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1. INTRODUCTION

1.1 Document Purpose

The FCC's first order in Docket 96-98 requires ILECs to provide CLECs with gateway access to ILEC Operational Support Systems (including those used for pre-ordering). Such gateway access will enable CLECs to provide customers with service experiences at least at parity with that provided by ILECs. The gateway interface as described by the FCC Order must be an electronic, machine-to-machine interface that does not rely on human intervention in the ultimate transfer of information from the ILEC OSS to the CLEC OSS (and vice versa).

It is AT&T's objective, and the expectation of the FCC, that a uniform national standard will be established for gateway electronic interfaces. This goal is important to both ILECs and CLECs as it permits all carriers to independently evolve their OSS infrastructure but continue to exchange information necessary to service customers in a competitive local service market.

This document will describe pre-ordering interface interconnect requirements defined by AT&T to provide Local and IntraLATA Service to end customers using ILEC facilities. These requirements include:

- pre-ordering process flow
- identification of batch files
- description of transaction sets
- logical data model of the information to be exchanged
- required message syntax, protocols and network connectivity
- file format and record descriptions for the batch files
- transaction formats

1.2 Document Format

The document is divided into specific sections. Section 1 provides an introduction to the scope and format of the document and provides a record of revisions. The remaining sections are described below:

Section 2:	Overview of Pre-Order Functionality
Section 3:	Data Requirements
Section 4:	Connectivity, Transport and Syntax Requirements
Section 5:	Definition of Key Terms

1.3 Revision Log

Date	Version	Changes
10/18/96	1.0	• Reformatted text to eliminate redundancy and improve readability. • Eliminated Advanced TN Reservation Queries, Appointment Cancellation and Completion • Added Batch Files for Service Availability and Address Verification • Update to object definitions as a result of Sync up with Order process • Replaced T/L/V syntax with EDI for data model

2. Pre-Order Functionality

2.1 Introduction

Pre-ordering and ordering is the process wherein local service providers and network providers exchange information about current and proposed retail services, unbundled network elements and combinations. The pre-ordering process involves compilation of all data that is necessary to complete a service order for purposes of delivering service to the customer. Sources for the data include the customer, local service provider internal systems, and switch provider internal systems.

Certain functions are best performed via exchange of batch data between AT&T and the ILEC, e.g. Service Availability. This will be the case for functions that are dependent on non-dynamic data and can be performed within each carrier's operational infrastructure once initial feeds and update mechanisms are established.

Other functions are best performed via a transaction-based, real-time, gateway interface between AT&T and the ILEC, e.g. Simple Telephone Number Assignment. This will be the case for functions that are dependent on dynamic data or when the batch data cannot satisfy a specific request . For these functions, customer service associates will initiate transactions from workstations within one carrier's operational infrastructure which are transported via a gateway machine-to-machine interface to the other carrier. Responses are returned through the same path to the customer service associate initiating the transaction.

2.2 Process Flow

Compilation of data achieved through the pre-order process will typically occur during interaction between AT&T's customer service associate and the customer. Therefore, all information to be obtained either from AT&T's internal support systems or from ILEC support systems must be available in real-time to the customer contact associate.

Information exchanged during pre-order activities is divided into a number of categories:

1. Service/Feature Availability - determination of what switching office will be used to deliver service and what features/capabilities are available in that office to offer to the customer.

2. Address Verification - validating that the address provided is an orderable address.

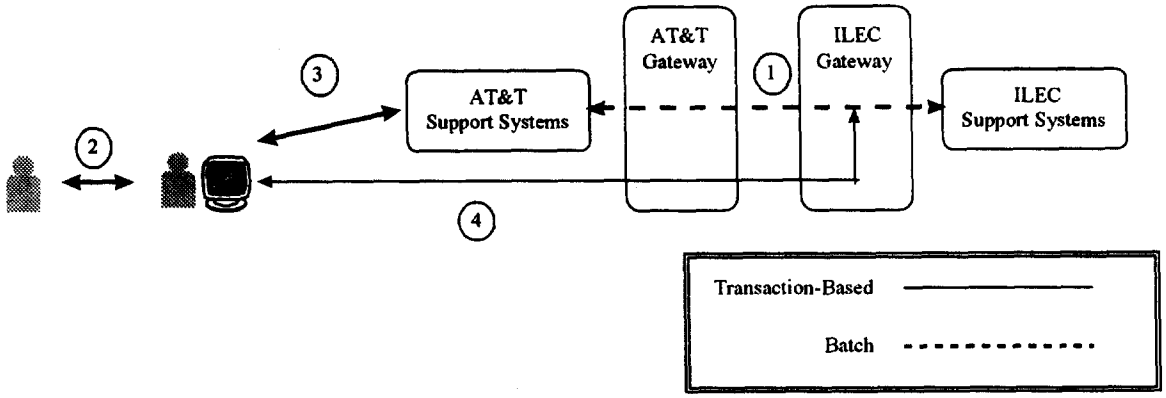
3. Telephone Number Assignment - for customers obtaining new service or wishing to change their existing telephone number, assignment of telephone number(s).

4. Appointment Scheduling - for service requiring dispatch of a technician to the customer's premise, obtaining a time slot convenient for the customer and scheduling with the ILEC.

5. Customer Service Record Request - for customers with existing service (i.e. migrations), determination of what services and features the customer already has.

The diagram below depicts the exchange of information amongst the customer, AT&T customer contact associate, AT&T service support systems and ILEC systems.

Pre-Ordering Process Flow Diagram



1. AT&T and the ILEC must establish a feed for batch data to be loaded to AT&T Support Systems for access by AT&T customer service associates. The mechanism must define the initial download as well as an appropriate update mechanism. The table below lists batch data for which this interface will apply. Details on update mechanism and content for each file in the list are provided later in Section 3, *Data Requirements*.

Service Availability	This data includes Feature Availability information (i.e. switch capabilities by CLLI).
Address Verification	This data includes SAG information.

The batch files described in the above table represent low volatility data and the information contained in them will be used to load internal AT&T databases. However, there will be situations when the data provided in the batch feeds will not be able to satisfy internal AT&T service availability and address verification queries. To accommodate these situations, several on-line transactions have been defined to query the more up-to-date information housed in the ILEC data sources.

2. Customer contacts AT&T customer service associate to obtain local service from AT&T.

3. Transactions initiated by the AT&T customer service associate which can be handled by access to data housed in internal AT&T systems will be directed to the appropriate internal system (e.g. Service Availability transactions).

4. Transactions initiated by the AT&T customer service associate which require data housed in ILEC internal systems will be directed through the AT&T Gateway to the ILEC Gateway which will distribute to the appropriate ILEC internal system. Data requirements and logical data structures for these transactions can be found in Sections 3, *Data Requirements*. There are two distinct classes of transactions that may be sent to the ILEC:

   A. Customer Service Record Requests (OPTIONAL) - For customers with existing service (i.e. migrations), AT&T customer service associates may initiate transactions requesting the ILEC to provide a customer service record which details all existing features/services that the ILEC currently provides to the customer. Internal AT&T methods and procedures will determine when it is necessary to request a customer service record. As

this is an optional transaction, there should be no linkage between data obtained ***only*** in response to a CSR Request and the actual service order sent by AT&T to the ILEC during the Ordering process.

B. Pre-order Service Inquiry - There are a number of transactions that are included in this category. Prior to completing the actual service order, it may be necessary to interact with the ILEC in order to:

- verify service/feature availability
- verify the address that has been supplied by the customer
- obtain reservations for needed telephone numbers
- schedule service appointments

It should be noted that not all of these transactions will be required for each customer interaction. Certain customer interactions will not require Address Verification (e.g., when such information is provided by internal AT&T systems). Certain customer interactions will not require TN Assignment (e.g. customer wishes to retain existing number). Certain customer interactions will require Service Availability when that information is not available internally. Certain customer interactions will require Appointment Scheduling (e.g. inside wire work is necessary to add a jack).

3. Data Requirements

The data requirements are introduced at a high level through the use of operational scenarios. The purpose of the scenarios is to depict the flow of information between AT&T and the ILEC. Each flow is further decomposed into one or more logical object models. The models describe the data elements, their structure, and whether they are mandatory, optional or conditional.

AT&T requires that the ILEC respond to a transaction within 4 to 7 seconds or less. Response time is defined as the time it takes for a transaction to be sent (initiated by the AT&T customer service associate) plus the time it takes AT&T to receive the response (at the associate workstation) from the ILEC. A special transaction called "Delay in Response" is required from the ILEC if and when the response time exceeds seven and fourteen seconds. This transaction will ensure that the AT&T customer service associate understands that the transaction request is being processed by the ILEC and that an immediate re-submit of the transaction is not necessary. If two "Delay in Response" transactions are received in response to a single AT&T transaction, the transaction will be considered aborted and will be resubmitted.

Both the scenarios and the object models are organized by pre-order functional category.

3.1 OPERATIONAL SCENARIOS

3.1.1 Telephone Number Assignment

1. This function will be used for customers obtaining new service or wishing to change their existing telephone number(s).
2. The response time for the Telephone Number Availability Query will be 4 to 7 seconds or less. Response time is defined as the time it takes for the query to be sent, plus the time it takes AT&T to receive the response from the ILEC. If the response will take longer than 7 seconds, the ILEC will return a Delay in Response transaction. If the response will take longer than 14 seconds, the ILEC will again return a Delay in Response transaction.
3. The ILEC will provide confirmation numbers as acknowledgment of telephone numbers that are selected for use in subsequent order transactions.
4. The ILEC will determine if a premise visit is required and will return that information on the Available Telephone Number Response.
5. Selected telephone numbers will be considered 'reserved' until the expiration date on the selection request. The expiration date provided will be no later than 31 business days after the selection request is made.
6. The reservation period will apply from the time the ILEC confirms the selection request until the service order is confirmed by the ILEC.
7. A maximum size of the range of telephone numbers that can be requested in one Telephone Number Availability Query is 9,999.
8. The following table depicts the response expected for each type of request:

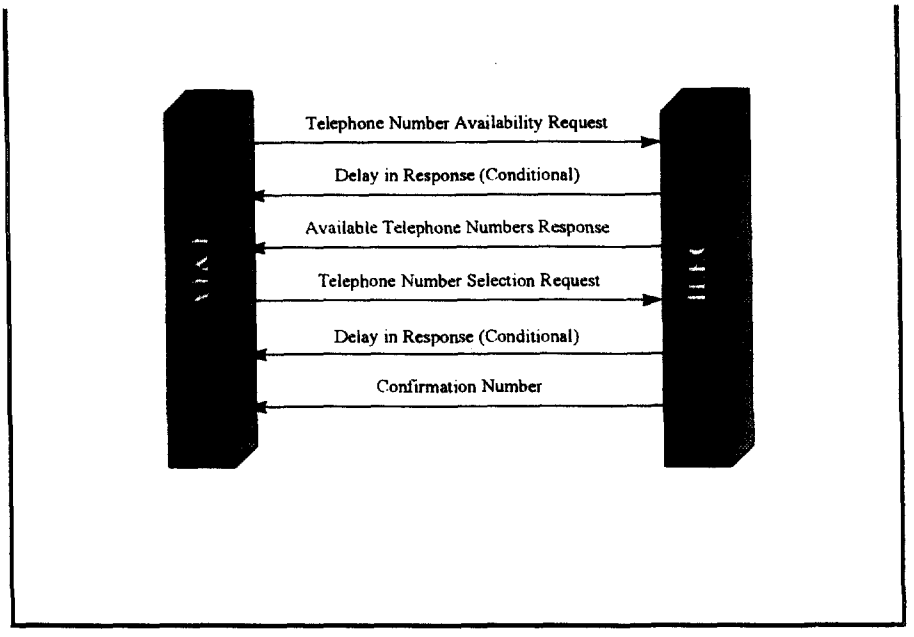
Type of Request	**ILEC Response**
1 - 9 random numbers	List of 10 available numbers
10 or more random numbers	List of available numbers equal to number requested
Vanity numbers (either individual or range)	Requested vanity numbers that are available
Range of random sequential numbers	Available sequential numbers equal to number requested

3.1.1.1 Requesting and Selecting Telephone Numbers

This scenario is used to request and select Telephone Numbers. The telephone numbers requested can be either

- specific vanity numbers
- random numbers
- a range of random sequential numbers
- a range of vanity sequential numbers

depending on the actual data in the transaction. Each of these types of requests follow the scenario depicted below:



1. During the "Telephone Number Selection Request", the ILEC will not be notified of Telephone Numbers that are not selected. Telephone Numbers not selected before the expiration time limit is reached may be reassigned by the ILEC.

2. The state of a Telephone Number for the above operational scenario is as follows:

   - An available Telephone Number will be in the "available" state in the ILEC database.

   - A "Telephone Number Availability Request" will put a Telephone Number on "temporary reserved" in the ILEC database. A Telephone Number in the "temporary reserved" state will be made available if no action is performed on it within 4 hours. The temporary reserve period begins with the ILEC issuance of the Available Telephone Number Response and ends with the ILEC receipt of the selection request or the passage of 4 hours, whichever comes first.

- A "Telephone Number Selection Request" will mark a Telephone Number "reserved" in the ILEC database and release Telephone Numbers on "temporary reserved".
- A request for a range of numbers, whether vanity or random, requires that sequential numbers be returned.

3.1.1.2 Exception Conditions

There are a number of exception situations that can occur during the processing of transactions within the ILEC environment. These will be identified at the application level and included within the transaction response.

Examples of exception conditions applicable to telephone number assignment include

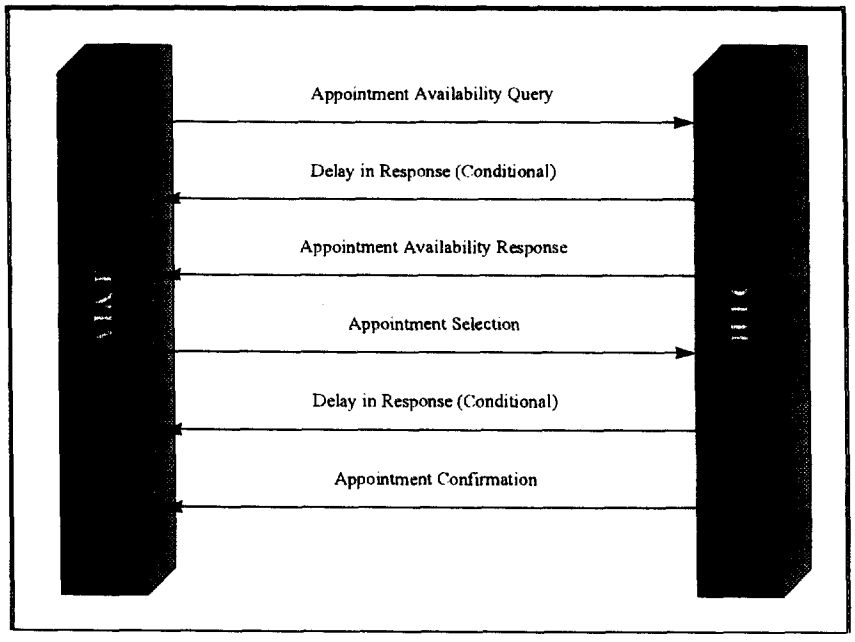
- Vanity request not available
- More telephone numbers requested than available
- Multiple ranges required to satisfy request
- Number newly disconnected

3.1.2 Appointment Scheduling

1. This function will be used to obtain a time slot convenient for the customer when the order requires dispatch of a technician to the customer's premise.
2. AT&T will only request an appointment in response to a customer request for additional lines and/or jacks. The ILEC is responsible for knowing the condition of facilities and when a premise visit is required.
3. For an existing customer migration, the assumption is that no on-site visit will be necessary unless requested by the customer.
4. The appointment request will indicate who initiated the request (the customer, the ILEC or both) in order to provide the ILEC with enough information to schedule the appropriate amount of time.
5. The response time for the Appointment Availability Query/Selection will be 4 to 7 seconds or less. Response time is defined as the time it takes for the query to be sent, plus the time it takes AT&T to receive the response from the ILEC. If the response will take longer than 7 seconds, the ILEC will return a Delay in Response transaction.

3.1.2.1 Appointment Availability

This scenario will be used by AT&T customer service associates to select an appointment for the end customer and obtain an appointment confirmation number from the ILEC.



1. Appointments can be requested for a specific date or date range.
2. Appointments can be requested for a.m. or p.m.
3. Appointments can be requested for the earliest available appointment.
4. Non-standard work hours may be requested. These would include night and weekend appointments

5. The ILEC may return a date that is less than the standard interval. In that case, the order shall not be considered an expedited request.

3.1.2.2 Exception Conditions

There are a number of exception situations that can occur during the processing of transactions within the ILEC environment. These will be identified at the application level and included within the transaction response. The actual format, syntax and mechanism is not yet defined.

Examples of exception conditions applicable to appointment requests include

- Requested date or time not available
- Non-standard work hours not available
- No appointment necessary

3.1.3 Service Availability

1. This function determines what features/capabilities the local switch office can provide the customer.
2. The ILEC will provide service availability information using both online and batch processes.
3. ILEC responses will identify services/features using OBF defined data element standards (i.e. TCIF Codes) as opposed to ILEC-specific USOCs. Where OBF has not yet defined codes, services/features will be referred to through text mnemonics agreed to between AT&T and ILEC. Additional OBF standard codes will be pursued as appropriate for those text mnemonics that are agreed to.

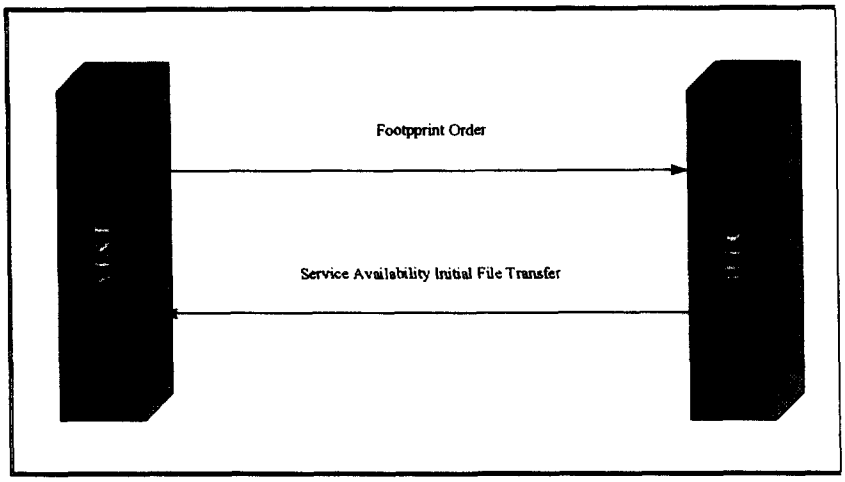
3.1.3.1 Service Availability Initial File Transfer

Batch Process:

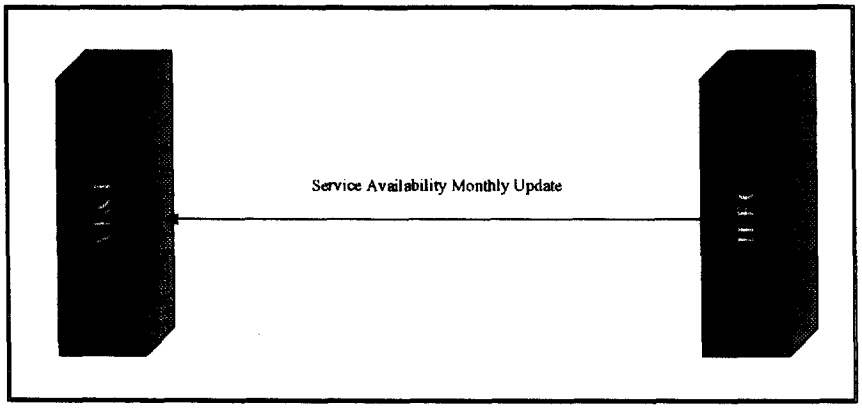
- ILEC will provide an initial full-file download in response to a footprint order from AT&T. The file will be electronically transmitted to AT&T utilizing machine-to-machine electronic interfaces.
- A monthly full-file download. The full-file downloads will occur every month on a scheduled basis. The data should arrive at AT&T within seven days following the month end. The file will be electronically transmitted to AT&T utilizing machine-to-machine electronic interfaces.

To determine service availability, the following switch and feature information is required on both the initial file download and the monthly file downloads. Generally, the ILEC should provide a list of Custom Calling features (i.e., call forwarding, three way calling, etc.) by NPA/NXX and by supplier switch CLLI code. The data elements required include:

- Tandem/End Office Designator
- Switch location (city)
- NPA/NXX
- Switch CLLI
- Class Feature Packages and Features Included
- Custom Calling Features
- ISDN Availability
- Centrex Availability
- Inter LATA PIC options
- Intra LATA PIC options



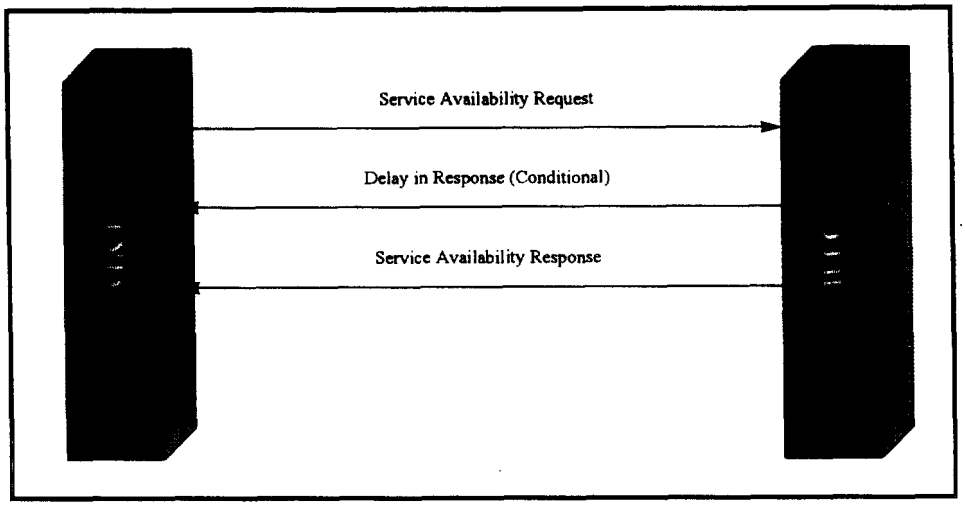
3.1.3.2 Service Availability Monthly Update



3.1.3.3 Service Availability Transactions

Online Process

AT&T will query ILEC systems for service availability information when that information is not available or a customer's physical address cannot be verified using the internal systems.



1. The response time for the Service Availability Query will be 4 to 7 seconds or less. Response time is defined as the time it takes for the query to be sent, plus the time it takes AT&T to receive the response from the ILEC.
2. The ILEC will send a Delay in Response transaction when response time exceeds 7 seconds and when it exceeds 14 seconds.
3. The Query can be based on CLLI or Address.
4. Switch service and feature information is returned by the ILEC.

3.1.3.4 Exception Conditions

There are a number of exception situations that can occur during the processing of transactions within the ILEC environment. These will be identified at the application level and included within the transaction response. The actual format, syntax and mechanism is not yet defined.

Examples of exception conditions applicable to service availability include

- Service location not found
- Service location not served
- Bad address data

3.1.4 Address Verification

1. This function provides the ability to verify an address before an order is issued.
2. The ILEC will provide orderable address (i.e. SAG or equivalent) information using both batch and online processes. All SAG information will be provided in USPS standard format.
3. The online process will be used when the address cannot be verified using internal AT&T systems.

Batch Process:

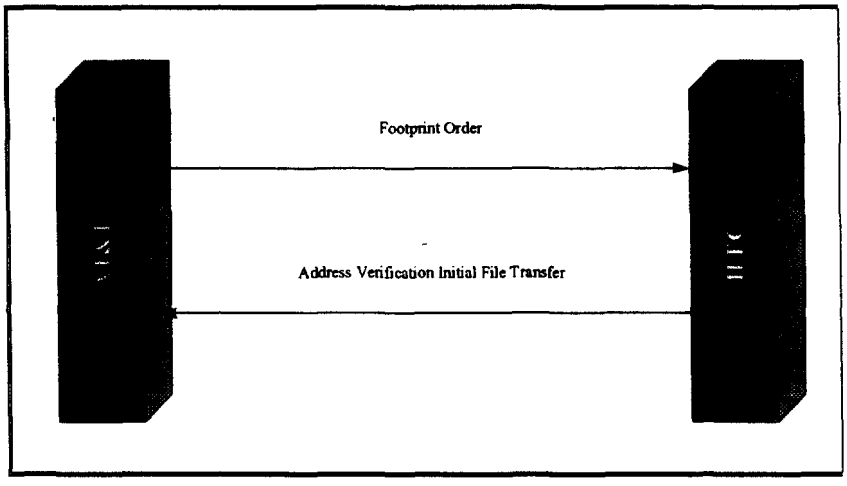
- ILEC will provide an initial full-file download in response to a footprint order from AT&T. The file will be electronically transmitted to AT&T utilizing machine-to-machine electronic interfaces.
- On an ongoing basis, the ILEC will provide a monthly full-file download. The full-file downloads will occur every month on a scheduled basis. The data should arrive at AT&T within seven days following the month end. The file will be electronically transmitted to AT&T utilizing machine-to-machine electronic interfaces.

- The SAG data will include the following data elements in USPS standard format.

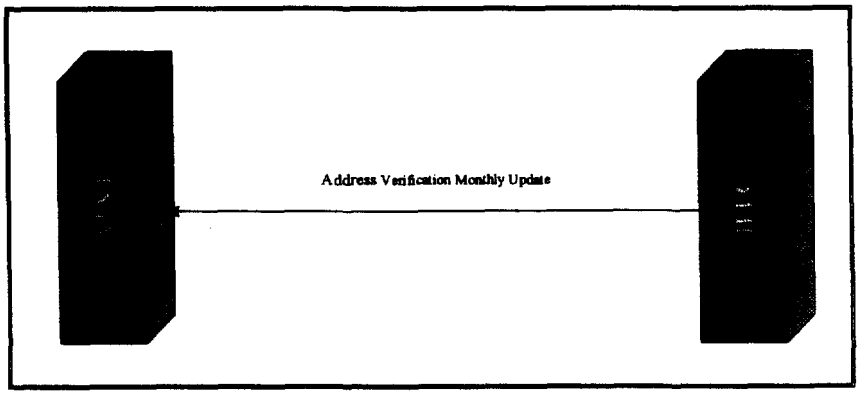
Data Element	*Examples*
Street Number	1234, 58
Street Directional	N, E, SW
Street Name	Kimberly, Pierce
Street Designator	AVE, ST, TER
Secondary Address Unit Indicator	APT, BLDG,FL
Secondary Address Number	(APT) A, (BLDG) 5
Community	Colonia, Easton
State	NJ, PA
Zip Code	07067, 18042

- SAG will also include CLLI code, Address Type indicator and Facility Available Indicator.

3.1.4.1 Address Verification Initial File Transfer

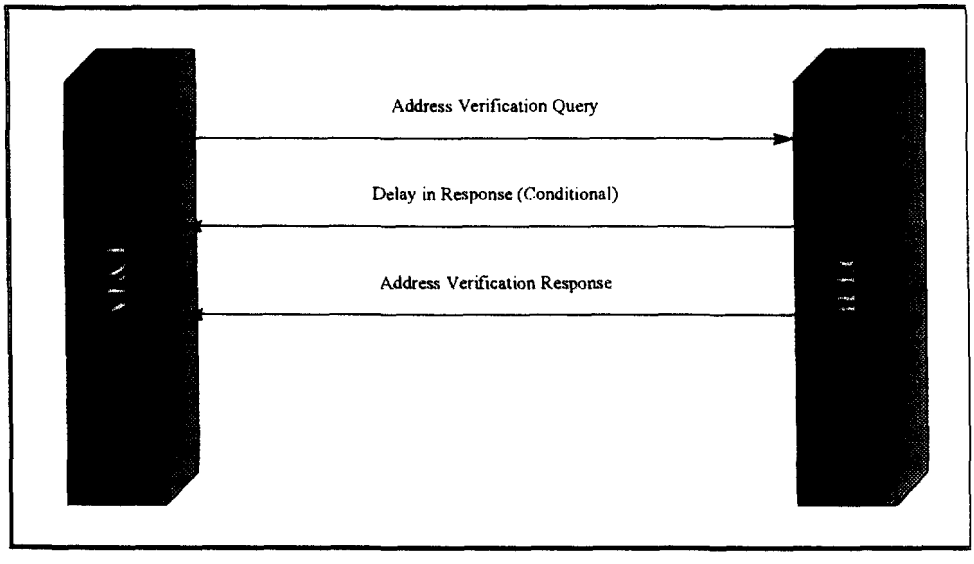


3.1.4.2 Address Verification Monthly Update



3.1.4.3 Address Verification Transactions

AT&T will query ILEC systems for Address Verification information when a customer's physical address cannot be verified using the internal systems.



1. The street address sent to ILEC for Address Verification will be in USPS standard format and will include the data elements listed under the Batch Process above.

2. Address Verification as a result of an online inquiry includes both "Exact Match" and "Near Match" address processing. The response will indicate which match type is being provided.

3. "Exact Match" is defined as a match on service address that occurs character for character, on an address submitted on a Address Verification Query. In this case, only the "exact match" address is returned on the Address Verification Response.

4. "Near Match" is defined as a match that is similar to an address submitted on a Address Verification Query. If there is not an exact match on the queried address, the near match addresses will be returned on the Address Verification. The algorithm for selecting near match addresses shall be a negotiated item and is expected to, at first, equal existing measures in use by the providers.

5. The response time for the Address Verification Query will be 4 to 7 seconds or less. Response time is defined as the time it takes for the query to be sent, plus the time it takes AT&T to receive the response from the ILEC.

6. If the response will exceed 7 seconds, the ILEC will send a Delay in Response transaction.

7. The Address Verification query will allow for both address and existing Telephone Number input.

8. The maximum number of near match addresses returned by the ILEC will be 10.

3.1.4.4 Exception Conditions

There are a number of exception situations that can occur during the processing of transactions within the ILEC environment. These will be identified at the application level and included within the transaction response. The actual format, syntax and mechanism is not yet defined.

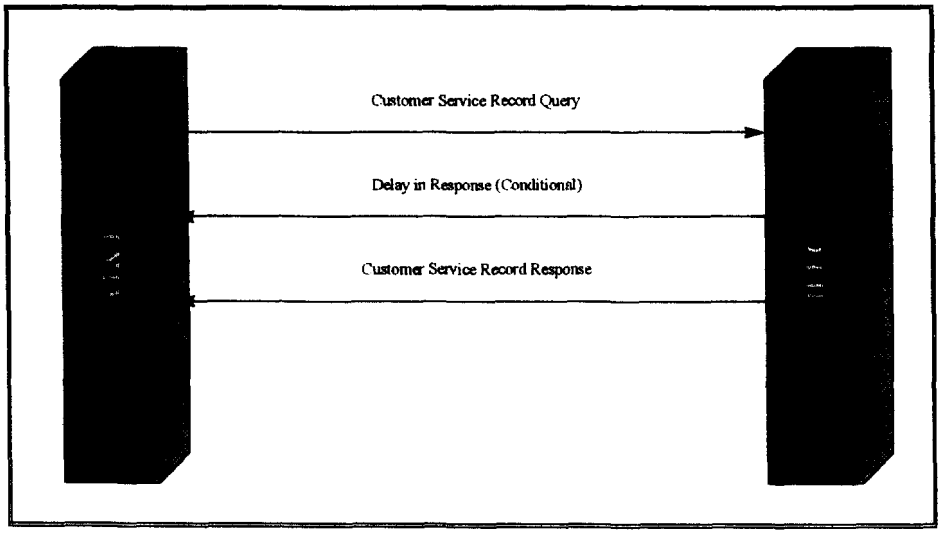
Examples of exception conditions applicable to address verification include

- Non-standard address received
- Address not recognized
- Facility (e.g. copper, NID) not available at service address

3.1.5 Customer Service Record Request

1. This function determines what features and services the customer currently has with the ILEC. This is only used for customers with existing service.
2. The response from the ILEC will include all telephone numbers associated with a customer.
3. ILEC responses will identify services/features using OBF defined data element standards (i.e. TCIF Codes) as opposed to ILEC-specific USOCs. Where OBF has not yet defined codes, services/features will be referred to through text mnemonics agreed to between AT&T and ILEC. Additional OBF standard codes will be pursued as appropriate for those text mnemonics that are agreed to.

3.1.5.1 Customer Service Record Query



1. The query can be requested by either telephone number or circuit number where appropriate.

3.1.5.2 Exception Conditions

There are a number of exception situations that can occur during the processing of transactions within the ILEC environment. These will be identified at the application level and included within the transaction response. The actual format, syntax and mechanism is not yet defined.

Examples of exception conditions applicable to customer service record requests include

- Customer information requested not found
- Invalid telephone number provided.
- Invalid circuit id provided.
- Insufficient authorization to access data

3.1.6 Combined Transactions

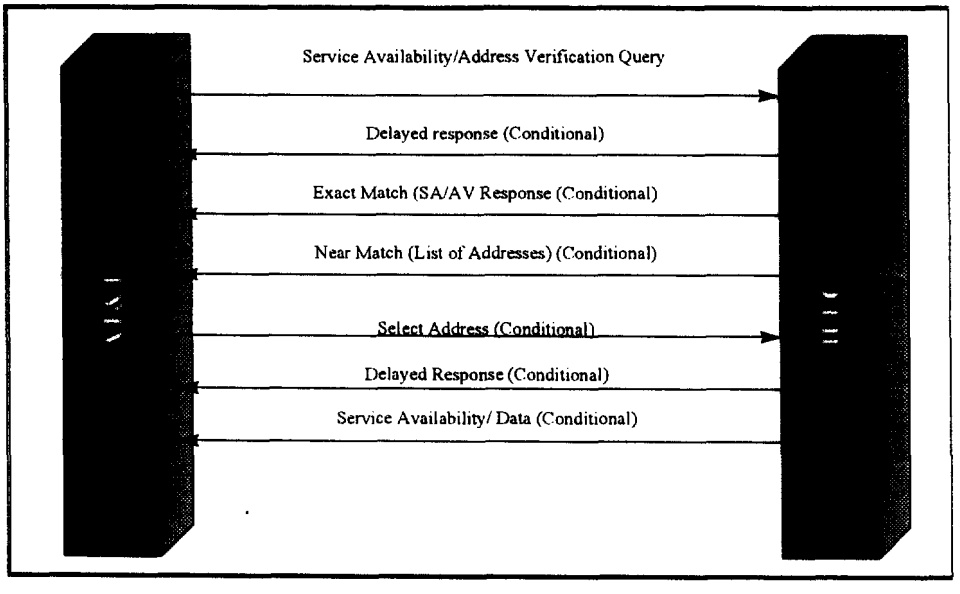
The ability to combine individual requests and responses into single transactions is required. There are many circumstances where individual transactions are logically related and can be processed more efficiently together. For example:

- address verification and service availability
- telephone number assignment and appointment request

The following scenarios describe some of the possibilities. A complete list of combined transactions and detailed object definitions will be provided in a later version of this document. A complete list of combined transactions will be derived as syntax mapping of the logical data objects is completed. Combined transactions will be constructed utilizing the individual transaction objects defined in Section 3.3, Detailed Object definitions. The intention is to construct the combined transactions by reusing the indvidual transaction object definitions.

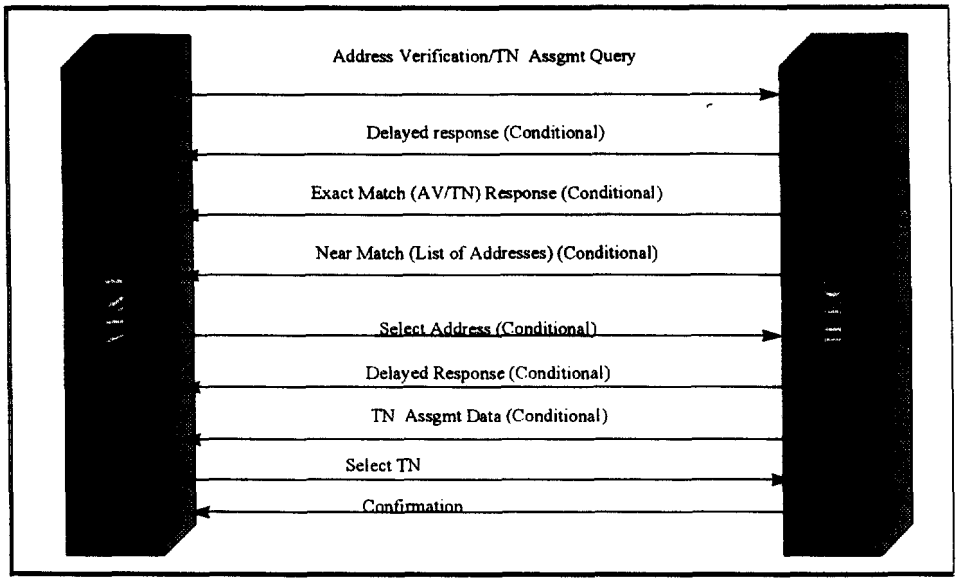
3.1.6.1 Service Availability/Address Verification

Service Availability/Address Verification will be used when a customer wishes to retain their existing telephone number and AT&T was unable to obtain either switch feature information or address verification from its internal systems.



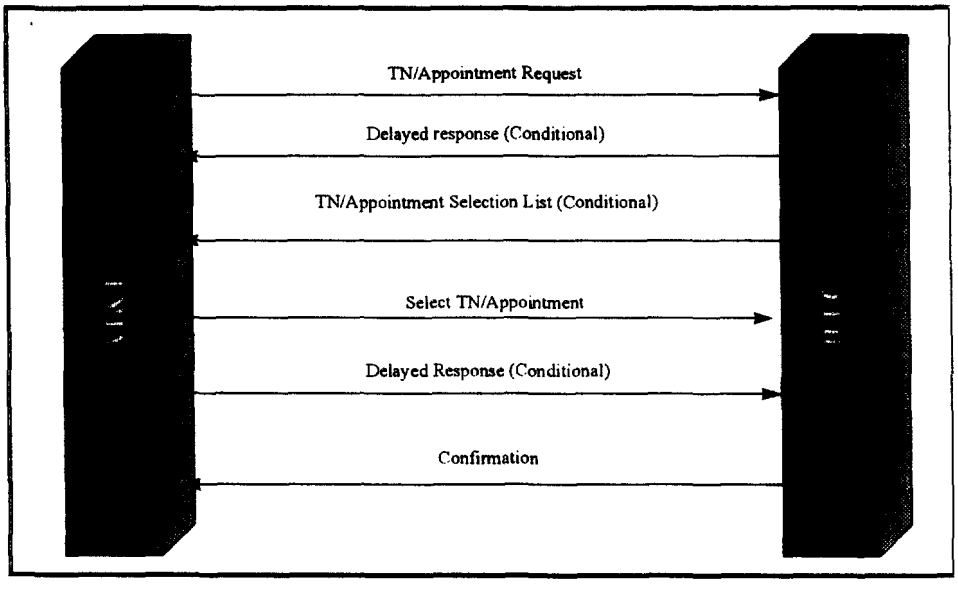
3.1.6.2 Address Verification/Telephone Number Assignment

This transaction will be used when the customer requests a new telephone number and AT&T was unable to validate the customer's address in its internal system.



3.1.6.3 Telephone Number/Appointment Request

This transaction will be used when the customer requests both a new telephone number and a premise visit.



3.1.6.4 Service Availability/Address Verification/Telephone Number Assignment

This transaction is used when the customer requests a new telephone number and service availability/address verification cannot be provided from internal AT&T systems.