17. Dedicated Signaling Transport

17.1 General

The Common Channel Signaling network is a packet switched communications network that allows for exchanging signaling and/or other information between processor equipped signaling systems on separate communications paths (out of band) from the voice and data communications. The protocol for Common Channel Signaling (Dedicated Signaling Transport) is the Consultative Committee for International Telephone and Telegraph (CCITT) and the American National Standards Institute (ANSI) SS7 signaling protocol.

17.2 Service Description

17.2.1 Dedicated Signaling Transport (DST)

Dedicated Signaling Transport (DST) is a Switched Access service which provides interconnection to the Telephone Company Common Channel Signaling Network (as referenced in Section 6.2.1 D4) using a dedicated two-way signaling path between a customer designated premises and a Telephone Company Signal Transfer Point (STP). DST uses a dedicated signaling link and a dedicated STP port. The signaling link provides the connection from the customer designated premises to the Telephone Company STP. The STP port provides the customer access to the Telephone Company SS7 network.

The signaling link and the STP port are dedicated to the customer.

Each signaling link provides for two-way digital transmission at a speed of 56 kbps. The connection to the Telephone Company STP will be made from the customer's STP which requires four 56 kbps circuits. The design requirements for signaling links are described in Technical Publication TR-TSV-000905. The customer may utilize an existing DS1 (1.544 Mbps) facility for DST. If the customer does not have existing DS1 (1.544 Mbps) facilities available for use with DST and does not want to order a DS1 Channel, the Telephone Company will provide an STP Access Connection between the customer designated premises and the Telephone Company Hub. When a DS1 Channel or an STP Access Connection is utilized by the customer, multiplexing from 1.544 Mbps to 56 kbps will occur at the designated Telephone Company Hub.

DST allows the customer to access Telephone Company services as they become available and as facilities permit. DST provides connection from the customer's STP to the Telephone Company STPs only.

17. Dedicated Signaling Transport (Cont'd)

17.2 Service Description (Cont'd)

17.2.1 Dedicated Signaling Transport (DST) (Cont'd)

Diversity will be provided as mutually agreed upon by the Telephone Company and the customer based upon availability from the customer's STP location to the Telephone Company's STP. Regulations and charges for diversity will apply, as specified in Section 11 of this Tariff.

One STP Port Termination is required for each 56 kbps STP Access Mileage link utilized for DST.

17.2.2 Line Information Data Base (LIDB) Service Applications

There are two different LIDB Service Applications:

- Validation Service
- Originating Line Screening Service (OLNS)

Following are detailed descriptions of each of the available service applications:

(A) Validation Service

Validation Service is provided by the Telephone Company to its customers in support of alternate billing services (ABS). Validation Service provides access to billing validation data which resides on the Telephone Company data base for use with alternate billing services. Alternate billing services allow customers' end users the ability to bill calls to an account not necessarily associated with the originating line. Validation Service supports alternate billing services such as Calling Cards, Collect Calls and Third Number Billing.

Customers participating in Validation Service for purposes of obtaining billing validation data which resides on the Telephone Company database, originate queries to the LIDB from an operator services system (OSS) identified by an originating point code (OPC). The LIDB query is routed through one of two Telephone Company Signal Transfer Points (STPs), located in Hartford and New Haven, Connecticut, to the Telephone Company Service Control Point (SCP) where the LIDB database resides. The requested billing validation data, in the form of a signaling message, is forwarded via one of the two Telephone Company STPs to the customer's designated OSS where the LIDB query originated.

17. Dedicated Signaling Transport (Cont'd)

17.2 Service Description (Cont'd)

17.2.2 Line Information Data Base (LIDB) Service Applications (Cont'd)

(A) Validation Service (Cont'd)

The Telephone Company LIDB will receive and respond to all Calling Card Service and Billed Number Screening (BNS) queries as defined in Bellcore publications TR-NPL-000246, TR-TSV-000905, and TR-TSV-000954. These procedures will be applied uniformly to all Telephone Company LIDB Validation customers.

Validation Service will provide the following functions on a per query basis:

- Validation of a telecommunications calling card stored on LIDB.
- Determination of whether the billed line automatically rejects certain calls billed as collect or third number.
- Determination of whether the billed line in the Billed Number Screening Query is a public or semi-public telephone.

(B) Originating Line Number Screening (OLNS) Service

OLNS is a Line Information Data Base service that provides originating line information to Operator Service Providers (OSPs) through a LIDB query. In response to a properly formatted OLNS query, the OLNS query response will identify the treatment and restrictions of the originating line placing the call. The Telephone Company will provide the originating screening requirements for call processing and billing that are associated with the originating line.

Technical specifications for OLNS indicators can be found in the following Technical Reference Publication: TR-NWT-001158.

The existing LIDB Query Transport is a flat rate which applies to both Validation queries and to OLNS queries on a per query basis. This rate provides for the transport of the LIDB query from the STPs to the SCPs and back. The Validation Service Query provides for the actual validation of the LIDB information. The OLNS Query provides for the actual originating line screening information which will be billed to the party that originated the OLNS query if it is used for fraud.

17. Dedicated Signaling Transport (Cont'd)

17.2 Service Description (Cont'd)

17.2.2 Line Information Data Base (LIDB) Service Applications (Cont'd)

All access to the Telephone Company's LIDB will occur through two Telephone Company STPs located in Hartford and New Haven, Connecticut. The Telephone Company will provide customer interconnection to the Telephone Company STPs via its Common Channel Signaling Access Service (CCSAS) provided in Section 17.2.1, preceding. LIDB Validation customers must obtain transport service from the Telephone Company (i.e., CCSAS) or from another CCS7 signaling transport service provider.

17.3 Limitations

Unless expressly authorized in writing by the Telephone Company, LIDB Service Applications are not to be used for purposes other than those LIDB functions described in 17.2.2. LIDB Services are used for those functions only on an on-line, call-by-call basis. Data accessed on LIDB may not be stored by the customer elsewhere for future use or utilized for purposes other than described in 17.2.2, preceding.

Proprietary information residing in the Telephone Company LIDB is protected from authorized access and may not be stored in a customer's database for any reason. All information on the LIDB data base related to alternate billing services is proprietary.

Examples of proprietary information include, but are not limited to, the following:

- Billed Number
- Personal Identification Number (PIN)
- Primary Interexchange Carrier (PIC) Information
- Billed Number Screening Indicators
- IC Denial Information
- Reports on LIDB Usage
- Information related to billing for LIDB usage

17. Dedicated Signaling Transport (Cont'd)

17.4 Rate Elements

17.4.1 Dedicated Signaling Transport (DST) Rate Elements

The following rate elements apply to DST:

- STP Access Connection (described in (A) following)
- STP Access Mileage (described in (B) following)
- STP Port Termination (described in (C) following)

(A) STP Access Connection

The STP Access Connection rate element provides the transmission facility between the customer designated premises and the Telephone Company Hub.

Connection charges are calculated according to mileage band. There are two rates that apply, a fixed monthly rate per mileage band and a monthly rate per mile.

Application of rates and charges is specified in 17.8.2(A), following. STP Access Connection is provided at the rates as set forth in 17.9.1(A), following.

(B) STP Access Mileage

The STP Access Mileage rate element provides the dedicated 56 kbps transmission facilities between a designated Telephone Company Hub and the Telephone Company STP. STP Access Mileage is calculated according to mileage band. There are two rates that apply, a fixed monthly rate per mileage band and a monthly rate per mile.

Application of the rate is specified in 17.8.2(A), following. STP Access Mileage is provided at the rate as set forth in 17.9.1(B), following.

17. Dedicated Signaling Transport (Cont'd)

17.4 Rate Elements (Cont'd)

17.4.1 Dedicated Signaling Transport (DST) Rate Elements (Cont'd)

(C) STP Port Termination

The STP Port Termination rate element provides for termination of the dedicated two-way 56 kbps signaling link at the Telephone Company STP. One STP Port Termination must be installed at the Telephone Company STP for each 56 kbps link.

Application of rates and charges is specified in 17.8.2(A), following. STP Port Termination is provided at the rates and charges as set forth in 17.9.1(C), following.

17.4.2 LIDB Service Application Rate Elements

The following rate elements and nonrecurring charge apply to LIDB Services:

- LIDB Query Transport (described in (A) following)
- Validation Service Query (described in (B) following)
- OLNS Service Query (described in (C) following)
- LIDB Service Establishment (described in (D) following)

(A) LIDB Query Transport

The LIDB Query Transport rate element provides for the routing of the LIDB query through one of two Telephone Company STPs, as designated by the Telephone Company, to the Telephone Company SCPs where the LIDB resides and back.

(B) Validation Service Query

The Validation Service Query rate element provides for the validation of calling card and toll billing exception data and performance of public and semi-public telephone checks. For these validation purposes, Validation Service customers will query the LIDB located in the Telephone Company SCPs via the Telephone Company CCS7 network. The LIDB will respond with a verification signal message back to the Validation Service customer via the Telephone Company CCS7 network.

Application of the rates is specified in 17.8.2(B)(1) and (2)a. The LIDB Query Transport and the Validation Service Query are provided at the rates set forth in 17.9.2 and 17.9.3(A) following.

17. Dedicated Signaling Transport (Cont'd)

17.4 Rate Elements (Cont'd)

17.4.2 LIDB Service Application Rate Elements (Cont'd)

(C) OLNS Service Query

The OLNS Service Query rate element provides for identification of the originating screening requirements for call processing and billing that are associated with an originating line. The application of the rates is specified in 17.8.2(B)(1) and 17.8.2(B)(2)b. The rates are set forth in 17.9.2 and 17.9.3(B).

(D) LIDB Service Establishment

A nonrecurring charge applies for each request for establishment or change of existing LIDB Service. The nonrecurring rate element, LIDB Service Establishment, is on a per Originating Point Code (OPC) basis. Any change in a LIDB OPC will be treated as a discontinuance of the existing OPC and an installation of a new OPC. The LIDB Service Establishment charge is as set forth in 17.9.2 (B), following.

17.5 Jurisdictional Report Requirements

17.5.1 Dedicated Signaling Transport (DST) Report Requirements

When a customer orders DST, the customer shall provide to the Telephone Company a DST percentage interstate usage (PIU).

Customers who provide the PIU information shall supply the Telephone Company with an interstate percentage in a whole number (a number of 0 through 100) per STP Port Termination. This STP Port Termination PIU will be an average PIU based upon the jurisdiction (interstate versus intrastate) of those originating end user calls that require use of the specified STP Port Termination for signaling purposes.

When the customer orders STP Access Connection and/or STP Access Mileage from the Telephone Company, the Telephone Company will derive the PIU for the STP Access Connection and STP Access Mileage. The STP Access Connection and STP Access Mileage PIU derived by the Telephone Company will be based upon the customer provided PIU for the Port Termination. The projected interstate percentages will be used by the Telephone Company to determine the appropriate jurisdiction for the application of rates and charges of DST.

17. Dedicated Signaling Transport (Cont'd)

17.5 Jurisdictional Report Requirements (Cont'd)

17.5.1 Dedicated Signaling Transport (DST) Report Requirements (Cont'd)

The DST PIU must be provided to the Telephone Company upon ordering service, and thereafter, on a quarterly basis. Provisions for updating the interstate and intrastate jurisdictional report as specified in Section 2.7.4, preceding will also apply for the DST PIU Report.The Telephone Company will utilize the quarterly DST PIU Report for the STP Port Termination to update the STP Access Connection and STP Access Mileage PIU effective on the next bill date for the service.

Verification provisions as specified in Section 2.7.5, preceding will also apply for the DST PIU Report.

17.5.2 LIDB Service Applications Report Requirements

When a customer orders LIDB Service Applications; i.e., Validation Service or OLNS Service, the customer shall provide to the Telephone Company a LIDB percentage interstate usage (PIU).

Customers who provide the PIU information shall supply the Telephone Company with an interstate percentage in a whole number (a number of 0 through 100) per Originating Point Code (OPC) ordered. The LIDB Services PIU will be an average PIU based upon the jurisdiction (interstate versus intrastate) of those originating

The LIDB PIU must be provided to the Telephone Company upon ordering service, and thereafter, on a quarterly basis. Provisions for updating the interstate and intrastate jurisdictional report as specified in Section 2.7.4, preceding will also apply for the LIDB PIU Report.

Verification provisions as specified in Section 2.7.5, preceding will also apply for the LIDB PIU Report.

17. Dedicated Signaling Transport (Cont'd)

17.6 Testing Requirements

In addition to testing services available in Section 8, the following prescribes the testing required for CCSAS and LIDB Service Applications.

17.6.1 DST Acceptance Testing Requirements

At no additional charge, the Telephone Company will cooperatively test with the customer, at the time of installation, network compatibility and other operational tests as described in Bellcore Technical References TR-NPL-000246, TR-TSV-000905 and TR-TSV-000954. Successful completion and acceptance of all testing requirements must occur in order to receive DST.

17.6.2 LIDB Acceptance Testing Requirements

At no additional charge, the Telephone Company will cooperatively test with the customer, at the time of installation, network compatibility and other operational tests as described in Bellcore Technical References TR-NPL-000246, TR-TSV-000905 and TR-TSV-000954. Successful completion and acceptance of all testing requirements must occur in order to receive LIDB.

17. Dedicated Signaling Transport (Cont'd)

17.7 Obligations of the Telephone Company

In addition to the obligations of the Telephone Company set forth in Section 2, the Telephone Company has certain other obligations pertaining to the provision of LIDB Service Applications. These obligations are as follows:

17.7.1 LIDB Data Specifications

The Telephone Company's LIDB will contain a current record for every working line number served by the Telephone Company. Other exchange carriers who may store their data in the Telephone Company LIDB are requested to provide this data as well.

The Telephone Company will update the LIDB information; i.e., add, delete and modify customer accounts as customers move, become delinquent on their account, or order new service, on a same day as received basis. Customer account information may include class of service, subaccount (PIN information), effective dates of account changes, toll billing exceptions, PIC information, and pending record changes.

The Telephone Company has procedures in place to deactivate billing validation data in the event that it is being used fraudulently. Calling Cards identified or suspected of being fraudulently used will be updated 7 days a week, 24 hours a day.

The Telephone Company utilizes a centralized fraud management center which provides a calling card help line, fraud analysis, high toll calling card investigation, and on-line ability to update customer account information (e.g. PIN changes, denials, restorals and collect and bill-to-third locking).

17.7.2 Measurement of LIDB Queries

When a LIDB query is received at the Telephone Company's SCP, a search is performed for the requested data. The Telephone Company SCP formulates a response and accumulates the LIDB queries for billing.

17. Dedicated Signaling Transport (Cont'd)

17.7 Obligations of the Telephone Company (Cont'd)

17.7.3 Provision of Billing Information

LIDB Validation Service and OLNS Service queries received at the SCP are accumulated and records are generated identifying the number of queries routed to and from the SCP and processed by the OPC of the customer's OSS location This information is delivered to the accounting office via tape or by teleprocessing for processing and billing. The query charges will be accumulated per OPC and billed to the LIDB Service customer each month.

The Telephone Company will provide information with the bill which will enable the customer to determine how the billed amount was calculated. Other reports may be provided to the customer as mutually agreed upon. Such reports, provided on an individual case basis, may involve additional rates, charges or conditions.

17.7.4 Investigation of Fraudulent Use of Service

End user information, pertinent to the investigation, may be shared with LIDB Validation Service customers where appropriate when validation queries for the specific customer reach or exceed Telephone Company established fraud threshold levels.This fraud threshold level will be applied uniformly to all customers. Such information shall be used solely for the purpose of resolving the investigation and shall not be disclosed by the LIDB Validation customer to any other party.

17.7.5 LIDB System Management

The Telephone Company will administer its LIDB to insure the provision of acceptable service levels to all customers of the Telephone Company's LIDB Services. During periods of LIDB Service system congestion, an automatic call gapping procedure will be utilized to control such congestion. The automatic call gapping procedure will tell the switch the gap (how long the switch should wait before sending another query) and the duration (how long the switch should continue to perform gapping). For example, during an overload condition, the automatic call gapping procedure will tell the LIDB when to begin to drop one out of three of the queries received. This call gapping procedure will be applied uniformly to all users of the Telephone Company's LIDB Service Applications.

The Telephone Company maintains the right to invoke manual intervention of the automatic call gapping procedure to preserve the integrity of the network.

17. Dedicated Signaling Transport (Cont'd)

17.8 Rate Regulations

17.8.1 Description of Rates and Charges

There are two types of rates and charges which apply to CCSAS and to LIDB Services. They are monthly recurring rates and nonrecurring charges. These rates and charges are applied differently to the various rate elements as set forth below.

(A) Monthly Rates

Monthly rates are either (1) fixed recurring rates that apply each month, or fraction thereof, when a specific service is provided; or (2) usage sensitive rates that apply on a per unit basis, e.g., per query, when a specific service is used.

(B) Nonrecurring Charges

Nonrecurring charges are one-time charges that apply for a specific work activity (i.e., installation of a service or rearrangement of an existing service).

17.8.2 Application of Rates and Charges

(A) Dedicated Signaling Transport (DST)

Rates and charges for STP Access Connection, STP Access Mileage and the STP Port Termination apply as follows:

(1) STP Access Connection

When STP Access Connection is provided, a fixed monthly rate as set forth in Section 17.9.1(A), following, will be assessed for each STP Access Connection between the customer's signaling point of interconnection and the Telephone Company Hub.

A monthly rate per mile applies to each airline mile between the Serving Wire Center of the customer's signaling point of interconnection and the Telephone Company Hub.

A nonrecurring charge applies for the installation of each STP Access Connection.

17. Dedicated Signaling Transport (Cont'd)

17.8 Rate Regulations (Cont'd)

17.8.2 Application of Rates and Charges (Cont'd)

(A) Dedicated Signaling Transport (DST) (Cont'd)

(2) STP Access Mileage

When STP Access Mileage is provided, a fixed monthly rate per mileage band as set forth in Section 17.9.1 (B), following, will be assessed for each dedicated 56 kbps out-of-band signaling connection between the Telephone Company Hub where multiplexing from DS1 (1.544 Mbps) to a 56 kbps circuit occurs, and the Telephone Company STP.

A monthly rate per mile applies to each airline mile between the Telephone Company Hub, where multiplexing from DS1 (1.544 Mbps) to a 56 kbps circuit occurs, and the Telephone Company STP.

(3) STP Port Termination

A monthly rate as set forth in Section 17.9.1 (C), following, per STP Port Termination applies to each termination of the dedicated two-way 56 kbps signaling link at the Telephone Company STP.

A nonrecurring charge as set forth in Section 17.9.1 (C), following, per STP Port Termination applies to each termination of the dedicated two-way 56 kbps signaling link at the Telephone Company STP. This nonrecurring charge applies for the installation of and change to existing service.

17. Dedicated Signaling Transport (Cont'd)

17.8 Rate Regulations (Cont'd)

17.8.2 Application of Rates and Charges (Cont'd)

(B) LIDB Service Applications

Rates and charges for LIDB Service Applications apply as follows:

(1) LIDB Query Transport

A usage sensitive rate applies to each LIDB query transported from the Telephone Company STP to the SCP location. This rate will apply each time a customer requests and receives validation of a LEC calling card, requests and receives the status of a billed number, or requests and receives the originating line screening information associated with a LEC line stored in the Telephone Company LIDB. Per query charges are accumulated over a monthly period and are billed to the customer on a monthly basis.

(2) LIDB Service Applications

a) Validation Service Query

A usage sensitive rate applies to each LIDB query request received at the Telephone Company SCP. This rate will apply each time a customer requests and receives validation of a LEC calling card or requests and receives the status of a billed number associated with a LEC line stored in the Telephone Company LIDB. Per query charges are accumulated over a monthly period and are billed to the customer on a monthly basis.

b) OLNS Service Query

The OLNS Service Query usage rate applies to each query received at the Telephone Company's LIDB for the identification of originating line number screening information.

(3) LIDB Service Establishment Charge

A nonrecurring charge per request for LIDB Validation Service and for OLNS Service applies for the establishment and change of existing LIDB Service Applications.

The LIDB Service Establishment Charge applies per originating point code (OPC) per request for the establishment of LIDB Services.

17. Dedicated Signaling Transport (Cont'd)

17.9 Rates and Charges

17.9.1 Dedicated Signaling Transport (DST)

(A) Signaling Link

(1) STP Access Connection (DS1)

| | Monthly Rate | |
|---|---|---|
| | Fixed | Per Mile |
| Mileage Bands | | |
| 0 | $344.02 | None |
| Over 0 | $413.74 | $21.40 |

| | | Nonrecurring Charges |
|---|---|---|
| Per First Connection | NRBSB | $615.81 |
| Per Each Additional Connection | NRBSD | $615.81 |

(2) STP Access Mileage (56 Kbps)

| | Monthly Rate | |
|---|---|---|
| | Fixed | Per Mile |
| Mileage Bands | | |
| 0 | $42.90 | None |
| Over 0 | $93.72 | $1.82 |

(B) STP Port Termination

| | Monthly Rate | Nonrecurring Charge |
|---|---|---|
| Per Port Termination | $799.00 | $1,300.00 |

17. Dedicated Signaling Transport (Cont'd)

17.9 Rates and Charges

17.9.2 LIDB Query Transport

| | Rate Per Query |
|---|---|
| Per LIDB Service Application Query | $0.00032 |

17.9.3 LIDB Service Applications

| | | |
|---|---|---|
| (A) | Validation Service Query | $0.037702 |
| (B) | OLNS Service Query | $0.01800 |

17.9.4 LIDB Service Establishment Charge

| | Nonrecurring Charge |
|---|---|
| Per Originating Point Code (OPC), per request | $240.00 |