&T and BellSouth are using up lots of resources debating resale and related issues in the regulatory arenas." He said he expected the regulatory process to continue while interconnection negotiations are on-going, but questioned whether there was a better way to resolve these issues than in a public forum. He said we

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needed to make better "practical use of our time" and get the big issues resolved. No one from AT&T commented on Bob's comments.

Jim Carroll returned and asked whether the AT&T and BellSouth negotiations teams could meet Friday, March 15th. Bob Scheye responded that he believed it would be helpful if AT&T and BellSouth could first identify the top "ten to twelve issues" that need to be negotiated and then prioritize the order of the negotiations.

Pam Nelson asked who at BellSouth had authority to decide what are the top issues from BellSouth's perspective. Pam then discussed BellSouth's yellow negotiations team chart (See Attachment 5) and pointed out that BellSouth has assigned various individuals to particular issues, but that it was unclear who was BellSouth's overall leader for negotiations. After discussion, we were left with the impression that Bob Scheye and Richard Robertson share this leadership responsibility.

The next topic discussed was access charges. Richard Robertson indicated that BellSouth had made a "good faith offer" in Florida on reducing access charges and that "we [BellSouth] only get 'one-way' deals offered to us by AT&T." Jim Carroll responded that is because the Southern Region has some of the highest access charges in the nation. Richard responded this wasn't true, that rates have been reduced in the last couple of years in Alabama and Georgia and that BellSouth's proposals to AT&T "never seem rich enough to you." Jim Carroll then indicated that North Carolina has some of the highest access charges in the country.

The topic of universal service was next discussed and Jim said AT&T supports a universal service fund, but that it's probably different from the universal service fund advocated by BellSouth.

Richard Robertson said he hoped the parties would strive for a win/win situation on access charges and that BellSouth had made significant access charge reductions in the last two years.

Allocation of resources was next discussed and Bob Scheye indicated that AT&T was not the only party with which BellSouth was negotiating and that BellSouth had a resource problem meeting AT&T's expectations. He said that right now they were dealing with over twenty different carriers. Loretta Cecil asked Bob whether all of these negotiations were under the new federal act. Bob said "no" only about five or six are under the act, but that "letters are coming in every day."

Jim Carroll then said that not much progress had been made in the last six to eight weeks in pre-legislation negotiations and that the negotiating teams

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needed to meet multiple days a week in order to comply with the timeframes under the new federal act. Jim indicated that AT&T was putting a lot of resources on negotiations. At that point, Pam Nelson told the group that supporting negotiations with BellSouth is her new full time job. Bob Scheye and Richard Robertson said they didn't know AT&T had added additional resources and said this was very helpful information.

The meeting ended with BellSouth's representatives not agreeing to meet Friday, March 15th or any other definite date in the future. Bob Scheye indicated that before meeting again, he needed to go back and discuss the resource issue with others at BellSouth. It was not clear when or who Bob Scheye would contact at AT&T once Bob had additional information.



Southern Region

March 4, 1996

1200 Peachtree Street, N.E.
Atlanta, Georgia 30309Via Hand-Delivery

F. Duane Ackerman
Vice-Chairman and Chief Operating Officer
BellSouth Communications, Inc.
Atlanta, Georgia

Dear Mr. Ackerman:

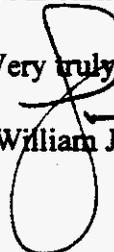
Pursuant to Section 252 of the Telecommunications Act of 1996, AT&T Corp. ("AT&T") requests the commencement of negotiations for interconnection to enable AT&T to provide competing telecommunications services, including local service in the State of Georgia. This request includes all interconnection issues identified in Sections 251 and 252 of the Act, including the prices and terms for interexchange access, the resale of services, and the network elements used for the origination and completion of local exchange and interexchange services traffic. It is AT&T's view that, while negotiated agreements must be filed and approved for each State, the vast majority of issues can and should be resolved at the regional level.

I invite you or your designated representatives to meet with me in my capacity as Vice-President-Local Services, Bill West, AT&T Local Interconnection and Access Management Vice-President, and Loretta Cecil, AT&T Law and Government Affairs Vice-President, at 1200 Peachtree Street on March 11, 1996 at 1:00 p.m. to initiate these discussions. At this meeting, we would like to discuss approaches and establish plans for ongoing negotiations. I propose we convene the remainder of our negotiations team members for their initial working session no later than March 15, 1996, at a mutually agreeable location here in Atlanta. If you or your team members cannot meet on these dates, please give me a call so we can establish an acceptable schedule for our initial and subsequent meetings.

We realize there are a significant number of issues to resolve. We are confident that with a concerted and cooperative spirit, we can resolve these issues in a mutually agreeable manner. Our companies have worked together in the past to provide world-class service to customers and we hope to enhance and expand this relationship into all telecommunications markets through these efforts.

I look forward to hearing from you at your earliest convenience.

Very truly yours,


William J. Carroll

cc: W. L. West
L. A. Cecil

200461



Southern Region

March 4, 1996

1200 Peachtree Street, N.E.
Atlanta, Georgia 30309Via Hand-Delivery

F. Duane Ackerman
Vice-Chairman and Chief Operating Officer
BellSouth Communications, Inc.
Atlanta, Georgia

Dear Mr. Ackerman:

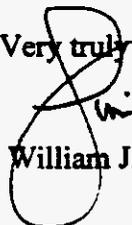
Pursuant to Section 252 of the Telecommunications Act of 1996, AT&T Corp. ("AT&T") requests the commencement of negotiations for interconnection to enable AT&T to provide competing telecommunications services, including local service in the State of Florida. This request includes all interconnection issues identified in Sections 251 and 252 of the Act, including the prices and terms for interexchange access, the resale of services, and the network elements used for the origination and completion of local exchange and interexchange services traffic. It is AT&T's view that, while negotiated agreements must be filed and approved for each State, the vast majority of issues can and should be resolved at the regional level.

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We realize there are a significant number of issues to resolve. We are confident that with a concerted and cooperative spirit, we can resolve these issues in a mutually agreeable manner. Our companies have worked together in the past to provide world-class service to customers and we hope to enhance and expand this relationship into all telecommunications markets through these efforts.

I look forward to hearing from you at your earliest convenience.

Very truly yours,


William J. Carroll

cc: W. L. West
L. A. Cecil

200462

AT&T / BELLSOUTH NEGOTIATIONS

MARCH 11, 1996

- **PROCESS OF NEGOTIATIONS**
 - GENERAL DIALOGUE/GOALS
 - CONFIDENTIAL INFORMATION
 - DOCUMENTATION
 - BUSINESS
- **SCOPE OF NEGOTIATIONS**
 - AREAS/TEAMS
 - EXPECTATIONS
 - STATUS/STARTING POINT

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SCOPE OF NEGOTIATIONS

	NETWORK & OPERATIONS INTERCONNECTION	PRICE
TOTAL SERVICES RESALE	PAM NELSON	NEIL BROWN
UNBUNDLED NETWORK ELEMENTS	PAM NELSON	NEIL BROWN
LOCAL EXCHANGE & INTEREXCHANGE ACCESS	PAM NELSON	NEIL BROWN

CORE TEAM LEADER: PRESTON FOSTER

- CORE TEAM TO MEET NO LATER THAN MARCH 15
- CORE TEAM LEADERS TO ESTABLISH SCHEDULES
 - CORE & SUBTEAMS TO MEET AT LEAST WEEKLY IN EACH AREA
 - CORE TEAM TO CALIBRATE ON PROGRESS WEEKLY
- SUBTEAMS WILL BE ESTABLISHED AT INITIAL CORE TEAM MEETING
- HANDLE EXPEDITIOUSLY

200464

**BELLSOUTH LOCAL SERVICE NEGOTIATIONS --
AT&T's EXPECTATIONS**

WHOLESALE OFFERS

1. TOTAL LOCAL SERVICES FOR RESALE

- o All BellSouth retail offers available at wholesale
- o Price structures that reflect retail offer discounts and volume tapers
- o Price levels that are commercially viable and substantially below BellSouth retail offers.
- o Supporting processes and electronic interfaces that are equal to or better than those supporting BellSouth retail offers and that meet AT&T's quality and cycle time requirements.
- o All end user customer interfaces branded AT&T

2. UNBUNDLED NETWORK ELEMENTS -- ACROSS THE FOLLOWING CATEGORIES:

- 1) Loop distribution
 - 2) Multiplexing /Loop concentration
 - 3) Loop feeder
 - 4) Switching
 - 5) Operator services
 - 6) Dedicated transport links
 - 7) Common transport links
 - 8) Tandem switching
 - 9) Signaling link
 - 10) Signal transfer point
 - 11) Service control point
- o Price each element distinctly
 - o Prices set at TSLRIC and be commercially viable
 - o Supporting processes and electronic interfaces meet AT&T quality and cycle time requirements
 - o AT&T branding for end user elements and no branding of other elements

3) CURRENT NETWORK ACCESS OFFERS

- o Provide current offers at TSLRIC prices

BellSouth - Local Interconnection Negotiating Process

Overall Fact Finding Team

- Bob Scheye (404) 420-8327
- Richard Robertson (205) 977-5690
- State Regulatory Vice President -
Varies by State
- Other Organizations and Function-
provided on an as needed basis

**Network Issues: Contact Vic Atherton
(205) 977-5041**

Trunking Issues

- George Jung
- Nancy Kallus
- Art Lane
- Bill McAllister
- Rob McKibben
- Jim Pritchett

Signaling Issues

- Russ Arsaga
- Jane Raulerson
- Stan Spillers

Number Portability Issues

- Loraine Beyer
- Steve Ottaway
- Gary Robert
- Neil Russo

Loop Issues

- Sharon Irwin
- John Jackson
- Ed Jones
- Jane Raulerson

**911 Services Issues: Contact Evelyn Parks
(404) 529-2527**

- Sandra Hall
- Carl Jackson
- Doug Kennedy
- Bill Marczak
- Ron Pardue
- Gary Robert
- Brenda Slonneger

**Unbundled Features and Functions Issues:
Contact Jerry Latham (205) 977-2213
CMDS AND ITORP**

- Stephanie Reardon
- Tim Yelton

Collocation

- Pam Tipton

800 Data Base

- Elbert Balch

Access To Numbers

- Harry Coleman

Switching and Ports

- TBD

**Operator Services Issues:
Contact Barbara Watson (404) 529-7466**

- Jeff Anderson
- David Rose

**Ordering, Billing, and Repair Services
Issues: Contact Gloria Calhoun
(404) 529-5579**

- Sherry Brannon
- Jane Raulerson
- Dana Simerson
- Ed Welch
- Shirley Wilcox

**Other Issues Not Described Above:
Contact Bob Scheye (404) 420-8327 or your
BellSouth Account Representative**

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AT&T Communications, Inc.
Total Service Resale Planning Document
for
Network Operations, Network Services, Billing and CARE,
and Pricing and Compensation
in the
Local Exchange Service Marketplace

Preface:

AT&T is certified to enter the local exchange market in Tennessee and is considering entering in BellSouth's remaining eight states. In anticipation of these filings AT&T is investigating viable alternatives available through which this service may be provided.

This may be accomplished through "Total Service Resale" and/or "Loop Resale" that will provide AT&T with the ability to service Customers in a manner that is consistent with the high quality and service standards with which the AT&T brand is associated. This document specifically addresses Total Service Resale.

This includes the full spectrum of BellSouth network services, both current and new including features for both business and residence markets as well as various unregulated or enhanced services such as voice mail and inside wire. All services will need to be provided in a seamless fashion so as not to impact customer service.

For all features and services described AT&T will require wholesale pricing options and service intervals in order to finalize our marketing plans. This request is separated into 4 major categories: Network Operations, Network Architecture and Services, Billing and CARE, and Pricing and Compensation.

Timing:

AT&T is requesting BellSouth to assign a dedicated professional team that is empowered to reach agreement and make decisions, to work cooperatively with AT&T to ensure that all of the required interface issues are agreed to and closed no later than December 1, 1995.

The required interfaces for the ordering, provisioning, maintenance and billing of the various services and features must be fully tested and verified to ensure AT&T's general availability is on the first day service is made available in each state by BellSouth. AT&T is prepared to commit the necessary resources and time required to bring the negotiations to a successful conclusion. AT&T welcomes the opportunity to work cooperatively to enhance system interfaces leading to a more robust and cost effective network on a going forward basis.

Any questions on this document may be addressed as follows:

Network Operations:

Ms. Kathy Taber
Room 12N17, Prom. II
1200 Peachtree St., NW
Atlanta, GA 30309
(404) 810-3102

Network Architecture/Services:

Mr. Jay Bradbury
Room 12W47, Prom. II
1200 Peachtree St., NW
Atlanta, GA 30309
(404) 810-8005

Billing and CARE:

Ms. Sue Ray
Room 12N04, Prom. I
1200 Peachtree St., NW
Atlanta, GA 30309
(404) 810-3123

Pricing and Compensation:

Ms. Karen Cummings
Room 6143 Prom. 1
1200 Peachtree St., NW
Atlanta, GA 30309
(404) 810-3246

TOTAL SERVICE RESALE

I. Network Operations:

The operational requirements associated with Total Service Resale concentrate primarily on the ability of AT&T to order service in a seamless fashion from BellSouth. Once that order is placed the provisioning of the service is internal to BellSouth and the only input AT&T has to this process involves performance metrics associated with the provisioning of the service as promised to our customer. As AT&T will make clear throughout this document the Quality, Integrity, and Responsiveness for provisioning and maintenance of the resale services, is essential to AT&T in reaching an agreement.

A real time ordering and provisioning interface using electronic bonding is essential to provide AT&T operational parity with existing BellSouth customer ordering processes. Such an interface is also required for BellSouth to comply with existing legislation and regulatory rules in many states.

Also associated with Total Service Resale is the provisioning of Voice Mail services and Inside Wiring. Since both of these functions are not tariffed and fall outside regulatory requirements, AT&T will address them accordingly. Please advise as soon as possible if it is appropriate for AT&T to negotiate these services separately. The issue of branding is particularly important in both the Voice Mail and Inside Wire offers so we request that this be a part of BellSouth's response.

As a Service Provider, AT&T recognizes the value of servicing our products quickly and how important it is to assure our customers that the problem will be fixed the first time. Any product or service which carries the AT&T brand must meet AT&T's requirements for prompt, friendly and efficient customer service.

It is our intention to provide AT&T customers with a single telephone number which they can call 24 hours a day, 7 days a week for the repair of their service. Logistically this presents some challenges to the current arrangement they may have with their local service. It is AT&T's desire that these challenges be transparent to the AT&T end-user and that BellSouth and AT&T work out any problems in the "Front End" process.

As with the Service Ordering and Provisioning process, AT&T would like to migrate to a standard EBI interface between the two companies. However, since BellSouth may not be ready to migrate to this platform in the time frame required we may need to establish an interim agreement which is based on some type of workable electronic interface.

If a full EBI interface is not available, we will need to develop an interim solution. One potential would be for BellSouth to provide a direct interface into the current BellSouth trouble reporting and tracking system which could be accessed from AT&T's work center. Another option could entail a gateway interface. BellSouth could provide AT&T with the interface specifications and AT&T could potentially build a gateway between its existing trouble ticketing system and the BellSouth system. These are just two possible methods of operation, AT&T is more than willing to discuss any viable options presented by BellSouth in response to this Total Resale Agreement.

In addition to an electronic interface required to provide "real time" status to AT&T's end-users the use of the AT&T brand is especially important. To that end, AT&T would like to discuss the options for the repair service in connection with provisioning and repairing service to AT&T end-users. It is understood that this is a very sensitive issue and we are willing to work with BellSouth to meet this requirement.

I. Network Operations (Cont'd)

A. Service Ordering and Provisioning Procedure

1. Provide AT&T with real time electronic means to transfer order information from AT&T to BellSouth and vice-versa.
2. BellSouth will provide AT&T with a real time response for the following items:
 - a. Firm Order Confirmation (FOC)
 - b. Information relative to service availability dates (e.g. Internal guide)
 - c. Information relative to the need for a service dispatch for installation
 - d. Feature and Service availability within any given area by LSO and Street Address
 - e. All Service order completions with related information on time and materials charges (if any). Provide form for end user signature when time and materials are required.
 - f. Service order errors, jeopardies and missed appointments
 - g. Any charges associated with required construction for a given service
 - h. Order Status at critical intervals to be negotiated for complex and designed services.
3. Provide AT&T with the ability to schedule installations with the Customer on line and access BellSouth's schedule availability to determine time of appointment.
4. Provide the same intervals and level of service currently being performed by BellSouth.
5. Provide AT&T with the ability to assign new telephone numbers with the Customer on line, this applies to vanity numbers as well.
6. BellSouth will allow existing Customers to retain their phone number in the event they change carriers with no loss of feature functionality.
7. Provide AT&T the ability to determine what features and functions an existing customer currently receives, with the customer consent.
8. AT&T requires BellSouth to provide where services and features are available, to street address detail, that includes type of Class 5 Switch by CLLI.
9. Provide a complete definition of all services, features, and functions available and any ancillary data required by BellSouth from the Customer to provision these services.
10. Provide information about the certification process for the provisioning of DA Exempt, Prison Services, Lifeline services, etc.
11. AT&T will provide BellSouth performance metrics which BellSouth is expected to meet.
12. AT&T requires BellSouth to notify AT&T if a customer requests changes to service at the time of installation.
13. AT&T requires adequate test and turn-up procedures to support the services and features ordered by AT&T.

I. Network Operations (Cont'd)

A. Service Ordering and Provisioning Procedure (Cont'd)

14. AT&T requests that BellSouth identify those areas where Multiserve and Multiserve + is available, including type of Centrex, and that BellSouth provide the required information for the Ordering and Provisioning of Centrex Services in those areas.

15. AT&T requires that BellSouth notify AT&T prior to Service termination, (Disconnect), or the termination of any service, feature or function by an AT&T Customer. (NOTE: since AT&T is BellSouth's customer of record the end-user CANNOT order a disconnect of AT&T service.).

16. AT&T requires that BellSouth provide intercept and transfer service as tariffed.

17. AT&T and BellSouth will develop a mutually agreeable escalation and expedite process for Service Ordering and Provisioning.

18a. AT&T requires BellSouth to describe the details and requirements on handling area transfers with the understanding that they are controlled by the owner of the NPA/NXX.

b. AT&T requires BellSouth to describe the details and requirements on handling LATA boundary changes.

19. AT&T requires that BellSouth provide interface agreements between Work Centers regarding systems and establishing a change control process.

20. AT&T requires that BellSouth provide non-discriminatory training for those technicians assigned to handle AT&T Local Service Customers.

21. Provide AT&T the ability to order a suspension on AT&T Local customers service upon request.

22. Provide AT&T the ability to deny service to a given AT&T end-user for non-payment of a bill in accordance with the PUC regulations.

23. Provide blocking of 700, 800, 888, 900, and 976, etc., services upon request from AT&T on a line, trunk or individual service basis.

24. AT&T and BellSouth agree to work cooperatively in practices and procedures regarding Law Enforcement and service annoyance handling.

25. AT&T would like a process established whereby misdirected calls can be routed correctly, e.g. reciprocal agreement for on-line transfer to business office, repair, etc.

26. AT&T needs to negotiate for the handling of 911 and E911 updates to BellSouth's databases for its Total Resale Customer base.

27. AT&T would like BellSouth to provide engineering support for all Special Services which are covered under a Total Resale offer, e.g. Data Services, Voice Grade private lines, intermediate bit rate services, Primary Rate ISDN services, Broadband services and Packet services, etc.

I. Network Operations (Cont'd)

B. Maintenance Procedures

1. BellSouth will provide AT&T with a "Real Time" electronic interface to perform the following functions related to the Maintenance process:

- a. Trouble Ticket entry and update capabilities
- b. Review and verify test results
- c. Provide status updates on current "Open" Trouble Tickets
- d. Verify feature and function updates and corrections as they relate to an open Trouble Report
- e. Provide a means for notifying AT&T of Switched Failures
- f. Provide dispatch status as well as location and ETA
- g. Testing

2. Provide AT&T the real time ability to verify and acknowledge any scheduled appointment upon receipt of the Trouble Ticket.

3. BellSouth will meet the following status requirements on AT&T services:

- a. Immediate notification of any changes in trouble status, electronically
- b. The ability to retrieve the current status of any open trouble report
- c. Immediate notification when any scheduled appointment is in jeopardy

4. BellSouth will close all TOK (Test OK), NTF (No Trouble Found), and CC (Came Clear) trouble reports with AT&T's work centers.

5. BellSouth will close the trouble by contacting the AT&T work center, AT&T in turn will be responsible for contacting the end-user Customer.

6. BellSouth will immediately notify AT&T of any Network event which impacts AT&T end-users. AT&T would prefer a real time monitoring arrangement if this is feasible.

7. BellSouth agrees to notify the AT&T work center of any scheduled maintenance activity which could have an impact on the service provided to AT&T end-users, and negotiate release with AT&T.

8. AT&T would like to negotiate a workable Disaster Recovery plan with BellSouth and agree to perform quarterly tests of the process.

- a. For BellSouth Work Centers
- b. For BellSouth Network Components

9. BellSouth will provide the AT&T work center with "real time" test results on any AT&T end-user service.

10. BellSouth agrees to route repair service calls to the correct service provider (AT&T), with same dialing parity as BellSouth.

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nondisclosure agreement and should not be shared except as provided thereto.

I. Network Operations (Cont'd)

B. Maintenance Procedures (Cont'd)

11. BellSouth will bill any applicable tariffed maintenance and service charges to AT&T, not to the end user. AT&T will provide an address and contact for all applicable tariffed charges.

12. BellSouth agrees to provide a listing of all applicable charges at the time the Trouble Ticket is closed.

13. BellSouth will use an AT&T branded form any time an AT&T end-user is contacted relative to a trouble report, maintenance charges or any applicable service charges.

14. A BellSouth Technician will clear any reported trouble to the end-user's network interface.

15. BellSouth will provide an on-line transfer of any AT&T end-user "misdirected" trouble call to the AT&T repair center.

16. AT&T and BellSouth will negotiate performance metric's for Service repair.

17. Provide AT&T with an "escalation" and "expedite" process for Maintenance.

Total Service Resale

II. Network Architecture and Services:

The Architecture of the Network in a Total Resale environment is the Architecture of the BellSouth Network as it is today and evolves in the future. As a potential re-seller of that Network, AT&T is interested in the flexibility and diversity that BellSouth has designed into it.

Flexibility and Diversity are not limited to the physical network alone, but are also tied to the variety of service offerings that AT&T can offer to its Customer base. We would like to work with BellSouth in developing a comprehensive response which covers these requirements, including a wholesale pricing structure that will accurately reflect the economies realized by BellSouth as a result of a wholesale tariff, that will make this alternative attractive to AT&T.

It is our desire to be able to offer via a Total Resale agreement, all the network capabilities and functions needed to offer residential and business customers a wide array of basic exchange services in a technically equivalent fashion to the services that are currently offered by BellSouth to its own customers. The Total Resale agreement includes electronic interfaces for billing, provisioning, maintenance, ordering, etc., as well as access to all supporting data bases. The sections of this document which list services and feature functionality are not meant to be inclusive of, or all encompassing of BellSouth's services. In the event that BellSouth should develop a new service or feature, AT&T would expect to be able to offer that service at the same time it is offered by BellSouth.

II. Network Architecture and Services:

A. Basic Service Requirements

1. No loss of features or functionality in any of the following areas:
 - a. Same dial tone and ring
 - b. Same capability for either dial pulse or touch tone recognition
 - c. Same capability to complete calls to any location
 - d. Same extended local calling area
 - e. 1 + IntraLATA toll calling
 - f. PIC 1 + service
 - g. CIC dialing
 - h. Telephone number portability
 - i. Same access to vertical features and functions
 - j. Call detail recording capability required for end user billing
 - k. Access to Telephone Relay Service (TRS)
 - l. All CLASS and Custom Calling features and functions (e.g., caller ID)
 - m. Centrex
 - n. Flat and Measured Services
 - o. International Calling
 - p. 911, 500, 700, 800, 888, 900, 976, etc.
 - q. Provide the following End Office features:
 1. Distinctive ringing
 2. Repeat dial capability
 3. Multi-line hunting
 - r. Provide the following feature capabilities allowing for Memory Call services:
 1. SMDI - Station Message Desk Interface
 2. MWI - Message Waiting Indicator
 3. CF-B/DA - Call Forward on Busy / Don't Answer
 - s. Trunk Local connectivity to PBXs and Direct Inward Dialed Services

II. Network Architecture and Services (Cont'd)

B. NXX Assignment and Administration

1. Provide AT&T with the capability to assign telephone numbers "on line", providing AT&T with electronic access to the number assignment system, for "real time" on-line number assignment.
2. Provide AT&T the capability to request and receive "Vanity" numbers on a real time basis.
3. Provide AT&T with the capability to reassign (coincident with an end users request), or obtain any BellSouth controlled number within the geographic boundaries of the LSO, consistent with the current numbering plan.
4. Establish a SPOC for the reservation of numbers on a 7x24 basis.
5. Maintain sufficient numbers to meet the needs of all Local Service Providers.
6. BellSouth is responsible for the reservation and aging of numbers.

C. Directory Assistance

1. BellSouth will provide AT&T the following capabilities exactly as BellSouth provides them to their customers on a going forward basis:
 - a. Provide 2 customers or numbers and or addresses per call
 - b. Provide name and address upon request except for unlisted numbers
 - c. Provide call completion to the requested number when requested
 1. Local
 2. Toll
 - d. Provide a service that carries the AT&T brand or no brand if branding is not technically possible.
 - e. Provide data (listing data base) that is timely and at parity with BellSouth.
 - f. Any information provided by Automatic Response Unit (ARU) is repeated twice.
 - g. Provide service at same levels as BellSouth and subject to same performance metric's.
 1. number of rings to answer
 2. average work time
 3. disaster recovery options
 - h. Provide Intercept service for customers moving service
 1. refer to new 10 digit number
 2. repeat new number twice on referral
 3. repeat recording twice
2. Exemptions:
 - a. Provide the ability to waive charges for handicapped customers.
 - b. Provide a process to verify and document a customer's exempt status.

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II. Network Architecture and Services (Cont'd)

C. Directory Assistance (Cont'd)

3. Provide the option to purchase resale service without associated Directory Assistance to AT&T in an unbundled offering.

- a. Provide AT&T with access to Directory Assistance data so that AT&T can self provision it's own Directory Assistance service.
- b. Provide the capability to route AT&T customers 411 calls to AT&T

D. Listings

1. White pages requirements:

- a. Listings at no cost to AT&T (1st number free)
- b. Distribution of directory to AT&T customers coincident with receipt of White Pages by BellSouth customer
- c. List of AT&T services and information (price, features, availability) similar to BellSouth
- d. Provide wholesale prices to AT&T which reflect BellSouth's avoided costs.
- e. Unlisted / unpublished discount
- f. Provide a discount for multiple listings
- g. Recycle AT&T's Customer directories and books
- h. AT&T's end user listings will be excluded from Lists Sales

2. Yellow pages requirements:

- a. Provide a "real time" knowledge of deadlines
- b. Distribution of directory to AT&T customer's coincident with receipt of Yellow Pages by BellSouth customer
- c. Provide wholesale prices to AT&T which reflect BellSouth's avoided costs.
- d. Provide a commission on advertisements from AT&T

3. Exemptions:

- a. Provide the ability to waive charges for handicapped customers
- b. Provide a process to verify and document a customer's exempt status

4. AT&T requires BellSouth to list AT&T in the front of the directory as a local service provider for the area with all appropriate information and telephone numbers.

II. Network Architecture and Services (Cont'd)

E. Operator Services

1. Provide to AT&T Operator Services accessible by "O+" and "O-" dialing.
2. Provide to AT&T a full range of Operator Service functions identical to those which BellSouth provides to its customers.
3. Provide the Operator Services "branded" as AT&T complete with the "AT&T sparkle tone bong".
4. AT&T will provide to BellSouth performance metric's for the provision of this service which will include:
 - a. Number of rings to answer
 - b. Average work time
 - c. Disaster Recovery (work stoppage, technical failure, natural disaster, weather)
5. Provide the following capabilities including but not limited to:
 - a. Calling Card Services (entry, verification, and blocking)
 - b. Instant credit on calls
 - c. Time and charges
 - d. Route calls to AT&T when requested
 - e. Busy Line Verification/Emergency Intercept (BLV/EI)
 - f. Emergency calls
 - g. Notification of the length of call
 - h. Hotel/Motel services
 - i. Real time rating of calls
 - j. Handicapped caller assistance
 - k. Third party billing
 - l. Collect: Person to Person / Station to Station calls
6. Provide the option to purchase resale service without associated Operator Service to AT&T in an unbundled offering.

F. Lifeline Service

1. Provide the capabilities required for Lifeline services exactly as BellSouth provides to their customers on a going forward basis, this includes a billing plan, access to the subsidy pool, etc.

G. Service Assurance Warranty (SAWS)

1. Provide a service quality guarantee to AT&T which will be accomplished by offering a credit when BellSouth does not meet the service quality requirements as specified by AT&T.

II. Network Architecture and Services (Cont'd)

G. Service Assurance Warranty (SAWS) (Cont'd)

2. This service guarantee is applicable but not limited to:

- a. Call Satisfaction Credit
- b. Service Interruption Guarantee
- c. Installation/Repair Satisfaction Credit
- d. Service Order Satisfaction Credit

H. 911

- 1. Provide access to 911 / E-911 in a transparent manner to the end user.
- 2. Provide the ability to populate the 911 databases in a timely manner at parity with BellSouth.
- 3. Provide 911 detailed rating information (city, county, state, etc.)

I. Inside Wire

- 1. Provide Inside Wire service maintained by BellSouth and branded as AT&T.
- 2. Establish a mutually beneficial arrangement to resell Inside Wire provisioning and maintenance.
- 3. Transfer the Inside Wire maintenance contract to AT&T for its' Local customers.

J. Disaster Recovery

- 1. Agree to mutual participation in Disaster Recovery plans.
- 2. Provide timely notification of any outage which has an effect on AT&T customer's:
 - a. Central Office outages
 - b. Facility outages such as cable cuts, repeater failures, etc.
 - c. Commercial power outages
 - d. Load sharing situations
 - e. Subscriber Loop problems
 - f. Signaling network problems
 - g. General network congestion
 - h. Any other issue which has or could have a negative effect on AT&T Customer service

K. Payphone Services

- 1. BellSouth will provide the ability to procure Payphone service at a wholesale price that is commercially viable.

III. Billing and C.A.R.E.

A. Billing Requirements for Local and IntraLATA Toll

AT&T expects charges for Local and IntraLATA Toll Resale to be rendered using existing billing systems. The Standard Access Billing Requirements (SABR) for Local/Resale document will enable AT&T and the billing entity to efficiently manage their Local and IntraLATA Toll Resale billing data and financial transactions. The SABR document provides the billing entities with AT&T's resale billing requirements.

The SABR document is to be used in conjunction with the current industry standard guidelines for access billing. These standard guidelines are Carrier Access Billing System (CABS) and Small Exchange Carrier Access Billing (SECAB). Billable components of the Local/Resale service not cared for in the current industry standards will be identified to AT&T by the billing entity and AT&T will provide appropriate billing documentation.

Following are the business and billing principles which should be used when billing to AT&T:

1. BellSouth will participate in a Local/Resale Bill Certification Process as defined by the SABR document (Section 5) to ensure quality and financial assurance controls throughout AT&T and BellSouth's processes. Billing accuracy is the sole responsibility of BellSouth.
2. BellSouth will work with AT&T to facilitate accurate and timely billing as defined by the SABR document (Section 3).
3. BellSouth will provide a mechanized bill as defined by the SABR document (Section 4,5 &6) and utilize the electronic data transmission Connect: Direct.
4. BellSouth and AT&T will agree to an annual Supplier Quality Certification Review to be conducted by AT&T.
5. The existing CABS Billing Output Specifications (BOS) documents provide guidelines for how to render a bill. Additional information that is required to be uniquely identified when rendering Local/Resale charges per the SABR document (Section 7) are as follows:
 - a. BellSouth will bill charges/credits for Primary Interexchange Carrier (PIC) change charges separately from the Local/Resale bill
 - b. BellSouth will use the same structure as documented in CABS for a Switched Access Bill
 - c. Specific Account Level, Jurisdiction and Service/Feature codes are delineated

For a complete and comprehensive list of AT&T's Local/Resale billing requirements the SABR document, current issue must be consulted.

III. Billing and C.A.R.E. (Cont'd)

B. Data Transfer Requirements

(detail can be found in the AT&T Local Resale Data Transfer Requirements LRDR)

BellSouth will provide the following to AT&T:

1. Unrated EMI records per EMI ESRD
2. IntraLATA Toll usage
3. Local usage
4. Rated incollects sent rated
5. Message packed by Send to: / Bill to: RAO
6. Transport facility which conforms to IDIS
7. Transmission via CONNECT: Direct
8. Information via courier if required
9. Tape data will conform to Attachment "A" of the LRDR
10. Data to be delivered Monday through Friday except negotiated agreed to Holidays
11. Contacts (sending/receiving usage files), IDS, volumes by sending location
12. Any rejected packs will be corrected and resent
13. Packs tracked by invoice sequencing criteria
14. Data compaction will be done per Attachment "B" of LRDR
15. Pack size is 1 to 99,999 plus the header and trailer
16. Daily transmission of up to 99 packs, maximum
17. Data set minimum of 1 pack
18. Only one data set per Sending RAO
19. Pack Header Record per LRDR (page 8)
20. Pack Trailer Record per LRDR (page 9)
21. Data set name per LRDR (page 10)
22. AT&T will provide Data control reports
23. Existing detail edits to be performed
24. Perform error correction as required
25. AT&T will return unbillable messages
26. Interface testing between BellSouth and AT&T
27. Operational Testing between AT&T and BellSouth
28. Test files via CONNECT: Direct
29. Periodic review of control procedures
30. Data back up retained for 45 days
31. Provide mutual written change notification
32. Billing capability for Automatic Call Completion on DA service
33. Requirements regarding Information Service Providers; Billing, and Contracts

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nondisclosure agreement and should not be shared except as provided thereto.

III. Billing and C.A.R.E. (Cont'd)

C. C.A.R.E. Requirements

(AT&T's Requirements Under Development)

IV. Pricing and Compensation

BellSouth's monopoly Basic Network Functions (BNFs) and all retail services must be available for unrestricted resale. Unbundled BNFs must be priced at Total Service Long Run Incremental Costs (TSLRIC). Retail services must be made available at economically viable rates. In the short term, estimation of the appropriate discount will have to be based on a tops-down approach which looks at (1) avoidable costs, i.e., marketing, billing, etc., and (2) inferior access to LEC customer support systems (Electronic bonding). The long term solution will require a bottom up approach in which all wholesale services will be based on local service elements priced at TSLRIC.

Summary Status

06-Mar-96

Status

Agree 56 issues

1.A.12	1.A.16	1.A.18	1.A.20	1.A.26
1.A.27	1.B.3.c	1.B.14	2.A.1.a	2.A.1.b
2.A.1.c	2.A.1.d	2.A.1.e	2.A.1.f	2.A.1.g
2.A.1.i	2.A.1.j	2.A.1.k	2.A.1.l	2.A.1.m
2.A.1.o	2.A.1.p	2.A.1.q.1	2.A.1.q.2	2.A.1.q.3
2.A.1.r.1	2.A.1.r.2	2.A.1.r.3	2.A.1.s	2.B.5
2.B.6	2.C.1.a	2.C.1.c.1	2.C.1.e	2.C.1.f
2.C.1.g.1	2.C.1.g.2	2.C.1.g.3	2.C.1.h.1	2.C.1.h.2
2.C.1.h.3	2.C.1.h.4	2.C.3.a	2.D.1.a	2.D.1.b
2.D.1.c	2.D.1.g	2.D.2.b	2.D.4	2.E.5.e
2.E.5.f	2.E.5.g	2.E.5.j	2.H.1	2.I.1
2.I.3				

Deleted 8 issues

1.A.8	1.B.6	2.A.1.h	2.B.1	2.B.2
2.B.3	2.B.4	2.H.2		

Escalated 33 issues

1.A.1	1.A.2.a	1.A.2.b	1.A.2.c	1.A.2.d
1.A.2.e	1.A.2.f	1.A.2.g	1.A.2.h	1.A.10
1.B.1.b	1.B.1.d	1.B.1.e	1.B.1.f	1.B.1.g
1.B.2	1.B.9	1.B.10	2.C.1.d	2.C.2.a
2.C.2.b	2.C.3.b	2.D.1.d	2.D.1.e	2.D.1.f
2.D.2.c	2.D.3.a	2.D.3.b	2.E.3	2.E.6
2.F.1	2.I.2	2.K.1		

Obtainable 26 issues

1.A.3	1.A.4	1.A.5	1.A.6	1.A.7
1.A.9	1.A.13	1.A.14	1.A.15	1.A.17
1.A.19	1.A.21	1.A.22	1.A.23	1.A.24
1.A.25	1.B.1.a	1.B.1.c	1.B.5	1.B.8.a
1.B.8.b	1.B.11	1.B.12	1.B.13	1.B.15
1.B.16	1.B.17	2.C.1.b		

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Unbundled Network Elements Local Platform

I. Introduction:

This document provides an overview, including definitions, of the unbundled network elements which AT&T wishes to purchase either individually or in combinations. This document also includes high level technical requirements to which the incumbent LEC shall adhere in support of the unbundled network element platform, some of the ancillary capabilities needed to provide local service and the operational requirements which must be met to support service. These operational requirements of the LEC include; network engineering, service order provisioning, maintenance and recording. This document will describe how the network platform arrangement will enable carriers to order a combination of unbundled network elements which will allow new entrants to offer local exchange and access services. Though the document will be primarily focused on one combination of network elements which supports switched services, there are other combinations which may be considered for purchase by a new entrant to the local service market. These combinations are also not limited to voice services.

Description:

The network platform arrangement is characterized by the ability to disaggregate and recombine the physical components of the local exchange network into component piece parts called basic network functions or elements. A basic network functions or element can be individually priced, and provided by LECs via tariffs or contracts to competitors. This will enable LEC competitors to purchase individual elements or combinations of elements needed to provide service to local end user customers and other carriers. While the list of network elements contained in this document is envisioned to be those required at this time the list will change as technological advances are made and new services evolve. It is also important to note that the list of network elements will contain network components which may be obtained by new entrants from a supplier other than the LEC or may be self provisioned.

The list of network elements is consistent with existing network architectures and will be adaptable to any future changes, if required. Each network element included within met the following criteria:

- Has a clearly identified interface.
- Is measurable and can be billed, or has the potential for such.
- Utilizes transmission and/or switching protocol and physical interconnection standards, recommended by the industry.
- Can be provided to a new entrant by another vendor.
- Can be ordered in combinations to facilitate the development of a competitive service offering.

However, offering unbundled network elements alone is not sufficient for new entrants to gain value from this arrangement. There must be provisions for the necessary automated operational interfaces and processes to support competing services. More importantly, there must be agreement on the specifications for these processes between incumbent LEC and the new entrant to ensure seamless high quality service to

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customers and fair treatment of the new entrant by incumbent LEC in an atmosphere supportive of competition. It is therefore necessary to identify and address the operational interfaces and processes which will support the new entrant's ability to order, provision, maintain and bill a quality competitive service offer for their customers.

In addition to the network elements and the operational interfaces, there are essential ancillary capabilities which the incumbent LEC must make available as part of the combinations or separately to new entrants. These ancillary functions would be available to new entrants via tariffs, contracts, or letters of agreement, depending on the specific ancillary function.

Unbundled Network Elements

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II. Unbundled Network Elements

This section provides definitions of the unbundled elements and high level technical requirements for those elements. The primary focus of this section is on the elements which support current switched services. Brief treatment is given to elements which support special services (e.g., private lines) and data services (e.g., frame relay).

As services and technology evolve there will be a need for additional unbundled elements.

1. Network Interface Device

Definition:

The Network Interface (NI) is a termination device which typically resides outside a residential premises and establishes the official network demarcation point. The device features two independent chambers which separates the public network termination from the consumer's inside wiring. This device provides a protective ground connection, and is capable of terminating fiber, coax or twisted pair cable.

Illustrative Requirements:

- The Network Interface (NI) provided by the LEC must meet applicable industry standards for NI.
- The LEC will be responsible for maintaining the NI device.

2. Loop Distribution

Definition:

The loop distribution is typically defined as the portion of the outside plant cable from the network interface (NI) at the customer's premises to the terminal block appearance on the distribution side of a feeder distribution interface (FDI). In case there is a distribution closure near the customer's premises, loop distribution consists of the drop between the distribution closure and the customer's NI and the twisted pair from the closure to the terminal block in the FDI unless a loop concentrator is located at the distribution closure, in which case distribution terminates at the concentrator/multiplexer. For a hybrid fiber-coax (HFC) application loop distribution consists of the outside plant cable connection that runs from the NI at the customer's premises to the fiber node termination, i.e. the point of multiplexing and optical to electrical conversion. Typically, loop distribution is copper twisted pair, but can also be coax or fiber, or a combination of these.

Illustrative Requirements:

The loop distribution provided to AT&T customers should be at least at parity in terms of design and performance with those provided to the

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LEC's own customers. Specific requirements include, but are not limited to:

A. Physical:

- Copper twisted pair facility, non-loaded for DLC and HFC based networks.
- Length of 26-gauge cable should not exceed 9Kft, including bridged tap.
- Total bridged tap length should not exceed 2.5Kft. No single tap should exceed 2.0Kft.
- Multigauge cable should be limited to 2 gauges.
- For single or multigauge cable consisting of 19, 22, or 24 gauge cable, the total length including bridged tap should not exceed 12Kft.

B. Transmission:

The maximum loss and resistance should be limited to 4.7dB and 750 ohms, respectively.

3. Loop Concentrator/Multiplexer

Definition

The digital loop carrier (DLC) equipment, fiber node termination (in HFC applications), channel bank, or similar equipment at which individual subscriber traffic is multiplexed/demultiplexed and/or concentrated/unconcentrated. On the customer end, derived pairs from the loop concentrator/multiplexer are typically terminated on the feeder side of the FDI distribution closure, or on the NI when the equipment is located at or within the customer's premises.

Illustrative Requirements:

The loop concentrator/multiplexer provided to AT&T customers should be at least at parity in terms of design and performance with that provided to the LEC's own customers. Specific requirements include:

A. Transmission:

- Voice Frequency: Support POTS (include CLASS/LASS and OHT features), Coin, Multiparty, DID, PLAR, FSR, Manual Ring Down services.
- ISDN: Support basic rate ISDN service.
- DS1: Support DS1 low-speed interface that conforms to CB-119, ANSI T1.102-1993, and Bellcore TR-499 (B8ZS/AMI option).
- OC-3: Support OC-3 high-speed interface that conforms to ANSI T1.106-1988, T1.105-1991, and Bellcore TR-253.
- DS0 Digital Transport (2.4 through 64 Kb/s and Nx64), DS3. HDSL/ADSL.
- Point of Interface: Must support TR-303 DS1 interface to Local Digital Switch. Support of TR-08 modes 1 & 2 DS1 interfaces are optional. Also support Integrated Network Access (INA) DS1s for non-locally switched or non-switched special services.

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B. Signaling:

- Line Signaling: Support Loop Start, Ground Start and Reverse Battery signaling for low-speed services.
- ISDN Signaling: Support signaling for basic rate ISDN service.
- Network Signaling: Support channel-associated or common-channel signaling based upon interface requirements of the local switch. TR-303 signaling format must be supported. TR-08 mode 1&2 signaling formats are optional.
- TimeSlot Management Channel (TMC): Support TMC for TR-303 configuration or assignment of switch and feeder DS0 capacity on a per-call basis.

C. Performance:

- Synchronization: Support Loop-timing (recovered clock from OC-3 STS1 or DS1), free-running and hold-over modes.
- Signal Performance: Bit Error Rate (BER) less than 10^{-3} for DS1 rate (excluding burst error seconds).
- Protection Switching: Automatic line switch initiated by signal fail and signal degrade conditions on received OC-3 signal. Automatic path switch initiated by STS1/VT1.5 path fail or path degrade conditions.
- Delay: The transmission delay between DS1 and OC-3 interfaces should be less than 50 microseconds.

D. Operations:

- Provisioning of analog and ISDN lines
- Semipermanent time slot assignment of ISDN D-channels using 4:1 TDM
- Semipermanent time slot assignment of dedicated DS0s for special services
- Capability for on-demand circuit testing of switched services
- Capability for on-demand path switching of Embedded Operations Channels (TR-303)
- Autonomous reporting of equipment, environmental, memory, data link and feeder alarms
- Capability for on-demand retrieval of DS1 and ISDN performance monitoring counts
- Provisioning of DS1 and ISDN performance monitoring thresholds
- Capability for on-demand loop-back testing for ISDN lines and DS1 feeder

4. Loop Feeder

Definition:

The medium on which subscriber traffic (multiplexed/concentrated or non-multiplexed/non-concentrated) is carried from the Main Distribution Frame (MDF) or DSX cross-connect panel in a central office or similar environment (e.g. closets in cases of remote sites, or head end in the case of HFC) to the loop concentrator/multiplexer (typically located at or near the feeder distribution interface or in

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the case of HFC, at the fiber node interface), or the feeder distribution interface in the case of direct twisted pair loops. The medium of the feeder can be copper, coax or fiber, or a combination of these.

Illustrative Requirements:

The loop feeder provided to AT&T customers should be at least at parity in terms of design and performance with that provided to the LEC's own customers. Specific requirements include, but are not limited to:

A. Physical (only one of the following for any application):

- Copper twisted pair feeder: Individual twisted pairs between the Feeder Distribution Interface (FDI) and the MDF in the LSO of POTS, data, private line and ISDN services.
- Metallic T1 feeder: Requires two conditioned pairs for each T1 line. The T1 lines terminate on DSX1 panels at each end. The function of the metallic T1 feeder is to transport a standard DS1 signal between a DLC remote terminal and the LSO.
- Fiber feeder: Single mode fiber pair terminated on Lightguide Cross-connects (LGX) panels at each end, with optional SONET OC-3/OC-12 shelves to perform O/E conversion and mux/demux functions. The function of the fiber feeder is to transport standard DS1/DS3 signals between a DLC remote terminal and the LSO.
- Hybrid fiber-coax feeder: A facility that combines a fiber connection from the LSO to a Fiber Node, for transport of voice, data, and video.

B. Transmission:

Maximum loop loss of 8dB (including loop distribution) for twisted pair feeder.

C. Performance:

- Minimum signal-to-noise ratio of 35dB (measured at 1004 Hz).
- No echo cancelers are allowed.
- Maximum of 2 severely errored seconds (SES) per day.
- Maximum down time per year of 10 minutes per DS0.

5. Loop Combination

Definition:

A loop can be considered a combination of the network interface, loop distribution and loop feeder, with or without a loop concentrator/multiplexer. The entire loop is the medium on which subscriber traffic (multiplexed or non-multiplexed, concentrated or non-concentrated) is carried from the MDF or DSX panel in a central office or similar environment (including those at remote sites) up to the termination at the NI at the customer's premise.

Illustrative Requirements:

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This combination is one example of how individual network elements can be put together to perform a higher level function. The loop provided to AT&T customers should be at least at parity in terms of design and performance with that provided to the LEC's own customers. In general, the requirements on the loop are a combination of the requirements on the separate loop elements: loop distribution, loop concentrator/multiplexer (if one exists in the loop), and loop feeder.

Note: While this and the previous sections focused on loops for switched services, unbundled loops will also be required for non-switched special services. This should include various options for customer premises to central office connectivity including, but not limited to Voice Frequency twisted pair loops, T-carrier systems, and SONET rings. It will also include for direct connection between customer premises without transiting a LEC central office.

6. Local Switching

Definition:

An element which provides the functionality required to connect the appropriate originating lines or trunks terminated on the Main Distributing Frame (MDF) or Digital Cross Connect (DSX) panel to a desired terminating line or trunk. This functionality includes, but may not be limited to: signaling, signaling software, digit reception, dialed number translations, routing and recording, call supervision, dial tone, switching, telephone numbers, announcements, calling features and capabilities (including call processing), Centrex, Carrier Pre-subscription (e.g. LD carrier, intralata toll), CIC code portability capabilities, testing and other operational features inherent to the switch and switch software. It also provides access to transport, signaling (ISUP and TCAP), and platforms such as adjuncts, Public Safety Systems (911), operator services, directory services and Advanced Intelligent Network as determined by AT&T. Remote Switching Module functionality is included in the switch function. The switch elements used will be based on the line side features they support. The switch will also be capable of routing traffic to LEC owned network elements as well as non-LEC owned elements.

Illustrative Requirements:

Requirements for the Local Switching Network Element include but are not limited to the following which will be provided at least at parity with the LEC:

- Screening and Routing: route calls to end points or platforms (e.g. operator services) on a per customer or per class basis.
- Provisioning: activate a new customer or network interconnection on any of the interfaces described below (Note: this list of interfaces is not intended to be all inclusive):

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Lines:

Standard Tip/Ring
Coin
On-hook signaling (e.g. Calling Name Delivery)
BRI ISDN
TR08 - Digital Loop Carrier
TR303- Digital Loop Carrier
Direct in Dial to customer PBXs

Trunks - Note: SS 7 where available, MF where appropriate:

64Kbs Clear Channel trunks using SS7 signaling
CAMA ANI - B911/E911
FG C - IEC Operator
T1 to PBX
PRI to PBX
DS 3
Feature Group B (950 access)
Switched Digital Service at 56 & 64 Kb/s
Future rates and interfaces as available (e.g. optical OC1, OC3)

Note: "Trunk" interfaces may include interfaces to a customer as well as interfaces to another switch.

- Testing: perform routing testing (e.g. MLT) and fault isolation.
- Maintenance: repair and restore to service a customer line, equipment element or other maintainable elements.
- Performance: request and review performance data regarding a customer line, traffic characteristics or other measurable elements.
- Network Management: control congestion points such as Radio Station call-ins, network routing overflow, etc.
- Manual and customer originated trace.
- Recording
- Essential Service Lines
- Telephone Service Prioritization
- Relay Services for the handicapped
- Soft dial tone where needed by law and other lifeline features.
- At least parity of offerings to customers to include, but not limited to:
 - Residential Features
 - CLASS/LASS
 - Business/Centrex (for Centrex equivalent administrative capabilities)
 - Basic and Primary Rate ISDN
 - Advanced Intelligent Network Triggers supporting AIN features.
 - Future telecommunications features to be introduced by the Incumbent LEC

7. Local Operator Services

Definition:

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Those systems which provide for processing and recording of special call types which include toll calls, public telephone call types as well as other call types requiring operator intervention/assistance. Operator assistance call types would include BLV/EI (busy line verification/emergency interrupt), or provide an intercept functionality to those call types where the caller who dials a number that has been changed or disconnected.

Illustrative Requirements:

- Resale Operator Services from the LEC, branded AT&T utilizing AT&T's rates for both Card and Operator services functions and providing at least at parity for services delivered.
- Resale of LEC's Operator Services Null-Branding and utilizing AT&T's rates for both Card and Operator Services.
- Service deliverables to include the following:
 1. Local call completion - O+ and O-, billed to Calling Cards, Collect, and Third Party
 2. Billable - Time and Charges Etc.

NOTE:

The following is not acceptable to AT&T:

- Resale of LEC local operator service with LEC's branding and LEC's rates for Card and Operator Services.
- Resale of LEC local operator service non-branded and LEC rates for Card and Operator Services.

8. Local Directory Assistance

Definition:

The function for storing customer specific data and then providing assistance functions in obtaining customer listing data.

Illustrative Requirement:

- Directory Assistance branded AT&T.

NOTE:

Resale of LEC Directory Assistance and LEC branded is not acceptable.

9. Common Transport

Definition:

An interoffice transmission path (including the equipment and facilities) possibly shared with the LEC and/or other carriers (typically used for switch to switch transport within the LECs network). Common transport is used within the LECs network (not used between networks). This includes:

- Multiplexing functionality
- Grooming functionality (other than that provided by a DCS)

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- Redundant equipment and facilities necessary to support protection and restoration
- Cross-office wiring to a DSX or LGX where facilities from a switch, cross-connect, or other service platform are terminated.

Illustrative Requirements:

- Compliance with Bellcore/industry standards (format, interfaces, performance monitoring, alarms, etc.).
- Equipment/interface/facility protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC facilities (at or better than Accunet T1.5/Accunet T45 CO to CO performance/availability specifications)
- Transport equipment/facility provisioning and maintenance provided by the LEC.
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).
- Interfaces should include DS1, DS3, and SONET at various levels (OC-x).

10. Dedicated Transport

Definition:

An Interoffice Transmission Path (including the equipment and facilities) dedicated to a single carrier. This may include but is not limited to:

- Multiplexing functionality
- Grooming functionality (other than that provided by a DCS)
- Redundant equipment and facilities necessary to support protection and restoration
- Cross-office wiring to a DSX or LGX where facilities from a switch, cross-connect, or other service platform are terminated.

Distinction can be made between two types of dedicated transport:

Type 1: Transport between the LEC network (including unbundled elements) and another carrier's network (e.g., transport between a LEC switch and an IXC switch).

Type 2: Transport leased from the LEC to connect equipment within the LEC network (e.g. between DSXs in two different LSOs in a local area), or to connect equipment between the LEC network and the AT&T POP (e.g. DSX in the LSO to the AT&T POP for dedicated access).

Illustrative Requirements:

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Type 1 Dedicated Transport

- AT&T must be allowed to utilize existing transport facilities between the LEC and a second carrier (an IXC or another CLEC) to carry traffic destined for the other carrier.
- Compliance with Bellcore/industry standards (format, interfaces, performance monitoring, alarms, etc.).
- Equipment/interface/facility protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC facilities (at or better than Accunet Spectrum of Digital services, Accunet T1.5/Accunet T45/Accunet T-155, CO to CO performance/availability specifications)
- Transport equipment/facility provisioning and maintenance provided by the LEC.
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).
- Interfaces should include DS0 DS1, DS3, and SONET at various levels (OC-x).

Type 2 Dedicated Transport

Transport Technology Options -- The LEC should provide the following transport technology options:

- Currently provided transport services (e.g., T1/T3 transport services)
- SONET Line switched rings - OC-48 (and OC-192 future)
- SONET Path switched rings - OC-3 and OC-12
- SONET point-to-point transport systems

Existing Transport Service -- The LEC should continue support of current service.

SONET Transport Requirements (applies to rings and point-to-point) include but are not limited to:

- Compliance with SONET and Bellcore standards (format, interfaces, performance monitoring etc.)
- Capability for real-time access to all SONET performance monitoring and alarm information.
- Equipment/interface/facility protection
- Redundant power supply/battery back-up
- Synchronization from both a primary and secondary Stratum 1 level timing source
- Interworking with SONET standard equipment from other vendors
- Data Communications Channel (DCC) connectivity
- Spare facilities and equipment needed to support provisioning/repair DMOQs
- Electronic provisioning control (on request)

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- Connectivity between locations designated by AT&T

Performance/availability per the table below for point-to-point service:

Performance			Unavailability	
ES/Day	% EFS/Day	SES/Day	Minutes per month per span	Minutes per year per span
25	99.97	1	< 0.25	< 0.5

SONET Ring Requirements (include but are not limited to):

- Diverse fiber routing and building entrances
- Dual ring interworking support
- No single point of failure
- Protection lock-out and support of extra traffic (Line switched rings only)

Interface Requirements (include but are not limited to):

- Support for the following interfaces (per AT&T's request):
 - DS1 (Extended SuperFrame - ESF)
 - DS3 (C-bit Parity)
 - STS-1 (VT-based) - desired interface at an AT&T service node
 - OC3 or OC-12
- Physical Point of Termination (POT) between networks
 - DSX1 for DS1s
 - DSX3 for DS3s or STS-1s
 - LGX for OC-3 or OC-12
- AT&T craft provided full time access to the POT

11. Digital Cross-Connect System (DCS)

Definition:

An element which provides automated cross-connection, facility grooming, bridging, point to multipoint connections, broadcast and automated facility test capabilities. The element may also provide multiplexing, format conversion, signaling conversion, etc. Cross-office wiring to a DSX or LGX where facilities from a switch, another cross-connect, or other service platform are terminated are included as part of this element. In cases where automated cross connection capability does not exist a "cross connect system" will be defined as the combination of DSX patch panels and D4 channel banks or other DS0 and above multiplexing equipment used to provision the function of a manual cross connection.

Illustrative Requirements:

- AT&T must be allowed access to all LEC Digital Cross-Connect Systems including but not limited to:
 - DS0 cross-connect with DS1 interfaces

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- DS1/VT1.5 cross-connect with DS1, DS3 and SONET interfaces
- Capability for real-time reconfiguration capabilities.
- Capability for real time access to integrated test equipment and other integrated functionality
- SONET to asynchronous gateway functionality
- Compliance with Bellcore/industry standards (interfaces, performance monitoring, alarms, etc.).
- Equipment/interface protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).
- The LEC must continue to administer and maintain the cross-connect including updates to the control software to current available release.

12 Data Switching Element

Definition:

An element which provides data services (e.g. packet transport , frame relay or ATM) switching functionality that is required to connect the facilities from the User to Network Interface (UNI) to either another UNI or to a communications path at the Network to Network Interface (NNI).

Illustrative Requirements:

- Switch features and functionality (e.g., signaling and connection control, broadcast capabilities, traffic shaping/congestion control, etc.) at least at parity with the LEC.
- Standard interfaces (DS0, DS1, fractional T1, DS3, STS-1, OC-3, OC-12, etc.)
- AT&T services must be given equal priority during overflow/congestion conditions.
- Capability for real time access to integrated test equipment and other integrated functionality
- Equipment/interface protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).

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- The LEC must continue to administer and maintain the switch.

13 SS7 Message Transfer and Connection Control

Definition:

Figure 1 depicts SS7 Message Transfer and Connection Control. This element enables the exchange of Signaling System 7 (SS7) messages among switching elements and database elements. It includes all functions of the Message Transfer Part (MTP), Signaling Connection Control Part (SCCP), and the Operations, Maintenance and Administration Part (OMAP) of SS7 commonly performed by Signaling Transfer Points (STPs). This element is sometimes referred to as the STP, but it also includes the transport of SS7 messages over signaling links connecting switching elements to STPs, database elements to STPs, and STPs to STPs.

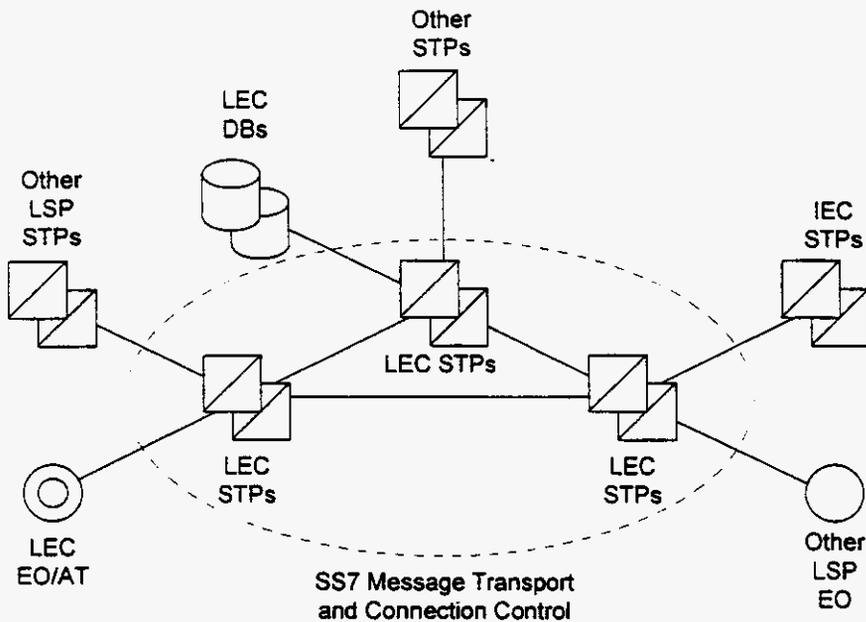


Figure 1. SS7 Message Transfer and Connection Control.

Illustrative Requirements:

This element shall provide access to all other elements connected to the LEC SS7 network. These include:

- LEC switching systems.
- LEC databases.
- Other LSP switching systems.
- Other LSP STPs.
- Other IEC STPs.
- Other (3rd-party-provided) STPs.

This element shall include options to connect AT&T local switching systems or STPs to the LEC SS7 network. These options shall include:

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- A-link access from AT&T local switching systems.
- D-link access from AT&T local STPs.

These options shall also include the option for AT&T to define the Signaling Points of Interconnect (SPOIs), as well as the option for the LEC to define the SPOIs.

These options shall also include interoffice and intra-office diversity of facilities and equipment, such that

- No single failure of facilities or equipment causes the failure of both links in an A-link layer.
- No two concurrent failures of facilities or equipment causes the failure of all four links in a D-link layer.

This element shall provide all functions of the MTP as specified in ANSI T1.111. This includes:

- Signaling Data Link functions, as specified in ANSI T1.111.2.
- Signaling Link functions, as specified in ANSI T1.111.3.
- Signaling Network Management functions, as specified in ANSI T1.111.4.

This element shall provide all functions of the SCCP necessary for Class 0 (basic connectionless) service, as specified in ANSI T1.112. In particular, this includes Global Title Translation (GTT) and SCCP Management procedures, as specified in T1.112.4.

This element shall provide all functions of the OMAP commonly provided by STPs, as specified in ANSI T1.116. This includes:

- MTP Routing Verification Test (MRVT).
- SCCP Routing Verification Test (SRVT).

This element shall meet or exceed the following performance requirements:

- MTP Performance, as specified in ANSI T1.111.6.
- SCCP Performance, as specified in ANSI T1.112.5.

14. Signaling Link Transport

Definition:

This element is a set of one, two, or four dedicated 56 kbps transmission paths among AT&T-designated Points of Interconnection (POIs), satisfying an appropriate requirement for physical diversity.

Illustrative Requirements:

A signaling link shall consist of a 56 kbps transmission path or other rates as defined by ANSI standards between AT&T-designated POIs.

A signaling link layer shall consist of one, two, or four signaling links, as follows:

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- An A-link layer shall consist of two links.
- A B-link, D-link, or E-link layer shall consist of four links.
- A C-link or F-link layer shall consist of one link.

A signaling link layer shall satisfy interoffice and intra-office diversity of facilities and equipment, such that

- No single failure of facilities or equipment causes the failure of both links in an A-link layer.
- No two concurrent failures of facilities or equipment causes the failure of all four links in a B-link, D-link, or E-link layer.

15. SCPs/Databases

Definition:

A node in the signaling network to which informational requests for service handling, such as routing, are directed and processed in real time.

Example databases include (not limited to):

- Line Information Database (LIDB)
- Emergency Services Databases
- Toll Free Number Portability Database
- Local Number Portability Database

Illustrative Requirements:

- Access to databases containing service handling/routing information.
- Database queries must receive equal priority as those of the incumbent LEC/other companies.
- Database queries must receive equal reliability, availability, and performance as that provided to the incumbent LEC/other companies (must be at least at industry standard levels).
- Database access using TCAP messages routed via STPs must be supported.
- Detailed tracking of usage and call termination point must be supported.
- Database dips resulting in a call terminating with the incumbent LEC should not be charged to AT&T.
- The ability to allow AT&T to update appropriate databases with their end user information.
- Procedures are required for validating that information supplied by AT&T is accurately provisioned in LEC databases.

16. Tandem Switching

Definition:

The establishment of a temporary communications path between two switching offices through a third (the tandem) switch. Typically, the tandem switch is used to connect end offices, other tandems, or to provide connection to IXC, ICO and CLEC switches. The tandem switch may

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also be used to provide SSP capabilities when these capabilities are not available in the EO.

Illustrative Requirements:

The requirements include, but are not limited to:

- signaling
- screening and routing
- recording
- access to AIN functionality
- access to Operator Services and Directory Assistance as appropriate
- access to Toll Free number portability database as appropriate
- must support all trunk interconnections discussed under "Network Interconnection/Trunking" (e.g., SS7, MF, DTMF, DialPulse, ISDN, DID, DN-RI, CAMA-ANI (if appropriate for 911), etc.)
- access to PSAPs where 911 solutions are deployed and the tandem is used for 911
- transit traffic to/from other carriers

17. Advanced Intelligent Network (AIN)

Definition:

AIN is a network architecture that is designed to provide a means for carriers to offer advanced features and services independent of the local switch vendor. Specification of specific points in the call model (i.e. triggers) at which the end office suspends call processing and launches an SS7 TCAP query to a database allows for application logic to be separated from the switching platform in a standard manner across all switch types that are AIN capable.

Illustrative Requirements:

- Provisioning of LEC end office AIN triggers initiated via service order from AT&T
- Interconnection of AT&T and LEC SS7 networks for exchange of AIN TCAP messages between LEC end offices and AT&T service control points (SCP).

The provisioning process and interfaces negotiated with the LEC must allow for provisioning of all triggers currently available to the LEC for offering AIN-based services (i.e. Off-Hook Immediate, Off-Hook Delay, Private EAMF Trunk, Shared Interooffice Trunk (EAMF, SS7), Termination Attempt, 3/6/10, N11, Feature Code Dialing, Customer Dialing Plan, Automatic Route Selection) in a manner which is at least at parity with the LEC's own capabilities in terms of performance and provisioning interval.

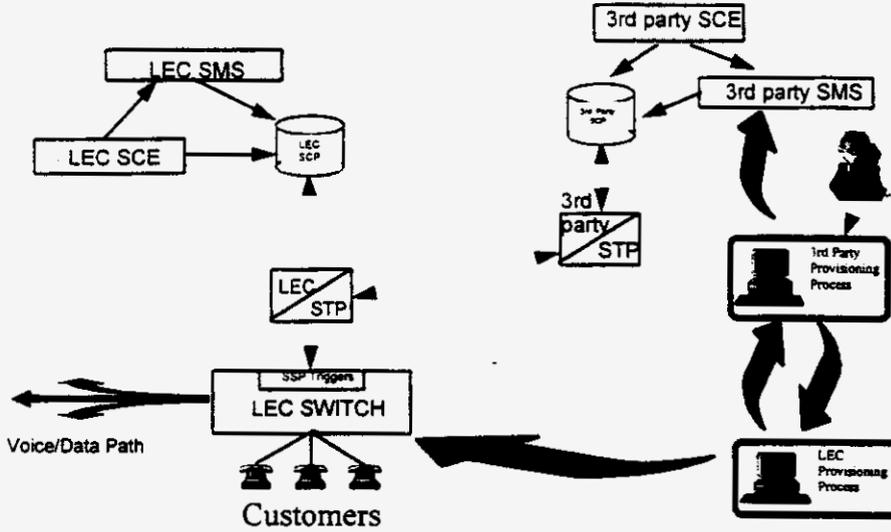
Figure 1 depicts the interconnection arrangement proposed. The AT&T SCP resides within the AT&T SS7 network which is interconnected via inter-network signaling links (D-links) to the LEC SS7 network. Queries originating in the LEC SSP traverse the LEC SS7 network and are routed

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via the D-links to the AT&T SS7 network, destined for the AT&T SCP. Service logic is applied at the SCP and a response returned via the reverse path described above to the LEC SSP with further call handling instructions.

Figure 1

**IMPLEMENTATION OF SINGLE IN-SERVICE PROVIDER ENVIRONMENT
TRIGGER PROVISIONING**



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III. Ancillary Capabilities

In addition to the basic requirements on unbundled network elements presented in section II, there are ancillary capabilities required to offer service in an unbundled environment. This section discusses some of the key ancillary capabilities. This section is intended to be representative of the types of requirements AT&T will have on ancillary capabilities, but it is not intended to be an exhaustive treatment of all required capabilities. As a general rule, AT&T requires that the LEC provide all ancillary capabilities needed to offer services at parity performance to those offered by the LEC.

1. 911 & E911

Definitions:

Basic 911 - collect 911 calls from one or more local exchange switches and route the call to the correct Public Safety Answering Point (PSAP). Local switches may each be connected to the PSAP.

Local switches may connect to a Basic Service Provider Location which will forward calls to the PSAP.

E911 - uses customer location information (ALI/DMS database) to provide greater routing flexibility.

Only 911 tandems are required to have trunks to the PSAP(s).

Requires coordination of name, address, telephone and other special information from the local service provider impacted by Remote Call Forwarding

Illustrative Requirements:

Basic 911 -- Ability to route 911 traffic to the appropriate PSAP with at least a parity level of performance the LEC provides their end users.

E911 -- Ability to route 911 to the appropriate PSAP with at least a parity level of performance the LEC provides their end users. Also, requires a feed from the service order process to update the ACI/DMS database with the end user's information.

2. Network Interconnection

Definition:

Network Interconnection gives the new entrant the ability to connect components of their network or of networks leased from other vendors to the incumbent LEC's network. This interconnection is necessary for the new entrant to originate calls which will terminate on or transit the LEC network and to receive calls which originated on the network of another carrier.

Illustrative Requirements:

- Interconnection must be made available upon AT&T's request at all technically and logically feasible interfaces.

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- Provisioned cooperatively and efficiently without use or user restrictions (e.g. Option for two-way trunking, no unnecessary trunk group fragmentation by traffic types, etc.)
- No loss of feature functionality.
- Agreed upon disaster recovery & network management procedures.
- Allows for the transiting of traffic to and from other carriers (IXCs, CLECs, Independent Companies, Cellular Providers) through the LEC tandem.

3. Rights-Of-Way

Definition:

Equal Access to Conduits, Pole Attachments, Rights of Way and Other Pathways (Commonly referred to as Rights-of Way).

Rights-of-way can be described as any system or pathway which may carry or house lines, facilities, or equipment used in the completion of telephone local exchange and toll traffic. These pathways may run under or above streets, traverse private property, enter multi-unit buildings and are required to reach end users. These R-O-W and OSP structure are currently owned or controlled by the LEC.

Illustrative Requirements

Highlights:

- LEC must make owned/controlled conduits, pole lines, R-O-W and other pathways available to AT&T on an equal basis
- LEC must provide open access to current pole-line and conduit prints, and availability, provide maps of manhole locations, and allow manhole/conduit break-outs, and audits to confirm usability
- LEC must provide access to building entrance conduits to reach new customers

Additional Clarification:

Any incumbent local exchange telephone company must provide any telecommunications carrier requesting access with equal and nondiscriminatory competitively neutral access to; without limitation, any pole, pole attachment, duct, conduit, entrance facilities, equipment rooms, remote terminals, cable vault, telephone closet, right-of way, and any other pathways on terms and conditions equal to that obtained by the incumbent LEC. Any incumbent local exchange carrier having equipment on, over, or under public or private property must permit the use of such equipment by any other telecommunications carrier on an equal and non-discriminatory basis. The incumbent local exchange telephone company must provide information on the location of and availability to access conduit, poles, etc., and other pathways on an equal and nondiscriminatory basis to any telecommunications carrier requesting such information within 10 workdays after the request. Any authorization to attach to poles, overlashing requirements, or modifications to the conduit system or other pathways to allow access to and egress from the system shall not be hindered/restricted or unreasonably withheld or

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delayed. Such access and use shall be on terms and conditions identical to those the local exchange carrier provides to itself and its affiliates for the provision of exchange, exchange access and interexchange services.

4. Performance

Definition:

As used in this section, performance refers to performance, reliability and availability. This includes all system/network performance parameters including both those directly observed by the customer (e.g., voice quality) and those which are indistinguishable contributors to overall service performance (e.g., database performance in responding to queries).

Illustrative Requirements:

- For all unbundled elements, the LEC must provide levels of performance which will allow services provided over the unbundled elements to perform at parity with the same/similar services provided to LEC customers (this is a minimum).
- The LEC must (on demand) demonstrate parity performance.
- All unbundled elements must meet applicable industry standards (e.g., Bellcore TR-NWT-000499, TR-NWT-000418, TR-NWT-000057, GR-303-CORE, GR-334-CORE, etc.)
- The LEC must work with AT&T to determine appropriate performance allocations across unbundled elements.

5. Protection/Restoration/Disaster Recovery

Definition:

This section refers specifically to requirements on the use redundant network equipment/facilities for protection, restoration, and disaster recovery. Requirements on disaster recovery procedure are covered elsewhere.

Illustrative Requirements:

- The LEC must provide protection, restoration, and disaster recovery capabilities at parity with those capabilities provided for their own services/equipment (e.g., equivalent circuit pack protection ratios, and facility protection ratios).
- AT&T services and unbundled elements must be given equal priority in protection, restoration, and disaster recovery schemes.
- AT&T services and unbundled elements must be given equal priority in the used of spare equipment and facilities.

6. Power

Definition:

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The equipment used to power the unbundled elements. This includes commercial power feeds, cables, busses, batteries, generators, power conditioning equipment, over-voltage protection devices, and over-current protection devices.

Illustrative Requirements:

Power distribution arrangements for unbundled elements must be at parity with what the LEC provides for it's own equipment (e.g., equivalent levels of redundancy and battery back-up).

7. Security

Illustrative Requirements:

- Assure logical and physical integrity of network elements and their interconnecting data networks and subtending OSSs.
- Assure the capability to meet public safety and legal process demands (ex.: wire taps, trap installation, traces, subpoenas, etc.).
- Provide the ability to utilize, under AT&T direction, any current or future fraud prevention, detection or control functionality embedded within the network element.

8. Network Validation Operations Readiness Testing:

It is expected that as AT&T initiates new service offerings or new interfaces with the network elements the LEC will test with AT&T to insure that all services and associated operational processes function appropriately. This testing will also be required when new technology is introduced into the network.

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IV. Unbundled Element Platform

As discussed in the introductory section of this document, a new entrant must be able to purchase unbundled network elements either individually or in combination to create competitive local service offers (e.g. local, toll and exchange access services). This section will focus on one such combination involving the purchase of the loop (which is simply a combination of the four sub-loop elements as described in section II) and the switch. The purchase of the switch allows the new entrant also to use the remaining unbundled network elements described in section II on an optional basis. This combination of contiguous network elements can be ordered on an individual line/customer basis as opposed to the "shared" network elements (e.g., transport, databases, etc.) which are usage based and not associated with a specific end user. When this loop/switch combination is implemented, the new entrant must have the option to include with the switch any or all of the shared elements. When purchasing network elements in combination the new entrant will have access to all features and capabilities of each individual component as described in section II of this document.

It is AT&T's expectation that this combination of loop and switch elements will be provisioned with a single order that specifies the type of end user service (e.g. voice grade switched, ISDN, etc.) this combination must support. The ordering vehicle will contain the appropriate FIDs which will allow the new entrant to also order the optional network elements when ordering this combination. This provisioning method is akin to the feature group concept when ordering access services from a local exchange company. When ordering access, an IXC, rather than order each component (carrier common line, local switching and transport) separately, orders Feature Group D access which is a combination of these components. This is the same concept which will apply to ordering a combination of unbundled network elements for local exchange service.

For existing customers who simply wish to change their local service provider this method of ordering will accomplish the change with no physical changes required in the existing network infrastructure. It shall not be necessary for new entrants to collocate equipment in the ILECs central office to connect the unbundled loop combinations to the unbundled local switch. If shared network elements are used, the ILEC will be responsible for all engineering, provisioning and maintenance of these elements to ensure they support the agreed upon grade of service. Performance data on these elements will be shared with AT&T on a real time basis or an agreed upon regularly scheduled interval depending on which element(s) are involved.

It is useful to think of unbundled network element combinations as a mechanism to order groups of elements where these elements need to be logically associated. Two examples of this are a combination of the sub-loop elements to create the entire loop, and the combination of the loop and the switch to provide service to end users. All other unbundled network elements are options which are not part of the loop/switch combination (with the exception of the signaling which

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cannot be separated from the switch) and are ordered separately. Once switching is selected either as part of a combination or as a standalone network element the new entrant has the option to access the incumbent's transport, databases, operator services, AIN platform, etc. or to purchase any of these functions from another vendor or provide them itself.

Though this document only addresses two combinations, this does not prevent a new entrant from ordering other combinations, or an individual element that the new entrant may need now or in the future to compete successfully in the marketplace. Also, the existence of a combination does not prevent a new entrant from subsequently disaggregating that combination to substitute a self-provided or competitor-provided component.

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V. Unbundled Platform Operations Requirements

A. Provisioning

1. AT&T requires a real-time Electronic Communication interface to the ILEC for ordering and provisioning. (i.e. Electronic Access to SAG or its equivalent) The same interface must be used for the ordering/provisioning of single unbundled elements/combinations and service ordered from resale tariffs.
2. AT&T requires agreement on identification and description of all elements related to providing local service.
3. AT&T requires the ability to order any defined element using agreed upon ordering/provisioning codes.
4. AT&T requires that particular combinations of elements, hereafter referred to as combinations, be identified and described so that they can be ordered and provisioned as combinations, and not require the enumeration of each element within that combination on each provisioning order.
5. AT&T requires that appropriate ordering/provisioning codes be established for each identified combination.
6. When purchasing switching capabilities, AT&T requires the ability to obtain telephone numbers on-line from the ILEC, and to assign these numbers with AT&T customer on-line. This includes vanity numbers. Reservation and aging of numbers remain the responsibility of the ILEC.
7. When purchasing switching capabilities, AT&T requires the ability to order all available features on that switch.
8. AT&T requires the ability to have the LEC end office AIN triggers initiated via a service order from AT&T.
9. AT&T requires that when combinations are ordered where the elements are currently interconnected and functional, those elements will remain interconnected and functional.
10. AT&T requires a list/description of all services and features available to street address detail, including: Type of Class 5 Switch by CLLI, line features availability by LSO, and service and capacity availability by LSO. AT&T further requires a complete layout of the data elements that will be required to provision all such services and features.
12. AT&T requires information about the certification process for: DA Exempt, Prison Services, Lifeline, Hotel, etc.

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13. AT&T requires the ILEC to identify areas where Centrex is available, including type of Centrex, and a definition/explanation of ordering and provisioning requirements.
14. AT&T requires the ILEC to describe the details and requirements on handling NPA-NXX splits with the understanding that they are controlled by the owner of the NPA-NXX.
15. AT&T and the Incumbent Local Service Provider will negotiate a standard service order/disconnect order format.
17. The ILEC must provide an initial electronic copy and a hard copy of the service address guide (SAG), or its equivalent, on a going forward basis. Updates are expected as changes are made to the SAG.
18. AT&T requires the ability to determine customer's existing service and feature configuration.
19. AT&T requires the ability to suspend/restore service at the AT&T local customer's request. The use of Suspend/Restore order-types would be used for the suspension and restoration of service based on non-payment/payment.
20. AT&T requires that the ILEC provide at the time of order completion notification of the local features/services/elements/combinations that were provisioned for all AT&T local customers. This applies to all types of service orders and all elements. In addition, AT&T requires the ILEC provide any customer status which qualifies the customer for a special service (e.g. DA exempt, lifeline)
21. AT&T requires the ability to block 800, 900, 976, 700 calls, etc. by line or trunk on an individual service basis.
22. AT&T requires the ability to order and provisioning for inter and intralata line PIC (2 PIC) where applicable.
23. AT&T requires that AT&T's local customers be able to retain their existing ILEC provided telephone number without loss of feature capability and ancillary services such as, but not exclusively: DA, 911/E911 capability. Both AT&T and the ILEC will work cooperatively on exceptions. The format of the data required for interim Local Number Portability must be provided to AT&T.
24. AT&T requires a complete definition of the rules for directory assistance listing (ordering data elements).
25. AT&T requires the ILEC to list AT&T in the front of the directory as a local service provider for that area with all appropriate information and telephone numbers.
26. AT&T requires from the ILEC the following for directory services: A free white and yellow pages listing for each customer, rules for white and yellow pages listing and types of listings (this includes

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cut off date for printing), areas that are covered by the white and yellow pages, and directory update, order, re-order and delivery processes. AT&T requires directory listings schedules, both an initial electronic copy and a hard copy, that will be updated by the access provider, a list of yellow page headings by directory, and the process established to receive updates to the above information whenever changes occur.

27. When necessary, AT&T requires the "real time" ability to schedule installation appointments with the customer on-line and access to the ILEC's schedule availability.
28. AT&T requires the ILEC to provide an intercept message that includes the new AT&T number, when appropriate.
29. AT&T requires the ILEC to provide nondiscriminatory training for all employees who handle AT&T local service customers.
30. AT&T requires a copy of the ILEC tariff/contract that AT&T will use to order service.
31. AT&T requires cooperative practices and processes for law enforcement and annoyance handling.
32. AT&T requires a jointly developed process with the ILEC to conduct Busy Line Verification (BLV) and Busy Line Interrupt (BLI).
33. AT&T requires "real-time" response for: Firm order confirmation, due date availability/scheduling, dispatch required or not, identify line option availability by LSO (such as, Digital Copper, Copper Analog, ISDN, etc.), completion with all service order and time and cost related fees, rejections/errors on service order data element(s), jeopardies against the due date, missed appointments, additional order charges (construction charges), order status, validate street address detail, and electronic notification of the local line options that were provisioned, at the time of order completion, by the ILEC for all AT&T local customers. This applies to all types of service orders and all elements.
34. AT&T requires the same intervals and level of service currently being performed by the ILEC (parity).
35. AT&T requires negotiated performance metrics with the ILEC. Results to be reviewed quarterly or on an as needed basis.
36. AT&T requires the ILEC to notify AT&T if a customer requests changes to their service at the time of installation. Specific scenarios and a process to handle changes will be required.
37. AT&T requires the ILEC to provide all test and turn-up procedures in support of the unbundled elements/combinations/services ordered by AT&T.

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38. AT&T requires the ILEC to notify AT&T prior to disconnect of any AT&T unbundled element/combination/service.
39. AT&T requires expedite and escalation processes for ordering and provisioning.
40. AT&T requires a joint operational understanding (work center and systems), and a change control process.
41. AT&T requires, for provisioning, a process for the management of misdirected service calls.
42. AT&T requires the ILEC to provide engineering information on all unbundled elements/combinations used for data, private line, foreign exchange, voice, etc. This would include the information that would normally be provided on records such as the detailed design layout records for loops and circuits.
43. AT&T requires provisioning support 24x7.
44. AT&T requires that all notices, invoices, and documentation provided to the customer at the customer's premises by the ILEC's field personnel be branded AT&T.
45. AT&T requires all T&M charges associated with an installation to be provided at the same time the supplier notifies AT&T of the installation's completion.
46. AT&T requires the ability to test or have the ILEC test all elements/combinations.
47. AT&T and the ILEC agreements on the flow of CARE records for correct provisioning and billing to IXCs.
48. Any new electronic interface will have no negative impact on existing interfaces AT&T may have with the LEC today for traditional services.
49. AT&T requires a process to expedite an order on a customers behalf.

Illustrative Service Assurance Requirements:

Synopsis of Measure Of Quality for ILEC Performance

Threshold	Metric	
	MAINTENANCE	
	Time To Repair (1)	
	<= 8 hours	85%
1	<= 24 hours	95%
2	Average Time To Repair (1)	10.5 hours
3	Repeat Trouble Reports (2)	3%

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4	Troubles per 100 access lines (3)	<= 1.4
5	PROVISIONING Percent Installation Commitment Met (4)	99.5%
6	Time To Install - all orders <= 2 days	95%
7	Firm Order Confirmation Sent - 24 hours from the time of receipt of an AT&T order	99.5%
8	Installed Correctly (No troubles with 30 days)	<= 2%
9	Missed Appointments (5) (To Customer's Location)	0%

For **Maintenance**, the access vendors have reported data to the FCC. Based on 1994 Y-T-D figures, the suggested thresholds for Average Time To Repair and Trouble per 100 Lines are Best-In-Class or better. The worst performance for Average Time To Repair is 37.8 (US West) and the average for all RBOCs is 22.3 hours. The worst performance for Trouble per 100 Lines is 3.22 (NYNEX) and the average for all RBOCs is 2.52. Other metrics are new and Best-In-Class figures will be established with our own providers after collecting data for three full months.

For **Provisioning**, the access vendors have reported data to the FCC on Percent Installation Commitment Met only. Based on the 1994 Y-T-D figures the suggested thresholds for it is Best-In-Class. The worst performance is 97.3 (US West) and the average for all RBOCs is 98.6%. Other metrics are new and Best-In-Class figures will be established with our own providers after collecting data for three full months.

Definitions

Performance is measured on a monthly basis, unless otherwise noted.

1. Repair is when service is restored by the ILEC on troubles reported by AT&T, not necessarily on the same architecture, but with the same or improved service quality. Average Time To Repair is the average time (in hours) to repair all troubles (less customer reasons). Initial plus repeat troubles are included in the base.
2. Repeat Rate is based on any ILEC troubles reported by AT&T on an access line that occurs more than once in the current report month plus the previous report month. Multiple troubles on a single access line reported within this two month period, regardless of quantity or trouble disposition, is considered a single repeat event. The divisor of this metric will be the number of troubles reported to the ILEC by AT&T (excluding customer reasons) in the two month period.
3. Initial plus repeats are include in the base. Troubles less customer reasons comprise the base of troubles.
4. On Time measurements starts when the ILEC receives an order at their first gateway to when the customer has service.

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5. Missed Appointments measures those times when the ILEC, through no fault of the customer, missed the appointment time made by AT&T for AT&T's end-user customer.

B. Maintenance

AT&T requires that the Incumbent LEC (ILEC) maintain AT&T's customers in a manner that is timely, consistent and at parity with the ILEC's customers. At a minimum, the quality of the leased elements should match that of the ILEC's own elements and in general conform to all applicable Bellcore and ANSI requirements specific to the type of service to be provided.

AT&T requires the ILEC establish and staff a Maintenance Center to act as AT&T's single point of contact (SPOC) for all maintenance functions and should operate on a 24 hour day, 7 days a week basis.

All trouble shooting will be performed by the ILEC and the ILEC will be responsible for the reported trouble until turned back to AT&T.

AT&T requires an escalation process be established for resolving maintenance troubles.

The ILEC should perform a Mechanized Loop Test (Quick Test) at the request of the AT&T work center while the work center is on line.

AT&T requires the ILEC to honor all dispatch requests on a 24 hour by 7 day basis.

AT&T requires a real-time industry standard electronic interface (EBI) to perform the following functions:

- Trouble Entry
- Obtain Trouble Report Status
- Obtain Estimated Time To Repair (ETTR) and ILEC Ticket Number
- Trouble Escalation
- Network Surveillance - Performance Monitoring (i.e., proactive notification of "auto detects" on network outages from the local supplier)

AT&T requires the ILEC to provide progress status reports so that AT&T maintenance work centers will be able to provide end user customers with detailed information and an estimated time to repair (ETTR).

AT&T requires parity with the ILEC regarding knowledge of any engineering changes associated with the incumbent's element technologies.

The LEC will close all trouble reports with AT&T. AT&T will close with the end user. The ILEC's outside technicians will clear to the network interface and provide callback from the fault location to AT&T.

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The ILEC will transfer any misdirected calls received from AT&T customers to the AT&T work center 800 number.

AT&T requires that all maintenance charges (time and materials, by customer, per event) be provided verbally at ticket close out. The ILEC will use an AT&T branded form that will be signed by the customer, capture all maintenance and service charges incurred by the customer and be forwarded or faxed to the AT&T work center by the end of the day when the repair is completed.

AT&T requires pre-screening of any ILEC activities that will incur charges to AT&T. This includes authorization by AT&T if a dispatch is required to the customer premises as well as verification on actual work completed.

AT&T requires the ILEC develop a formal process to track, analyze and continuously improve service levels.

AT&T requires negotiated performance metrics with the ILEC to be reviewed quarterly or on an as needed basis.

All ALIT/SLIT (Auto / Subscriber Line Tests) tests performed on AT&T customers that result in a failure will be reported to AT&T.

AT&T requires an AT&T branded, or at a minimum a non branded, customer-not-at-home card be left at the customers premises when an AT&T customer is not at home for an appointment.

AT&T will coordinate dispatches to the customer premises. This includes re-dispatches for customer not-at-home.

The ILEC will ensure that all applicable alarm systems that support AT&T customers are operational and the supporting databases are accurate so that equipment that is in alarm will be properly identified. The ILEC will respond to AT&T customer alarms consistent with how and when they respond to alarms for their own customers.

AT&T requires individual Emergency Restoration and Disaster Recovery Plans be developed. The Plans should outline methods for the restoration of each central office in the local network provider territory as well as contain site specific restoration alternatives which could be implemented based on the magnitude of the disaster. Each plan should incorporate at a minimum the following elements:

ILEC Single Point of Contact single point of contact (SPOC)

- Responsible for notification of AT&T work center
- Responsible for the initiation of the ILEC's restoration plan
- Status and problem resolution during the entire restoration process

Restoration Equipment Dispatch Plan

- Documented procedure on how the equipment will be dispatched to restoration site

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- Estimated maximum time for the restoration equipment to arrive on site

AT&T requires prior notification, with the option to influence the decision (time frame - TBD), of any scheduled maintenance activity performed by the local supplier that may be service affecting to AT&T local customers (i.e., cable throws, power tests, etc.).

AT&T requires knowledge of the criteria and process used for handling facility and power outages on an agreed upon severity and priority basis.

C. Recording

AT&T requires that records of our recorded messages be received on a daily basis.

DMOQs for the receipt of these records are as follows:

- 99% of the usage must be received within five days,
- 99.95% within ten days.

The ILEC will take corrective action if the agreed to DMOQs are not being met.

ILEC will provide reports quantifying the number of records discarded or rejected during processing.

ILEC will do detailed recording of all AT&T usage including local, intralata toll interlata calls and usage sensitive CLASS/LASS features.

ILEC will also provide the following records for access and mutual compensation billing:

- All originating (completed and incomplete) calls routed to an IXC.
- All terminating calls received from an IXC.
- All terminating calls received from the ILEC, other CLECs Cellular MTSOs and Independent companies.

All records received for access or mutual compensation billing will carry the carrier identification code of the distant carrier to allow AT&T to generate the proper billing to that carrier.

AT&T prefers to receive all records in the raw AMA format. If this is not available then an EMI/EMR format for record exchange is acceptable.

The medium for receiving these records will be mechanized via the currently used connect direct transfer protocol.

AT&T would like to have the access and mutual compensation records separated from the customer usage records.

Local Account Maintenance

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LOCAL ACCOUNT MAINTENANCE
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SECTION 3 - LOCAL ACCOUNT MAINTENANCE REQUIREMENTS

3.1 GENERAL

In a Resale environment the goal is to enable AT&T Local to create an account maintenance structure congruent to a Facilities based LEC. In the current LEC environment, the LEC has access to all of the customer account data, network switch activity and current status, and new and existing customer account data. In order to obtain the data necessary to satisfy AT&T Local Account Maintenance requirements, the SWP must support three key Local Account Maintenance requirements.

3.2 REQUIREMENT #1 - OUTPLOC TRANSACTION FEED

Situation: A Customer initiates a change from AT&T Local to another LSP by contacting the New LSP. (OUTPLOC)

Create an end-of-day OUTPLOC Feed:

Purpose:

To convey to AT&T Local that a customer has left the LSP and moved to a new LSP. The new LSP could either be another Reseller, or the Incumbent (Switch Provider) LEC.

Data Delivery Schedule: Seven days a week, volumes fluctuating with change activity.

Data Transfer Requirements: Batch feed, sent end-of-day, via Connect/Direct NDM sent within 24 hours of the switch being provisioned.

AT&T Data Center Receiving NODE: NDMATTA1

I. HEADER RECORD LAYOUT:

Field Name	Type	Length	Position	Required	Contents
HEADER CODE	A/N	0002	0001-0002	R	Numeric (00)
SWP OCN	A/N	0004	0003-0006	R	Numeric
HEADER CREATE DATE	A/N	0006	0007-0012	R	YYMMDD
HEADER SEQUENCE NUMBER	A/N	0004	0013-0016	R	Numeric (0000)
HEADER RECEIVING LSP ID	A/N	0004	0017-0020	R	Numeric
FILLER	A/N	0060	0021-0080		

II. TRAILER RECORD LAYOUT:

Field Name	Required	Notes
TRAILER RECORD COUNT	R	Numeric character, zero filled. Number of records in the file, including the header and trailer records.
TRAILER CODE	R	Numeric character, value '99'
CREATE DATE	R	YYMMDD format. Must match HEADER CREATE DATE

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SECTION 3 - LOCAL ACCOUNT MAINTENANCE REQUIREMENTS (CONT'D)

III. DETAIL RECORD LAYOUT:

Field Name	Field Description	Field Length	Field Position	Field Characteristics	Valid Values
Activity Code	Indication of a change in Local Service Providers	0001	0001	Alpha	O - OUTPLOC
CTI	Customer Type Indicator	0001	0002	Alpha	R - Residence B - Business C - Civilian I - Institutions J - COCOTS K - Coinless L - Limited Collect Q - Public Pay Telephone Z - Semi Public Pay Telephone W - Wats X - Centrex
WTN	Working Telephone Number	0010	0003-0012	Numeric	Numeric
Switch Deactivation Date	Date that the OUTPLOC was provisioned in the Network.	0006	0013-0018	Numeric	YYMMDD
Intralata PIC Change Indicator	Status of Intralata PIC. Notification of PIC change during the move to another LSP.	0001	0019	Alpha	Y - Intralata PIC Changed N - Intralata PIC did NOT Change
Interlata PIC Change Indicator	Status of Interlata PIC. Notification of PIC change during the move to another LSP.	0001	0020	Alpha	Y - Interlata PIC Changed N - Interlata PIC did NOT Change
LSP ID	Losing LSP	0004	0021-0024	Numeric	Numeric
NEW LSP ID	Winning LSP	0004	0025-0028	Numeric	Numeric
Filler		0052	0029-0080		

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3.3 REQUIREMENT #2 - LSP SERVICE ORDER PIC ONLY CHANGE PROCESS

Situation: Customer has AT&T for Local and contacts AT&T Local requesting a change of PIC only from AT&T LD to another LD Carrier.

AT&T Local Process:

LD PIC Changes will be accepted by AT&T Local. AT&T Local will enter the PIC Change into the service order system, and will generate an LD PIC Change Order which will be sent to the SWP for provisioning.

SWP Requirement:

Accept a PIC Only Change for an existing AT&T Local customer via the current Service Order feed. Provision the network, and convey the confirmation of the PIC Only order via the current Work Order Completion feed.

(Negotiators: Reference Section 10, 10.3)

3.4 REQUIREMENT #3 - IXC PIC CHANGE PROCESS

Situation: Customer has AT&T Local and contacts a New IXC to change PIC to new LD Carrier.

III. Upon receipt of an IXC-initiated '01' PIC order on a Resold line:

- Switch Provider will reject the '01' order. Create the appropriate Industry Standard '3148', with the Local Service Provider ID of the Reseller and send the reject to the originating IXC. The reject must be returned within one business day.

NOTE: If the Local Service Provider ID cannot be provided, reject the order with the Industry Standard alternate '31'.

3.5 PIC Restricted

In order for the SWP to appropriately reject an IXC initiated "01" PIC Order on an AT&T Local WTN, the SWP must implement a specific up-front edit. Do not apply a 'PIC Freeze' or a 'PIC Restriction'.

If the submitted WTN is a resold line assigned to AT&T Local (LSP ID 7421), reject the "01" PIC order with TCSI 3148. Populate LSP ID 7421 in positions 772-775 of the CARE record and return to the submitting IXC.

The above edit process has nothing to do with "PIC Restriction". It is not AT&T Local's intent to provide the SWP with end user PIC Restriction information since an end user's request for PIC restriction will be resident only on AT&T Local data bases. IXC initiated PIC orders received by AT&T Local will be edited for restricted PIC and returned to the submitting IXC with the appropriate reject TCSI if the WTN is found to be restricted.

If the SWP were to reject the order for the reason of "restricted PIC" rather than "resold line", the submitting IXC would not know the line was resold. This would further delay the IXC's attempt to provision the line with the correct LSP.

SECTION 5 LOCAL SERVICE PROVIDER INITIATED SERVICE CHANGES

F L O W	SCENARIO	CUST CONTACT	PROVISIONING PROCESS	Switch Provider PROCESS	***THIS COLUMN IS FIC ONLY*** ACCOUNT MAINTENANCE PROCESS	***THIS COLUMN IS FVI ONLY*** New IXC	DM RESELLER LSP	REFERS TO REPLACEMENT NUMBER (Original Flow)
1	Customer migrates from Incumbent LEC to AT&T Local	AT&T Local	AT&T Local receives order information from customer. Creates Local Service Order (including LD FIC), and sends to SWP via Service Order Feed.	Accepts the Service Order Feed, provisions the switch, and sends back the Order Completion	AT&T Local Completes Service Order, creates the appropriate ISI CARE and sends to the IXC.	Receives CARE Inpic from AT&T Local	N/A	Account Maintenance Data covered under existing requirements for Service Order feed.
2	New Customer calls AT&T for Local Service	AT&T Local	AT&T Local takes customer information from the customer, creates a Service Order (including FIC), and sends to the area SWP LEC for provisioning.	Accepts the Service Order Feed, provisions the network, and sends the Order Completion.	AT&T Local Completes Service Order, creates the appropriate ISI CARE and sends to the IXC.	Receives CARE Inpic from the AT&T Local	N/A	Account Maintenance Data covered under existing requirements for Service Order feed.

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SECTION 5 LOCAL SERVICE PROVIDER INITIATED SERVICE CHANGES

F L O W	SCENARIO	CST CONTACT	PROVISIONING PROCESS	Switch Provider PROCESS	***THIS COLUMN IS PIC ONLY*** ACCOUNT MAINTENANCE PROCESS	***THIS COLUMN IS PIC ONLY*** New DC	OLD RESELLER LSP	REFERS TO REQUIREMENT NUMBER (Requirement 14-E)
3	Customer currently has AT&T Local and changes to a new Reseller LSP	New Reseller LSP	New Reseller LSP creates a service order including both Local and LD PIC, and sends to the SWP.	Changes the Local service from AT&T Local to the New Reseller LSP, provisions the Local service and LD PIC. Creates an <i>OUTPLOC</i> transaction and sends to AT&T Local.	The New Reseller completes the service order, creates the CARE LD PIC transactions to notify the DC.	Receives the appropriate CARE records from both AT&T Local and the New Reseller LSPs. (Specific CARE transactions are dependent upon whether or not an LD PIC change was done in conjunction with the move to a new LSP.)	AT&T Local receives an End-of-Day <i>OUTPLOC</i> Activity feed from SWP. AT&T Local 'Finals' the account, and creates the appropriate ISI CARE records to send to the DC, notifying of a change of LSP.	I AT&T Local must receive timely notification from the SWP for a customer that is leaving AT&T Local and going to another LSP. The SWP will create an <i>OUTPLOC</i> Activity Feed.
4	Customer has AT&T Local and changes PIC to another LD Carrier.	AT&T Local	AT&T Local creates a Service Order, with PIC change, and sends to SWP.	Accepts the Service Order with PIC Only Change, provisions the PIC change in the network.	AT&T Local completes the order, creates the CARE <i>Outpic</i> and sends to the old DC. Creates the CARE <i>Inpic</i> and sends to the New DC.	Receives CARE <i>Inpic</i> from AT&T Local.	N/A	II SWP must accept a 'PIC Only' change via an LSP Service Order.

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SECTION 7 CUSTOMER CONTACT MATRIX

7.0 PURPOSE

The purpose of this matrix is to reflect AT&T's Local's expectations of the role of the SWP and the IXC regarding customer contact in the Resale environment.

CHANGE ACTIVITY	CUSTOMER CONTACTS	ACTION TAKEN
CUSTOMER MIGRATES FROM INCUMBENT LEC TO RESELLER LSP	1) RESELLER LEC (AT&T Local) 2) INCUMBENT LEC	1) RESELLER LSP (AT&T Local) TAKES THE ORDER 2) REFERS THE CUSTOMER TO THE RESELLER LSP.
CUSTOMER HAS RESELLER LSP, AND CHANGES LD PIC.	1) RESELLER LSP (AT&T Local) 2) SWP LEC 3) New IXC 4) Old IXC	1) RESELLER LSP (AT&T Local) TAKES THE PIC CHANGE AND SENDS PIC CHANGE SERVICE ORDER TO THE SWP. 2) SWP LEC REFERS CUSTOMER TO THE RESELLER LSP. 3) CREATES AN '01' PIC ORDER AND SENDS TO THE LSP. 4) REFERS CUSTOMER TO THE New IXC.
CUSTOMER CHANGES FROM ONE RESELLER LSP TO ANOTHER	1) CUSTOMER CONTACTS New LSP. 2) CUSTOMER CONTACTS Old LSP. 3) CUSTOMER CONTACTS SWP LEC.	1) New LSP TAKES THE ORDER. 2) Old LSP REFERS CUSTOMER TO New LSP. 3) SWP LEC REFERS CUSTOMER TO New LSP.

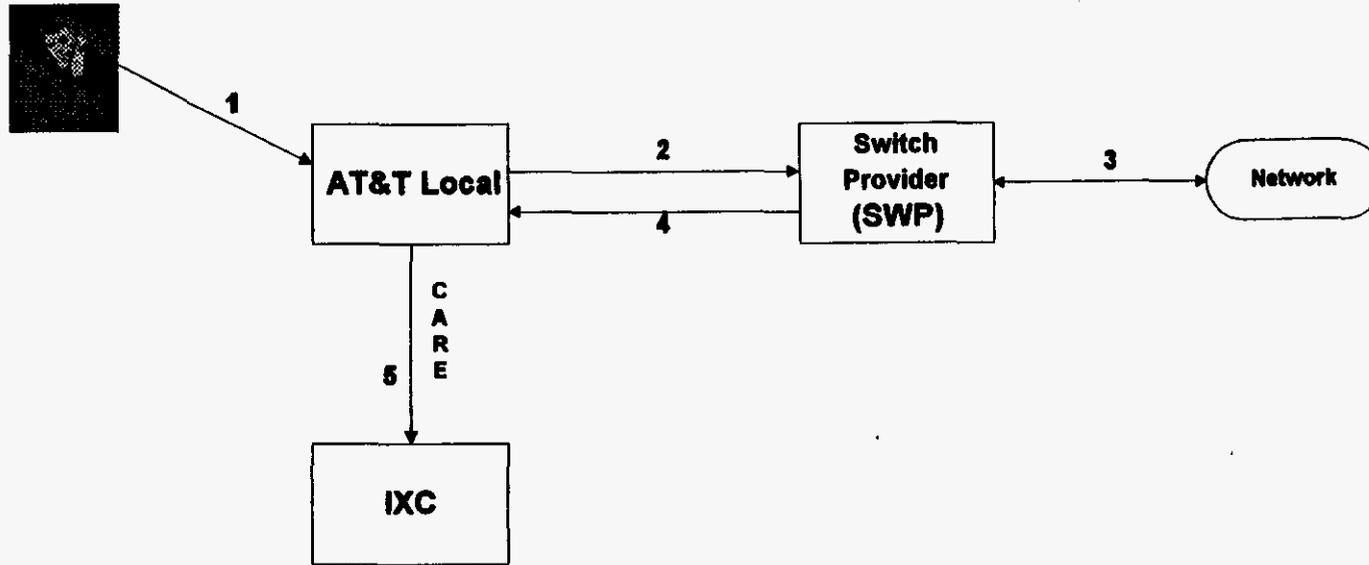
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Section 8 - LSP and IXC Flows (Flow 1)

Customer Migrates From Incumbent LEC to Reseller LSP



Flow 1 - LSP Initiated Local Service Changes

- 1) Customer Contacts AT&T Local to migrate from Incumbent LEC to AT&T Local.
- 2) AT&T Local sends local service order with LD PIC to SWP.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to AT&T Local.
- 5) AT&T Local creates the Industry Standard CARE record and sends to the IXC.

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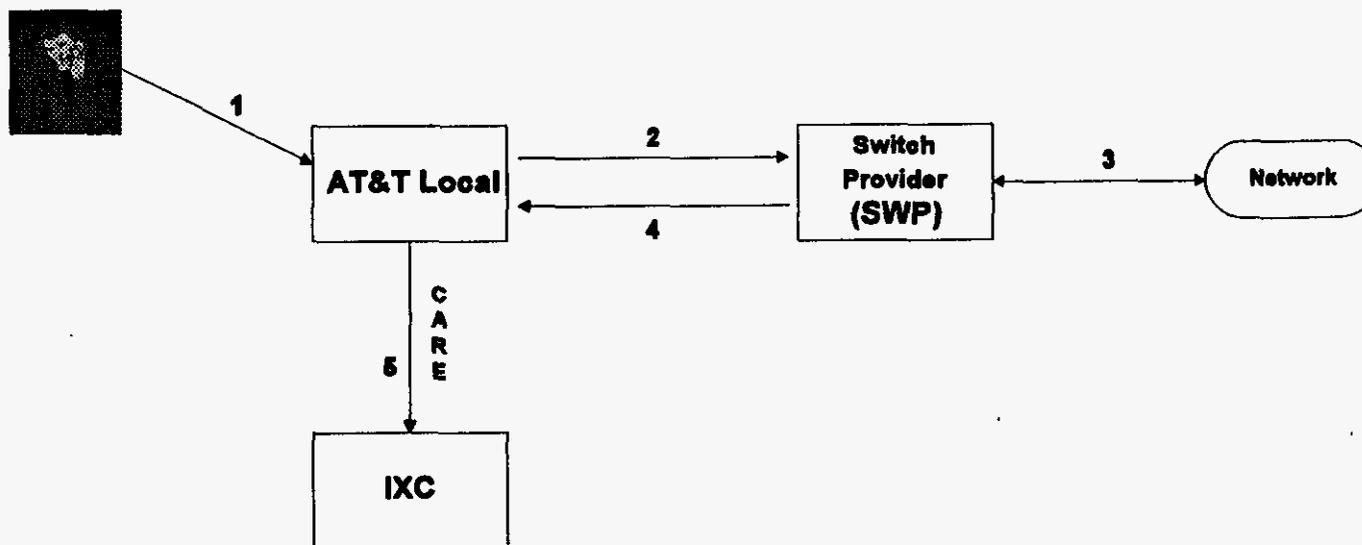
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Section 8 - LSP and IXC Flows (Flow 2)

Customer Calls AT&T for Local Service (New Install)



Flow 2 - New Customer calls AT&T for Local Service

- 1) Customer Contacts AT&T requesting Local Service.
- 2) AT&T Local sends local service order with LD PIC to SWP.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to AT&T Local.
- 5) AT&T Local creates the Industry Standard CARE record and sends to the IXC.

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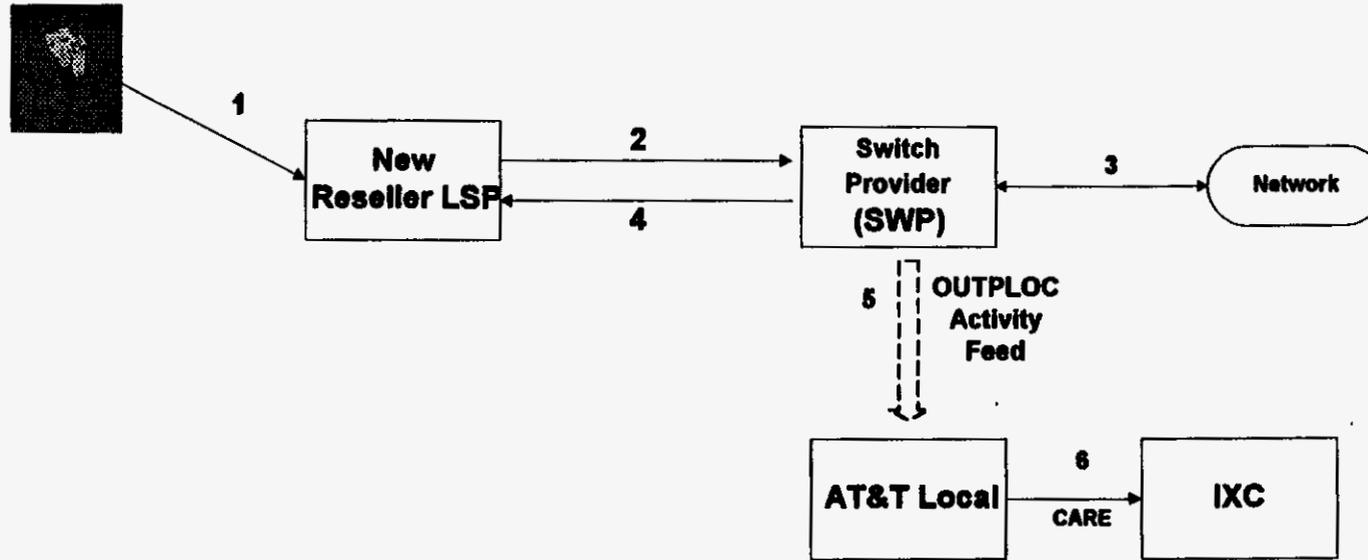
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Section 8 - LSP and IXC Flows (Flow 3)

Customer Requests a Change to a New Reseller LSP
(Requirement I)



Flow 4 - Customer Currently has AT&T Local and Changes to a New Reseller LSP

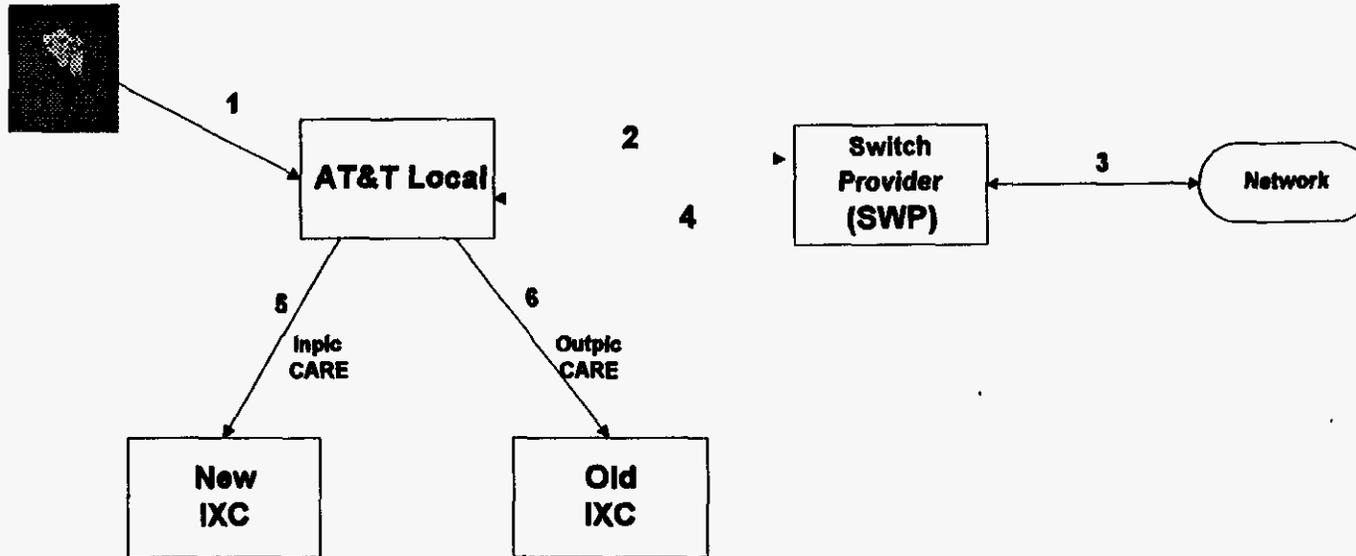
- 1) Customer requests a change to a new Reseller LSP.
- 2) New Reseller LSP sends Service Order with both Local and LD PIC to the Switch Provider.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to LSP.
- 5) SWP creates an OUTPLOC Activity record. Creates an end-of-day batch OUTPLOC feed and sends to AT&T Local.
- 6) AT&T Local creates the Industry Standard CARE record and sends to the IXC.

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Section 8 - LSP and IXC Flows (Flow 4)

Customer Request a Change of LD PIC Only

(Requirement II)



Flow 3 - Customer Contacts AT&T Local to Change LD PIC Only

- 1) Customer requests a change in LD PIC Only.
- 2) AT&T Local creates a Service Order with PIC Only Change and sends to SWP.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to AT&T Local.
- 5) AT&T Local creates the Industry Standard CARE Inpic record and sends to the New IXC.
- 6) AT&T Local creates the Industry Standard CARE Outpic record and sends to the Old IXC.

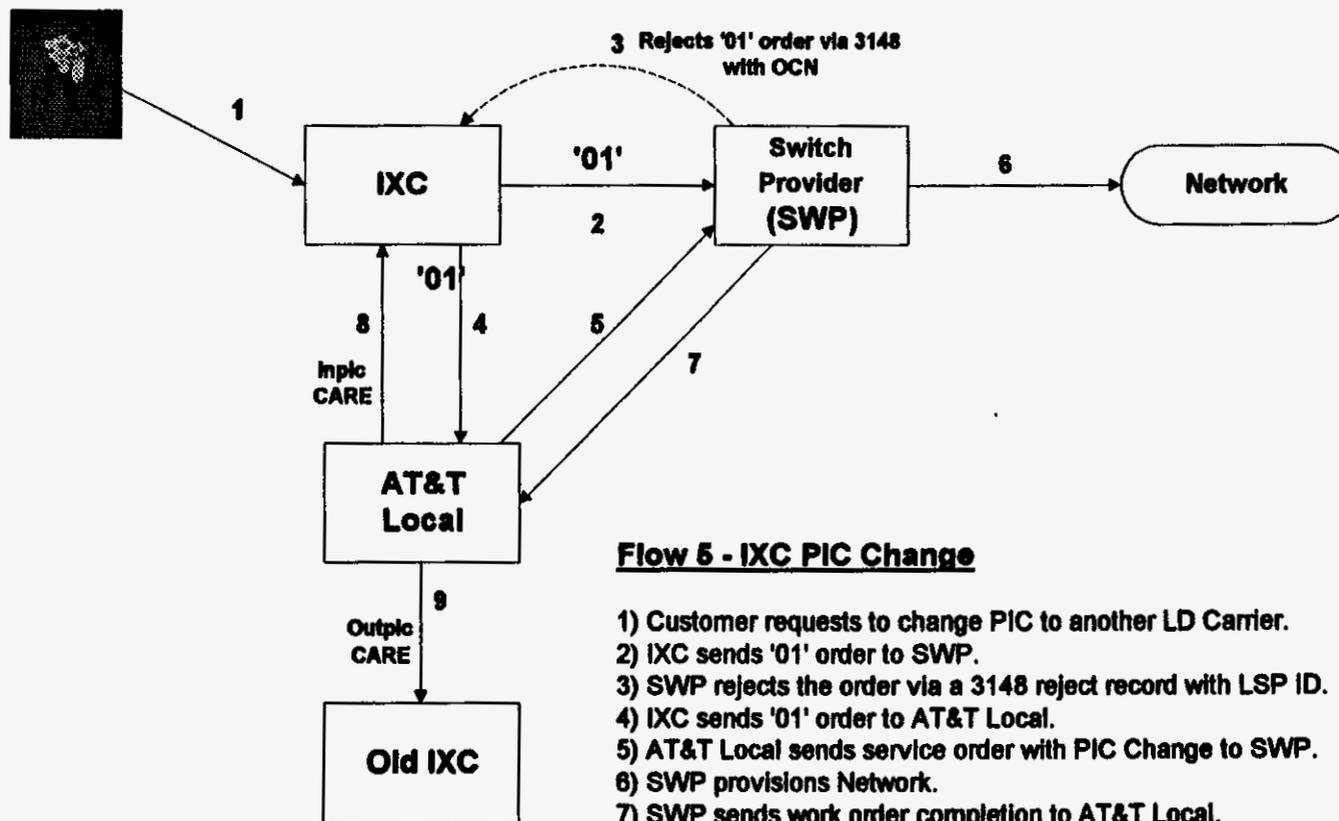
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Section 8 - LSP and IXC Flows (Flow 5)
Customer Contacts IXC Requesting a Change of LD Carrier
Requirement III



Flow 5 - IXC PIC Change

- 1) Customer requests to change PIC to another LD Carrier.
- 2) IXC sends '01' order to SWP.
- 3) SWP rejects the order via a 3148 reject record with LSP ID.
- 4) IXC sends '01' order to AT&T Local.
- 5) AT&T Local sends service order with PIC Change to SWP.
- 6) SWP provisions Network.
- 7) SWP sends work order completion to AT&T Local.
- 8) AT&T Local sends Industry Standard CARE Inpic Record to the New IXC.
- 9) AT&T Local sends Industry Standard CARE Outpic Record to the Old IXC.

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Section 11 - GLOSSARY OF TERMS

<u>Acronym</u>	<u>Definition</u>
• ALEC	Alternate Local Exchange Carrier
• CARE	Customer Account Record Exchange
• CTI	Customer Type Indicator
• Incumbent LEC	Incumbent Local Exchange Company
• ISI	Industry Support Interface
• IXC	Interexchange Carrier
• LAM	Local Account Maintenance
• LD	Long Distance
• LEC	Local Exchange Company
• LERG	Local Exchange Routing Guide
• LSP	Local Service Provider
• NDM	Network Data Mover
• OCN	Operating Company Number
• OUTPLOC	Change of Primary Local Operating Carrier
• PIC	Primary Interexchange Carrier
• PLOC	Primary Local Operating Carrier
• S/O	Service Order
• SWP	Switch Provider
• WTN	Working Telephone Number

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Local Account Maintenance Negotiations AID

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**LOCAL ACCOUNT MAINTENANCE NEGOTIATIONS AID
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SECTION I - PROJECT SCOPE

1.1 GENERAL

The purpose of this document is to provide information that will enable the negotiators to gain a thorough understanding of the needs of AT&T Local Account Maintenance in a Total Resale environment. Since Local Account Maintenance is a totally NEW concept to support the Local Resale environment, much emphasis will be put on the 'Concept' of Local Account Maintenance throughout the document. ***This document, in entirety, is not meant to be distributed to the SWP. However, the following Sections may be shared with the SWP, if necessary:***

- o Section 3
- o Section 5
- o Section 6
- o Section 7
- o Section 8
- o Section 11

1.2 DESCRIPTION OF LOCAL ACCOUNT MAINTENANCE

Local Account Maintenance is the process of maintaining a current status of AT&T Local customer accounts. The total 'Account Maintenance' view is really a combination of the initial customer service record (CSR - E.G. Customer name and address information, services and features, Pub/Non-Pub status, working telephone line numbers, LD PIC, etc.) along with changes originating from subsequent account activity.

While most of the customer account information in a Total Resale environment will originate through direct customer contact and be processed internally through the Service Order Flow, it has been identified that some account changes may originate from sources external to the Reseller LSP. The purpose of this document is specifically to identify those external sources and to address the means of obtaining the information from the SWP.

1.3 OBJECTIVES

This document addresses those AT&T Local Account Maintenance requirements that are required to support initial market entry.

KEY Objectives:

- 1) To clarify what Local Account Maintenance is, and detail the requirements that must be negotiated with the Incumbent LEC for initial market entry.
- 2) ***Dispel all previous notions*** that CARE is the vehicle for Local Account Maintenance Data from the Switch Provider (Incumbent) LECs.

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SECTION I - PROJECT SCOPE (CONT'D)

1.4 DOCUMENT CONTENT

This document includes Local Account Maintenance Baseline Requirements, along with additional information to describe Local Account Maintenance conceptually. Data Flow Diagrams accompany each requirement, and processing 'Scenarios' are also included which reflect AT&T Local expectations of the processing. An 'FYI' of proposed Industry solutions is also provided. The intent of this information is prepare the negotiator to discuss possible SWP proposals of alternative solutions.

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SECTION 2 - LOCAL ACCOUNT MAINTENANCE OVERVIEW

2.1 GENERAL

AT&T Local must have accurate customer account information in order to provide customer service and properly bill the customer. In addition, we must assure that all associated internal data stores are in sync. Along with customer name and address, and services and features, our bases must also be updated to reflect changes in customer account information, disconnects and changes in LD PIC. AT&T Local must also receive notification when a customer leaves AT&T Local for another Local Service Provider. (Referred to as OUTPLOC)

2.2 CURRENT LEC ENVIRONMENT

In the current LEC environment, where a customer has no choice of Local carriers, all customer information originates with the customer. The LEC receives the information from the customer and enters the information directly into their systems. With the LEC owning their own switch, all customer information necessary to maintain the customer base is contained entirely within the LEC entity. As a result, all information pertaining to the customer and network status is easily accessible within the LEC's data stores.

2.3 TOTAL RESALE ENVIRONMENT

In a Total Resale environment, the Incumbent LEC continues to own the Switch. The Reseller LSP is dependent upon the Switch Provider to update the network and convey switch changes back to the LSP. This information is critical for the LSP to update their customer billing and internal data stores. In addition, as a Local Service Provider (ALEC- Alternate Local Exchange Carrier), AT&T Local is responsible for production of the Industry Standard Outbound CARE data transactions to the Interexchange Carriers.

2.4 LOCAL ACCOUNT MAINTENANCE DESCRIPTION

Local Account Maintenance in the Resale environment is the exchange of network change activity from the Switch Provider to the Reseller LSP. In today's environment there is no Industry Standard to support the Local Account Maintenance need. While long-term Industry Standard solutions may be proposed in the future, AT&T Local has identified the criticality of obtaining specific data to support proper maintenance of our customer account bases.

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SECTION 2 - LOCAL ACCOUNT MAINTENANCE OVERVIEW (CONT'D)

2.5 WHAT LOCAL ACCOUNT MAINTENANCE IS NOT

Local Account Maintenance is NOT the Industry Standard CARE (Customer Account Record Exchange) feed. CARE is the exchange of data between the LEC (ALEC) and the Interexchange Carrier. The data that is required for Local Account Maintenance is from the Switch Provider to the LSP.

EXCEPTION: Requirement #3 in 'Section 3 - Local Account Maintenance Requirements' is the exception to the above rule. AT&T Local and AT&T LD have agreed that this requirement is a viable solution to satisfying needs of both AT&T Local as well as AT&T LD.

Any requests or discussions on providing CARE (which supports AT&T LD) should be referred by the AT&T Negotiator to: Jackie Vonschmidt, (AT&T Data Management District), (908) 457-4176. CARE negotiations will be supported by the Data Management CARE Negotiations Team.

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SECTION 3 - LOCAL ACCOUNT MAINTENANCE REQUIREMENTS

3.1 GENERAL

In a Resale environment the goal is to enable AT&T Local to create an account maintenance structure congruent to a Facilities based LEC. In the current LEC environment, the LEC has access to all of the customer account data, network switch activity and current status, and new and existing customer account data. In order to obtain the data necessary to satisfy AT&T Local Account Maintenance requirements, the SWP must support three key Local Account Maintenance requirements.

3.2 REQUIREMENT #1 - OUTPLOC TRANSACTION FEED

Situation: A Customer initiates a change from AT&T Local to another LSP by contacting the New LSP. (OUTPLOC)

Create an end-of-day OUTPLOC Feed:

Purpose:

To convey to AT&T Local that a customer has left the LSP and moved to a new LSP. The new LSP could either be another Reseller, or the Incumbent (Switch Provider) LEC.

Data Delivery Schedule: Seven days a week, volumes fluctuating with change activity.

Data Transfer Requirements: Batch feed, sent end-of-day, via Connect/Direct NDM sent within 24 hours of the switch being provisioned.

AT&T Data Center Receiving NODE: NDMATTA1

I. HEADER RECORD LAYOUT:

Field Name	Type	Length	Position	Required	Contents
HEADER CODE	A/N	0002	0001-0002	R	Numeric (00)
SWP OCN	A/N	0004	0003-0006	R	Numeric
HEADER CREATE DATE	A/N	0006	0007-0012	R	YYMMDD
HEADER SEQUENCE NUMBER	A/N	0004	0013-0016	R	Numeric (0000)
HEADER RECEIVING LSP ID	A/N	0004	0017-0020	R	Numeric
FILLER	A/N	0060	0021-0080		

II. TRAILER RECORD LAYOUT:

Field Name	Required	Notes
TRAILER RECORD COUNT	R	Numeric character, zero filled. Number of records in the file, including the header and trailer records.
TRAILER CODE	R	Numeric character, value '99'
CREATE DATE	R	YYMMDD format. Must match HEADER CREATE DATE

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SECTION 3 - LOCAL ACCOUNT MAINTENANCE REQUIREMENTS (CONT'D)

III. DETAIL RECORD LAYOUT:

Field Name	Field Description	Field Length	Field Position	Field Characteristics	Valid Values
Activity Code	Indication of a change in Local Service Providers	0001	0001	Alpha	O - OUTPLOC
CTI	Customer Type Indicator	0001	0002	Alpha	R - Residence B - Business C - Civilian I - Institutions J - COCOTS K - Coinless L - Limited Collect Q - Public Pay Telephone Z - Semi Public Pay Telephone W - Wats X - Centrex
WTN	Working Telephone Number	0010	0003-0012	Numeric	Numeric
Switch Deactivation Date	Date that the OUTPLOC was provisioned in the Network.	0006	0013-0018	Numeric	YYMMDD
Intralata PIC Change Indicator	Status of Intralata PIC. Notification of PIC change during the move to another LSP.	0001	0019	Alpha	Y - Intralata PIC Changed N - Intralata PIC did NOT Change
Interlata PIC Change Indicator	Status of Interlata PIC. Notification of PIC change during the move to another LSP.	0001	0020	Alpha	Y - Interlata PIC Changed N - Interlata PIC did NOT Change
LSP ID	Losing LSP	0004	0021-0024	Numeric	Numeric
NEW LSP ID	Winning LSP	0004	0025-0028	Numeric	Numeric
Filler		0052	0029-0080		

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3.3 REQUIREMENT #2 - LSP SERVICE ORDER PIC ONLY CHANGE PROCESS

Situation: Customer has AT&T for Local and contacts AT&T Local requesting a change of PIC only from AT&T LD to another LD Carrier.

AT&T Local Process:

LD PIC Changes will be accepted by AT&T Local. AT&T Local will enter the PIC Change into the service order system, and will generate an LD PIC-Change Order which will be sent to the SWP for provisioning.

SWP Requirement:

Accept a PIC Only Change for an existing AT&T Local customer via the current Service Order feed. Provision the network, and convey the confirmation of the PIC Only order via the current Work Order Completion feed.

(Negotiators: Reference Section 10, 10.3)

3.4 REQUIREMENT #3 - IXC PIC CHANGE PROCESS

Situation: Customer has AT&T Local and contacts a New IXC to change PIC to new LD Carrier.

III. Upon receipt of an IXC-initiated '01' PIC order on a Resold line:

- Switch Provider will reject the '01' order. Create the appropriate Industry Standard '3148', with the Local Service Provider ID of the Reseller and send the reject to the originating IXC. The reject must be returned within one business day.

NOTE: If the Local Service Provider ID cannot be provided, reject the order with the Industry Standard alternate '31'.

3.5 PIC Restricted

In order for the SWP to appropriately reject an IXC initiated "01" PIC Order on an AT&T Local WTN, the SWP must implement a specific up-front edit. Do not apply a 'PIC Freeze' or a 'PIC Restriction'.

If the submitted WTN is a resold line assigned to AT&T Local (LSP ID 7421), reject the "01" PIC order with TCSI 3148. Populate LSP ID 7421 in positions 772-775 of the CARE record and return to the submitting IXC.

The above edit process has nothing to do with "PIC Restriction". It is not AT&T Local's intent to provide the SWP with end user PIC Restriction information since an end user's request for PIC restriction will be resident only on AT&T Local data bases. IXC initiated PIC orders received by AT&T Local will be edited for restricted PIC and returned to the submitting IXC with the appropriate reject TCSI if the WTN is found to be restricted.

If the SWP were to reject the order for the reason of "restricted PIC" rather than "resold line", the submitting IXC would not know the line was resold. This would further delay the IXC's attempt to provision the line with the correct LSP.

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SECTION 4 - REFERENCE MATERIAL

4.0 ADDITIONAL DOCUMENTATION

The following reference material is included in this documentation. The purpose of the references is to provide additional information that will be helpful in describing the processes related to the requirement, and also to provide other pertinent information that may be helpful in discussions of other proposals currently under discussion.

- 5.0 - Local Service Provider - initiated service change Matrix
- 6.0 - Interexchange Carrier initiated LD PIC change Matrix
- 7.0 - Customer Contact Matrix
- 8.0 - Flows
- 9.0 - FYI - Other 'Total Resale' Proposals
- 11.0 - Glossary of Terms

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SECTION 5 LOCAL SERVICE PROVIDER INITIATED SERVICE CHANGES

SCENARIO	CUSTOMER CONTACT	PROVISIONING PROCESS	Switch Provider Process	ACCOUNT MAINTENANCE PROCESS	***THIS COLUMN IS FOR ONLY*** NEW DDC	***THIS COLUMN IS FOR ONLY*** RENEWAL LSP	REFERS TO AGREEMENT NUMBER	RENEWAL TERM
1	Customer migrates from LEC to AT&T Local	AT&T Local receives order information from customer. Creates Local Service Order (including LD PIC), and sends to SWP via Service Order Feed	AT&T Local receives order information from switch, and sends back the Order Completion	Accepts the Service Order Feed, provisions the switch, and sends CARE and sends to the DDC.	AT&T Local Completes Service Order, creates the appropriate ISI CARE and sends to the DDC.	Receives CARE Inpic from AT&T Local	Account Maintenance Data covered under existing requirements for Service Order feed.	N/A
2	New Customer calls AT&T for Local Service	AT&T Local takes customer information from the customer, creates a Service Order (including PIC), and sends to the area SWP LEC for provisioning.	Accepts the Service Order Feed, provisions the network, and sends the Order Completion.	AT&T Local Completes Service Order, creates the appropriate ISI CARE and sends to the DDC.	Receives CARE Inpic from the AT&T Local	Data covered under existing requirements for Service Order feed.	Account Maintenance Data covered under existing requirements for Service Order feed.	N/A

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SECTION 5 LOCAL SERVICE PROVIDER INITIATED SERVICE CHANGES

SCENARIO	CUSTOMER CONTACT	PROVISIONING PROCESS	SWITCH PROVIDER PROCESS	ACCOUNT MAINTENANCE COLLECTEDS FOR ONLY	***THIS COLUMN IS FOR NEW IXC	OLD RESSELLER LSP	REPORT TO REPAIRMENT NUMBER	Management (d. H.)
1. Scenario	Customer currently has AT&T Local and changes to a new Reseller LSP	New Reseller LSP creates a service order including both Local and LD PIC, Reseller LSP, provisions the Local service and LD PIC. Sends to the SWP.	Changes the Local service from AT&T Local to the New Reseller LSP.	The New Reseller completes the CARE service order, creates the CARE LD PIC transactions to notify the IXC.	Receives the appropriate CARE AT&T Local and records from both the New Reseller LSP. (Specific CARE transactions are dependent upon whether or not an LD PIC change was done in conjunction with the move to a new LSP.)	receives an End-of-Day OUTPLOC Activity feed from SWP. AT&T Local 'Finals' leaving AT&T Local and going to another LSP. The SWP will create an OUTPLOC Activity Feed.		
2. Scenario	Customer has AT&T Local and changes PIC to another LD Carrier.	AT&T Local	Accepts the Service Order with PIC Only Change, provisions the PIC change in the network.	AT&T Local completes the CARE Outpic and sends to the New IXC. Creates the CARE Inpic and sends to the New IXC.	Receives CARE Inpic from AT&T Local.			
3. Scenario	Customer must accept a PIC Only Service Order.	SWP must accept a PIC Only Service Order.						

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Section 6 Interexchange Carrier initiated LD PIC change Matrix

S C E N A R I O	SCENARIO	CARE CONTACT	***NEW COLUMN IS PIC ONLY*** New DC	Switch Provider PROCESS	***NEW COLUMN IS PIC ONLY*** ACCOUNT MAINTENANCE PROCESS	OLD RESELLER LSP	REFER TO REQUIREMENT NUMBER: (Requirements ID)
5	Customer has AT&T Local and changes PIC to another LD Carrier.	New DC	Creates an '01' CARE PIC order and sends to the SWP. Receives the '3148' with the LSP ID. Creates an '01' CARE PIC order with the Local Service Provider ID and sends the '01' order to AT&T Local. New DC receives the CARE Inpic from AT&T Local upon completion of the PIC change order.	Rejects the '01' PIC order that was sent by the New DC. Produces an Industry Standard '3148', with the Local Service Provider ID and sends the '31' back to the New DC.	AT&T Local completes the order, creates the CARE Outpic transaction and sends to the Old DC. New LSP Reseller creates the CARE Inpic transaction and sends to the New DC.	N/A	III SWP must reject an '01' order initiated from an external DC for a Resold Line. E.G. If the '01' is received from ABC LD for an AT&T Local Customer, the SWP will NOT accept and provision. The SWP will reject the order back to the originating DC.

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SECTION 7 CUSTOMER CONTACT MATRIX

7.0 PURPOSE

The purpose of this matrix is to reflect AT&T's Local's expectations of the role of the SWP and the IXC regarding customer contact in the Resale environment.

CHANGE ACTIVITY	CUSTOMER CONTACTS	ACTION TAKEN
CUSTOMER MIGRATES FROM INCUMBENT LEC TO RESELLER LSP	1) RESELLER LEC (AT&T Local) 2) INCUMBENT LEC	1) RESELLER LSP (AT&T Local) TAKES THE ORDER 2) REFERS THE CUSTOMER TO THE RESELLER LSP.
CUSTOMER HAS RESELLER LSP, AND CHANGES LD PIC.	1) RESELLER LSP (AT&T Local) 2) SWP LEC 3) New IXC 4) Old IXC	1) RESELLER LSP (AT&T Local) TAKES THE PIC CHANGE AND SENDS PIC CHANGE SERVICE ORDER TO THE SWP. 2) SWP LEC REFERS CUSTOMER TO THE RESELLER LSP. 3) CREATES AN '01' PIC ORDER AND SENDS TO THE LSP. 4) REFERS CUSTOMER TO THE New IXC.
CUSTOMER CHANGES FROM ONE RESELLER LSP TO ANOTHER	1) CUSTOMER CONTACTS New LSP. 2) CUSTOMER CONTACTS Old LSP. 3) CUSTOMER CONTACTS SWP LEC.	1) New LSP TAKES THE ORDER. 2) Old LSP REFERS CUSTOMER TO New LSP. 3) SWP LEC REFERS CUSTOMER TO New LSP.

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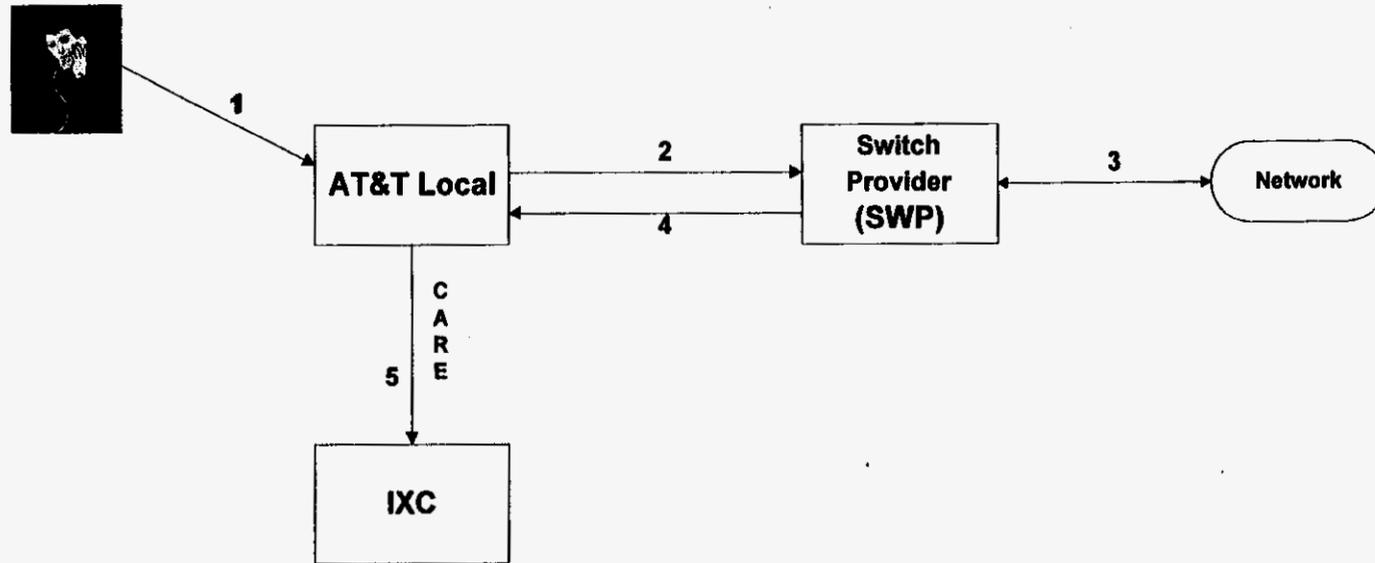
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Section 8 - LSP and IXC Flows (Flow 1)

Customer Migrates From Incumbent LEC to Reseller LSP



Flow 1 - LSP Initiated Local Service Changes

- 1) Customer Contacts AT&T Local to migrate from Incumbent LEC to AT&T Local.
- 2) AT&T Local sends local service order with LD PIC to SWP.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to AT&T Local.
- 5) AT&T Local creates the Industry Standard CARE record and sends to the IXC.

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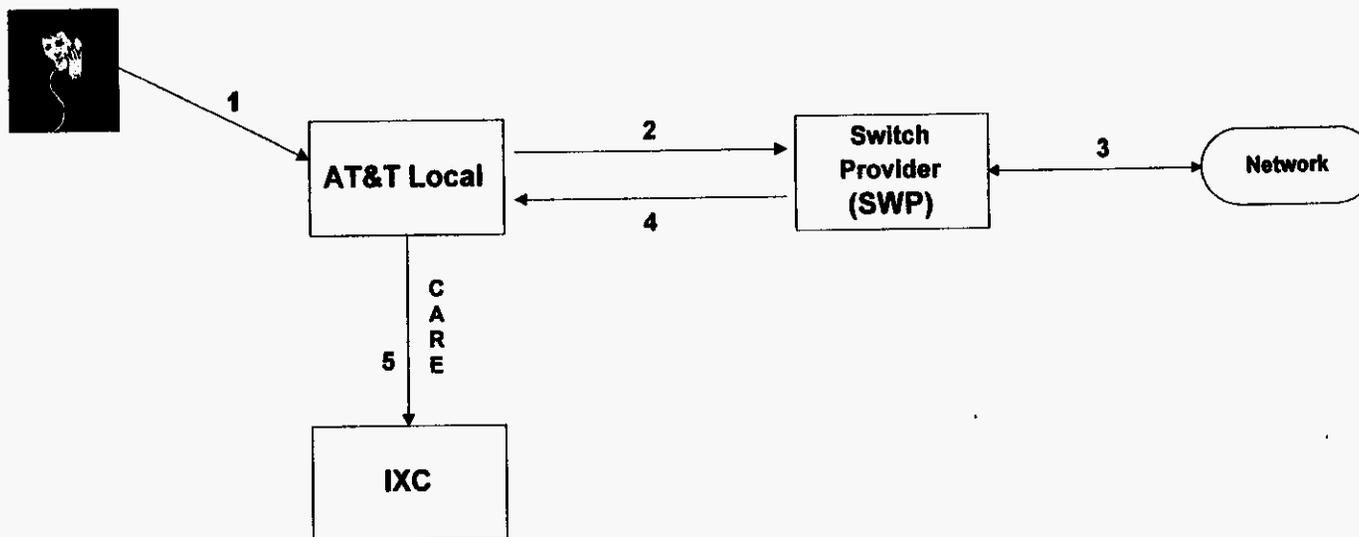
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Section 8 - LSP and IXC Flows (Flow 2)

Customer Calls AT&T for Local Service (New Install)



Flow 2 - New Customer calls AT&T for Local Service

- 1) Customer Contacts AT&T requesting Local Service.
- 2) AT&T Local sends local service order with LD PIC to SWP.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to AT&T Local.
- 5) AT&T Local creates the Industry Standard CARE record and sends to the IXC.

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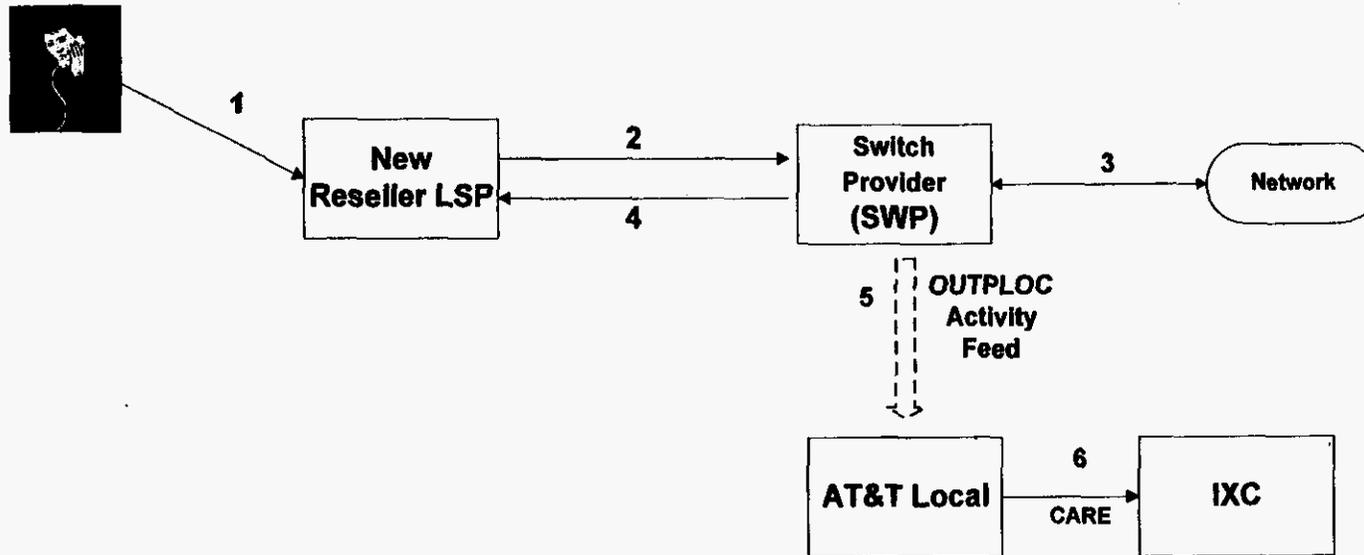
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Section 8 - LSP and IXC Flows (Flow 3)

Customer Requests a Change to a New Reseller LSP
(Requirement I)



Flow 4 - Customer Currently has AT&T Local and Changes to a New Reseller LSP

- 1) Customer requests a change to a new Reseller LSP.
- 2) New Reseller LSP sends Service Order with both Local and LD PIC to the Switch Provider.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to LSP.
- 5) SWP creates an OUTPLOC Activity record. Creates an end-of-day batch OUTPLOC feed and sends to AT&T Local.
- 6) AT&T Local creates the Industry Standard CARE record and sends to the IXC.

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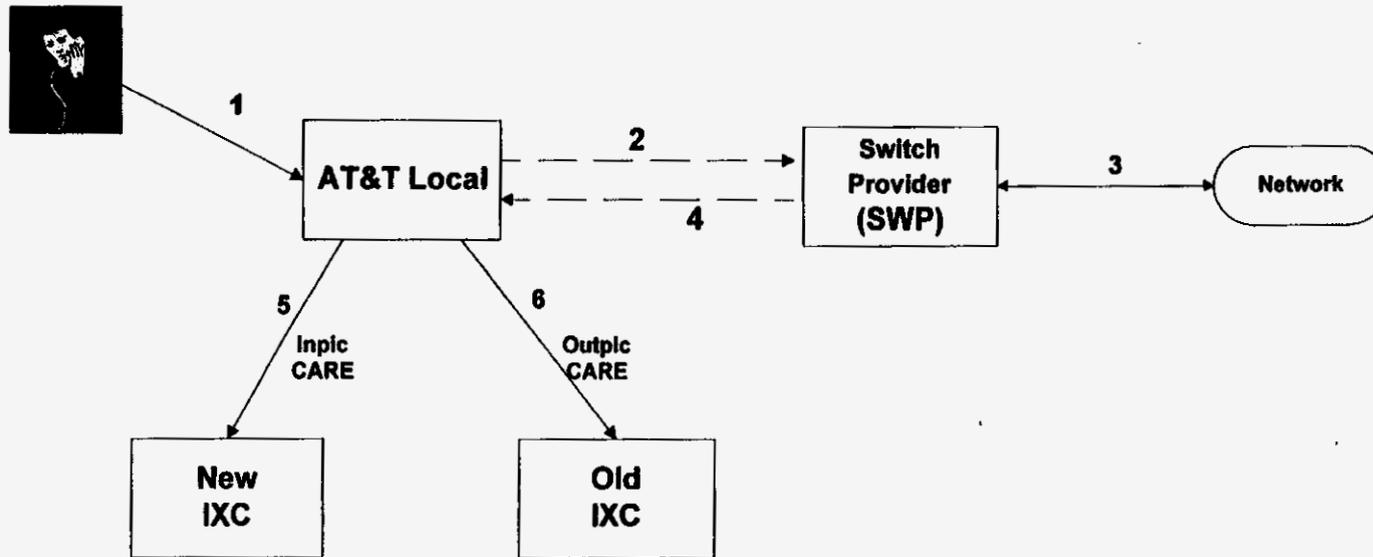
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Section 8 - LSP and IXC Flows (Flow 4)

Customer Request a Change of LD PIC Only
(Requirement II)



Flow 3 - Customer Contacts AT&T Local to Change LD PIC Only

- 1) Customer requests a change in LD PIC Only.
- 2) AT&T Local creates a Service Order with PIC Only Change and sends to SWP.
- 3) SWP requests the network to be provisioned.
- 4) SWP sends Order Completion to AT&T Local.
- 5) AT&T Local creates the Industry Standard CARE Inpic record and sends to the New IXC.
- 6) AT&T Local creates the Industry Standard CARE Outpic record and sends to the Old IXC.

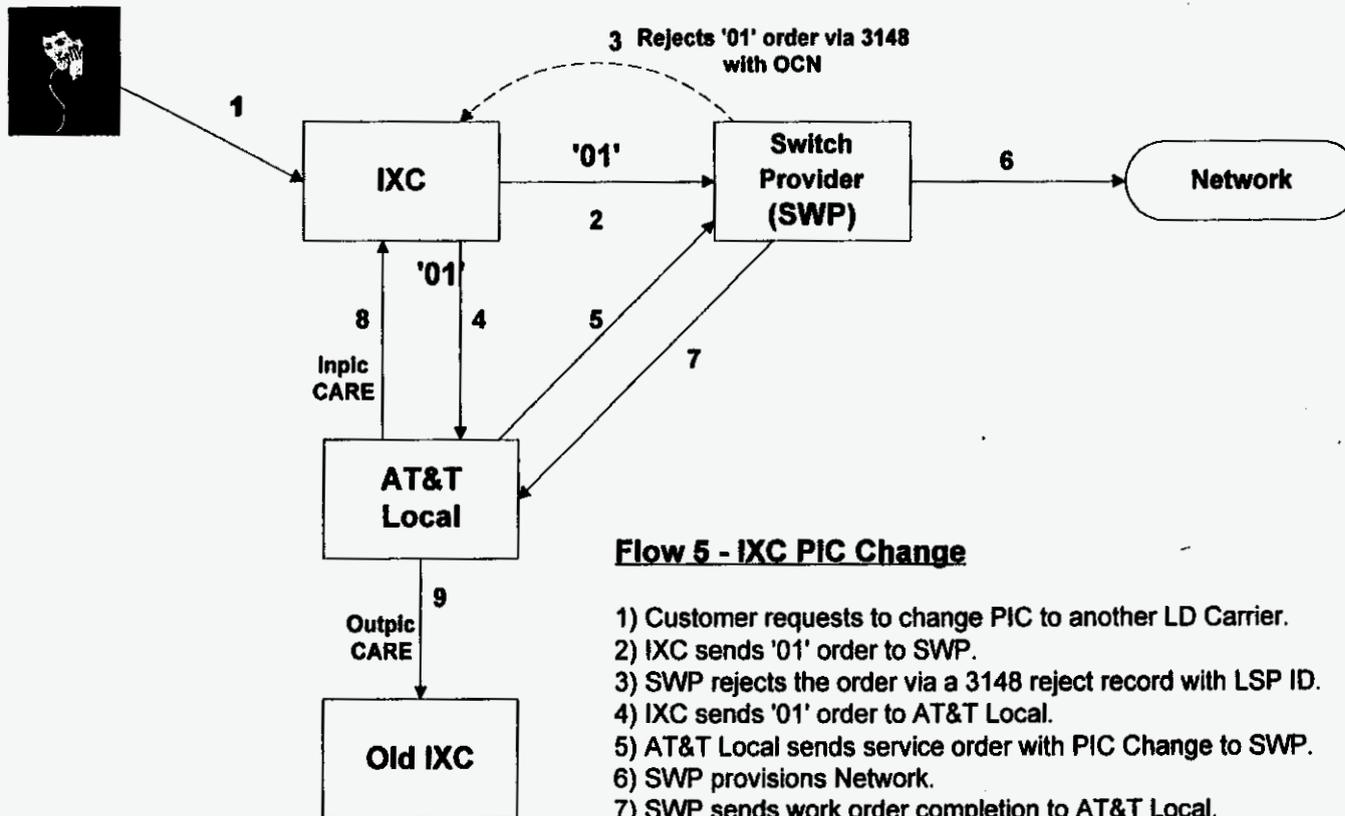
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Section 8 - LSP and IXC Flows (Flow 5)
Customer Contacts IXC Requesting a Change of LD Carrier
Requirement III



Flow 5 - IXC PIC Change

- 1) Customer requests to change PIC to another LD Carrier.
- 2) IXC sends '01' order to SWP.
- 3) SWP rejects the order via a 3148 reject record with LSP ID.
- 4) IXC sends '01' order to AT&T Local.
- 5) AT&T Local sends service order with PIC Change to SWP.
- 6) SWP provisions Network.
- 7) SWP sends work order completion to AT&T Local.
- 8) AT&T Local sends Industry Standard CARE Inpic Record to the New IXC.
- 9) AT&T Local sends Industry Standard CARE Outpic Record to the Old IXC.

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SECTION 9 FYI - INDUSTRY PROPOSALS

9.1 GENERAL

The purpose of this section is to provide additional information regarding the Local Account Maintenance function to support the Total Resale environment. The objective is to help give the negotiator a better perspective on why AT&T Local has arrived at the specific requirements that are being submitted for negotiation.

1. Local to Local CARE: Currently, the Industry Standard 'Flow' of customer CARE data is:

- o Outbound CARE - Local Exchange Company to the PICed Interexchange Carrier.
- o Inbound CARE PIC Orders - Interexchange Carrier to the Local Exchange Company.

In Total Resale, with the Switch Provider LEC in the middle, there is no Industry Standard CARE to support a LEC (or LSP) to LEC (or LSP) flow. Initial discussions have taken place in the Industry (at OBF) to propose new standard 'Local Exchange to Local Exchange' CARE. However, this concept was rejected due to a number of reasons. One reason is that the 'Inbound' CARE record would have to include all Service Order and Features information. Today's CARE record does not support transfer of service order data. In addition, in a Resale environment, where the line numbers are associated with the Switch Provider (Company Code is accessible in the LERG), the Reseller LSP is not easily identifiable. Discussions have also taken place to address the feasibility of an industry-wide 'Clearinghouse' data base that would contain the Operating Company Number of all WTNs (down to the line level). See #2, below.

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SECTION 9 FYI - INDUSTRY PROPOSALS (CONT'D)

2. Clearinghouse:

In today's environment, the Local Exchange Company is easily identifiable by the NPA-NXX of the Working Telephone Number. In the Total Resale environment, there is no easy way of obtaining the LSP based only upon the Working Telephone Number. Therefore, data cannot be easily sent from either an IXC to a LEC (Specifically, in the routing of an LD PIC order taken by an IXC to the customer's LSP), nor from an LSP to an LSP. Several discussions have taken place, both internally and in the industry, in order to facilitate PIC order flow, without relying upon the Switch Provider. All past proposals were rejected. It is for this reason that AT&T Local has deemed that the Local Account Maintenance (Switch changes) from the Switch Provider LEC be met. Since the SWP LEC owns the switch and is responsible for provisioning the network, it is the only source for reliable account status information.

NOTE: With the markets opening up, and other companies entering the Resale environment, it is anticipated that a 'Clearinghouse' is foreseeable in the future. AT&T Local is continuing to pursue and evaluate long-term industry clearinghouse solutions.

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SECTION 9 FYI - INDUSTRY PROPOSALS (CONT'D)

3. Individual SWP Clearinghouse Proposals:

Currently, in the Rochester Tel. area, AT&T Local relies upon the Rochester Clearinghouse for routing of data between AT&T Local and the Interexchange Carriers. As we move into Local in other areas, AT&T Local does not want to rely upon LEC-specific routing solutions. The Rochester Clearinghouse creates all Outbound CARE data on behalf of AT&T Local, routes the Outbound CARE to the appropriate IXC, and routes the Inbound IXC PIC orders to AT&T Local.

NOTE: AT&T Local systems are designed to produce Outbound CARE and process Inbound CARE PIC orders. AT&T Local will be supporting the Industry CARE feed on their own behalf. Any attempts by a LEC at proposing individual Clearinghouse solutions should be discouraged.

Pacific Bell had also previously offered to produce non- Industry Standard (Non-Industry Standard 'Local Use' Transaction Codes and Non-Industry Standard flow of data - from a SWP to AT&T Local, etc.) CARE on behalf of AT&T Local. The proposal was evaluated internally. The proposal was not accepted by AT&T for several reasons, among which are the following:

- o Pacific Bell would provision the LD PIC prior to notifying AT&T.
- o The proposal was non-Industry Standard, and was not generally accepted at OBF. Therefore, it would not have become an Industry Standard.
- o It would necessitate extensive changes to the Local strategic plans.

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SECTION 9 FYI - INDUSTRY PROPOSALS (CONT'D)

4. LD PIC Change Only via '01' Background: In the current environment, LD PIC changes may be processed in two ways:

- a) The customer calls their Local Exchange Company, and requests to switch to another LD Carrier. The PIC change order is entered into the system, the switch is updated, and a CARE '20' (Notification of PIC) record is generated by the LEC and sent to the LD carrier. A '22' (Notification of loss of PIC) is also generated to the Losing LD carrier.
- b) The customer may contact the new IXC directly, and request LD service. The LD carrier will then create an CARE '01' (PIC Order) and send to the LEC for provisioning. The LEC will receive the '01', provision the LD change, and send the appropriate CARE transactions out to the IXCs (as detailed in 'a', above.).

The goal of AT&T Local is to process as a LEC does in the current environment. AT&T Local will receive '01' records from an IXC, process the PIC change through service order notification to the SWP, create the appropriate Outbound CARE records (as described in 'a', above.) and send out to the IXCs.

Issue: There has been much discussion that the LSPs should CREATE '01' orders and send them to the SWP in order to provision a PIC Only change. Some SWPs do not want to accept a PIC Only change via the service order feed.

AT&T's Local's Position (as stated in requirement #2 in this document), is that:

- o If the AT&T Local customer calls AT&T Local to request a PIC change, we will accept the order and send the change to the SWP via the service order feed.
 - o AT&T Local will also accept '01' PIC Change orders from an IXC, and send the change to the SWP via the service order feed.
 - o AT&T Local will NOT generate '01' orders to the SWP for PIC Only changes. (Industry Standard does not support the LEC generating an '01'. This is non-Industry Standard use of an '01'.)
- o Requirement #3 specifically requests the SWP to reject any IXC initiated '01' order with the '3148' to the originator. (The use of '01' is contradictory to a previous requirement.)

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SECTION 10 - ADDITIONAL INFORMATION

10.1 GENERAL

The purpose of this section is to assure that certain critical issues are addressed during the negotiations session. Important AT&T Local Account Maintenance decisions are dependent upon the SWP's answers.

10.2 QUESTIONS:

1. What is the cost of a PIC change and what will AT&T be charged for a PIC change on a resold line?
2. What is the charge for a service order and what will AT&T Local be charged for issuing a PIC change Only order via a service order ('Change' type order)?

10.3 NEGOTIATIONS STRATEGY:

Regarding requirement #2:

Background: In a resale environment, the service order feed is the only existing vehicle that the reseller has to convey a PIC change Only order to the SWP. If AT&T Local is going to be able to provide service similar to a LEC in the current environment, AT&T Local must have the following capabilities:

- o To take a PIC change Only order directly from the customer.
- o To enter the PIC change order into the on-line service order system.
- o To convey the order directly to the SWP for timely provisioning of the network.

Strategy: For initial market entry, AT&T Local must be able to send the PIC change order to the SWP via the current service order stream (Using something like a 'Change' order). The charge must be reasonable and in sync with the current PIC change charge. The high cost of the entire service order fee is not acceptable. If the quoted costs are not in line with the minimal PIC change charge, AT&T will try to work the issue through Legal channels to reduce the cost.

For long-term, alternatives to the PIC only change are being worked. It is suggested that the alternatives are mentioned, and impacts are requested. (Please reference Flow # 10.4.) In order to reduce the costs, and introduce a lower cost method of PIC only changes, we are working on inclusion of another record that could be produced by AT&T Local Order systems when a PIC only change is requested. The record would contain minimal fields, and would be sent to the SWP via the CNSC/Actiview mechanism. The SWP could then use this record to directly provision the switch, bypassing any human intervention. The feedback (PIC switch confirmation) record would be much more 'turse' than the existing service order completion. Since this feed will be new, the cost should be much more negotiable (aside from the initial development.)

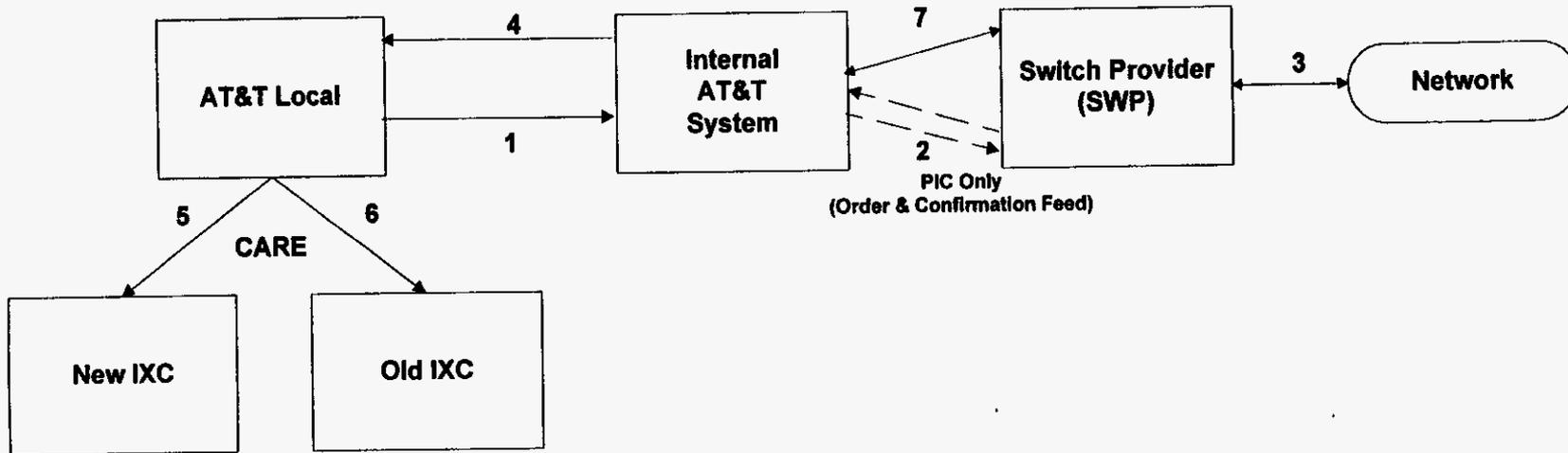
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PROPOSED PIC ONLY ORDER FLOW (10.4)



Record from AT&T Local to SWP:

WTN - Working Telephone Number
 CIC
 JI - Jurisdictional Indicator
 Date of Request

Returned Record to AT&T Local

WTN - Working Telephone Number
 CIC
 JI - Jurisdictional Indicator
 Date of Request
 Switch Activation Date
 Status - 'P' - Pending, 'R' - Reject
 'A' - Already PIC

Flow 10.4 - PIC Only Order via PIC Only Order & Confirmation Feed

- 1) PIC Only Order is sent to AT&T Internal system.
- 2) AT&T Internal system will send PIC only changes via new feed to SWP.
- 3) SWP will provision the network.
- 4) AT&T Internal system sends AT&T Local response.
- 5) AT&T Local will send out industry standard CARE (Inpic) to the New IXC.
- 6) AT&T Local will send out industry standard CARE (Outpic) to the Old IXC
- 7) This reflects existing service order feed, not used for PIC only orders.

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Section 11 - GLOSSARY OF TERMS

<u>Acronym</u>	<u>Definition</u>
• ALEC	Alternate Local Exchange Carrier
• CARE	Customer Account Record Exchange
• CTI	Customer Type Indicator
• Incumbent LEC	Incumbent Local Exchange Company
• ISI	Industry Support Interface
• IXC	Interexchange Carrier
• LAM	Local Account Maintenance
• LD	Long Distance
• LEC	Local Exchange Company
• LERG	Local Exchange Routing Guide
• LSP	Local Service Provider
• NDM	Network Data Mover
• OCN	Operating Company Number
• OUTPLOC	Change of Primary Local Operating Carrier
• PIC	Primary Interexchange Carrier
• PLOC	Primary Local Operating Carrier
• S/O	Service Order
• SWP	Switch Provider
• WTN	Working Telephone Number

Section 12 - AT&T Local Contacts

AT&T Local Data Management:

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Piscataway, NJ 08854
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Marjorie Blake
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Local Network Elements
Local Platform

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Unbundled Network Elements

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**Unbundled Network Elements
Local Platform**

I. Introduction:

This document provides an overview, including definitions, of the unbundled network elements which AT&T wishes to purchase either individually or in combinations. This document also includes high level technical requirements to which the incumbent LEC shall adhere in support of the unbundled network element platform, some of the ancillary capabilities needed to provide local service and the operational requirements which must be met to support service. These operational requirements of the LEC include; network engineering, service order provisioning, maintenance and recording. This document will describe how the network platform arrangement will enable carriers to order a combination of unbundled network elements which will allow new entrants to offer local exchange and access services. Though the document will be primarily focused on one combination of network elements which supports switched services, there are other combinations which may be considered for purchase by a new entrant to the local service market. These combinations are also not limited to voice services.

Description:

The network platform arrangement is characterized by the ability to disaggregate and recombine the physical components of the local exchange network into component piece parts called basic network functions or elements. A basic network functions or element can be individually priced, and provided by LECs via tariffs or contracts to competitors. This will enable LEC competitors to purchase individual elements or combinations of elements needed to provide service to local end user customers and other carriers. While the list of network elements contained in this document is envisioned to be those required at this time the list will change as technological advances are made and new services evolve. It is also important to note that the list of network elements will contain network components which may be obtained by new entrants from a supplier other than the LEC or may be self provisioned.

The list of network elements is consistent with existing network architectures and will be adaptable to any future changes, if required. Each network element included within met the following criteria:

- Has a clearly identified interface.
- Is measurable and can be billed, or has the potential for such.

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- Utilizes transmission and/or switching protocol and physical interconnection standards, recommended by the industry.
- Can be provided to a new entrant by another vendor.
- Can be ordered in combinations to facilitate the development of a competitive service offering.

However, offering unbundled network elements alone is not sufficient for new entrants to gain value from this arrangement. There must be provisions for the necessary automated operational interfaces and processes to support competing services. More importantly, there must be agreement on the specifications for these processes between incumbent LEC and the new entrant to ensure seamless high quality service to customers and fair treatment of the new entrant by incumbent LEC in an atmosphere supportive of competition. It is therefore necessary to identify and address the operational interfaces and processes which will support the new entrant's ability to order, provision, maintain and bill a quality competitive service offer for their customers.

In addition to the network elements and the operational interfaces, there are essential ancillary capabilities which the incumbent LEC must make available as part of the combinations or separately to new entrants. These ancillary functions would be available to new entrants via tariffs, contracts, or letters of agreement, depending on the specific ancillary function.

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II. Unbundled Network Elements

This section provides definitions of the unbundled elements and high level technical requirements for those elements. The primary focus of this section is on the elements which support current switched services. Brief treatment is given to elements which support special services (e.g., private lines) and data services (e.g., frame relay).

As services and technology evolve there will be a need for additional unbundled elements.

1. Network Interface Device

Definition:

The Network Interface (NI) is a termination device which typically resides outside a residential premises and establishes the official network demarcation point. The device features two independent chambers which separates the public network termination from the consumer's inside wiring. This device provides a protective ground connection, and is capable of terminating fiber, coax or twisted pair cable.

Illustrative Requirements:

- The Network Interface (NI) provided by the LEC must meet applicable industry standards for NI.
- The LEC will be responsible for maintaining the NI device.

2. Loop Distribution

Definition:

The loop distribution is typically defined as the portion of the outside plant cable from the network interface (NI) at the customer's premises to the terminal block appearance on the distribution side of a feeder distribution interface (FDI). In case there is a distribution closure near the customer's premises, loop distribution consists of the drop between the distribution closure and the customer's NI and the twisted pair from the closure to the terminal block in the FDI unless a loop concentrator is located at the distribution closure, in which case distribution terminates at the concentrator/multiplexer. For a hybrid fiber-coax (HFC) application loop distribution consists of the outside plant cable connection that runs from the NI at the customer's premises to the fiber node termination, i.e. the point of multiplexing and optical

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to electrical conversion. Typically, loop distribution is copper twisted pair, but can also be coax or fiber, or a combination of these.

Illustrative Requirements:

The loop distribution provided to AT&T customers should be at least at parity in terms of design and performance with those provided to the LEC's own customers. Specific requirements include, but are not limited to:

A. Physical:

- Copper twisted pair facility, non-loaded for DLC and HFC based networks.
- Length of 26-gauge cable should not exceed 9Kft, including bridged tap.
- Total bridged tap length should not exceed 2.5Kft. No single tap should exceed 2.0Kft.
- Multigauge cable should be limited to 2 gauges.
- For single or multigauge cable consisting of 19, 22, or 24 gauge cable, the total length including bridged tap should not exceed 12Kft.

B. Transmission:

The maximum loss and resistance should be limited to 4.7dB and 750 ohms, respectively.

3. Loop Concentrator/Multiplexer

Definition

The digital loop carrier (DLC) equipment, fiber node termination (in HFC applications), channel bank, or similar equipment at which individual subscriber traffic is multiplexed/demultiplexed and/or concentrated/unconcentrated. On the customer end, derived pairs from the loop concentrator/multiplexer are typically terminated on the feeder side of the FDI distribution closure, or on the NI when the equipment is located at or within the customer's premises.

Illustrative Requirements:

The loop concentrator/multiplexer provided to AT&T customers should be at least at parity in terms of design and performance with that provided to the LEC's own customers. Specific requirements include:

A. Transmission:

- Voice Frequency: Support POTS (include CLASS/LASS and OHT features), Coin, Multiparty, DID, PLAR, FSR, Manual Ring Down services.

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- ISDN: Support basic rate ISDN service.
- DS1: Support DS1 low-speed interface that conforms to CB-119, ANSI T1.102-1993, and Bellcore TR-499 (B8ZS/AMI option).
- OC-3: Support OC-3 high-speed interface that conforms to ANSI T1.106-1988, T1.105-1991, and Bellcore TR-253.
- DS0 Digital Transport (2.4 through 64 Kb/s and Nx64), DS3. HDSL/ADSL.

- Point of Interface: Must support TR-303 DS1 interface to Local Digital Switch. Support of TR-08 modes 1 & 2 DS1 interfaces are optional. Also support Integrated Network Access (INA) DS1s for non-locally switched or non-switched special services.

B. Signaling:

- Line Signaling: Support Loop Start, Ground Start and Reverse Battery signaling for low-speed services.
- ISDN Signaling: Support signaling for basic rate ISDN service.
- Network Signaling: Support channel-associated or common-channel signaling based upon interface requirements of the local switch. TR-303 signaling format must be supported. TR-08 mode 1&2 signaling formats are optional.
- TimeSlot Management Channel (TMC): Support TMC for TR-303 configuration or assignment of switch and feeder DS0 capacity on a per-call basis.

C. Performance:

- Synchronization: Support Loop-timing (recovered clock from OC-3 STS1 or DS1), free-running and hold-over modes.
- Signal Performance: Bit Error Rate (BER) less than 10^{-9} for DS1 rate (excluding burst error seconds).
- Protection Switching: Automatic line switch initiated by signal fail and signal degrade conditions on received OC-3 signal. Automatic path switch initiated by STS1/VT1.5 path fail or path degrade conditions.
- Delay: The transmission delay between DS1 and OC-3 interfaces should be less than 50 microseconds.

D. Operations:

- Provisioning of analog and ISDN lines
- Semipermanent time slot assignment of ISDN D-channels using 4:1 TDM
- Semipermanent time slot assignment of dedicated DS0s for special services

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- Capability for on-demand circuit testing of switched services
- Capability for on-demand path switching of Embedded Operations Channels (TR-303)
- Autonomous reporting of equipment, environmental, memory, data link and feeder alarms
- Capability for on-demand retrieval of DS1 and ISDN performance monitoring counts
- Provisioning of DS1 and ISDN performance monitoring thresholds
- Capability for on-demand loop-back testing for ISDN lines and DS1 feeder

4. Loop Feeder

Definition:

The medium on which subscriber traffic (multiplexed/concentrated or non-multiplexed/non-concentrated) is carried from the Main Distribution Frame (MDF) or DSX cross-connect panel in a central office or similar environment (e.g. closets in cases of remote sites, or head end in the case of HFC) to the loop concentrator/multiplexer (typically located at or near the feeder distribution interface or in the case of HFC, at the fiber node interface), or the feeder distribution interface in the case of direct twisted pair loops. The medium of the feeder can be copper, coax or fiber, or a combination of these.

Illustrative Requirements:

The loop feeder provided to AT&T customers should be at least at parity in terms of design and performance with that provided to the LEC's own customers. Specific requirements include, but are not limited to:

A. Physical (only one of the following for any application):

- Copper twisted pair feeder: Individual twisted pairs between the Feeder Distribution Interface (FDI) and the MDF in the LSO of POTS, data, private line and ISDN services.
- Metallic T1 feeder: Requires two conditioned pairs for each T1 line. The T1 lines terminate on DSX1 panels at each end. The function of the metallic T1 feeder is to transport a standard DS1 signal between a DLC remote terminal and the LSO.
- Fiber feeder: Single mode fiber pair terminated on Lightguide Cross-connects (LGX) panels at each end,

**Unbundled Network Elements
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with optional SONET OC-3/OC-12 shelves to perform O/E conversion and mux/demux functions. The function of the fiber feeder is to transport standard DS1/DS3 signals between a DLC remote terminal and the LSO.

- Hybrid fiber-coax feeder: A facility that combines a fiber connection from the LSO to a Fiber Node, for transport of voice, data, and video.

B. Transmission:

Maximum loop loss of 8dB (including loop distribution) for twisted pair feeder.

C. Performance:

- Minimum signal-to-noise ratio of 35dB (measured at 1004 Hz).
- No echo cancelers are allowed.
- Maximum of 2 severely errored seconds (SES) per day.
- Maximum down time per year of 10 minutes per DS0.

5. Loop Combination

Definition:

A loop can be considered a combination of the network interface, loop distribution and loop feeder, with or without a loop concentrator/multiplexer. The entire loop is the medium on which subscriber traffic (multiplexed or non-multiplexed, concentrated or non-concentrated) is carried from the MDF or DSX panel in a central office or similar environment (including those at remote sites) up to the termination at the NI at the customer's premise.

Illustrative Requirements:

This combination is one example of how individual network elements can be put together to perform a higher level function. The loop provided to AT&T customers should be at least at parity in terms of design and performance with that provided to the LEC's own customers. In general, the requirements on the loop are a combination of the requirements on the separate loop elements: loop distribution, loop concentrator/multiplexer (if one exists in the loop), and loop feeder.

Note: While this and the previous sections focused on loops for switched services, unbundled loops will also be required for non-switched special services. This should include various options for customer premises to central office connectivity including, but not limited to Voice Frequency twisted pair loops, T-carrier systems, and SONET rings. It will also include for direct connection between customer premises without transiting a LEC central office.

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6. Local Switching

Definition:

An element which provides the functionality required to connect the appropriate originating lines or trunks terminated on the Main Distributing Frame (MDF) or Digital Cross Connect (DSX) panel to a desired terminating line or trunk. This functionality includes, but may not be limited to: signaling, signaling software, digit reception, dialed number translations, routing and recording, call supervision, dial tone, switching, telephone numbers, announcements, calling features and capabilities (including call processing), Centrex, Carrier Pre-subscription (e.g. LD carrier, intralata toll), CIC code portability capabilities, testing and other operational features inherent to the switch and switch software. It also provides access to transport, signaling (ISUP and TCAP), and platforms such as adjuncts, Public Safety Systems (911), operator services, directory services and Advanced Intelligent Network as determined by AT&T. Remote Switching Module functionality is included in the switch function. The switch elements used will be based on the line side features they support. The switch will also be capable of routing traffic to LEC owned network elements as well as non-LEC owned elements.

Illustrative Requirements:

Requirements for the Local Switching Network Element include but are not limited to the following which will be provided at least at parity with the LEC:

- Screening and Routing: route calls to end points or platforms (e.g. operator services) on a per customer, or per class basis.
- Provisioning: activate a new customer or network interconnection on any of the interfaces described below (Note: this list of interfaces is not intended to be all inclusive):

Lines:

Standard Tip/Ring

Coin

On-hook signaling (e.g. Calling Name Delivery)

BRI ISDN

TR08 - Digital Loop Carrier

TR303- Digital Loop Carrier

Direct in Dial to customer PBXs

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Trunks - Note: SS 7 where available, MF where appropriate:

64Kbs Clear Channel trunks using SS7 signaling

CAMA ANI - B911/E911

FG C - IEC Operator

T1 to PBX

PRI to PBX

DS 3

Feature Group B (950 access)

Switched Digital Service at 56 & 64 Kb/s

Future rates and interfaces as available (e.g. optical OC1, OC3)

Note: "Trunk" interfaces may include interfaces to a customer as well as interfaces to another switch.

- Testing: perform routing testing (e.g. MLT) and fault isolation.
- Maintenance: repair and restore to service a customer line, equipment element or other maintainable elements.
- Performance: request and review performance data regarding a customer line, traffic characteristics or other measurable elements.
- Network Management: control congestion points such as Radio Station call-ins, network routing overflow, etc.
- Manual and customer originated trace.
- Recording
- Essential Service Lines
- Telephone Service Prioritization
- Relay Services for the handicapped
- Soft dial tone where needed by law and other lifeline features.
- At least parity of offerings to customers to include, but not limited to:
 - Residential Features
 - CLASS/LASS
 - Business/Centrex(for Centrex equivalent administrative capabilities)
 - Basic and Primary Rate ISDN
 - Advanced Intelligent Network Triggers supporting AIN features.
 - Future telecommunications features to be introduced by the Incumbent LEC

7. Local Operator Services

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Definition:

Those systems which provide for processing and recording of special call types which include toll calls, public telephone call types as well as other call types requiring operator intervention/assistance. Operator assistance call types would include BLV/EI (busy line verification/emergency interrupt), or provide an intercept functionality to those call types where the caller who dials a number that has been changed or disconnected.

Illustrative Requirements:

- Resale Operator Services from the LEC, branded AT&T utilizing AT&T's rates for both Card and Operator services functions and providing at least at parity for services delivered.
- Resale of LEC's Operator Services Null-Branding and utilizing AT&T's rates for both Card and Operator Services.
- Service deliverables to include the following:
 1. Local call completion - O+ and O-, billed to Calling Cards, Collect, and Third Party
 2. Billable - Time and Charges Etc.

NOTE:

The following is not acceptable to AT&T:

- Resale of LEC local operator service with LEC's branding and LEC's rates for Card and Operator Services.
- Resale of LEC local operator service non-branded and LEC rates for Card and Operator Services.

8. Local Directory Assistance

Definition:

The function for storing customer specific data and then providing assistance functions in obtaining customer listing data.

Illustrative Requirement:

- Directory Assistance branded AT&T.

NOTE:

Resale of LEC Directory Assistance and LEC branded is not acceptable.

9. Common Transport

Definition:

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An interoffice transmission path (including the equipment and facilities) possibly shared with the LEC and/or other carriers (typically used for switch to switch transport within the LECs network). Common transport is used within the LECs network (not used between networks).

This includes:

- Multiplexing functionality
- Grooming functionality (other than that provided by a DCS)
- Redundant equipment and facilities necessary to support protection and restoration
- Cross-office wiring to a DSX or LGX where facilities from a switch, cross-connect, or other service platform are terminated.

Illustrative Requirements:

- Compliance with Bellcore/industry standards (format, interfaces, performance monitoring, alarms, etc.).
- Equipment/interface/facility protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC facilities (at or better than Accunet T1.5/Accunet T45 CO to CO performance/availability specifications)
- Transport equipment/facility provisioning and maintenance provided by the LEC.
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).
- Interfaces should include DS1, DS3, and SONET at various levels (OC-x).

10. Dedicated Transport

Definition:

An Interoffice Transmission Path (including the equipment and facilities) dedicated to a single carrier. This may include but is not limited to:

- Multiplexing functionality
- Grooming functionality (other than that provided by a DCS)
- Redundant equipment and facilities necessary to support protection and restoration

**Unbundled Network Elements
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- Cross-office wiring to a DSX or LGX where facilities from a switch, cross-connect, or other service platform are terminated.

Distinction can be made between two types of dedicated transport:

Type 1: Transport between the LEC network (including unbundled elements) and another carrier's network (e.g., transport between a LEC switch and an IXC switch).

Type 2: Transport leased from the LEC to connect equipment within the LEC network (e.g. between DSXs in two different LSOs in a local area), or to connect equipment between the LEC network and the AT&T POP (e.g. DSX in the LSO to the AT&T POP for dedicated access).

Illustrative Requirements:

Type 1 Dedicated Transport

- AT&T must be allowed to utilize existing transport facilities between the LEC and a second carrier (an IXC or another CLEC) to carry traffic destined for the other carrier.
- Compliance with Bellcore/industry standards (format, interfaces, performance monitoring, alarms, etc.).
- Equipment/interface/facility protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC facilities (at or better than Accunet Spectrum of Digital services, Accunet T1.5/Accunet T45/Accunet T-155, CO to CO performance/availability specifications)
- Transport equipment/facility provisioning and maintenance provided by the LEC.
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).
- Interfaces should include DS0 DS1, DS3, and SONET at various levels (OC-x).

Type 2 Dedicated Transport

Transport Technology Options -- The LEC should provide the following transport technology options:

- Currently provided transport services (e.g., T1/T3 transport services)
- SONET Line switched rings - OC-48 (and OC-192 future)
- SONET Path switched rings - OC-3 and OC-12

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- SONET point-to-point transport systems

Existing Transport Service -- The LEC should continue support of current service.

SONET Transport Requirements (applies to rings and point-to-point) include but are not limited to:

- Compliance with SONET and Bellcore standards (format, interfaces, performance monitoring etc.)
- Capability for real-time access to all SONET performance monitoring and alarm information.
- Equipment/interface/facility protection
- Redundant power supply/battery back-up
- Synchronization from both a primary and secondary Stratum 1 level timing source
- Interworking with SONET standard equipment from other vendors
- Data Communications Channel (DCC) connectivity
- Spare facilities and equipment needed to support provisioning/repair DMOQs
- Electronic provisioning control (on request)
- Connectivity between locations designated by AT&T

Performance/availability per the table below for point-to-point service:

Performance			Unavailability	
ES/Day	% EFS/Day	SES/Day	Minutes per month per span	Minutes per year per span
25	99.97	1	< 0.25	< 0.5

SONET Ring Requirements (include but are not limited to):

- Diverse fiber routing and building entrances
- Dual ring interworking support
- No single point of failure
- Protection lock-out and support of extra traffic (Line switched rings only)

Interface Requirements (include but are not limited to):

- Support for the following interfaces (per AT&T's request):
 - DS1 (Extended SuperFrame - ESF)
 - DS3 (C-bit Parity)
 - STS-1 (VT-based) - desired interface at an AT&T service node
 - OC3 or OC-12

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- Physical Point of Termination (POT) between networks
 - DSX1 for DS1s
 - DSX3 for DS3s or STS-1s
 - LGX for OC-3 or OC-12
- AT&T craft provided full time access to the POT

11. Digital Cross-Connect System (DCS)

Definition:

An element which provides automated cross-connection, facility grooming, bridging, point to multipoint connections, broadcast and automated facility test capabilities. The element may also provide multiplexing, format conversion, signaling conversion, etc. Cross-office wiring to a DSX or LGX where facilities from a switch, another cross-connect, or other service platform are terminated are included as part of this element. In cases where automated cross connection capability does not exist a "cross connect system" will be defined as the combination of DSX patch panels and D4 channel banks or other DS0 and above multiplexing equipment used to provision the function of a manual cross connection.

Illustrative Requirements:

- AT&T must be allowed access to all LEC Digital Cross-Connect Systems including but not limited to:
 - DS0 cross-connect with DS1 interfaces
 - DS1/VT1.5 cross-connect with DS1, DS3 and SONET interfaces
- Capability for real-time reconfiguration capabilities.
- Capability for real time access to integrated test equipment and other integrated functionality
- SONET to asynchronous gateway functionality
- Compliance with Bellcore/industry standards (interfaces, performance monitoring, alarms, etc.).
- Equipment/interface protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).

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- The LEC must continue to administer and maintain the cross-connect including updates to the control software to current available release.

12 Data Switching Element

Definition:

An element which provides data services (e.g. packet transport , frame relay or ATM) switching functionality that is required to connect the facilities from the User to Network Interface (UNI) to either another UNI or to a communications path at the Network to Network Interface (NNI).

Illustrative Requirements:

- Switch features and functionality (e.g., signaling and connection control, broadcast capabilities, traffic shaping/congestion control, etc.) at least at parity with the LEC.
- Standard interfaces (DS0, DS1, fractional T1, DS3, STS-1, OC-3, OC-12, etc.)
- AT&T services must be given equal priority during overflow/congestion conditions.
- Capability for real time access to integrated test equipment and other integrated functionality
- Equipment/interface protection (at least at parity with LEC capabilities).
- Redundant power supply and/or battery back-up (at least at parity with LEC capabilities).
- Spare facilities and equipment necessary to support provisioning/repair DMOQs.
- Performance/availability at least at parity with LEC
- Capability for real-time access to performance monitoring and alarm data affecting (or potentially affecting) AT&T's traffic (upon AT&T's request).
- The LEC must continue to administer and maintain the switch.

13 SS7 Message Transfer and Connection Control

Definition:

Figure 1 depicts SS7 Message Transfer and Connection Control. This element enables the exchange of Signaling System 7 (SS7) messages among switching elements and database elements. It includes all functions of the Message Transfer Part (MTP), Signaling Connection Control Part (SCCP), and the Operations, Maintenance and Administration Part (OMAP) of SS7 commonly performed by Signaling Transfer

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Points (STPs). This element is sometimes referred to as the STP, but it also includes the transport of SS7 messages over signaling links connecting switching elements to STPs, database elements to STPs, and STPs to STPs.

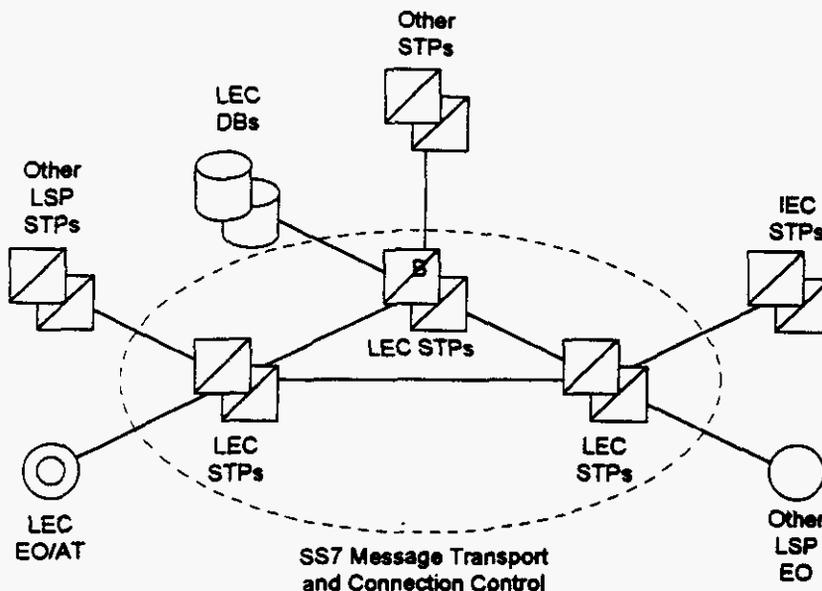


Figure 1. SS7 Message Transfer and Connection Control.

Illustrative Requirements:

This element shall provide access to all other elements connected to the LEC SS7 network. These include:

- LEC switching systems.
- LEC databases.
- Other LSP switching systems.
- Other LSP STPs.
- Other IEC STPs.
- Other (3rd-party-provided) STPs.

This element shall include options to connect AT&T local switching systems or STPs to the LEC SS7 network. These options shall include:

- A-link access from AT&T local switching systems.
- D-link access from AT&T local STPs.

These options shall also include the option for AT&T to define the Signaling Points of Interconnect (SPOIs), as well as the option for the LEC to define the SPOIs.

These options shall also include interoffice and intra-office diversity of facilities and equipment, such that

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- No single failure of facilities or equipment causes the failure of both links in an A-link layer.
- No two concurrent failures of facilities or equipment causes the failure of all four links in a D-link layer.

This element shall provide all functions of the MTP as specified in ANSI T1.111. This includes:

- Signaling Data Link functions, as specified in ANSI T1.111.2.
- Signaling Link functions, as specified in ANSI T1.111.3.
- Signaling Network Management functions, as specified in ANSI T1.111.4.

This element shall provide all functions of the SCCP necessary for Class 0 (basic connectionless) service, as specified in ANSI T1.112. In particular, this includes Global Title Translation (GTT) and SCCP Management procedures, as specified in T1.112.4.

This element shall provide all functions of the OMAP commonly provided by STPs, as specified in ANSI T1.116. This includes:

- MTP Routing Verification Test (MRVT).
- SCCP Routing Verification Test (SRVT).

This element shall meet or exceed the following performance requirements:

- MTP Performance, as specified in ANSI T1.111.6.
- SCCP Performance, as specified in ANSI T1.112.5.

14. Signaling Link Transport

Definition:

This element is a set of one, two, or four dedicated 56 kbps transmission paths among AT&T-designated Points of Interconnection (POIs), satisfying an appropriate requirement for physical diversity.

Illustrative Requirements:

A signaling link shall consist of a 56 kbps transmission path or other rates as defined by ANSI standards between AT&T-designated POIs.

A signaling link layer shall consist of one, two, or four signaling links, as follows:

- An A-link layer shall consist of two links.
- A B-link, D-link, or E-link layer shall consist of four links.

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- A C-link or F-link layer shall consist of one link.

A signaling link layer shall satisfy interoffice and intra-office diversity of facilities and equipment, such that

- No single failure of facilities or equipment causes the failure of both links in an A-link layer.
- No two concurrent failures of facilities or equipment causes the failure of all four links in a B-link, D-link, or E-link layer.

15. SCPs/Databases

Definition:

A node in the signaling network to which informational requests for service handling, such as routing, are directed and processed in real time.

Example databases include (not limited to):

- Line Information Database (LIDB)
- Emergency Services Databases
- Toll Free Number Portability Database
- Local Number Portability Database

Illustrative Requirements:

- Access to databases containing service handling/routing information.
- Database queries must receive equal priority as those of the incumbent LEC/other companies.
- Database queries must receive equal reliability, availability, and performance as that provided to the incumbent LEC/other companies (must be at least at industry standard levels).
- Database access using TCAP messages routed via STPs must be supported.
- Detailed tracking of usage and call termination point must be supported.
- Database dips resulting in a call terminating with the incumbent LEC should not be charged to AT&T.
- The ability to allow AT&T to update appropriate databases with their end user information.
- Procedures are required for validating that information supplied by AT&T is accurately provisioned in LEC databases.

16. Tandem Switching

Definition:

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The establishment of a temporary communications path between two switching offices through a third (the tandem) switch. Typically, the tandem switch is used to connect end offices, other tandems, or to provide connection to IXC, ICO and CLEC switches. The tandem switch may also be used to provide SSP capabilities when these capabilities are not available in the EO.

Illustrative Requirements:

The requirements include, but are not limited to:

- signaling
- screening and routing
- recording
- access to AIN functionality
- access to Operator Services and Directory Assistance as appropriate
- access to Toll Free number portability database as appropriate
- must support all trunk interconnections discussed under "Network Interconnection/Trunking" (e.g., SS7, MF, DTMF, DialPulse, ISDN, DID, DN-RI, CAMA-ANI (if appropriate for 911), etc.)
- access to PSAPs where 911 solutions are deployed and the tandem is used for 911
- transit traffic to/from other carriers

17. Advanced Intelligent Network (AIN)

Definition:

AIN is a network architecture that is designed to provide a means for carriers to offer advanced features and services independent of the local switch vendor. Specification of specific points in the call model (i.e. triggers) at which the end office suspends call processing and launches an SS7 TCAP query to a database allows for application logic to be separated from the switching platform in a standard manner across all switch types that are AIN capable.

Illustrative Requirements:

- Provisioning of LEC end office AIN triggers initiated via service order from AT&T
- Interconnection of AT&T and LEC SS7 networks for exchange of AIN TCAP messages between LEC end offices and AT&T service control points (SCP).

The provisioning process and interfaces negotiated with the LEC must allow for provisioning of all triggers currently available to the LEC for offering AIN-based services (i.e.

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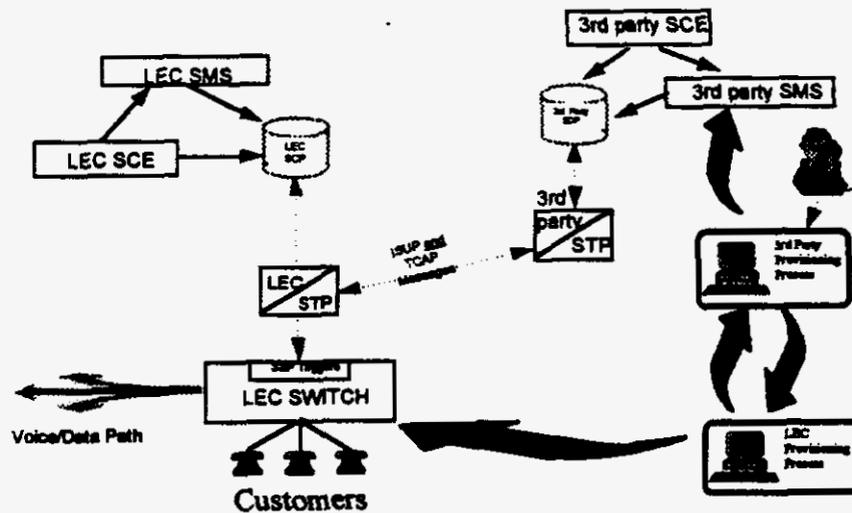
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Off-Hook Immediate, Off-Hook Delay, Private EAMF Trunk, Shared Interoffice Trunk (EAMF, SS7), Termination Attempt, 3/6/10, N11, Feature Code Dialing, Customer Dialing Plan, Automatic Route Selection) in a manner which is at least at parity with the LEC's own capabilities in terms of performance and provisioning interval.

Figure 1 depicts the interconnection arrangement proposed. The AT&T SCP resides within the AT&T SS7 network which is interconnected via inter-network signaling links (D-links) to the LEC SS7 network. Queries originating in the LEC SSP traverse the LEC SS7 network and are routed via the D-links to the AT&T SS7 network, destined for the AT&T SCP. Service logic is applied at the SCP and a response returned via the reverse path described above to the LEC SSP with further call handling instructions.

Figure 1

**IMPLEMENTATION OF SINGLE IN-SERVICE PROVIDER ENVIRONMENT
TRIGGER PROVISIONING**



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III. Ancillary Capabilities

In addition to the basic requirements on unbundled network elements presented in section II, there are ancillary capabilities required to offer service in an unbundled environment. This section discusses some of the key ancillary capabilities. This section is intended to be representative of the types of requirements AT&T will have on ancillary capabilities, but it is not intended to be an exhaustive treatment of all required capabilities. As a general rule, AT&T requires that the LEC provide all ancillary capabilities needed to offer services at parity performance to those offered by the LEC.

1. 911 & E911

Definitions:

Basic 911 - collect 911 calls from one or more local exchange switches and route the call to the correct Public Safety Answering Point (PSAP).

Local switches may each be connected to the PSAP.

Local switches may connect to a Basic Service Provider Location which will forward calls to the PSAP.

E911 - uses customer location information (ALI/DMS database) to provide greater routing flexibility.

Only 911 tandems are required to have trunks to the PSAP(s).

Requires coordination of name, address, telephone and other special information from the local service provider impacted by Remote Call Forwarding

Illustrative Requirements:

Basic 911 -- Ability to route 911 traffic to the appropriate PSAP with at least a parity level of performance the LEC provides their end users.

E911 -- Ability to route 911 to the appropriate PSAP with at least a parity level of performance the LEC provides their end users. Also, requires a feed from the service order process to update the ACI/DMS database with the end user's information.

2. Network Interconnection

Definition:

Network Interconnection gives the new entrant the ability to connect components of their network or of networks leased from other vendors to the incumbent LEC's network. This interconnection is necessary for the new entrant to

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originate calls which will terminate on or transit the LEC network and to receive calls which originated on the network of another carrier.

Illustrative Requirements:

- Interconnection must be made available upon AT&T's request at all technically and logically feasible interfaces.
- Provisioned cooperatively and efficiently without use or user restrictions (e.g. Option for two-way trunking, no unnecessary trunk group fragmentation by traffic types, etc.)
- No loss of feature functionality.
- Agreed upon disaster recovery & network management procedures.
- Allows for the transiting of traffic to and from other carriers (IXCs, CLECs, Independent Companies, Cellular Providers) through the LEC tandem.

3. Rights-Of-Way

Definition:

Equal Access to Conduits, Pole Attachments, Rights of Way and Other Pathways (Commonly referred to as Rights-of Way).

Rights-of-way can be described as any system or pathway which may carry or house lines, facilities, or equipment used in the completion of telephone local exchange and toll traffic. These pathways may run under or above streets, traverse private property, enter multi-unit buildings and are required to reach end users. These R-O-W and OSP structure are currently owned or controlled by the LEC.

Illustrative Requirements

Highlights:

- LEC must make owned/controlled conduits, pole lines, R-O-W and other pathways available to AT&T on an equal basis
- LEC must provide open access to current pole-line and conduit prints, and availability, provide maps of manhole locations, and allow manhole/conduit break-outs, and audits to confirm usability
- LEC must provide access to building entrance conduits to reach new customers

Additional Clarification:

Any incumbent local exchange telephone company must provide any telecommunications carrier requesting access with equal

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and nondiscriminatory competitively neutral access to; without limitation, any pole, pole attachment, duct, conduit, entrance facilities, equipment rooms, remote terminals, cable vault, telephone closet, right-of way, and any other pathways on terms and conditions equal to that obtained by the incumbent LEC. Any incumbent local exchange carrier having equipment on, over, or under public or private property must permit the use of such equipment by any other telecommunications carrier on an equal and non-discriminatory basis. The incumbent local exchange telephone company must provide information on the location of and availability to access conduit, poles, etc., and other pathways on an equal and nondiscriminatory basis to any telecommunications carrier requesting such information within 10 workdays after the request. Any authorization to attach to poles, overlashing requirements, or modifications to the conduit system or other pathways to allow access to and egress from the system shall not be hindered/restricted or unreasonably withheld or delayed. Such access and use shall be on terms and conditions identical to those the local exchange carrier provides to itself and its affiliates for the provision of exchange, exchange access and interexchange services.

4. Performance

Definition:

As used in this section, performance refers to performance, reliability and availability. This includes all system/network performance parameters including both those directly observed by the customer (e.g., voice quality) and those which are indistinguishable contributors to overall service performance (e.g., database performance in responding to queries).

Illustrative Requirements:

- For all unbundled elements, the LEC must provide levels of performance which will allow services provided over the unbundled elements to perform at parity with the same/similar services provided to LEC customers (this is a minimum).
- The LEC must (on demand) demonstrate parity performance.
- All unbundled elements must meet applicable industry standards (e.g., Bellcore TR-NWT-000499, TR-NWT-000418, TR-NWT-000057, GR-303-CORE, GR-334-CORE, etc.)
- The LEC must work with AT&T to determine appropriate performance allocations across unbundled elements.

5. Protection/Restoration/Disaster Recovery

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Definition:

This section refers specifically to requirements on the use of redundant network equipment/facilities for protection, restoration, and disaster recovery. Requirements on disaster recovery procedure are covered elsewhere.

Illustrative Requirements:

- The LEC must provide protection, restoration, and disaster recovery capabilities at parity with those capabilities provided for their own services/equipment (e.g., equivalent circuit pack protection ratios, and facility protection ratios).
- AT&T services and unbundled elements must be given equal priority in protection, restoration, and disaster recovery schemes.
- AT&T services and unbundled elements must be given equal priority in the use of spare equipment and facilities.

6. Power

Definition:

The equipment used to power the unbundled elements. This includes commercial power feeds, cables, busses, batteries, generators, power conditioning equipment, over-voltage protection devices, and over-current protection devices.

Illustrative Requirements:

Power distribution arrangements for unbundled elements must be at parity with what the LEC provides for its own equipment (e.g., equivalent levels of redundancy and battery back-up).

7. Security

Illustrative Requirements:

- Assure logical and physical integrity of network elements and their interconnecting data networks and subtending OSSs.
- Assure the capability to meet public safety and legal process demands (ex.: wire taps, trap installation, traces, subpoenas, etc.).
- Provide the ability to utilize, under AT&T direction, any current or future fraud prevention, detection or control functionality embedded within the network element.

8. Network Validation Operations Readiness Testing:

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It is expected that as AT&T initiates new service offerings or new interfaces with the network elements the LEC will test with AT&T to insure that all services and associated operational processes function appropriately. This testing will also be required when new technology is introduced into the network.

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IV. Unbundled Element Platform

As discussed in the introductory section of this document, a new entrant must be able to purchase unbundled network elements either individually or in combination to create competitive local service offers (e.g. local, toll and exchange access services). This section will focus on one such combination involving the purchase of the loop (which is simply a combination of the four sub-loop elements as described in section II) and the switch. The purchase of the switch allows the new entrant also to use the remaining unbundled network elements described in section II on an optional basis. This combination of contiguous network elements can be ordered on an individual line/customer basis as opposed to the "shared" network elements (e.g., transport, databases, etc.) which are usage based and not associated with a specific end user. When this loop/switch combination is implemented, the new entrant must have the option to include with the switch any or all of the shared elements. When purchasing network elements in combination the new entrant will have access to all features and capabilities of each individual component as described in section II of this document.

It is AT&T's expectation that this combination of loop and switch elements will be provisioned with a single order that specifies the type of end user service (e.g. voice grade switched, ISDN, etc.) this combination must support. The ordering vehicle will contain the appropriate FIDs which will allow the new entrant to also order the optional network elements when ordering this combination. This provisioning method is akin to the feature group concept when ordering access services from a local exchange company. When ordering access, an IXC, rather than order each component (carrier common line, local switching and transport) separately, orders Feature Group D access which is a combination of these components. This is the same concept which will apply to ordering a combination of unbundled network elements for local exchange service.

For existing customers who simply wish to change their local service provider this method of ordering will accomplish the change with no physical changes required in the existing network infrastructure. It shall not be necessary for new entrants to collocate equipment in the ILECs central office to connect the unbundled loop combinations to the unbundled local switch. If shared network elements are used, the ILEC will be responsible for all engineering, provisioning and maintenance of these elements to ensure they support the agreed upon grade of service. Performance data on these elements will be shared with AT&T on a real time basis or an agreed upon regularly scheduled interval depending on which element(s) are involved.

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It is useful to think of unbundled network element combinations as a mechanism to order groups of elements where these elements need to be logically associated. Two examples of this are a combination of the sub-loop elements to create the entire loop, and the combination of the loop and the switch to provide service to end users. All other unbundled network elements are options which are not part of the loop/switch combination (with the exception of the signaling which cannot be separated from the switch) and are ordered separately. Once switching is selected either as part of a combination or as a standalone network element the new entrant has the option to access the incumbent's transport, databases, operator services, AIN platform, etc. or to purchase any of these functions from another vendor or provide them itself.

Though this document only addresses two combinations, this does not prevent a new entrant from ordering other combinations, or an individual element that the new entrant may need now or in the future to compete successfully in the marketplace. Also, the existence of a combination does not prevent a new entrant from subsequently disaggregating that combination to substitute a self-provided or competitor-provided component.

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V. Unbundled Platform Operations Requirements

A. Provisioning

1. AT&T requires a real-time Electronic Communication interface to the ILEC for ordering and provisioning. (i.e. Electronic Access to SAG or its equivalent) The same interface must be used for the ordering/provisioning of single unbundled elements/combinations and service ordered from resale tariffs.
2. AT&T requires agreement on identification and description of all elements related to providing local service.
3. AT&T requires the ability to order any defined element using agreed upon ordering/provisioning codes.
4. AT&T requires that particular combinations of elements, hereafter referred to as combinations, be identified and described so that they can be ordered and provisioned as combinations, and not require the enumeration of each element within that combination on each provisioning order.
5. AT&T requires that appropriate ordering/provisioning codes be established for each identified combination.
6. When purchasing switching capabilities, AT&T requires the ability to obtain telephone numbers on-line from the ILEC, and to assign these numbers with AT&T customer on-line. This includes vanity numbers. Reservation and aging of numbers remain the responsibility of the ILEC.
7. When purchasing switching capabilities, AT&T requires the ability to order all available features on that switch.
8. AT&T requires the ability to have the LEC end office AIN triggers initiated via a service order from AT&T.
9. AT&T requires that when combinations are ordered where the elements are currently interconnected and functional, those elements will remain interconnected and functional.
10. AT&T requires a list/description of all services and features available to street address detail, including:
 - Type of Class 5 Switch by CLLI, line features
 - Availability by LSO, and service and capacity
 - Availability by LSO. AT&T further requires a complete layout of the data elements that will be required to provision all such services and features.

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12. AT&T requires information about the certification process for: DA Exempt, Prison Services, Lifeline, Hotel, etc.
13. AT&T requires the ILEC to identify areas where Centrex is available, including type of Centrex, and a definition/explanation of ordering and provisioning requirements.
14. AT&T requires the ILEC to describe the details and requirements on handling NPA-NXX splits with the understanding that they are controlled by the owner of the NPA-NXX.
15. AT&T and the Incumbent Local Service Provider will negotiate a standard service order/disconnect order format.
17. The ILEC must provide an initial electronic copy and a hard copy of the service address guide (SAG), or its equivalent, on a going forward basis. Updates are expected as changes are made to the SAG.
18. AT&T requires the ability to determine customer's existing service and feature configuration.
19. AT&T requires the ability to suspend/restore service at the AT&T local customer's request. The use of Suspend/Restore order-types would be used for the suspension and restoration of service based on non-payment/payment.
20. AT&T requires that the ILEC provide at the time of order completion notification of the local features/services/elements/combinations that were provisioned for all AT&T local customers. This applies to all types of service orders and all elements. In addition, AT&T requires the ILEC provide any customer status which qualifies the customer for a special service (e.g. DA exempt, lifeline)
21. AT&T requires the ability to block 800, 900, 976, 700 calls, etc. by line or trunk on an individual service basis.
22. AT&T requires the ability to order and provisioning for inter and intralata line PIC (2 PIC) where applicable.
23. AT&T requires that AT&T's local customers be able to retain their existing ILEC provided telephone number without loss of feature capability and ancillary services such as, but not exclusively: DA, 911/E911 capability. Both AT&T and the ILEC will work cooperatively on

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exceptions. The format of the data required for interim Local Number Portability must be provided to AT&T.

24. AT&T requires a complete definition of the rules for directory assistance listing (ordering data elements).
25. AT&T requires the ILEC to list AT&T in the front of the directory as a local service provider for that area with all appropriate information and telephone numbers.
26. AT&T requires from the ILEC the following for directory services: A free white and yellow pages listing for each customer, rules for white and yellow pages listing and types of listings (this includes cut off date for printing), areas that are covered by the white and yellow pages, and directory update, order, re-order and delivery processes. AT&T requires directory listings schedules, both an initial electronic copy and a hard copy, that will be updated by the access provider, a list of yellow page headings by directory, and the process established to receive updates to the above information whenever changes occur.
27. When necessary, AT&T requires the "real time" ability to schedule installation appointments with the customer on-line and access to the ILEC's schedule availability.
28. AT&T requires the ILEC to provide an intercept message that includes the new AT&T number, when appropriate.
29. AT&T requires the ILEC to provide nondiscriminatory training for all employees who handle AT&T local service customers.
30. AT&T requires a copy of the ILEC tariff/contract that AT&T will use to order service.
31. AT&T requires cooperative practices and processes for law enforcement and annoyance handling.
32. AT&T requires a jointly developed process with the ILEC to conduct Busy Line Verification (BLV) and Busy Line Interrupt (BLI).
33. AT&T requires "real-time" response for: Firm order confirmation, due date availability/scheduling, dispatch required or not, identify line option availability by LSO (such as; Digital Copper, Copper Analog, ISDN, etc.), completion with all service order and time and cost related fees, rejections/errors on service order data element(s), jeopardies against the due date, missed appointments, additional order charges (construction charges), order status, validate street address detail, and electronic notification of the local line options

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that were provisioned, at the time of order completion, by the ILEC for all AT&T local customers. This applies to all types of service orders and all elements.

34. AT&T requires the same intervals and level of service currently being performed by the ILEC (parity).
35. AT&T requires negotiated performance metrics with the ILEC. Results to be reviewed quarterly or on an as needed basis.
36. AT&T requires the ILEC to notify AT&T if a customer requests changes to their service at the time of installation. Specific scenarios and a process to handle changes will be required.
37. AT&T requires the ILEC to provide all test and turn-up procedures in support of the unbundled elements/combinations/services ordered by AT&T.
38. AT&T requires the ILEC to notify AT&T prior to disconnect of any AT&T unbundled element/combination/service.
39. AT&T requires expedite and escalation processes for ordering and provisioning.
40. AT&T requires a joint operational understanding (work center and systems), and a change control process.
41. AT&T requires, for provisioning, a process for the management of misdirected service calls.
42. AT&T requires the ILEC to provide engineering information on all unbundled elements/combinations used for data, private line, foreign exchange, voice, etc; This would include the information that would normally be provided on records such as the detailed design layout records for loops and circuits.
43. AT&T requires provisioning support 24x7.
44. AT&T requires that all notices, invoices, and documentation provided to the customer at the customer's premises by the ILEC's field personnel be branded AT&T.
45. AT&T requires all T&M charges associated with an installation to be provided at the same time the supplier notifies AT&T of the installation's completion.
46. AT&T requires the ability to test or have the ILEC test all elements/combinations.

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- 47. AT&T and the ILEC agreements on the flow of CARE records for correct provisioning and billing to IXCs.
- 48. Any new electronic interface will have no negative impact on existing interfaces AT&T may have with the LEC today for traditional services.
- 49. AT&T requires a process to expedite an order on a customers behalf.

Illustrative Service Assurance Requirements:

Synopsis of Measure Of Quality for ILEC Performance

<u>Threshold</u>	<u>Metric</u>
	<u>MAINTENANCE</u>
1	Time To Repair (1) <= 8 hours <= 24 hours 85% 95%
2	Average Time To Repair (1) 10.5 hours
3	Repeat Trouble Reports (2) 3%
4	Troubles per 100 access lines (3) <= 1.4
	<u>PROVISIONING</u>
5	Percent Installation Commitment Met (4) 99.5%
6	Time To Install - all orders <= 2 days 95%
7	Firm Order Confirmation Sent - 24 hours from the time of receipt of an AT&T order 99.5%
8	Installed Correctly (No troubles with 30 days) <= 2%
9	Missed Appointments (5) (To Customer's Location) 0%

For Maintenance, the access vendors have reported data to the FCC. Based on 1994 Y-T-D figures, the suggested thresholds for Average Time To Repair and Trouble per 100 Lines are Best-In-Class or better. The worst performance for Average Time To Repair is 37.8 (US West) and the average for all RBOCs is 22.3 hours. The worst performance for Trouble per 100 Lines is 3.22 (NYNEX) and the average for all RBOCs is 2.52. Other metrics are new and Best-In-Class figures will be established with our own providers after collecting data for three full months.

For Provisioning, the access vendors have reported data to the FCC on Percent Installation Commitment Met only. Based on the 1994 Y-T-D figures the suggested thresholds for it is Best-In-Class. The worst performance is 97.3 (US West) and

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the average for all RBOCs is 98.6%. Other metrics are new and Best-In-Class figures will be established with our own providers after collecting data for three full months.

Definitions

Performance is measured on a monthly basis, unless otherwise noted.

1. Repair is when service is restored by the ILEC on troubles reported by AT&T, not necessarily on the same architecture, but with the same or improved service quality. Average Time To Repair is the average time (in hours) to repair all troubles (less customer reasons). Initial plus repeat troubles are included in the base.
2. Repeat Rate is based on any ILEC troubles reported by AT&T on an access line that occurs more than once in the current report month plus the previous report month. Multiple troubles on a single access line reported within this two month period, regardless of quantity or trouble disposition, is considered a single repeat event. The divisor of this metric will be the number of troubles reported to the ILEC by AT&T (excluding customer reasons) in the two month period.
3. Initial plus repeats are include in the base. Troubles less customer reasons comprise the base of troubles.
4. On Time measurements starts when the ILEC receives an order at their first gateway to when the customer has service.
5. Missed Appointments measures those times when the ILEC, through no fault of the customer, missed the appointment time made by AT&T for AT&T's end-user customer.

B. Maintenance

AT&T requires that the Incumbent LEC (ILEC) maintain AT&T's customers in a manner that is timely, consistent and at parity with the ILEC's customers. At a minimum, the quality of the leased elements should match that of the ILEC's own elements and in general conform to all applicable Bellcore and ANSI requirements specific to the type of service to be provided.

AT&T requires the ILEC establish and staff a Maintenance Center to act as AT&T's single point of contact (SPOC) for all maintenance functions and should operate on a 24 hour day, 7 days a week basis. This includes access to AT&T

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All trouble shooting will be performed by the ILEC and the ILEC will be responsible for the reported trouble until turned back to AT&T.

AT&T requires an escalation process be established for resolving maintenance troubles.

The ILEC should perform a Mechanized Loop Test (Quick Test) at the request of the AT&T work center while the work center is on line.

AT&T requires the ILEC to honor all dispatch requests on a 24 hour by 7 day basis.

AT&T requires a real-time industry standard electronic interface (EBI) to perform the following functions:

- Trouble Entry
- Obtain Trouble Report Status
- Obtain Estimated Time To Repair (ETTR) and ILEC Ticket Number
- Trouble Escalation
- Network Surveillance - Performance Monitoring (i.e., proactive notification of "auto detects" on network outages from the local supplier)

AT&T requires the ILEC to provide progress status reports so that AT&T maintenance work centers will be able to provide end user customers with detailed information and an estimated time to repair (ETTR).

AT&T requires parity with the ILEC regarding knowledge of any engineering changes associated with the incumbent's element technologies.

The ILEC will close all trouble reports with AT&T. AT&T will close with the end user. The ILEC's outside technicians will clear to the network interface and provide callback from the fault location to AT&T.

The ILEC will transfer any misdirected calls received from AT&T customers to the AT&T work center 800 number.

AT&T requires that all maintenance charges (time and materials, by customer, per event) be provided verbally at ticket close out. The ILEC will use an AT&T branded form that will be signed by the customer, capture all maintenance and service charges incurred by the customer and be forwarded or faxed to the AT&T work center by the end of the day when the repair is completed.

AT&T requires pre-screening of any ILEC activities that will incur charges to AT&T. This includes authorization by AT&T

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if a dispatch is required to the customer premises as well as verification on actual work completed.

AT&T requires the ILEC develop a formal process to track, analyze and continuously improve service levels.

AT&T requires negotiated performance metrics with the ILEC to be reviewed quarterly or on an as needed basis.

All ALIT/SLIT (Auto / Subscriber Line Tests) tests performed on AT&T customers that result in a failure will be reported to AT&T.

AT&T requires an AT&T branded, or at a minimum a non branded, customer-not-at-home card be left at the customers premises when an AT&T customer is not at home for an appointment.

AT&T will coordinate dispatches to the customer premises. This includes re-dispatches for customer not-at-home.

The ILEC will ensure that all applicable alarm systems that support AT&T customers are operational and the supporting databases are accurate so that equipment that is in alarm will be properly identified. The ILEC will respond to AT&T customer alarms consistent with how and when they respond to alarms for their own customers.

AT&T requires individual Emergency Restoration and Disaster Recovery Plans be developed. The Plans should outline methods for the restoration of each central office in the local network provider territory as well as contain site specific restoration alternatives which could be implemented based on the magnitude of the disaster. Each plan should incorporate at a minimum the following elements:

ILEC Single Point of Contact single point of contact (SPOC)

- Responsible for notification of AT&T work center
- Responsible for the initiation of the ILEC's restoration plan
- Status and problem resolution during the entire restoration process

Restoration Equipment Dispatch Plan

- Documented procedure on how the equipment will be dispatched to restoration site
- Estimated maximum time for the restoration equipment to arrive on site

AT&T requires prior notification, with the option to influence the decision (time frame - TBD), of any scheduled maintenance activity performed by the local supplier that

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may be service affecting to AT&T local customers (i.e., cable throws, power tests, etc.).

AT&T requires knowledge of the criteria and process used for handling facility and power outages on an agreed upon severity and priority basis.

C. Recording

AT&T requires that records of our recorded messages be received on a daily basis.

DMOQs for the receipt of these records are as follows:

- 99% of the usage must be received within five days,
- 99.95% within ten days.

The ILEC will take corrective action if the agreed to DMOQs are not being met.

ILEC will provide reports quantifying the number of records discarded or rejected during processing.

ILEC will do detailed recording of all AT&T usage including local, intralata toll interlata calls and usage sensitive CLASS/LASS features.

ILEC will also provide the following records for access and mutual compensation billing:

- All originating (completed and incomplete) calls routed to an IXC.
- All terminating calls received from an IXC.
- All terminating calls received from the ILEC, other CLECs Cellular MTSOs and Independent companies.

All records received for access or mutual compensation billing will carry the carrier identification code of the distant carrier to allow AT&T to generate the proper billing to that carrier.

AT&T prefers to receive all records in the raw AMA format. If this is not available then an EMI/EMR format for record exchange is acceptable.

The medium for receiving these records will be mechanized via the currently used connect direct transfer protocol.

AT&T would like to have the access and mutual compensation records separated from the customer usage records.