

ACCESS SERVICE

7. **SPECIAL ACCESS SERVICE** (Continued)

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Issued: October 31, 2005

Effective: November 1, 2005

Vice President - Marketing
TDS METROCOM, LLC
525 Junction Road, Suite 6000
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7. **SPECIAL ACCESS SERVICE** (Continued)

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7. **SPECIAL ACCESS SERVICE** (Continued)

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7.6 High Capacity Service

7.6.1 Basic Channel Description

A High Capacity channel is a channel for the transmission of DS1, DS3, or OCN Service or Circuit. The actual bit rate is a function of the channel interface selected by the customer. High Capacity channels are provided between Customer Designated Premises or between a Customer Designated Premises and a Telephone Company hub or hubs.

High Capacity Services Channel Terminations are offered as Type 1, Type 2, or Type 3 depending on the facilities used in provisioning circuit.

A Type 1 High Capacity Service is provisioned using wholly Company-owned facilities within a Market Area to provide the communications path between Central Office Hub and the Customer Designated Premise or Central Office Hub and the Facility Hub.

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A Type 2 High Capacity Service is provisioned using unbundled network element facilities leased from a third party to provide the communications path between the Facility Hub and the Customer Designated Premise.

A Type 3 High Capacity Service is provisioned using facilities other than unbundled network elements to provide the communication path between the Facility Hub or IXC POP and the Customer Designated Premises or when services are provided outside the Telephone Company's Market Area.

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A channel with technical specifications package HC1 will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the 1.544 Mbps rate through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference GR-342-CORE.

Rates and charges for Special Access High Capacity Service are as set forth in 15.4.4 following.

ACCESS SERVICE7. **SPECIAL ACCESS SERVICE** (Continued)7.6 High Capacity Service (Continued)7.6.2 Technical Specifications Packages and Network Channel Interfaces

Technical Specifications Packages are set forth in 13.2.1 following.
Compatible channel interfaces are set forth in 13.2.2 following.

The following network channel interfaces (NCIs) define the bit rates that are available for a High Capacity channel:

<u>NCI</u>	<u>Bit Rate</u>	
DS-15	1.544 Mbps (DS1)	(T) (D) (D)
DS-44	44.736 Mbps (DS3)	(D)
FCF-B	155.52 Mbps (OC3)	(N)
FCF-D	622.08 Mbps (OC12)	(N)

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7. SPECIAL ACCESS SERVICE (Continued)

7.6 High Capacity Service (Continued)

7.6.3 Optional Features and Functions

(A) Cross Connect

The function to provide the electrical or optical connection of two digital services of the same bit rate at a Central Office Hub or Facility Hub.

(B) OCN Protection

This service is provided with protection capable electronics in the Telephony Company Network. In the event of a primary electronic failure, the services would switch to the protection electronics.

1 + 1 Protection

This option provides two identical fiber pairs within the same cable sheath and path. If the working pair fails, traffic would switch to the protected (second) fiber pair. This option does not protect against a fiber cable cut.

The protected OC-3/OC3c, OC12/OC12c, and OC48/OC-48c services are offered with four fibers in the same cable sheath and the protection electronics are activated when this option is ordered. This allows customers to order protection providing their CPE can accommodate.

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7. **SPECIAL ACCESS SERVICE** (Continued)

7.6 High Capacity Service (Continued)

7.6.3 Optional Features and Functions (Continued)

(C) Central Office Multiplexing

(1)

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(2) DS3 to DS1

An arrangement that converts a 44.736 Mbps channel to 28 DS1 channels using digital time division multiplexing.

(3)

(D)

(4)

(5)

(6)

(D)

(7) OC3 to DS3

An arrangement that converts a 155.52 Mbps channel to 3 DS3 channels using Add/Drop Multiplexing

(N)

(8) OC12 to OC3

An arrangement that converts a 622.08 Mbps Channel to 4 OC3 channels using Add/Drop Multiplexing

(9) OC12 to DS3

An arrangement that converts a 622.08 Mbps Channel to 12 DS3 channels using Add/Drop Multiplexing

When an OC3 channel is derived from an OC12 service and is further multiplexed to obtain DS3 service, an OC3 to DS3 multiplexing charge will apply in addition to the OC12 to OC3 multiplexing charge.

When a DS3 channel is derived from an OC3 service and is further multiplexed to obtain DS1 service, a DS3 to DS1 Multiplexing charge will apply in addition to the OC3 to DS3 multiplexing charge.

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7. **SPECIAL ACCESS SERVICE** (Continued)

7.6 High Capacity Service (Continued)

7.6.3 Optional Features and Functions (Continued)

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(D) Clear Channel Capability (CCC)

- (1) CCC is an arrangement that allows a customer to transport 1.536 Mbps information rate signals over a 1.544 Mbps High Capacity channel or over a 1.544 Mbps High Capacity channel derived from a multiplexed 44.736 Mbps High Capacity channel with no constraint on the quantity or sequence of one and zero bits. This arrangement requires the customer signal at the channel interface to conform to Bipolar with Eight Zero Substitution (B8ZS) line code as described in Technical Reference GR-54-CORE and Technical Reference GR-342-CORE.
- (2) CCC is provided, subject to availability of facilities, on DS1/1.544 Mbps High Capacity channels between two customer designated premises and on multiplexed DS3/44.736 Mbps High Capacity channels or multiplexed DS1/1.544 Mbps High Capacity channels* between a Telephone Company Central Office Hub and a Customer Designated Premises.
- (3) The CCC optional feature must be ordered at the same time the High Capacity service is ordered. The charges for the CCC optional feature are as set forth in 7.2.2 (C) (3) preceding.

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* Available only on a DS1-to-Digital multiplexed configuration

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7. Special Access Service (Cont'd)

7.7 Individual Case Filings

Certain services set forth in Special Access Service, Section 7. are provided on an Individual Case Basis. Rates and charges for Special Access Service provided on an Individual Case Basis.

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8. LOCAL NUMBER PORTABILITY (LNP) QUERY SERVICE

8.1 General

LNP Query Service is a capability that utilizes Advanced Intelligent Network (AIN) technology to query a database to secure network routing instructions before completion of a call. The database contains information about end users which have ported their service from the donor switch. At a minimum, the database contains the Location Routing Number (LRN) which identifies the Local Service Provider's (LSP) switch serving each ported end user. The LRN is used to direct the call to the correct switch for completion to the end user. Where more than one network is involved in completing the call, the network just before the terminating network (i.e., the N-1 Network) is responsible for querying a LNP database to secure the LRN.

N-1 wireline and wireless telecommunications carrier ("Carriers") will be assessed a LNP query charge as set forth in Section 15 following where they deliver calls for termination by the Telephone Company for which a query has not been performed.

8.2 LNP Query Service Application

Terminating calls from N-1 Carriers upon which a query has not been performed to numbers in the Telephone Company's network with NXX codes from which a number is or has been ported that have been designated as number portable will require a query to the LNP database. There are two applications of the LNP network capability through the Telephone Company's network.

8.2.1. Prearranged LNP Query

N-1 Carriers may arrange in advance to have the Telephone Company query the LNP data base for terminating a call into the N-1 Telephone Company's network. This query is initiated on behalf of the Carrier in the performance of its N-1 responsibility. In this scenario, the Telephone Company's end office or access tandem switch will suspend call processing and launch a query to the LNP database. When the routing information is returned to the switch, call processing is resumed and the call is routed to the correct switch for completion to the called party. The Carrier will be assessed with either an end office or a tandem LNP Query depending upon where the query is launched.

8.2.2. Default LNP Query

Carriers who have not arranged in advance to have the Telephone Company query the LNP database or otherwise do not qualify for the prearranged query rate and terminate calls into the Telephone Company's network without having performed the appropriate database query will be assessed a Default LNP Query. This query is initiated on behalf of the N-1 Carrier in the performance of its N-1 responsibility, and may require the Telephone Company to assume extraordinary measures to meet the demand of unforecasted default queries.

8. LOCAL NUMBER PORTABILITY (LNP) QUERY SERVICE (Cont'd)8.3 LNP Surcharge

The Telephone Company queries the database, as required, on behalf of its local exchange, line side access service customers and resale customers to enable completion of calls to numbers with NXX codes that have been designated as number portable. This service is "automatically" provided as part of the dialing process employed in the Telephone Company's local exchange and access network.

On calls placed to numbers with NXX codes that have been designated as number portable, an originating LNP capable switch, using advanced intelligent network capabilities will suspend a call processing, formulate and launch a query via the common channel signaling network to a database containing information necessary to route calls to number portable NXX codes. When the necessary routing information has been returned from the database to the switch originating the query, call processing is resumed and the call is routed to the correct network switching element for completion to the called party.

The LNP Surcharge Service rate element applies to and provides the capability necessary for three Telephone Company's local and general exchange and lineside access services (e.g., FGA customers to: (1) maintain the same telephone number when changing from one Telecommunication Service Provider to another while remaining at the same location, and (2) to complete calls to any telephone number that has been ported.

This capability is automatically provided as part of the local dialing process employed in the Telephone Company's local exchange network.

This charge applies per line capable of originating local exchange calls with the following exceptions:

PBX trunks will be assessed the equivalent of 9 monthly rates; and
ISDN PRI will be assessed 5 monthly rates.

8.4 Service Provisioning

LNP Query Service will only be available at specially designated switches.

LNP Query Service procedures will be applied uniformly to all users of the Telephone Company's LNP Query Service except as stated in 8, following. The Telephone Company's LNP database will receive and respond to all queries, including the Telephone Company's queries.

8. LOCAL NUMBER PORTABILITY (LNP) QUERY SERVICE (Cont'd)

8.4.1. Manner of Provisioning

LNP Query Service will be provisioned using the LRN. The LRN associates an NPA NXX-XXXX number with each central office switch that serves ported lines. This number will be known as the LRN for that switch. The LRN will be used as a network routing number for calls to ported numbers serviced by that switch. All switching equipment types will utilize LRN functionality using Advanced Intelligent Network capability (AIN).

8.4.2. Limitations

LNP Query Service is to be used only on a call-by-call basis for routing calls to number portable NXX codes and cannot be used for purposes other than those functions described herein.

Information residing in the Telephone Company's LNP database is protected from unauthorized access and may not be stored in a carrier's database or elsewhere for any reason.

8.4.3. Network Management

The Telephone Company will administer its network with the objective of the provision of acceptable service levels to all users of LNP query service.

The Telephone Company maintains the right to block LNP Query traffic, in a nondiscriminatory manner, where the processing of the LNP queries threatens to disrupt operation of its network and impair network reliability. The provision of LNP Query Service for both default and prearranged queries is subject to the provisions of Section 2.

8.5 Rate Regulations

The rates and charges associated with LNP Query Services are "query" based and will be billed on a monthly basis, based on recorded usage. Query charges will be applied by the Telephone Company based upon the recordings of carrier queries to the database. If such recordings are not available, the Telephone Company will develop monthly charges based on an average number of queries per month.

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9. SPECIAL CONSTRUCTION9.1 Special Construction9.1.1 Basis for Rates and Charges

Rates and charges for special construction will be determined by the Company on an Individual Case Basis and based, in part, on the costs incurred by the Company and may include (1) non-recurring type charges, (2) recurring type charges, (3) termination liabilities, or (4) combinations thereof.

9.1.2 Termination Liability

To the extent that there is no other requirement for use by the Company, a termination liability may apply for facilities specially constructed at the request of the Customer.

9.1.2 (A) The termination liability period is the initial service term with respect to said specially constructed facilities.

9.1.2 (B) The amount of maximum termination liability is equal to the rates and charges established pursuant to Section 9.1.1 above:

9.1.2 (C) The applicable termination liability charge is based on the normal method for calculating the unpaid balance of a term obligation. The amount of such charge is obtained by multiplying the sum of the amounts determined as set forth in Section 9.1.1 preceding by a factor related to the unexpired period of liability and the discount rate for return and contingencies. This product is adjusted to reflect applicable taxes.

9.2 Individual Case Basis Arrangement

When the Company furnishes a facility or service for which a rate or charge is not specified in the Company's tariffs, charges will be determined on an Individual Case Basis. Specialize rates or charges will be made available to similarly situated Customers on a nondiscriminatory basis.

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10. Public Packet Data Network

Public Packet Data Networks utilize separate data networks, comprised of switching, routing and transmission facilities. The networks provide for the transfer of data provided by a customer in a frame or cell format. The data is separated into discrete segments for transmission through the public packet data network

10.1 Ethernet Service

10.1.1 General

Ethernet Service (ES) is a high speed data transport service that provides best effort end-to-end transmission using Ethernet packet technology at transport speeds ranging from 1.5 Mbps to 10 Gbps, where available. ES is ideal for transport of broadband multimedia traffic (i.e., voice, data and video) using variable length Ethernet packets with the ability to interconnect multiple locations using the Telephone Company's ES network. Ethernet packets generated by Ethernet-compatible customer premises equipment (CPE) are transmitted using available capacity on shared transmission paths through the Telephone Company's ES network to a pre-specified destination. The ES customer may use ES to: (1) interconnect customer designated premises (CDPs) served by the Telephone Company's ES network, (2) interconnect with its local area network (LAN) to the Telephone Company's ES network and/or (3) interconnect its CDPs to an Ethernet network located outside of the Telephone Company's serving territory.

10.1.2 Service Description

ES is provided using a combination of ES Channel Terminations (ES CTs), ES Ports, Ethernet Entrance Facility (EEF), Ethernet Virtual Circuits (EVC), and ES Extended Ethernet Virtual Connections (ES E-EVCs).

An EEF may be required to provide the interface into the Telephone Company's ES network. ES E-EVCs may be ordered to connect the Telephone Company's ES network to an EEF located outside the Telephone Company's market.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.2 Service Description (cont'd)

The transmission quality of ES is not guaranteed and is offered to ES customers at a best effort level. The Telephone Company will attempt to deliver all Ethernet packets received; however, network congestion may result in a loss of Ethernet packets. Transmission speeds using copper facilities may be affected by distance from the Telephone Company central office and other technical limitations in the Telephone Company's copper network and are also not guaranteed.

Service is provided, where available, between CDPs and designated Telephone Company Facility Hubs. ES will be furnished where suitable facilities exist as determined by the Telephone Company. The Telephone Company will identify its ES-equipped Serving Wire Centers (SWCs) in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. Tariff F.C.C. No. 4.

Rates and charges for ES are specified in Section 15.9, following. The application of rates and charges for ES is described later in this section.

10.1.3 Obligations of the Customer

In addition to the regulations described in other sections of this tariff, the following provisions apply to ES:

- (A) The ES customer is responsible for providing the Telephone Company with the necessary information to provision ES as specified in Section 5 Ordering Requirements, preceding.
- (B) The ES customer is responsible for providing and maintaining all required CPE, which is compatible with ES and complies with the standards specified in Technical Reference IEEE Standard 802.3-2005, Part 3, Sections 1 through 5.

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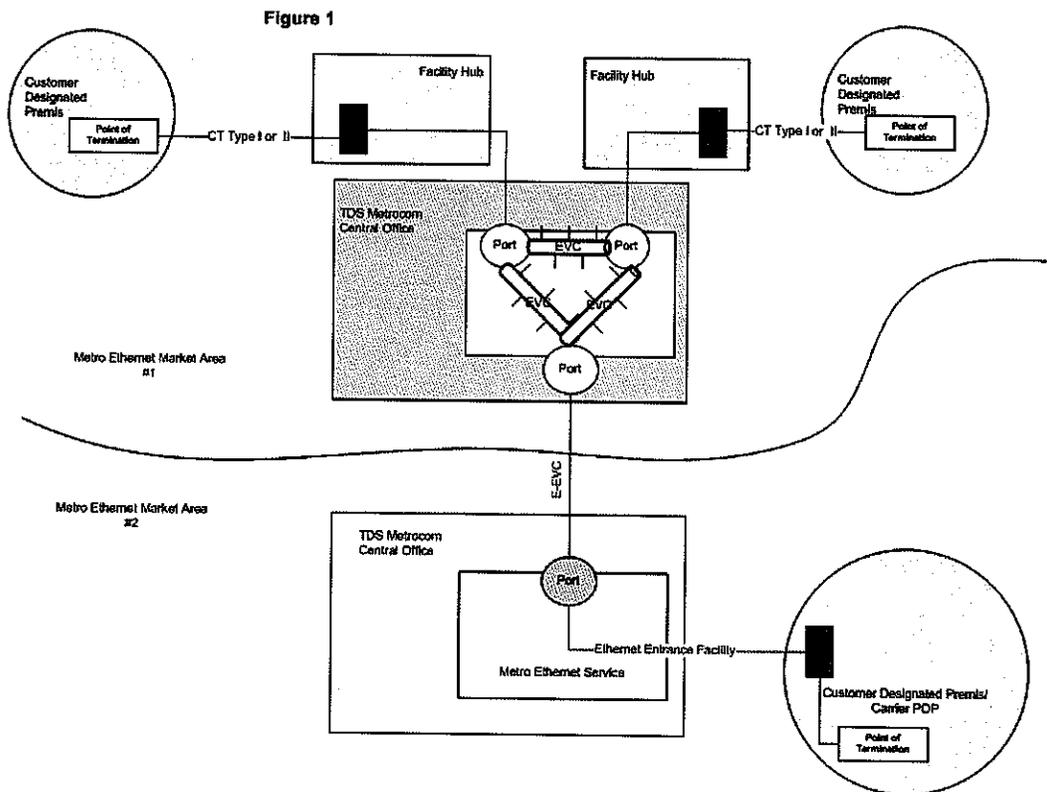
10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation

This section contains the regulations governing the rates and charges that apply for ES. Regulations governing the rates and charges for Special Access provided under this tariff used in conjunction with ES are as specified in Sections 7 and 8, preceding.

The following diagrams depict generic views of the elements of ES. In the first figure, the ES customer's CDPs are served by a single ES SWC. ES EVCs ordered between two ES Ports in the same SWC are classified as ES Intraswitch EVCs. The ES customer orders the applicable ES elements from the Telephone Company pursuant to the provisions specified in this section.



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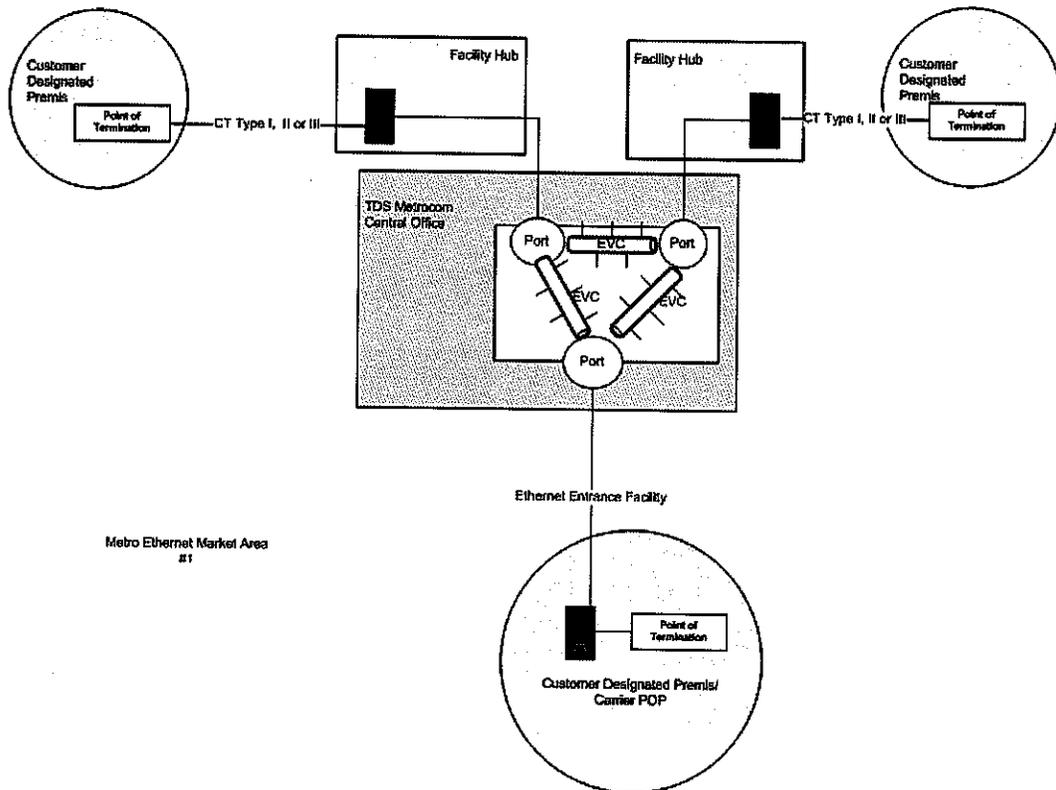
10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

In the second figure, the ES customer's EEF and CDP's are served by different ES Central Office Hubs. ES ordered between two ES Ports in different Central Office Hubs are classified as ES E-EVCs. The ES customer orders the applicable ES elements from the Telephone Company pursuant to the provisions specified in this section.

Figure 2



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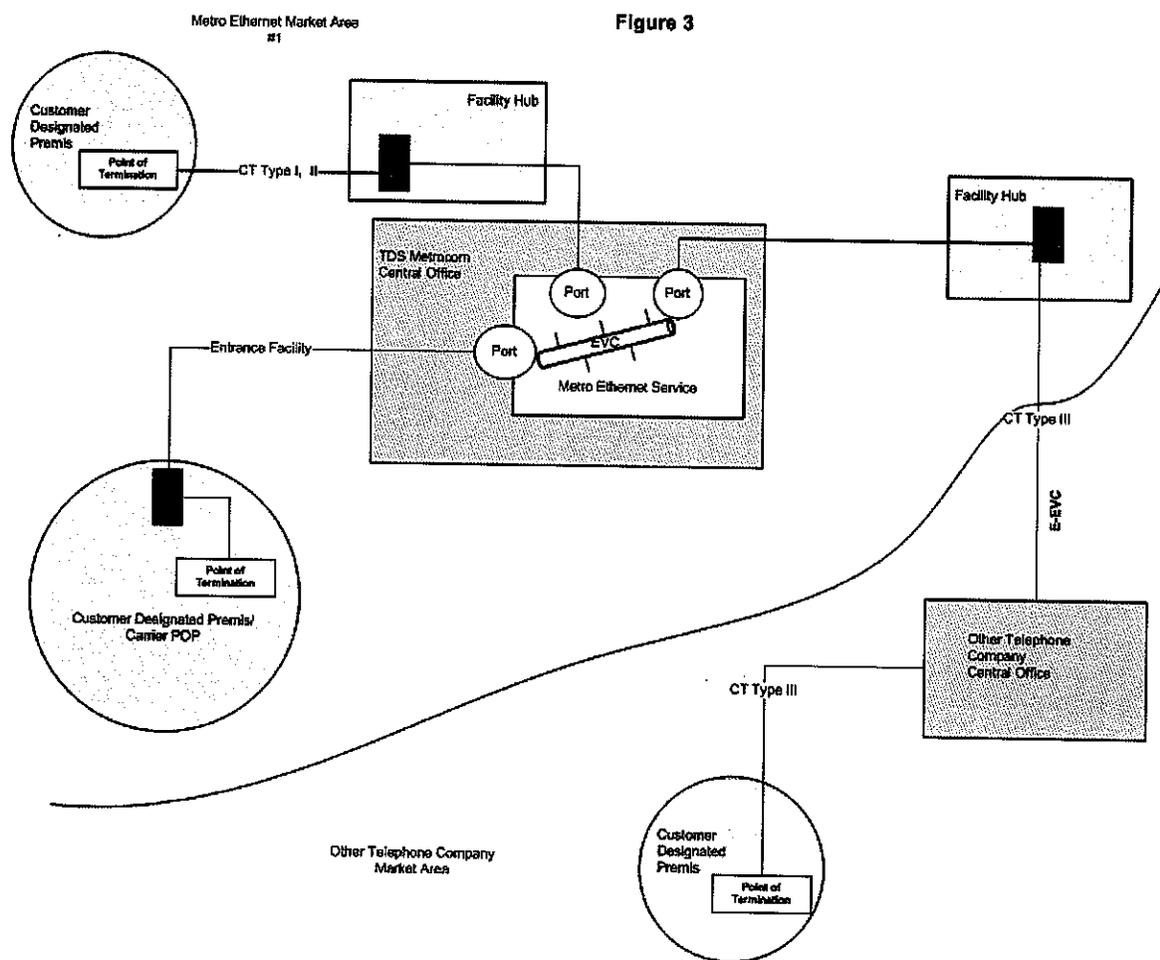
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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

In the third figure, one of the ES customer's CDPs is served by an adjacent telephone company's Ethernet network. The ES customer orders the applicable ES elements from the Telephone Company pursuant to the provisions specified in this section. In addition, the ES customer will order the applicable Ethernet service elements from the adjacent telephone company.



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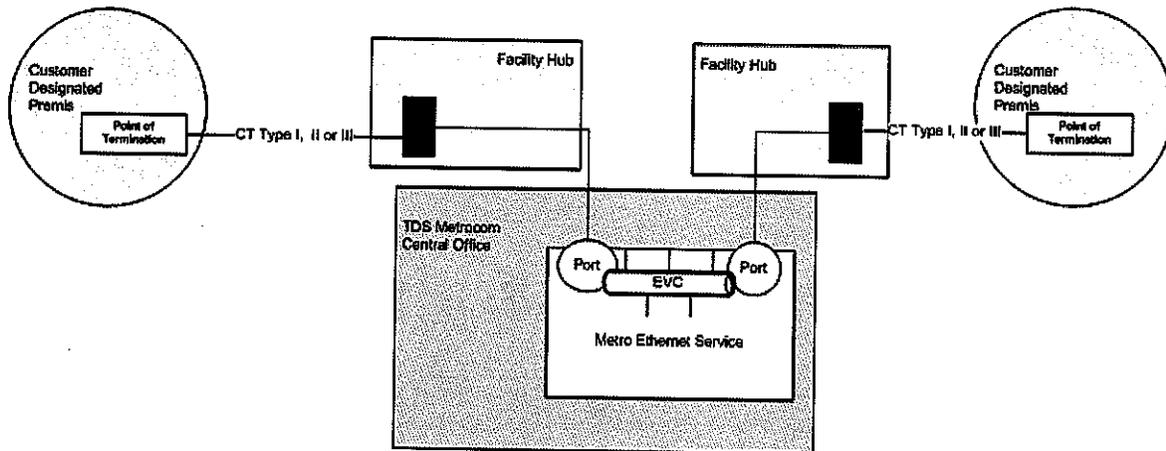
10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

In the fourth figure, both of the ES customer's CDPs is served by the same SWC are classified as ES Intraswitch EVCs. The ES customer orders the applicable ES elements from the Telephone Company pursuant to the provisions specified in this section.

Figure 4



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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(A) Rate Categories

The various ES service elements are described below.

(1) ES Channel Terminations (CTs)

An ES CT provides the transport facility between the customer's designated premises and an ES Port at the Telephone Company's ES Central Office Hub.

ES CTs are available at bandwidth speeds of 1.5 Mbps, 3.0 Mbps, 5.0 Mbps, and 10.0 Mbps. The ES customer orders the type of ES CT it needs based on its bandwidth requirements. ES CTs are available only from suitably equipped ES Central Office Hubs for connection to ES Ports.

Monthly and nonrecurring charges apply for each ES CT ordered. The monthly rate is based upon the bandwidth capacity ordered and Channel Types. Rates and charges are specified in Section 15.8, following.

(2) ES Ports

ES Ports provide the interface at the Telephone Company's ES Central Office Hub for data traffic to and from the customer premises equipment as well as for connecting the Telephone Company's ES network with the Ethernet network of another telephone company. An ES Port receives Ethernet packets from the ES customer's Ethernet-compatible CPE, validates the addressing parameters contained in the packet headers, and transmits the packets into the ES network. The ES Port also receives Ethernet packets from the Telephone Company's ES network or from an Ethernet network located outside of the Telephone Company's serving territory, validates the addressing parameters contained in the packet headers, and transmits the packets to the pre-designated CDP.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(A) Rate Categories (cont'd)

(2) ES Ports (cont'd)

ES Ports provide the interface to the Telephone Company's ES network and do not include the required transport facility between the CDP and the Telephone Company's ES Central Office Hub.

ES Ports are available with bandwidth speeds of 1.5 Mbps, 3.0 Mbps, 5.0 Mbps, 10.0 Mbps, 100 Mbps, and 1 Gbps. Required transport to the ES Port is provided using an ES CT, EFF, or E-EVC as described above. The bandwidth speed of an ES Port must be equal to or greater than the bandwidth speed of the associated ES CT.

(3) ES Ethernet Entrance Facility (ES EEF)

ES EEF is a logical association which is established between the Telephone Company and the customer. ES EEF is used for aggregation of traffic on the network, and is available in fixed bandwidth amounts of 100 Mbps, 1 Gbps, and 10 Gbps. One ES EEF is required for each Ethernet Metro System¹.

Monthly and nonrecurring charges apply for each ES E-EVC ordered. The monthly recurring charge is based upon the bandwidth capacity ordered. Rates and charges are specified in Section 15.8, following.

¹ Ethernet Metro System is a dedicated set of Ethernet circuits pointed to one physical connection used to tie together two entities over a common shared connection point.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(A) Rate Categories (cont'd)

(4) ES Ethernet Virtual Connections (ES-EVCs)

ES EVCs are logical associations established by the Telephone Company across a shared transmission path that allow the ES customer to transmit packets to and receive packets from an ES Port located between the Telephone Company's ES network Central Office Hubs. ES EVCs are established between two ES Ports. ES EVCs are available in fixed bandwidth amounts of 100 Mbps, 1 Gbps, and 10 Gbps. The Telephone Company will establish ES EVCs based upon the bandwidth capacity specified by the ES customer on its Access Order.

Monthly and nonrecurring charges apply for each ES EVC ordered. The ES EVC monthly recurring charge is based upon the bandwidth capacity of the ES EVC ordered. Rates and charges are specified in Section 15.8, following.

(B) Types of Rates and Charges

There are two types of rates and charges. They are monthly rates and nonrecurring charges. The rates and charges are described below:

(1) Monthly Rates

Monthly rates are recurring rates that apply each month or fraction thereof when an ES service element is provided. For billing purposes, each month is considered to have 30 days.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(B) Types of Rates and Charges (cont'd)

(2) Nonrecurring Charges

Nonrecurring charges are one-time charges that apply for specific work activity (i.e., installation or change to an existing service). The types of nonrecurring charges that apply for ES are installation of service, service rearrangements, moves and design changes.

Except as specified below, these charges are in addition to the Access Order Charge as specified in Section 15.5.1, following.

(a) Installation of Service

Nonrecurring charges apply for installation of ES CTs, ES Ports, ES E-EVCs, and EEF.

(b) Service Rearrangements

Service rearrangements are changes to existing (i.e., installed) services, which may be administrative only in nature as set forth below or, that involve an actual physical change to the service.

When the ES customer elects to increase or decrease the bandwidth capacity on existing ES Ports, the request will be considered a discontinuance of service for the former capacity and start of service for the new capacity. Associated nonrecurring (i.e., installation) charges will apply. New minimum period requirements will be established for the new ES elements. The ES customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued ES elements.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(B) Types of Rates and Charges (cont'd)

(2) Nonrecurring Charges (cont'd)

(c) Moves

A move involves a change in the physical location of one of the following:

- The Point of Termination at the customer's premises
- The customer's premises

The charges for moving ES elements are dependent on whether the move is to a different location within the same building, to a different building within the same SWC, or to a different building in a different SWC. The charges specified below apply in addition to any applicable charges for moving any applicable Special Access Services as specified in Section 7.2.3, preceding.

(i) Moves Within the Same Building – Type I only

ES Ports and ES E-EVCs are not impacted when an ES customer moves its Point of Termination to a different location within the same building. The charge for moving an ES CT or ES EEF within the same building will be the applicable labor rates specified in 15.5.3.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(B) Types of Rates and Charges (cont'd)

(2) Nonrecurring Charges (cont'd)

(c) Moves (cont'd)

(ii) Moves To a Different Building Within the Same SWC

The move of an ES CT or ES EEF will be treated as a discontinuance and start of service. Associated nonrecurring (i.e., installation) charges will apply. New minimum period requirements will be established for the new services. The ES customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued service.

(iii) Moves to a Different Building in a Different Central Office Hub

A move to a different building in a different Central Office Hub will be treated as a discontinuance and start of service of all associated ES elements. Associated nonrecurring (i.e., installation) charges will apply. New minimum period requirements will be established for the new services. The ES customer will also remain responsible for satisfying all outstanding minimum period charges for the discontinued service.

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10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.4 Rate Regulation (cont'd)

(C) Minimum Periods

The minimum period for ES service elements provided to an ES customer and for which charges are applicable is:

- Twelve months for ES service elements

10.1.5 ES Term Discount Plan

An optional term discount plan is available for Ethernet Service (ES). Under the ES Term Discount Plan, the monthly rates for eligible ES service elements are reduced by a fixed percentage. The amount of the discount percentage differs based on the length of the term commitment period selected by the ES customer.

ES may be ordered at the customer's option on 12 month basis or, under a single term commitment period of either 36 months or 60 months. The customer must notify the Telephone Company in writing of the length of its selected term commitment period. ES Ports installed after the establishment of the customer's ES Term Discount Plan may be ordered on a 12 month basis or added as an additional term. Each ES CT may be ordered under a separate Term Discount Plan.

Access Order Charges as described in Section 15.5.3, do not apply to establish a new or make any changes to an existing ES Term Discount Plan. The monthly rates for ES service elements are set forth in Section 15. The term discount percentages for the ES Term Discount Plan are set forth in Section 15.8.

Except as specified in (A) and (B), below, discontinuance charges will apply when the customer fails to satisfy the term commitment period or the in-service requirements for its committed ES Service.

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ACCESS SERVICE

(N)

10. Public Packet Data Network (cont'd)

10.1 Ethernet Service (cont'd)

10.1.5 ES Term Discount Plan (cont'd)

At the end of the term commitment period, the customer may subscribe to a new ES Term Discount Plan commitment period or revert to month-to-month rates. If the customer does not notify the Telephone Company in writing of its choice by the end of its existing term commitment period, the Telephone Company will automatically convert the customer's ES billing to month-to-month rates. An Access Order Charge will not apply when a customer at the end of its existing term commitment period subscribes to a replacement ES Term Discount Plan or reverts to month-to-month rates.)

(A) Plan Replacements

For example, a customer with an existing 36 month term commitment period and 10 Mbps of bandwidth capacity for its committed ES Ports can replace that term commitment in its entirety with a new 36 month or 60 month term commitment period at any time during the existing term commitment period without the application of a discontinuance charge provided the bandwidth capacity of the customer's committed ES Ports under the new term commitment period greater than previous Mbps.

When the term commitment period of a replacement ES Term Discount Plan does not meet or exceed the number of months remaining in the customer's existing ES Term Discount Plan commitment period, a discontinuance charge as described in (B), below, will apply.

(B) Discontinuance Charges

The discontinuance charge will be equal to 50% of the total undiscounted monthly rate for each committed ES Port included in the customer's ES Term Discount Plan for each month remaining in the unsatisfied term commitment period. Minimum service period charges as specified in Section 10.1.4(C), preceding, would also apply, if applicable.

(N)

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ACCESS SERVICE**11. Additional Engineering, Additional Labor and Miscellaneous Services**

In this section, normally scheduled working hours are an employee's scheduled work period in any given calendar day (e.g., 8:00 a.m. to 5:00 p.m.) for the application of rates based on working hours.

A Miscellaneous Service Order charge as described in 5.4.2 preceding may be applicable to services ordered from this section.

11.1 Additional Engineering

Additional Engineering, including engineering reviews as set forth in 5.4.3 preceding, will be undertaken only after the Telephone Company has notified the customer that additional engineering charges apply as set forth in 15.5.2 following, and the customer agrees to such charges.

Additional Engineering will be provided by the Telephone Company at the request of the customer only when:

- (A) A customer requests additional technical information after the Telephone Company has already provided the technical information normally included on the Design Layout Report (DLR).
- (B) Additional Engineering time is incurred by the Telephone Company to engineer a customer's request for a customized service as set forth in 7.1.2 preceding.
- (C) A customer requested Design Change requires the expenditure of Additional Engineering time. Such Additional Engineering time is incurred by the Telephone Company for the engineering review as set forth in 5.4.3 preceding. The charge for additional engineering time relating to the engineering review, which is undertaken to determine if a design change is indeed required, will apply whether or not the customer authorizes the Telephone Company to proceed with the Design Change. In this case the Design Change charge, as set forth in 15.5.1(C) following, does not apply unless the customer authorizes the Telephone Company to proceed with the Design Change.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.2 Additional Labor

Additional Labor is that labor requested by the customer on a given service and agreed to by the Telephone Company as set forth in 11.2.1 through 11.2.5 following. The Telephone Company will notify the customer that Additional Labor charges as set forth in 15.5.3 following will apply before any additional labor is undertaken. A call-out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

(P)
(b)11.2.1 Overtime Installation

Overtime installation is that Telephone Company installation effort outside of normally scheduled working hours.

11.2.2 Overtime Repair

Overtime repair is that Telephone Company effort performed outside of normally scheduled working hours.

11.2.3 Standby

Standby includes all time in excess of one-half (1/2) hour during which Telep Company personnel standby to make installation acceptance tests or cooperative tests with a customer to verify facility repair on a given service.

11.2.4 Testing and Maintenance with Other Telephone Companies

Additional testing, maintenance or repair of facilities which connect other telephone companies is that which is in addition to the normal effort required to test, maintain or repair facilities provided solely by the Telephone Company.

11.2.5 Other Labor

Other labor is that additional labor not included in 11.2.1 through 11.2.4 preceding and labor incurred to accommodate a specific customer request that involves only labor which is not covered by any other section of this tariff.

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ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.3 Miscellaneous Services11.3.1 Testing Services

Testing Services offered under this section of the tariff are optional and subject to rates and charges as set forth in 15.5.4 following. A call-out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours. Other testing services are provided by the Telephone Company in association with Access Services and are furnished at no additional charge.

Testing Services are normally provided by Telephone Company personnel at Telephone Company locations; however, provisions are made in (B)(2) following for a customer to request Telephone Company personnel to perform Testing Services at the customer designated premises.

The offering of Testing Services under this section of the tariff is made subject to the availability of the necessary qualified personnel and test equipment at the various test locations mentioned in (A) and (B) following.

(A) Switched Access Service

Testing Services for Switched Access are comprised of (a) tests which are performed during the installation of a Switched Access Service, (i.e., Acceptance Tests), (b) tests which are performed after customer acceptance of such access services and which are without charge (i.e., routine testing) and (c) additional tests which are performed during or after customer acceptance of such access services and for which additional charges apply, (i.e., Additional Cooperative Acceptance Tests and in-service tests).

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.3 Miscellaneous Services (Cont'd)11.3.1 Testing Services (Cont'd)(A) Switched Access Service (Cont'd)

Routine tests are those tests performed by the Telephone Company on a regular basis, which are required to maintain Switched Access Service. Additional in-service tests may be done on an automatic basis (no Telephone Company or customer technicians involved), on a manual basis [Telephone Company technician(s) involved at Telephone Company office(s) and Telephone Company or customer technician(s) involved at the customer designated premises].

Testing services are ordered to the end office for FGs C and D. Testing Services for Directory Assistance Service not routed through an access tandem is ordered to a Directory Assistance Location for each NPA. (T)

(1) Additional Cooperative Acceptance Testing

Additional Cooperative Acceptance Testing of Switched Access Service involves the Telephone Company provision of a technician at its office(s) and the customer provision of a technician at its premises, with suitable test equipment to perform the required tests.

Additional Cooperative Acceptance Tests may, for example, consist of the following tests:

- Impulse Noise
- Phase Jitter
- Signal to C-Notched Noise Ratio
- Intermodulation (Nonlinear) Distortion
- Frequency Shift (Offset)
- Envelope Delay Distortion
- Dial Pulse Percent Break

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)

11.3 Miscellaneous Services (Cont'd)

11.3.1 Testing Services (Cont'd)

(A) Switched Access Service (Cont'd)

(2) Additional Automatic Testing

Additional Automatic Testing (AAT) of Switched Access Services (Feature Groups C and D), is a service where the customer provides remote office test lines and 105 test lines with associated responders or their functional equivalent. The customer may order, at additional charges, gain-slope and C-notched noise testing and may order the routine tests (1004 Hz loss, C-Message Noise and Balance) on an as needed or more than routine schedule.

(T)

The Telephone Company will provide an AAT report that lists the test results for each trunk tested. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on an as-occurs basis.

The Additional Tests, (i.e., gain slope, C- notched noise, 1004 Hz loss, C-message noise and balance) may be ordered by the customer at additional charges, 60 days prior to the start of the customer prescribed schedule. The rates for Additional Automatic Tests are as set forth in 15.5.4(B) following.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.3 Miscellaneous Services (Cont'd)11.3.1 Testing Services (Cont'd)(A) Switched Access Service (Cont'd)(3) Additional Manual Testing

Additional Manual Testing (AMT) of Switched Access Services (Feature Groups C and D and Directory Access Service not routed through an access tandem), is a service where the Telephone Company provides a technician at its office(s) and the Telephone Company or customer provides a technician at the customer designated premises, with suitable test equipment to perform the required tests. Such additional tests will normally consist of gain-slope and C-notched noise testing. However, the Telephone Company will conduct any additional tests which the IC may request.

(T)

The Telephone Company will provide an AMT report listing the test results for each trunk tested. Trunk test failures requiring customer participation for trouble resolution will be provided to the customer on a per occurrence basis.

The Additional Manual Tests may be ordered by the customer at additional charges, 60 days prior to the start of the testing schedule as mutually agreed to by the customer and the Telephone Company.

The rates for Additional Manual Testing are as set forth in 15.5.4(C) following.

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ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.3 Miscellaneous Services (Cont'd)11.3.1 Testing Services (Cont'd)(A) Switched Access Service (Cont'd)(4) Obligations of the Customer

- (A) The customer shall provide the Remote Office Test Line priming data to the Telephone Company, as appropriate, to support routine testing.
- (B) The customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

(B) Special Access Service

The Telephone Company will provide assistance in performing specific tests requested by the customer.

(1) Additional Cooperative Acceptance Testing

When a customer provides a technician at its premises or at an end user's premises, with suitable test equipment to perform the requested tests, the Telephone Company will provide a technician at its office for the purpose of conducting Additional Cooperative Acceptance Testing on Voice Grade Services. At the customer's request, the Telephone Company will provide a technician at the customer's premises or at the end user premises. These tests may, for example, consist of the following:

- Attenuation Distortion (i.e., frequency response)
- Intermodulation Distortion (i.e., harmonic distortion)
- Phase Jitter
- Impulse Noise
- Envelope Delay Distortion
- Echo Control
- Frequency Shift

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)

11.3 Miscellaneous Services (Cont'd)

11.3.1 Testing Services (Cont'd)

(B) Special Access Service (Cont'd)

(2) Additional Manual Testing

The Telephone Company will provide a technician at its premises, and the Telephone Company or customer will provide a technician at the customer's designated premises with suitable test equipment to perform the requested tests.

(3) Obligation of the Customer

When the customer subscribes to Testing Service as set forth in this section, the customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)

11.3 Miscellaneous Services (Cont'd)

11.3.2 Maintenance of Service

- (A) When a customer reports a trouble to the Telephone Company for clearance and no trouble is found in the Telephone Company's facilities, the customer shall be responsible for payment of a Maintenance of Service charge as set forth in 15.4.4(F) following for the period of time from when Telephone Company personnel are dispatched, at the request of the customer, to the customer designated premises to when the work is completed. Failure of Telephone Company personnel to find trouble in Telephone Company facilities will result in no charge if the trouble is actually in those facilities, but not discovered at the time.
- (B) The customer shall be responsible for payment of a Maintenance of Service charge when the Telephone Company dispatches personnel to the customer designated premises, and the trouble is in equipment or communications systems provided by other than the Telephone Company or in detariffed CPE provided by the Telephone Company.

In either (A) or (B) preceding, no credit allowance will be applicable for the interruption involved if the Maintenance of Service Charge applies.

11.3.3 Reserved for Future Use

(T)
(D)

(D)

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)

11.3 Miscellaneous Services (Cont'd)

11.3.3 Reserved for Future Use (Cont'd)

(T)

(D)

(D)

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ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.3 Miscellaneous Services (Cont'd)11.3.4 Miscellaneous Equipment(A) Controller Arrangement

This arrangement enables the customer to control up to 48 transfer functions at a Telephone Company central office via a remote keyboard terminal capable of either 300 or 1200 bps operation. Included as part of the Controller Arrangement is a dial-up data station located at the Telephone Company Central Office to provide access to the Controller Arrangement. This dial-up data station consists of a 212A DATAPHONE data set and an appropriate Telephone Company provided channel.

The Controller Arrangement must be located in the same Telephone Company central office as the transfer functions which it controls.

Charges for the Controller Arrangement are set forth in 15.5.4(G) following.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.4 Presubscription

Pursuant to the Federal Communications Commission's Memorandum Opinion and Order, CC Docket No. 83-1145, Phase I, adopted May 31, 1985, and released June 12, 1985, the Allocation Plan, outlined in the Appendix B of this Order, will be available for inspection in the Public Reference Room of the Tariff Division at the Federal Communications Commission's Washington, D.C., location or may be obtained from the Commission's commercial contractor.

- (A) Presubscription is the process by which end user customers may select and designate to the Telephone Company an IC to access, without an access code, for interLATA, interstate calls. This IC is referred to as the end user's predesignated IC.
- (B) On the effective date of this tariff, all existing end users have access to interstate MTS/WATS. No later than 85 days prior to conversion to Feature Group D in a serving end office, the Telephone Company will notify end users of the availability of equal access in their particular area. The notification will include the names of all ICs wishing to participate in the presubscription process. This notification will be sent via U.S. Mail to each end user of record served by the end office to be converted.
- (C) End users may select one of the following options at no charge:
- indicate a primary IC for all of its lines,
 - indicate a different IC for each of its lines.

Only one IC may be selected for each line or lines terminating in the same hunt group.

End users may designate that they do not want to presubscribe to any IC. The end user must arrange this designation by directly notifying the Telephone Company's code (10XXX or 101XXXX) for all interstate calls.

After the end user's initial selection of a predesignated IC or the designation that they do not want to presubscribe to any IC, for any change in selection after conversion to Equal Access in the serving end office, a nonrecurring charge, as set forth in 15.5.4(H) following applies.

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ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.4 Presubscription (Cont'd)

- (D) End users not responding to the initial notification will be sent a second notification for the selection of a predesignated IC no earlier than 40 days prior to or no later than 90 days after the conversion to Equal Access in a serving end office. This second notification will indicate the primary IC that has been assigned to them if they fail to respond to the second notification.

After the allocation process has been completed, end users assigned to an IC via the allocation process may change their IC one time within six months after conversion to Equal Access in the serving end office at no charge.

Following the six month period after conversion to Equal Access for any change in selection, a nonrecurring charge as set forth in 15.5.4(H) following, applies.

- (E) When an end user indicates more than one IC selection on the return notification or returns an illegible return notification, the Telephone Company will contact the end user for clarification. If the end user indicates an IC selection on the return notification that does not match with information provided by an IC and both notifications indicate the same authorization date, the end user's notification takes precedence and the Telephone Company will process the end user's selection.

In the event that two or more ICs provide to the Telephone Company notifications with the same authorization date and neither notification has been processed, the Telephone Company will contact the end user for clarification. A list of these end users in conflict must be sent to the affected IC by the Telephone Company.

In the event that two or more ICs have provided to the Telephone Company notifications with the same authorization date(s), and one IC notification has already been processed by the Telephone Company, those IC notifications not yet processed would be returned to the ICs.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.4 Presubscription (Cont'd)

(F) New end users who are served by end offices equipped with Feature Group D will be asked to presubscribe to an IC at the time they place an order with the Telephone Company for Telephone Exchange Service. They may select either of the following options. There will be no charge for this initial selection.

- designate a primary IC for all of its lines,
- designate a different IC for each of its lines.

Only one IC may be selected for each individual line, or lines terminating in the same hunt group. Subsequent to the installation of Telephone Exchange Service and after the end user's initial selection of a predesignated IC, for any change in selection, a nonrecurring charge, as set forth in 15.5.4(H) following, applies.

(G) If the new end user fails to designate an IC as its predesignated IC prior to the date of installation of Telephone Exchange Service, the Telephone Company will (1) allocate the end user to an IC based upon current IC presubscription ratios, (2) require the end user to dial an access code (10XXX or 101XXXX) for all interstate calls, or (3) block the end user from interstate calling. The end user will be notified which option will be applied if they fail to presubscribe to an IC. An allocated or blocked end user may designate another, or initial, IC as its predesignated IC one time at no charge, if it is requested within six months after the installation of Telephone Exchange Service.

For any change in selection after 6 months from the installation of Telephone Exchange Service, a nonrecurring charge, as set forth in 15.5.4(H) following applies.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.4 Presubscription (Cont'd)

- (H) If an IC elects to discontinue its Feature Group D service offering prior to or within 2 years of the conversion, the IC will notify the Telephone Company of the cancellation. The IC will also notify all end users which selected them that they are canceling their service and that they should contact the Telephone Company to select a new primary IC. The IC will also inform the end user that it will pay the presubscription change charge. The canceling IC will then be billed by the Telephone Company the appropriate charge for each end user for a period of two years from the discontinuance of Feature Group D service.
- (I) If an IC elects to change or discontinue use of a Carrier Identification Code (CIC) for any reasons other than those set forth in (H) above, the IC will identify to the Telephone Company any affected end users and advise the Telephone Company of the new CIC to be assigned to these end users. If the CIC change involves a change of carrier for any end users, the IC will notify the affected end users of the change. The Telephone Company will change the predesignated carrier code of each end user identified by the IC to the new CIC and bill the IC the nonrecurring charge set forth in 15.4.4(I) following for each end user line or trunk that is changed.

11.5 Verification of Orders for Long Distance Telemarketing

No IC shall submit to the Telephone Company a Primary Interexchange Carrier (PIC) change order generated by telemarketing unless and until the order has first been confirmed in accordance with one of the following procedures:

- (A) The IC obtains the billed party's (e.g., an end user or the designator of the PIC for a pay telephone) written authorization to submit the PIC change order. The written authorization shall take the form of a letter of agency which:
- shall be a separate document whose sole purpose is to authorize an interexchange carrier to initiate a primary interexchange carrier change.
 - shall be signed and dated by the billed party of the telephone line(s) requesting the primary interexchange carrier change.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.5 Verification of Orders for Long Distance Telemarketing (Cont'd)

(A) (Cont'd)

- shall not be combined with inducements of any kind on the same document.
- shall not suggest or require that the billed party take some action in order to retain the billed party's current interexchange carrier.
- shall have all portions translated into another language if any portion of the letter of agency is translated into another language.
- may be combined with checks that contain only the required letter of agency language that follows and the necessary information to make the check a negotiable instrument. At a minimum, the letter of agency should be printed with a type of sufficient size and readable type to be clearly legible and must contain clear and unambiguous language that confirms:
 - The billed party's billing name and address and each telephone number to be covered by the PIC change order; and
 - The billed party's decision to change the PIC to the IC; and
 - The billed party's intention to designate the interexchange carrier to act as its agent for the PIC change; and
 - The billed party's understanding that only one interexchange carrier may be designated as the billed party's interstate primary interexchange carrier for any one telephone number. To the extent that a jurisdiction allows the selection of additional primary interexchange carriers, the letter of agency must contain separate statements regarding these choices. Any carrier designated as a primary interexchange carrier must be the carrier directly setting the rates for the billed party. One interexchange carrier can be both the billed party's interstate primary interexchange carrier and a billed party's intrastate primary interexchange carrier; and

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ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.5 Verification of Orders for Long Distance Telemarketing (Cont'd)

(A) (Cont'd)

- The billed party's understanding that they may incur a charge for changing the primary interexchange carrier, or

(B) The IC obtains the billed party's electronic authorization to submit the PIC change order. The billed party will place a call, from the telephone number(s) on which the PIC is to be changed, to a toll free telephone number that is dedicated to the IC's PIC verification process. The verification number will connect the billed party to a voice response unit that records the originating ANI and the required information described in (A) preceding; or

(C) An appropriately qualified and independent third party, operating in a location physically separate from the telemarketing representative, obtains the billed party's oral authorization to submit the PIC change order. This authorization must confirm the order and include appropriate verification data (e.g., the billed party's date of birth or social security number); or

(D) Within three business days of the billed party's request for a PIC change, the IC must send them an information package by first class mail which includes:

- a statement that the enclosed information is being sent to confirm a telemarketing order placed by the billed party within the previous week,
- the name of the current and soliciting ICs,
- the terms, conditions or charges for the PIC change,
- the name of the person who ordered the change,
- the name, address and telephone number of both the customer and the soliciting IC,
- a statement advising the billed party that, absent their response, the change will be implemented 14 days from the date the information package was mailed to them,

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.5 Verification of Orders for Long Distance Telemarketing (Cont'd)

- the name, address and telephone number of a contact point at the FCC for consumer complaints.

The IC must provide a postpaid postcard which the billed party can use to deny, cancel or confirm the order. The IC must wait 14 days after the information package is mailed to the billed party before submitting the PIC change order to the Telephone Company.

11.6 Unauthorized PIC Change

If an IC requests a Primary Interexchange Carrier (PIC) change on behalf of a billed party (e.g., an end user or the designator of the PIC for a pay telephone), and the billed party subsequently denies requesting the change, and the IC is unable to substantiate the change with a letter of authorization signed by the billed party; then:

- The billed party will be reassigned to its previously selected IC. No charge will apply to the billed party for this reassignment.
- The Unauthorized Presubscription Change Charge as set forth in 15.5.4(I) will apply to the IC that requested the unauthorized PIC change. This charge is applied in addition to the \$5.00 PIC change charge.

11.7 Presubscription Exceptions

When centralized Equal Access is provided in cooperation with Minnesota Independent Equal Access Corporation, the following presubscription exceptions apply:

- The initial Telephone Company notification to end users of the availability of Equal Access in their particular area will be provided between 105 and 270 days prior to the conversion of the serving end office to Feature Group D.
- The second notification for the selection of presubscribed IC will be between 65 and 230 days prior to the conversion to Equal Access in a serving end office.

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)

11.7 Presubscription Exceptions (Cont'd)

- All end users will be notified by the Telephone Company of the actual conversion date to Equal Access between one and three weeks prior to such conversion. This notification will also show the end user's selected or assigned IC and will advise the end user that if they desire to change their presubscribed IC they may contact the Telephone Company prior to the conversion of their end office and the change will be made at no charge.

11.8 Blocking Service

11.8.1 International Blocking Service

The Telephone Company will provide International Blocking Service to customers who obtain local exchange service from the Telephone Company under its general or local exchange tariffs. This service is only provided at appropriately equipped Telephone Company end offices. Those offices providing International Blocking Service are identified in NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. NO. 4.

(T)

On each line or trunk for which International Blocking Service is ordered, the Telephone Company will block all direct dialed international calls that use the call sequence of 011+ or 10XXX-011+ or 101XXXX-011+.When capable, the Telephone Company will route the blocked calls to a recorded message.

An International Blocking Service charge as set forth in 15.5.4(J) following is applicable for each new or existing exchange line to which International Blocking Service is added or removed. This charge does not apply when blocking is removed from an exchange line at the same time that it is disconnected.

(T)

(T)

ACCESS SERVICE

11. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)11.8 Blocking Service (Cont'd)11.8.1 International Blocking Service (Cont'd)

A Miscellaneous Service Order Charge as set forth in 15.5.1(D) will apply to orders adding or removing International Blocking Service that are placed subsequent to the initial installation of the associated exchange line(s) or trunk(s). This charge does not apply when blocking is removed from an exchange line or trunk.

(T)
(T)11.8.2 900 Blocking Service

The Telephone Company will provide 900 Blocking Service to customers who obtain local exchange service from the Telephone Company under its general or local exchange tariffs. This service is only provided at appropriately equipped end offices. Those offices providing 900 Blocking Service are identified in NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. NO. 4.

(T)

On each line or trunk for which 900 Blocking Service is ordered, the Telephone Company will block all direct dialed calls placed to a 900 number. When capable, the Telephone Company will route the blocked calls to a recorded message.

A Blocking Service charge as set forth in 15.5.4(J) following is applicable when ordered by the end user customer with the following exceptions:

- Blocking access to 900 Service is offered to all subscribers at no charge from November 1, 1993 through December 31, 1993.
- Blocking access to 900 Service is offered to all subscribers at no charge at the time telephone service is established at a new number and for 60 days thereafter.

The Blocking Service charge is applied for each line, trunk or Feature Group A Switched Access service to which 900 Blocking Service is added or removed. Requests by subscribers to remove 900 Blocking Service must be in writing. This charge does not apply when blocking is removed from an exchange line or trunk or Feature Group A Switched Access line at the same time that it is disconnected.

ACCESS SERVICE

APPROVED

12. TELECOMMUNICATIONS SERVICE PRIORITY

(T)

A. General

(N)

The Telecommunications Service Priority (TSP) Program is a federal program used to identify and prioritize telecommunications services that support National Security and Emergency Preparedness (NS/EP) missions.

NS/EP services are defined as those telecommunications services which are used to maintain a state of readiness or respond to and manage any event or crisis which causes or could cause injury or harm to the population, damage or loss to property, or degrades or threatens the NS/EP posture of the United States.

TSP restoration and/or provisioning shall be provided in accordance with Part 64.401, Appendix A of the Federal Communications Commission's Rules and Regulations (47 C.F.R.) and the "Service Vendor Handbook for the Telecommunications Service Priority (TSP) Program" and the "Service User Manual for the Telecommunications Service Priority (TSP) System" (NCS Manual 3-1-1) (Service User Manual) issued and updated as necessary by the Office of Priority Telecommunications (OPT) of the National Communications System. Any changes to or re-issuance of these regulations or manuals supersede tariff language contained herein.

B. Terms and Conditions

TSP service is limited to telecommunications services which the Telephone Company can discretely identify for priority provisioning and/or restoration.

The customer subscribing to TSP service must also be the customer subscribing to the services with which TSP is associated.

Under certain conditions it may be necessary to preempt one or more customer services with a lower or no restoration priority in order to install or restore service which subscribes to TSP service of a higher priority. If such preemption is necessary, the Telephone Company will make reasonable effort to notify the preempted service customer of the action to be taken. Credit allowance for such service preemption shall be made in accordance with Section 2.4.4

(N)

ACCESS SERVICE

(N)

12. TELECOMMUNICATIONS SERVICE PRIORITY (continued)

APPROVED

B. Terms and Conditions (continued)

TSP service is limited to telecommunications services which the Telephone Company can discretely identify for priority provisioning and/or restoration.

The customer subscribing to TSP service must also be the customer subscribing to the services with which TSP is associated.

Under certain conditions it may be necessary to preempt one or more customer services with a lower or no restoration priority in order to install or restore service which subscribes to TSP service of a higher priority. If such preemption is necessary, the Telephone Company will make reasonable effort to notify the preempted service customer of the action to be taken. Credit allowance for such service preemption shall be made in accordance with Section 2.4.4

The customer, in obtaining TSP service acknowledges and consents to the Telephone Company providing customer service record information to the Federal Government to administer service per the TSP Service Vendor Handbook. The customer service record information will include: TSP Authorization Code and the Telephone Company Circuit ID.

Credit allowance for service interruption for TSP shall be the same as with the service it is associated. See Section 2.4.4

When performing a service under TSP, the Telephone Company may not be in a position to notify the customer in advance when additional labor charges apply. The TSP subscriber recognizes that quoting charges and obtaining permission to proceed would cause delays and would be contrary to the objectives of the TSP Service. In subscribing to TSP service the customer recognizes this condition and grants the Telephone Company the right to bill for applicable charges to restore service(s).

All other terms, conditions, rates and charges for services may apply as specified elsewhere when provided in conjunction with TSP service.

When Priority Restoration Maintenance and Administration is discontinued and the associated Access Services is continued in service, the charge specified in Section 15.8.2 will not apply.

(N)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications

13.1 contains Switched Access Service Options (which are comprised of Interface Groups, Supervisory Signaling, Entry Switch Receive Level and Local Transport Termination) and Transmission Specifications. 13.2 describes Special Access Service Network Channel (NC) codes and Network Channel Interface (NCI) codes.

13.1 Switched Access Service

Ten Interface Groups are provided for terminating the Local Transport Entrance Facility at the customer's designated premises. Each Interface Group provides a specified premises interface (e.g., two-wire, four-wire, DS1, etc.). Where transmission facilities permit, and at the option of the customer, the Entrance Facility may be provided with optional features as set forth in 13.1.1 following.

As a result of the customer's access order and the type of Telephone Company transport facilities serving the customer designated premises, the need for signaling conversions or two-wire to four-wire conversions, or the need to terminate digital or high frequency facilities in channel bank equipment may require that Telephone Company equipment be placed at the customer designated premises. For example, if a voice frequency interface is ordered by the customer and the Telephone Company facilities serving the customer designated premises are digital, then Telephone Company channel bank equipment must be placed at the customer designated premises in order to provide the voice frequency interface ordered by the customer.

13.1.1 Local Transport Interface Groups

Interface Groups are combinations of technical parameters which describe the Telephone Company handoff at the point of termination at the customer designated premises. The technical specifications concerning the available interface groups are set forth in (A) through (D) following.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.1 Switched Access Service (Cont'd)13.1.1 Local Transport Interface Groups (Cont'd)

Interface Group 1 is provided with Type C Transmission Specifications, as set forth in 13.1.2(C) following, and Interface Groups 2 through 10 are provided with Type A or B Transmission Specifications, as set forth respectively in 13.1.2(E) and (F) following, depending on the Feature Group and whether the Access Service is routed directly or through an access tandem. All Interface Groups are provided with Data Transmission Parameters.

Only certain premises interfaces are available at the customer designated premises. The premises interfaces associated with the Interface Groups may vary among Feature Groups.

(A) Interface Group 1

Interface Group 1, except as set forth in the following, provides two-wire voice frequency transmission at the point of termination at the customer designated premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

Interface Group 1 is not provided in association with FGC and FGD when the first point of switching is an access tandem. In addition, Interface Group 1 is not provided in association with FGC or FGD when the first point of switching provides only four-wire terminations. (T)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(A) Interface Group 1 (Cont'd)

The transmission path between the point of termination at the customer designated premises and the customer's serving wire center may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of 300 to 3000 Hz.

The interface is provided with loop supervisory signaling. When the interface is associated with FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reversed battery signaling. (T)

(B) Interface Group 2

Interface Group 2 provides four-wire voice frequency transmission at the point of termination at the customer designated premises. The interface is capable of transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

The transmission path between the point of termination at the customer designated premises and the customer's serving wire center may be comprised of any form or configuration of plant capable of and typically used in the telecommunications industry for the transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(B) Interface Group 2 (Cont'd)

The interface is provided with loop supervisory signaling. When the interface is associated with FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

(T)

(C)

(D)

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.1 Switched Access Service (Cont'd)13.1.1 Local Transport Interface Groups (Cont'd)(D) Interface Groups 6 through 10

Interface Groups 6 through 10 provide digital transmission at the point of termination at the customer designated premises. The various interfaces are capable of transmitting electrical signals at the nominal bit rates illustrated following, with the capability to channelize voice frequency transmission paths. Before the first point of switching, when analog switching utilizing analog terminations is provided, the Telephone Company will provide multiplex and channel bank equipment to derive transmission paths of a frequency bandwidth of approximately 300 to 3000 Hz. When digital switching or analog switching with digital carrier terminations is provided, the Telephone Company will provide a DS1 signal(s) in D3/D4 format.

The interfaces are provided with individual transmission path bit stream supervisory signaling.

<u>Interface Group Identification No.</u>	<u>Nominal Bit Rate (Mbps)</u>	<u>Digital Hierarchy Level</u>	<u>Maximum No. of Channelized Voice Freq. Trans. Paths</u>
6	1.544	DS1	24
9	44.736	DS3	672

(D)

(D)

(D)

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ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(E)

Where transmission facilities permit, the Telephone Company will, at the option of the customer, provide the following features in association with Local Transport. An Access Order Charge as specified in 15.5.1(A) is applicable on a per order basis when nonchargeable optional features are added subsequent to the installation of service.

(T)

(D)

(D)

- Supervisory Signaling

Supervisory Signaling allows the customer to order an optional supervisory signaling arrangement for each transmission path provided where the transmission parameters permit, and where signaling conversion is required by the customer to meet its signaling capability.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(E) Local Transport Optional Features (Cont'd)

The Interface Groups, as described in (A) through (D) preceding, represent industry standard arrangements. Where transmission parameters permit, the customer may select the following optional signaling arrangements in place of the signaling arrangements standardly associated with the Interface Groups.

- For Interface Groups 1 and 2 associated with FGC or FGD (T)
- E&M Type I Supervisory Signaling, (D)
E&M Type II Supervisory Signaling, or
E&M Type III Supervisory Signaling
- For Interface Group 2 associated with FGC or FGD and in (T)
addition to the preceding
SF Supervisory Signaling, or
Tandem Supervisory Signaling
- For Interface Groups 3 through 5
Optional Supervisory Signaling Not Available
- For Interface Groups 6 through 10

These Interface Groups may, at the option of the customer, be provided with individual transmission path SF supervisory signaling where such signaling is available in Telephone Company central offices. Generally such signaling is available only where the first point of switching provides an analog (i.e., non-digital) interface to the transport termination.

These optional Supervisory Signaling arrangements not available in combination with the SS7 optional feature as described in 6.8.1 preceding.

Additionally, in (F) following, there is a matrix of available Premises Interface Codes as a function of Interface Group, Telephone Company Switch Supervisory Signaling and Feature Group.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes

Following is a matrix showing premises interface codes which are available for each Interface Group. Their availability is a function of the Telephone Company switch supervisory signaling and Feature Group. For explanations of these codes, see the Parameter Codes and Options as set forth in 13.2.2(A) following.

<u>Interface Group</u>	<u>Telephone Company Switch Supervisory Signaling</u>	<u>Premise Interface Code</u>	<u>Feature Group</u>			
			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>

1

(D)

2

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes (Cont'd)

<u>Interface Group</u>	<u>Telephone Company Switch Supervisory Signaling</u>	<u>Premise Interface Code</u>	<u>Feature Group</u>			
			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>

2 (Cont'd)

	SS7	4NO2		X	X	
--	-----	------	--	---	---	--

(D)

 (D)

 (D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.1 Local Transport Interface Groups (Cont'd)

(F) Available Premises Interface Codes (Cont'd)

<u>Interface Group</u>	<u>Telephone Company Switch Supervisory Signaling</u>	<u>Premise Interface Code</u>	<u>Feature Group</u>				
			<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	
6							(P) (D)
	SS7	4DS9-15			X	X	(D)
7							(P) (D)
	SS7	4DS9-31			X	X	(D)
8							(P) (D)
	SS7	4DS0-63			X	X	(D)
9							(P) (D)
	SS7	4DS6-44			X	X	(D)
10							(P) (D)
	SS7	4DS6-27			X	X	(D)

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ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications

Descriptions of the transmission specifications available with each Feature Group as a function of the Interface Group selected by the customer, are set forth in (A) through (D) following. Descriptions of each of these Standard Transmission Specifications and the two Data Transmission Parameters mentioned are set forth respectively in (E) through (G) and 13.1.3(A) and (B) following:

(A)

(D)

(B)

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.1 Switched Access Service (Cont'd)13.1.2 Standard Transmission Specifications (Cont'd)(C) Feature Group C

FGC is provided with either Type B or Type C Transmission Specifications as follows:

- When routed directly to the end office either Type B or Type C is provided.
- When routed to an access tandem only Type B is provided.
- Type B or Type C is provided on the transmission path from the access tandem to the end office.

Type C Transmission Specifications are provided with Interface Group 1 when routed directly to an end office. Type B is provided with Interface Groups 2 through 10, whether routed directly to an end office or to an access tandem.

Type DB Data Transmission Parameters are provided with FGC for the transmission path between the customer designated premises and the end office when directly routed to the end office, and between the customer designated premises and the access tandem and between the access tandem and the end office when routed via an access tandem.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(D) Feature Group D

FGD is provided with either Type A, Type B or Type C Transmission Specifications as follows:

- When routed to the end office either Type B or C is provided.
- When routed to an access tandem only Type A is provided.
- Type A is provided on the transmission path from the access tandem to the end office.

Type C Transmission Specifications are provided with Interface Group 1. Type A and Type B Transmission Specifications are provided with Interface Groups 2 through 10.

Type DB Data Transmission Parameters are provided with FGD for the transmission path between the customer designated premises and the end office when directly routed to the end office. Type DA Data Transmission Parameters are provided for the transmission path between the customer designated premises and the access tandem and between the access tandem and the end office when routed via an access tandem.

(E)

(D)

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(E)

(D)

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(E)

(D)

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(F)

(D)

(D)

(D)
(D)

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ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(F)

(D)

(D)

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(F)

(D)

(D)

(G) Type C Transmission Specifications

Type C Transmission Specifications are provided with the following parameters:

(1) Loss Deviation

The maximum Loss Deviation of the 1004 Hz loss relative to the Expected Measured Loss (EML) is \pm 3.0 dB.

(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to loss at 1004 Hz is -2.0 dB to +5.5 dB.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.1 Switched Access Service (Cont'd)13.1.2 Standard Transmission Specifications (Cont'd)(G) Type C Transmission Specifications (Cont'd)(3) C-Message Noise

The maximum C-Message Noise for the transmission path at the route miles listed is less than or equal to:

<u>Route Miles</u>	<u>C-Message Noise *</u>	
	<u>Type C1</u>	<u>Type C2</u>
less than 50	32 dBrnCO	38 dBrnCO
51 to 100	33 dBrnCO	39 dBrnCO
101 to 200	35 dBrnCO	41 dBrnCO
201 to 400	37 dBrnCO	43 dBrnCO
401 to 1000	39 dBrnCO	45 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBm0 holding tone is less than or equal to 47 dBrnCO.

* For Feature Groups C and D, only Type C2 will be provided.

(T)

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ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.2 Standard Transmission Specifications (Cont'd)

(G) Type C Transmission Specifications (Cont'd)

(5) Echo Control

Echo Control, identified as Return Loss and expressed as Echo Return Loss and Singing Return Loss is dependent on the routing, i.e., whether the service is routed directly from the customer's point of termination (POT) to the end office or via an access tandem. It is equal to or greater than the following:

	<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
POT to Access Tandem	13 dB	6 dB
POT to End Office - Direct	13 dB	6 dB

(D)
(D)

13.1.3 Data Transmission Parameters

Two types of Data Transmission Parameters, i.e., Type DA and Type DB, are provided for the Feature Group arrangements. Type DB is provided with Feature Groups C and D when Feature Group D is directly routed to the end office. Type DA is only provided with Feature Group D and only when routed via an access tandem. Following are descriptions of each.

(T)

(A) Data Transmission Parameters Type DA

(1) Signal to C-Notched Noise Ratio

The Signal to C-Notched Noise Ratio is equal to or greater than 33.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.3 Data Transmission Parameters (Cont'd)

(A) Data Transmission Parameters Type DA (Cont'd)

(2) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is:

604 to 2804 Hz

less than 50 route miles	500 microseconds
equal to or greater than 50 route miles	900 microseconds

1004 to 2404 Hz

less than 50 route miles	200 microseconds
equal to or greater than 50 route miles	400 microseconds

(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 65 dBnCO threshold in 15 minutes is no more than 15 counts.

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2)	33 dB
Third Order (R3)	37 dB

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.1 Switched Access Service (Cont'd)

13.1.3 Data Transmission Parameters (Cont'd)

(A) Data Transmission Parameters Type DA (Cont'd)

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 5⁰ peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

(B) Data Transmission Parameters Type DB

(1) Signal to C-Notched Noise Ratio

The Signal to C-Notched Noise Ratio is equal to or greater than 30 dB.

(2) Envelope Delay Distortion

The maximum Envelope Delay Distortion for the frequency bands and route miles specified is:

604 to 2804 Hz

less than 50 route miles 800 microseconds
equal to or greater than
50 route miles 1000 microseconds

1004 to 2404 Hz

less than 50 route miles 320 microseconds
equal to or greater than
50 route miles 500 microseconds

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.1 Switched Access Service (Cont'd)13.1.3 Data Transmission Parameters (Cont'd)(B) Data Transmission Parameters Type DB (Cont'd)(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 67 dBmCO threshold in 15 minutes is no more than 15 counts.

(4) Intermodulation Distortion

The Second Order (R2) and Third Order (R3) Intermodulation Distortion products are equal to or greater than:

Second Order (R2)	31 dB
Third Order (R3)	34 dB

(5) Phase Jitter

The Phase Jitter over the 4-300 Hz frequency band is less than or equal to 7° peak-to-peak.

(6) Frequency Shift

The maximum Frequency Shift does not exceed -2 to +2 Hz.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service

This section explains and lists the codes that the customer must specify when ordering Special Access Service, Switched Access Entrance Facilities, and Voice Grade and High Capacity Direct Trunked Transport. These codes provide a standardized means to relate the services being ordered to Special Access Service offerings contained in Section 7. preceding.

When ordering, the type of Special Access Service or Switched Access Entrance Facility or Direct Trunked Transport is described by two code sets, the Network Channel (NC) code and the Network Channel Interface (NCI) codes.

The Network Channel (NC) code consists of two elements. Element one is a Channel Service Code (character positions 1 and 2) that describes the channel service type in an abbreviated form. Element two is an Optional Feature Code (character positions 3 and 4) that identifies option codes available for each channel service code, such as C-conditioning or Improved Return Loss.

The Network Channel Interface (NCI) is used to identify interface specifications associated with a particular channel. This code describes the total wires, protocol, impedance, protocol options and transmission level point(s) reflecting physical and electrical characteristics between the Telephone Company and the customer.

On the following 3 pages are examples which explain the specific characters of the codes and which reference matrices and charts used in developing the codes. Included in the matrices are Service Designator (SD) codes, which are used to identify variations of service within service types. The SD and NC codes are displayed as components of the matrices designated as Technical Specifications packages in (A) through (G) following. Through the use of these matrices, SD codes may be converted to NC codes for service ordering purposes.

A chart is also provided in 13.2.2(A) following which contains information necessary to develop NCI codes.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)

Comprehensive lists of allowed Network Channel (NC) and Network Channel Interface (NCI) codes are contained in Special Report SR-STS-000307. However, not all services contained in this Special Report may be offered by the Telephone Company at this time.

Lastly, 13.2.2(C) following provides a list of compatible Network Channel Interfaces inasmuch as the Network Channel Interfaces associated with a given service need not always be the same, but all must be compatible.

Example No. 1: If the customer wishes to order a 4-wire voice grade circuit with 600 Ohms impedance, capable of data transmission, and with improved return loss, the customer might specify the following:

<u>NC</u> LG-R	<u>NCI</u> 04DB2	<u>SECNCI</u> 04DA2-S
-------------------	---------------------	--------------------------

NC Code:

LG = Voice Grade Channel Service, VG6
-R = Improved Return Loss

NCI Code:

04 = Number of physical wires at CDP
DB = Data stream in VF frequency band at the customer designated main terminal location
2 = 600 Ohms impedance

SECNCI (Secondary NCI Code):

04 = Number of physical wires at CDP
DA = Data stream in VG frequency at the customer designated secondary terminal location
2 = 600 Ohms impedance
S = Sealing current option for 4-wire transmission

In the above example the NCI (Network Channel Interface) code is the interface requested at the customer's POT (Point of Termination) and the SECNCI (Secondary Network Channel Interface) code represents the interface at the end office serving the End User.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)

Example No. 2: If the customer wishes to order a FX circuit to a station, with 600 Ohms impedance, loop start signaling, which is 4-wire at the CDP and 2-wire at the end-user, the customer might specify:

<u>NC</u>	<u>NCI</u>	<u>SECNCI</u>
LC--	04LO2	02LS2

NC Code:

LC = Voice Grade Channel Service, VG2
-- = No Optional Features

NCI Code:

04 = Number of physical wires at CDP
LO = Loop start, loop signaling - open end
2 = 600 Ohms impedance

SECNCI (Secondary NCI Code):

02 = Number of physical wires at CDP
LS = Loop start signaling - closed end
2 = 600 Ohms impedance

Example No. 3: If the customer wishes to order a 1.544 Mbps Hi-cap facility with no channel options such as CO multiplexing, the customer might specify the following:

<u>NC</u>	<u>NCI</u>	<u>SECNCI</u>
HC--	04DS9-15	04DS9-15

NC Code:

HC = High Capacity Channel Service, HC1
-- = No Optional Features

NCI, SECNCI Code:

04 = Number of physical wires at CDP
DS = Digital hierarchy interface
9 = 100 Ohms impedance
15 = 1.544 Mbps (DS1) format

The preceding three examples use information contained in Special Report SR-ST5-000307.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.1 Network Channel (NC) Codes

In order to determine the NC code appropriate for the service to be ordered, the type of Special Access Service the customer wishes must be identified. This identification is accomplished by a Service Designator (SD) code. The broad categories of Service Designator codes (e.g., VG, MT, TG, etc.) are set forth in Section 7. preceding. Variations within service type (e.g., VG1, MTC, TG2, etc.) are described in the various Technical Publications cited in (A) through (G) following.

Having determined the specific service type to be ordered and its SD code, and having used the appropriate Technical Publication, the customer should match the SD code to the NC code using the following matrices. Once the NC code has been determined, the Network Channel Interface (NCI) code may be developed using the information set forth in 13.2.2 following and the guidelines concerning specific parameters available for each service type as set forth in the specified Technical Publication.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.1 Network Channel (NC) Codes (Cont'd)

(A) Technical Specifications Packages Voice Grade Service

SD Code	C*	Package VG-												W
		1	2	3	4	5	6	7	8	9	10	11	12	
NC Code	LQ	LB	LC	LD	LE	LF	LG	LH	LJ	LK	LN	LP	LR	SE
<u>Parameter</u>														
Attenuation														
Distortion	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C-Message Noise	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Echo Control	X	X	X	X		X		X	X			X	X	X
Envelope Delay														
Distortion	X						X	X	X	X	X	X	X	X
Frequency Shift	X						X	X	X	X	X	X	X	X
Impulse Noise	X					X	X	X	X	X	X	X	X	X
Intermodulation														
Distortion	X						X	X	X	X	X	X		X
Loss Deviation	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Phase Hits, Gain														
Hits, and Dropouts	X													
Phase Jitter	X						X	X	X	X	X	X		X
Signal-to-C														
Message Noise					X									
Signal-to-C														
Notch Noise	X					X	X	X	X	X	X	X	X	X

The technical specifications for these parameters (except for dropouts, phase hits, and gain hits) are described in Technical References TR-NPL-000334 and TR-TSY-000335. The technical specifications for dropouts, phase hits, and gain hits are described in Technical Reference PUB 41004, Table 4.

* The desired parameters are selected by the customer from the list of available parameters.

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.1 Network Channel (NC) Codes (Cont'd)

(A) Technical Specifications Packages Voice Grade Service (Cont'd)

SD Code NC Code	Package VG-													W SE	
	C*	1	2	3	4	5	6	7	8	9	10	11	12		
	<u>LQ</u>	<u>LB</u>	<u>LC</u>	<u>LD</u>	<u>LE</u>	<u>LF</u>	<u>LG</u>	<u>LH</u>	<u>LJ</u>	<u>LK</u>	<u>LN</u>	<u>LP</u>	<u>LR</u>		
<u>Optional Features and Functions</u>															
Central Office Bridging Capability	X		X			X	X						X	X	X
Central Office Multiplexing	X						X								
Conditioning: C-Type Improved	X					X	X	X	X	X	X				
Attenuation Distortion	X					X	X	X	X	X	X				
Improved Envelope Delay Distortion	X					X	X	X	X	X	X				
Sealing Current	X						X								
Data Capability	X						X	X			X				
Telephoto Capability	X												X		
Customer Specified Premises Receive Level	X		X	X				X	X	X					
Improved Return Loss for Effective Four-Wire Transmission	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
For Effective Two-Wire Transmission	X		X	X				X							
Improved Two-Wire Voice Transmission														X	
PPSN Interface Arrangement	X									X					
Selective Signaling Arrangement	X		X			X	X				X	X	X		
Signaling Capability	X	X	X	X				X	X	X					
Transfer Arrangement	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.1 Network Channel (NC) Codes (Cont'd)

(B) Technical Specifications Packages Digital Data Service

SD Code NC Code	Package					
	D1 XA	D2 XB	D3 XG	D4 XH	D5 XE	D6 YN
<u>Parameter/Hubbed</u>						
Error-Free Seconds	X	X	X	X	X	X
<u>Optional Features and Functions/Hubbed</u>						
Central Office Bridging Capability	X	X	X	X	X	X
PPSN Interface Transfer Arrangement	X	X	X	X	X	X
Transfer Arrangement	X	X	X	X	X	X

The Telephone Company will provide a channel capable of meeting a monthly average performance equal to or greater than 99.875% error-free seconds (if provided through a Digital Data hub) while the channel is in service, if it is measured through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference PUB 62310.

Optional Features
and Functions/Non-Hubbed

Public Packet Data Arrangement				X	X	
-----------------------------------	--	--	--	---	---	--

Voltages which are compatible with Digital Data Service are delineated in Technical Reference TR-NWT-000341.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.1 Network Channel (NC) Codes (Cont'd)

(C) Technical Specifications Packages High Capacity Service

	<u>Package</u>					
SD Code	<u>HC0</u>	<u>HC1</u>	<u>HC1C</u>	<u>HC2</u>	<u>HC3</u>	
	<u>HC4</u>					
NC Code	<u>HS</u>	<u>HC</u>	<u>HD</u>	<u>HE</u>	<u>HF</u>	<u>HG</u>
<u>Parameters</u>						
Error-Free Seconds		X				
<u>Optional Features and Functions</u>						
Automatic Loop Transfer			X			
Central Office Multiplexing:						
DS4 to DS1						X
DS3 to DS1					X	
DS2 to DS1				X		
DS1C to DS1			X			
DS1 to Voice		X				
DS1 to DS0		X				
DS0 to Subrate*	X					
Transfer Arrangement		X				
Clear Channel Capability		X				

A channel with technical specifications package HC1 will be capable of an error-free second performance of 98.75% over a continuous 24 hour period as measured at the 1.544 Mbps rate through a CSU equivalent which is designed, manufactured, and maintained to conform with the specifications contained in Technical Reference PUB 62411.

* Available only on a channel of 1.544 Mbps facility to a Telephone Company Hub.

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes

The electrical interface with the Telephone Company for Special Access Services, is defined by an interface code. There are interface codes for both the customer designated premises and the point of termination. Three examples of NCI codes are found in 13.2 preceding.

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(A) Parameter Codes and OptionsParameterCode OptionDefinition

AB -	accepts 20 Hz ringing signal at customer's point of termination
AC -	accepts 20 Hz ringing signal at customer's end user's point of termination
AH -	analog high capacity interface
- B	60 kHz to 108 kHz (12 channels)
- C	312 kHz to 552 kHz (60 channels)
- D	564 kHz to 3084 kHz (600 channels)
CT -	Centrex Tie Trunk Termination
CS -	digital hierarchy interface at Digital Cross Connect System (DCS)
- 15	.544 Mbps (DS1) ANSI Extended Superframe (ESF) Format and B8ZS Clear Channel Capability
- 15A	1.544 Mbps (DS1) Superframe (SF) format
- 15B	1.544 Mbps (DS1) Superframe (SF) format and B8ZS Clear Channel Capability
- 15K	1.544 Mbps (DS1) Extended Superframe (ESF)
DA -	data stream in VF frequency band at customer's end user's point of termination
DB -	data stream in VF frequency band at customer's point of termination
- 10	VF for TG1 and TG2
- 43	VF for 43 Telegraph Carrier type signals, TG1 and TG2
DC -	direct current or voltage
- 1	monitoring interface with series RC combination (McCulloh format)
- 2	Telephone Company energized alarm channel
- 3	Metallic facilities (DC continuity) for direct current/low frequency control signals or slow speed data (30 baud)
DD -	DATAPHONE Select-A-Station (and TABS) interface at customer's point of termination
DE -	DATAPHONE Select-A-Station (and TABS) interface at the customer's end user's point of termination

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(A) Parameter Codes and Options (Cont'd)Parameter (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
DS	-	digital hierarchy interface
	- 15	1.544 Mbps (DS1) format per PUB 62411 plus D4
	- 15E	8-bit PCM encoded in one 64 kbps of the DS1 signal
	- 15F	8-bit PCM encoded in two 64 kbps of the DS1 signal
	- 15G	8-bit PCM encoded in three 64 kbps of the DS1 signal
	- 15H	14/11-bit PCM encoded in six 64 kbps of the DS1 signal
	- 15J	1.544 Mbps format per PUB 62411
	- 15K	1.544 Mbps format per PUB 62411 plus extended framing format
	- 15L	1.544 Mbps (DS1) with SF signaling
	- 27	274.176 Mbps (DS4)
	- 27L	274.176 Mbps (DS4) with SF signaling
	- 31	3.152 Mbps (DS1C)
	- 31L	3.152 Mbps (DS1C) with SF signaling
	- 44	44.736 Mbps (DS3)
	- 44L	44.736 Mbps (DS3) with SF signaling
	- 63	6.312 Mbps (DS2)
	- 63L	6.312 Mbps (DS2) with SF signaling
DU	-	digital access interface
	- 24	2.4 kbps
	- 48	4.8 kbps
	- 19	19.2 kbps
	- 56	56.0 kbps
	- 96	9.6 kbps
	- 64	64.0 kbps
	- A	1.544 Mbps format per PUB 62411
	- B	1.544 Mbps format per PUB 62411 plus D4
	- C	1.544 Mbps format per PUB 62411 plus extended framing format
	- 1KN	1.544 Mbps ANSI Extended Superframe (ESF) Format without line power
	- 1SN	1.544 Mbps ANSI Extended Superframe (ESF) Format with B8ZS Clear Channel Capability and without line power
	- AN	1.544 Mbps free-framing format without line power (only avail. to U.S. Govt. agencies)
	- BN	1.544 Mbps Superframe (SF) Format without line power
	- DN	1.544 Mbps Superframe (SF) Format with B8ZS Clear Channel Capability without line power
DX	-	duplex signaling interface at customer's point of termination
DY	-	duplex signaling interface at customer's end user's point of termination

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(A) Parameter Codes and Options (Cont'd)Parameter (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
EA - E		Type I E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EA - M		Type I E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EB - E		Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on E Lead.
EB - M		Type II E&M Lead Signaling. Customer at POT or customer's end user at POT originates on M Lead.
EC -		Type III E&M signaling at customer POT
EX - A		tandem channel unit signaling for loop start or ground start and customer supplies open end (dial tone, etc.) functions.
EX - B		tandem channel unit signaling for loop start or ground start and customer supplies closed end (dial pulsing, etc.) functions.
GO -		ground start loop signaling - open end function by customer or customer's end user
GS -		ground start loop signaling - closed end function by customer or customer's end user
IA -		E.I.A. (25 pin RS-232)
LA -		end user loop start loop signaling - Type A OPS registered port open end
LB -		end user loop start loop signaling - Type B OPS registered port open end
LC -		end user loop start loop signaling - Type C OPS registered port open end
LO -		loop start loop signaling - open end function by customer or customer's end user
LR -		20 Hz automatic ringdown interface at customer with Telephone Company provided PLAR
LS -		loop start loop signaling - closed end function by customer's end user
NO -		no signaling interface, transmission only

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(A) Parameter Codes and Options (Cont'd)Parameter (Cont'd)

<u>Code</u>	<u>Option</u>	<u>Definition</u>
PG	-	program transmission - no dc signaling
	- 1	nominal frequency from 50 to 15000 Hz
	- 3	nominal frequency from 200 to 3500 Hz
	- 5	nominal frequency from 100 to 5000 Hz
	- 8	nominal frequency from 50 to 8000 Hz
PR	-	protective relaying*
RV	- 0	reverse battery signaling, one way operation, originate by customer
	- T	reverse battery signaling, one way operation, terminate function by customer or customer's end user
SF	-	single frequency signaling with VF band at either customer POT or customer's end user POT
TF	-	telephotograph interface
TT	-	telegraph/teletypewriter interface at either customer POT or customer's end user POT
	- 2	20.0 milliamperes
	- 3	3.0 milliamperes
	- 6	62.5 milliamperes
TV	-	television interface
	- 1	combined (diplexed) video and one audio signal
	- 2	combined (diplexed) video and two audio signals
	- 5	video plus one (or two) audio 5 kHz signal(s) or one (or two) two wire
	- 15	video plus one (or two) audio 15 kHz signal(s)

* Available only for the transmission of audio tone protective relaying signals used in the protection of electric power systems during fault conditions

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(B) Impedance

The nominal reference impedance with which the channel will be terminated for the purpose of evaluating transmission performance:

<u>Value (ohms)</u>	<u>Code(s)</u>
110	0
150	1
600	2
900	3*
135	5
75	6
124	7
Variable	8
100	9

* For those interface codes with a 4-wire transmission path at the customer designated POT, rather than a standard 900 ohm impedance the code (3) denotes a customer provided transmission equipment termination.

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces

The following tables show the Network Channel Interface codes (NCIs) which are compatible:

(1) Voice Grade

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
2AB2	2AC2	2DB2	2DA2	2LR2	2LR2
2AB3	2AC2	2DB32	DA2	2LR3	2LR2
2CT3	2DY2	2DX3	2LA2	2LS	2GS
	4DS8		2LB2		2LS
	4DX2		2LC2		4GS
	4DX3		2LO3		4LS
	4DY2		2LS2		
	4EA2-E		2LS3	2LS2	2LA2
	4EA2-M				2LB2
	4SF2	2GO2	2GS2		2LC2
	4SF3		2GS3		
	6DX2			2LS3	2LA2
	6DY2	2GO3	2GS2		2LB2
	6DY3		2GS3		2LC2
	6EA2-E				
	6EA2-M	2GS	2GS	2NO2	2DA2
	6EB2-E		2LS		2NO2
	6EB2-M		4GS		
	6EB3-E		4LS	2NO3	2NO2
	8EB2-E				2PR2
	8EB2-M	2L02	2LS2		
	8EC2		2LS3	2TF3	2TF2
	9DY2				
	9DY3	2L03	2LS2		
	9EA2		2LS3		
	9EA3				

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

	<u>Compatible CIs</u>	<u>Compatible CIs</u>	<u>Compatible CIs</u>
4AB2	2AC2 4AB2 4AC2 4SF2		
4AB3	2AC2 4AC2 4SF2		
4AC2	2AC2 4AC2		
		4DS8-	4DS8-
		2AC2	4DG2
		2DA2	4LR2
		2DY2	4LS2
		2GO2	4NO2
4DA2	4DA2	2GO3	4PR2
		2GS2	4RV2-T
4DB2	2DA2 2NO2 2PR2 4DA2 4DB2 4NO2 4PR2	2GS3 2LA2 2LB2 2LC2 2LO2 2LO3 2LR2 2LS3	4SF2 4SF3 4TF2 6DA2 6DY2 6DY3 6EA2-E 6EB2-E
4DD3	2DE2 4DE2	2NO2 2PR2 2RV2-T 2TF2 4AC2 4DA2 4DE2 4DX2 4DX3 4DY2 4EA2-E 4EA2-M	6EB2-M 6GS2 6LS2 8EB2-E 8EB2-M 9DY2 9DY3 9EA2 9EA3

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DX2	2DY2	4DX2	8EB2-E	4DX3	6DY2
	2LA2		8EB2-M		6DY3
	2LB2		9DY2		6EA2-E
	2LC2		9DY3		6EA2-M
	2LO3		9EA2		6EB2-E
	2LS2		9EA3		6EB2-M
	2LS3				6LS2
	2RV2-T	4DX3	2DY2		8EB2-E
	4DX2		2LA2		8EB2-M
	4DY2		2LB2		9DY2
	4EA2-E		2LC2		9DY3
	4EA2-M		2LO3		9EA2
	4LS2		2LS2		9EA3
	4RV2-T		2LS3		
	4SF2		2RV2-T	4DY2	2DY2
	4SF3		4DX2		4DY2
	6DY2		4DX3		
	6DY3		4DY2		
	6EA2-E		4EA2-E		
	6EA2-M		4EA2-M		
	6EB2-E		4LS2		
	6EB2-M		4RV2-T		
	6LS2		4SF2		
			4SF3		

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135. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>		
4EA2-E	2DY2	4EA3-E	2DY2	4GO2	2GO2	
	4DY2		4DY2		2GO3	
	4EA2-E		4EA2-E		2GS2	
	4EA2-M		4EA2-M		2GS3	
	4SF2		4SF2		4GS2	
	6DY2		6DY2		4SF2	
	6DY3		6DY3		6GS2	
	6EB2-E		6EA2-E			
	6EB2-M		6EA2-M		4GO3	2GO2
	8EB2-E		6EB2E			2GS2
	8EB2-M		6EB2-M	2GS3		
	9DY2		8EB2-E	4GS2		
	9DY3		8EB2-M	4SF2		
			9DY2	6GS2		
	4EA2-M		2DY2	9DY3		
4DY2		9EA2	4GS	2GS		
4EA2-M		9EA3		2LS		
4SF2				4GS		
6DY2			4LS			
6DY3						
6EB2-E						
6EB2-M						
8EB2-E						
8EB2-M						
9DY2						
9DY3						

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4LO2	2LS2 2LS3 4LS2 4SF2 6LS2 2RV2-T	4LS3	2LA2 2LB2 2LC2 2LO2 2LO3	4SF2	2LO3 2LR2 2LS2 2LS3
4LO3	2LS2 2LS3 4LS2 4RV2-T 4SF2 6LS2	4NO2	4SF2 2DA2 2DE2		4AC2 4DY2 4LS2
4LR2	2LR2 4LR2 4SF2		2NO2 4DA2 4DE2 4NO2 6DA2		4SF2 6DY2 6DY3 6GS2 9DY2 9DY3
4LR3	2LR2 4LR2 4SF2	4RV2-0	2RV2-T 4RV2-T 4SF2	4SF3	2DY2 2GO3 2GS2 2GS3 2LA2 2LB2 2LC2 2LO3 2LR2
4LS	2GS 2LS 4GS 4LS	4SF2	2AC2 2DY2 2GS2 2GS3 2LA2 2LB2 2LC2		
4LS2	2LA2 2LB2 2LC2 2LO2 2LO3				

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4SF3	2LS2	6DA	4DA2	6DY3	2DY2
	2LS3		6DA2		4DY2
	2RV2-T				6DY2
	4DY2	6DX2	2DY2		6DY3
	4EA2-E		4DY2		
	4EA2-M		4EA2-E	6EA2-E	2AC2
	4GS2				
	4LR2		4EA2-M		2DY2
	4LS2		4SF2		2LA2
	4RV2-T		6DY2		2LB2
	4SF2		6DY3		2LC2
	4SF3		6EA2-E		2LO3
	6DY2		6EA2-M		2LS2
	6DY3		6EB-E		2LS3
	6EB2-E		6EB2-M		
	2RV2-T				
	6EB2-M		8EB2-E		4AC2
	6GS2		8EB2-M		4DY2
	6LS2		9DY2		4EA2-E
	9DY2		9DY3		4EA2-M
	9DY3		9EA2		4LS2
	9EA2		9EA3		
	4RV2-T				4SF2
	9EA3				4SF3
		6DY2	2DY2		6DY2
4TF2	2TF2		4DY2		6DY3
	4TF2		6DY2		6EA2-E
					6EA2-M

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13. Access Service Interfaces and Transmission Specifications (Cont'd)13.2 Special Access Service (Cont'd)13.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6EA2-E	6EB2-E	6EA2-M	6DY2	6EB3-E	2DY2
	6EB2-M		6DY3		4DY2
	6LS2		6EA2-M		4EA2-E
	8EB2-E		6EB2-E		4EA2-M
	8EB2-M		6EB2-M		4SF2
	9DY2		6LS2		6DY2
	9DY3		8EB2-E		6DY3
			8EB2-M		6EA2-E
6EA2-M	2AC2		9DY2		6EA2-M
	2DY2		9DY3		8EB2-E
	2LA2				8EB2-M
	2LB2	6EB2-E	2DY2		9DY2
	2LC2		4DY2		9DY3
	2LO3		4SF2		9EA2
	2LS2		6DY2		9EA3
	2LS3		6DY3		
	2RV2-T		6EB2-E	6EX2-A	2GS2
	4AC2		6EB2-M		2GS3
	4DY2		9DY2		2LS2
	4EA2-E		9DY3		2LS3
	4EA2-M				4GS2
	4LS2	6EB2-M	2DY2		4LS2
	4RV2-T		4DY2		4SF2
	4SF2		4SF2		6GS2
	4SF3		6DY2		6LS2
			6DY3		
			6EB2-M		
			9DY2		
			9DY3		

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
6EX2-B	2GO3	8EB2-E	2AC2	8EB2-M	2AC2
	2LA2		2DY2		2DY2
	2LB2		2LA2		2LA2
	2LC2		2LB2		2LB2
	2LO2		2LC2		2LC2
	2LO3		2LO3		2LO3
	2LR2		2LS2		2LS2
	4LR2		2LS3		2LS3
	4SF2		2RV2-T		2RV2-T
			4AC2		4AC2
6GO2	2GO2		4DY2		4DY2
	2GS2		4LS2		4LS2
	2GS3		4RV2-T		4RV2-T
	4GS2		4SF2		4SF2
	4SF2		4SF3		4SF3
	6GS2		6DY2		6DY2
			6DY3		6DY3
6LO2	2LS2		6EB2-E		6EB2-E
	2LS3		6EB2-M		6EB2-M
	4LS2		6LS2		6LS2
	4SF2		8EB2-E		8EB2-M
	6LS2		8EB2-M		9DY2
			9DY2		9DY3
6LS2	2LA2		9DY3		
	2LB2				
	2LC2				
	2LO2				
	2LO3				
	4SF2				

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13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(1) Voice Grade (Cont'd)

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
8EC2	2DY2	9DY2	2DY2	9EA3	2DY2
	4DY2		4DY2		4DY2
	4EA2-E		6DY2		4EA2-E
	4EA2-M		6DY3		4EA2-M
	4SF2		9DY2		6DY2
	6DY2				6DY3
	6DY3	9DY3	2DY2		6EA2-E
	6EA2-E		4DY2		6EA2-M
	6EA2-M		6DY2		6EB2-E
	6EB2-E		6DY3		6EB2-M
	6EB2-M		9DY2		8EB2-E
	8EB2-E		9DY3		8EB2-M
	8EB2-M				9DY2
	9DY2	9EA2	2DY2		9DY3
	9DY3		4DY2		9EA3
	9EA2		4EA2-E		
	9EA3		4EA2-M		
			6DY2		
			6DY3		
			6EA2-E		
			6EA2-M		
			6EB2-E		
			6EB2-M		
			8EB2-E		
			8EB2-M		
			9DY2		
			9DY3		
			9EA2		
			9EA3		

ACCESS SERVICE

13. Access Service Interfaces and Transmission Specifications (Cont'd)

13.2 Special Access Service (Cont'd)

13.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(C) Compatible Network Channel Interfaces (Cont'd)

(2) Digital Data

<u>Compatible CIs</u>		<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS8-15	4DS8-15+ 4DU5-24 4DU5-48 4DU5-56 4DU5-96 6DU5-24 6DU5-48 6DU5-96	4DU5-24	4DU5-24 4DU5-48 4DU5-96 4DU8-56	6DU5-24	6DU5-24 6DU5-48 6DU5-56 6DU5-96

(3) High Capacity

<u>Compatible CIs</u>		<u>Compatible CIs</u>	
4DS0-63	4DS0-63 4DU8-A,B or C 6DU8-A,B or C	4DS8-15J	4DU8-A 6DU8-A
4DS6-27	4DS6-27 4DU8-A,B or C 6DU8-A,B or C	4DS8-15K	4DU8-B 4DU8-C 6DU8-B 6DU8-C
4DS6-44	4DS6-44 4DU8-A,B or C 6DU8-A,B or C	4DS8-31	4DS8-31 4DU8-A,B or C 6DU8-A,B or C
4DS8-15	4DS8-15 + 4DU8-B 6DU8-8	4DU8-A,B or C	4DU8-A,B or C

+ Available only as a cross connect of two digital channels at appropriate digital speeds at a Telephone Company hub.

+ Available only as a cross connect of two individual channels of 1.544 Mbps facilities at a Telephone Company hub.

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ACCESS SERVICE

15. Rates and Charges – TDS Metrocom

15.1 Federal Universal Service Charge

15.1.1 Federal Universal Service Charge (FUSC)

Regulations concerning the Federal Universal Service Charge are set forth in Section 3 preceding.

	<u>Percentage</u>
(A) FUSC Surcharge Factor	(1)

(1) As approved by the Federal Communications Commission (FCC).

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ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)15.2 End User Access Service**APPROVED**

Regulations concerning End User Access Service are set forth in Section 4 proceeding.

(A) The rates for End User Common Line are:

	<u>Rate Per Month</u>	
(1) Primary Residence		
- Individual line or trunk, each		
State of Wisconsin		
Market Areas excluding Middleton	\$6.50	(I)
Middleton Market Area	6.50	
State of Illinois	6.50	(I)
State of Michigan	6.50	
(2) Non-Primary Residence		
- Individual line or trunk, each		
State of Wisconsin		
Market Areas		
excluding Middleton	\$6.50	(I)
Middleton Market Area	6.50	
State of Illinois	6.50	(I)
State of Michigan	6.50	

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ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)

15.2 End User Access Service (Cont'd)

(A) The rates for End User Common Line are: (Cont'd)

	<u>Rate Per Month</u>	
(3) Single Line Business Subscriber		
- Individual line or trunk, each		
State of Wisconsin		
Market Areas excluding Middleton	\$6.50	(l)
Middleton Market Area	6.50	
State of Illinois	6.50	(l)
State of Michigan	6.50	(l)
(4) Multi-line Business Subscribers, including Centrex CO and CO-Like		
- Individual line or trunk, each		
State of Wisconsin		
Market Areas		
excluding Middleton	\$6.50	(l)
Middleton Market Area	9.08	
State of Illinois	6.50	(l)
State of Michigan	6.50	(l)
State of New York	9.20	

ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)15.2 End User Access Service (Cont'd)

(A) The rates for End User Common Line are: (Cont'd)

	<u>Rate Per Month</u>	
(5) ISDN BRI		
- Per facility		
State of Wisconsin		
Market Areas		
excluding Middleton	\$6.50	(I)
Middleton Market Area	9.08	
State of Illinois	6.50	(I)
State of Michigan	6.50	(I)
State of New York	9.20	
(6) ISDN PRI, DS1		
- Per Facility		
State of Wisconsin		
Market Areas		
excluding Middleton	\$25.30	
Middleton Market Area	16.50	
State of Illinois	22.50	
State of Michigan	26.75	
State of New York	46.00	

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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.3 Switched Access Service

(D)

(D)

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ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)15.3 Switched Access Service15.3.2 Recurring Charges

	<u>Rate</u>	
(A) <u>Switched Access Service</u>		
<u>Charge, Per Access Minute</u>		
End User Access		
- Illinois		
--Rockford Market	\$0.003595	
--Libertyville Market	\$0.003693	
- Michigan		
--Ann Arbor Market	\$0.003616	
--Grand Rapids Market	\$0.003590	
--Lansing	\$0.003574	
- New York	\$0.004125	(I)
- Wisconsin		
--Appleton Market	\$0.003545	
--New Berlin	\$0.003587	
--Madison Market	\$0.003561	
--Middleton Market	\$0.016657	(I)
Carrier-to-Carrier Access		
- Illinois		
--Rockford Market	\$0.001238	(R)
--Libertyville Market	\$0.001268	(R)
- Michigan		
--Ann Arbor Market	\$0.001268	(R)
--Grand Rapids Market	\$0.001203	
--Lansing	\$0.001220	
- New York	\$0.001605	(R)
- Wisconsin		
--Appleton Market	\$0.001149	(R)
--New Berlin	\$0.001226	
--Madison Market	\$0.001163	(R)
--Middleton Market	\$0.007965	(I)

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ACCESS SERVICE15. **RATES AND CHARGES – TDS METROCOM** (Continued)15.3 **Switched Access Service** (Continued)15.3.2 **Recurring Charges** (Continued)(B) **800 Data Base Access Service**
Queries, Per Query

	<u>Rate</u>	
Illinois	\$0.002304	
Michigan	\$0.002304	
New York	\$0.004356	(I)
Wisconsin – Middleton	\$0.005300	(R)
Wisconsin – All but Middleton	\$0.002304	

(C) **Intermediate Transport Access Service**Rate

Wisconsin

Entrance Facility
Per Termination

- High Capacity DS1	\$158.00	(I)
- High Capacity DS3	\$1,260.00	(I)

Direct Trunked Transport
Direct Trunked Facility
Per Mile

- High Capacity DS1	\$14.15	(R)
- High Capacity DS3	\$57.30	(R)

Direct Trunked Termination
Per Termination

- High Capacity DS1	\$33.42	(R)
- High Capacity DS3	\$351.00	(I)

Multiplexing

Per Arrangement

- DS3 to DS1	\$515.00	(I)
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Tandem Switched TransportTandem Switched Facility

Per Access Minute Per Mile	\$0.000013	(R)
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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.3 Switched Access Service

15.3.4 Assumed Access minutes of Use

Assumed
Minutes
Per Month
Per Line
or Trunk

(D)

(D)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service

15.4.1 Reserved for Future Use

(T)

(D)

(D)

15.4.2 Reserved for Future Use

(T)

(D)

(D)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.2 Reserved for Future Use (Continued)

(T)

(D)

(D)

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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.2 Reserved for Future Use (Continued)

(T)

(D)

(D)

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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.2 Reserved for Future Use (Continued)

(T)

(D)

(D)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.3 Reserved for Future Use

(T)

(D)

(D)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.3 Reserved for Future Use (Continued)

(T)

(D)

(D)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.4 High Capacity Service

	<u>Monthly Rate</u>	<u>Nonrecurring Charge</u>	
(A) Channel Termination			
(2) Per Termination (36 Month Term)			(M1) (M2)
(a) DS1 (1.544 Mbps)			(T)
- Type 1 ¹	\$102.00	\$100.00	(T)
- Type 2	\$135.00	\$100.00	(T)
- Type 3	\$225.00	\$378.19	(N)
(b) DS3 (44.736 Mbps)			(T)
- Type 1 ¹	\$750.00	\$600.00	(T)
- Type 2	\$1,200.00	\$600.00	(T)
- Type 3	\$2,106.00	\$983.25	(N)
(c) OC3 (155.52 Mbps)			(T)
- Type 1	\$2,000.00	\$900.00	(T)
- Type 2	\$2,000.00	\$900.00	(T)
- Type 3	\$3,001.50	\$1,500.00	(N)
(d) OC12 (622.08 Mbps)			(T)
- Type 1	ICB	ICB	(T)
- Type 2	ICB	ICB	(T)
- Type 3	ICB	ICB	(N)
(d) OC48 (2488.28 Mbps)			(T)
- Type 1	ICB	ICB	(T)
- Type 2	ICB	ICB	(M2) (T)
- Type 3	ICB	ICB	(N)

(M1) Channel Termination (60 month term) material moved to Page 15-15.2 and Channel Mileage Facility – per mile moved to Page 15-16

(M2) Material previously appeared on Page 15-15.

¹ Rates available to new circuits ordered after 11/1/06.

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.4 High Capacity Service (Continued)

(A) Channel Termination (Continued)

(3) Per Termination (60 Month Term)

	Monthly Rate	Nonrecurring Charge	(M1)(M2)
(a) DS1 (1.544 Mbps)			(T)
- Type 1 ¹	\$60.00	\$0.00	(T)
- Type 2	\$110.25	\$0.00	(T)
- Type 3	\$187.50	\$339.07	(N)
(b) DS3 (44.736 Mbps)			(T)
- Type 1 ¹	\$600.00	\$0.00	(T)
- Type 2	\$960.00	\$0.00	(T)
- Type 3	\$1,890.00	\$874.00	(N)
(c) OC3 (155.52 Mbps)			(M1) (T)
- Type 1	\$1,875.00	\$900.00	(T)
- Type 2	\$1,875.00	\$900.00	(T)
- Type 3	\$2,725.50	\$1,345.50	(N)
(d) OC12 (622.08 Mbps)			(T)
- Type 1	ICB	ICB	(T)
- Type 2	ICB	ICB	(T)
- Type 3	ICB	ICB	(N)
(d) OC48 (2488.28 Mbps)			(T)
- Type 1	ICB	ICB	(T)
- Type 2	ICB	ICB	(T)
- Type 3	ICB	ICB	(N)

(M1) Material moved to Page 15-16

(M2) Material previously appeared on Sheet 15-15.1.

¹ Rates available to new circuits ordered after 11/1/06.

ACCESS SERVICE15. **RATES AND CHARGES – TDS METROCOM** (Continued)15.4 Special Access Service (Continued)15.4.4 High Capacity Service (Continued)

(B) Channel Mileage (Continued)

(1) Channel Mileage Facility, per mile ²

(T)

	<u>Monthly</u>	<u>Optional Rate Plan</u>	
		<u>36 Month</u>	<u>60 Month</u>
(a) DS1 (1.544 Mbps) – Type 1 & 2			
0 to 15 Miles	\$16.00 ¹	\$10.88 ¹	\$8.00 ¹
Over 15 to 24 Miles	\$16.00	\$10.88	\$8.00
Over 24 to 100 Miles	\$3.00	\$2.04	\$1.50
Over 100 Miles	\$2.00	\$1.36	\$1.00
(b) DS1 (1.544 Mbps) – Type 3	\$16.00	\$10.88	\$8.00
(c) DS3 (44.736 Mbps) – Type 1 & 2			
0 to 15 Miles	\$72.00 ¹	\$41.76 ¹	\$23.04 ¹
Over 15 to 24 Miles	\$72.00	\$41.76	\$23.04
Over 24 to 100 Miles	\$36.00	\$20.88	\$11.52
Over 100 Miles	\$27.00	\$15.66	\$8.64
(d) DS3 (44.736 Mbps) – Type 3	\$72.00	\$41.76	\$23.04
(e) OC3 (155.52 Mbps) – Type 1 & 2			
0 to 15 Miles	\$225.00 ¹	\$191.25 ¹	\$168.75 ¹
Over 15 to 24 Miles	\$225.00	\$191.25	\$168.75
Over 24 to 100 Miles	\$115.00	\$97.75	\$86.25
Over 100 Miles	\$86.00	\$73.10	\$64.50
(f) OC3 (155.52 Mbps) – Type 3	\$225.00	\$191.25	\$168.75
(g) OC12 (622.08 Mbps) – Type 1 & 2	ICB	ICB	ICB
(h) OC12 (622.08 Mbps) – Type 3	ICB	ICB	ICB
(i) OC48 (2488.28 Mbps) – Type 1 & 2	ICB	ICB	ICB
(j) OC48 (2488.28 Mbps) – Type 3	ICB	ICB	ICB

1 This charge will be waived when both end point locations are within the company's serving exchange

2 If any portion of the route is Type 3, all mileage will be billed at Type 3 rates.

(C)

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ACCESS SERVICE

15. RATES AND CHARGES – TDS METROCOM (Continued)15.4 Special Access Service (Continued)15.4.4 High Capacity Service (Continued)

(B) Channel Mileage (Continued)

(2) Channel Mileage Termination ⁽²⁾

	<u>Monthly Rate</u>	
(a) Per Termination (Month to Month)		
- DS1 (1.544 Mbps) – Type 1 & 2 ⁽¹⁾	\$75.00	
- DS1 (1.544 Mbps) – Type 3	\$100.00	
- DS3 (44.736 Mbps) – Type 1 & 2 ⁽¹⁾	\$350.00	(C)
- DS3 (44.736 Mbps) – Type 3	\$605.00	
- OC3 (155.52 Mbps) – Type 1 & 2 ⁽¹⁾	\$422.00	(C)
- OC3 (155.52 Mbps) – Type 3	\$422.00	
- OC12 (622.08 Mbps) – Type 1 & 2	ICB	
- OC12 (622.08 Mbps) – Type 3	ICB	
- OC48 (2488.28 Mbps) – Type 1 & 2	ICB	
- OC48 (2488.28 Mbps) – Type 3	ICB	
(b) Per Termination (36 Month Term)		
- 1 DS1 (1.544 Mbps) – Type 1 & 2 ⁽¹⁾	\$45.00 ¹	
- 1 DS1 (1.544 Mbps) – Type 3	\$75.00	
- DS3 (44.736 Mbps)) – Type 1 & 2 ⁽¹⁾	\$290.50	(C)
- DS3 (44.736 Mbps)) – Type 3	\$526.00	
- OC3 (155.52 Mbps)) – Type 1 & 2 ⁽¹⁾	\$337.60	(C)
- OC3 (155.52 Mbps)) – Type 3	\$337.60	
- OC12 (622.08 Mbps) – Type 1 & 2	ICB	
- OC12 (622.08 Mbps) – Type 3	ICB	
- OC48 (2488.28 Mbps) – Type 1 & 2	ICB	
- OC48 (2488.28 Mbps) – Type 3	ICB	

(1) The charge is waived on Type 1 and 2 when the total Channel Mileage Facility is 15 miles or less.

(2) If a Type 3 Channel Mileage Termination (CMT) is required, then both CMT's will be billed at the Type 3 rate.

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ACCESS SERVICE**15. RATES AND CHARGES – TDS METROCOM (Continued)****15.4 Special Access Service (Continued)****15.4.4 High Capacity Service (Continued)**

	<u>Monthly Rate</u>	
(B) Channel Mileage (Continued)		
(2) Channel Mileage Termination		
(c) Per Termination (60 Month Term)		
- 1 DS1 (1.544 Mbps) – Type 1 & 2 ⁽¹⁾	\$30.00	
- 1 DS1 (1.544 Mbps) – Type 3	\$50.00	
- DS3 (44.736 Mbps) – Type 1 & 2 ⁽¹⁾	\$280.50	(C)
- DS3 (44.736 Mbps) – Type 3	\$477.95	
- OC3 (155.52 Mbps) – Type 1 & 2 ⁽¹⁾	\$316.50	(C)
- OC3 (155.52 Mbps) – Type 3	\$316.50	
- OC12 (622.08 Mbps) – Type 1 & 2	ICB	
- OC12 (622.08 Mbps) – Type 3	ICB	
- OC48 (2488.28 Mbps) – Type 1 & 2	ICB	
- OC48 (2488.28 Mbps) – Type 3	ICB	
(C) Optional Features and Functions		
(1) Multiplexing, per arrangement		
- DS3 to DS1	\$300.00	
- OC3 to DS3	\$600.00	
- OC12 to OC3	ICB	
- OC12 to DS3	ICB	

(1) The charge is waived on Type 1 and 2 when the total Channel Mileage Facility is 15 miles or less.

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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.4 High Capacity Service (Continued)

	<u>Monthly Rate</u>	
(D) Clear Channel Capability - per 1.544 Mbps transmission path	None	(T)
(E) Cross Connect - per Arrangement (Month to Month)		(T)
DS1 to DS1 – Type 1	\$10.00	(T)(D)
DS1 to DS1 – Type 2 & 3	\$50.00	(T)
DS3 to DS3	\$100.00	
OC3 to OC3	\$120.00	
(F) OCN Protection Card		(T)
(1) Month to Month		
OC3 – Type 1 & 2	\$200.00	(T)
OC3 – Type 3	\$402.50	(N)
OC12/48 – Type 1 & 2	ICB	(T)
OC12/48 – Type 3	ICB	(N)
(2) 36 Month Term		
OC3 – Type 1 & 2	\$160.00	(T)
OC3 – Type 3	\$350.18	(N)
OC12/48 – Type 1 & 2	ICB	(T)
OC12/48 – Type 3	ICB	(N)
(3) 60 Month Term		
OC3 – Type 1 & 2	\$140.00	(T)
OC3 – Type 3	\$313.95	(N)
OC12/48 – Type 1 & 2	ICB	(T)
OC12/48 – Type 3	ICB	(N)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.4 Special Access Service (Continued)

15.4.5 Individual Case Filings

Rate and charges for Selected Special Access Services are provided on an individual case basis.

(T)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.5 Other Services (Continued)

15.5.1 Access Ordering

	<u>Charge</u>	
(A) <u>Access Order Charge</u>		
Per Order, Type 1	\$81.00	(T)
Per Order, Type 2	\$89.00	(T)(I)
Per Order, Type 3	\$100.00	(N)
(B) <u>Service Date Change Charge</u> ¹		(T)
<p>A Service Date Change Charge will apply, on a per order per occurrence basis, for each service date changed. The Access Order Charge as specified in 15.5.1(A) preceding does not apply. The applicable charge is:</p>		
Per Order, Type 1	\$34.00	(D)
Per Order, Type 2	\$34.00	(T)
Per Order, Type 3	\$100.00	(N)
(C) <u>Design Change Charge</u>		
<p>The Design Change Charge will apply on a per order per occurrence basis, for each order requiring design change.</p>		
Per Order, Type 1	\$60.00	(M) (T)
Per Order, Type 2	\$60.00	(T)
Per Order, Type 3	\$100.00	(N)
(D) <u>Miscellaneous Service Order Charge</u>		
Per Order, Type 1	\$34.00	(T)
Per Order, Type 2	\$34.00	(T)
Per Order, Type 3	\$100.00	(M) (N)

¹ If the requested service date change is more than 30 days from the original service date or installation date, a cancellation charge will apply in addition to the Service Date Change Charge. (N)
 (M) Material moved to Page 15-20 (N)

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.5 Other Services (Continued)

15.5.1 Access Ordering

	<u>Charge</u>	
(E) <u>Expedite Service Order Charge</u>		(M)
The Expedite Service Order Charge will apply in addition to the Access Order Charge on a per order basis for each order requesting an expedited service date.		
Per Order, Type 1	\$50.00	(T)
Per Order, Type 2	\$200.00	(M)(T)(I)
Per Order, Type 3	\$1,000.00	(N)
(F) <u>Cancellation Charge</u>		
Per Order, Type 1	\$350.00	(T)
Per Order, Type 2	\$500.00	(T)(I)
Per Order, Type 3	\$1,000.00	(N)

15.5.2 Additional Engineering

	<u>Each Half Hour or Fraction Thereof</u>
(A) Basic Time per engineer normally scheduled working hours	\$32.50
(B) Overtime per engineer outside of normally scheduled working hours	\$50.00
(C) Premium Time outside of scheduled work day, per engineer	\$75.00

(M) Material previously appeared on Page 15-19

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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.5 Other Services (Continued)

15.5.3 Additional Labor

<u>Additional Engineering Periods</u>	<u>Each Half Hour or Fraction Thereof</u>	
(A) Installation or Repair		
- Overtime, outside of normally scheduled working hours on a scheduled work day, per technician	\$35.00*	(I)
- Premium Time, outside of scheduled work day, per technician	\$45.00*	(I)

(D)

 (D)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)

15.5 Other Services (Cont'd)

15.5.3 Additional Labor (Cont'd)

Additional Labor Periods Each Half Hour or Fraction Thereof

	<u>Installation and Repair Technician</u>	<u>Central Office Maintenance Technician</u>	
(C) Testing and Maintenance with other Telephone Companies, or Other Labor			
- Basic Time per technician normally scheduled working hours	\$32.50	\$32.50	(l) (l)
- Overtime per technician outside of normally scheduled working hours on a scheduled work day	\$35.00*	\$50.00*	(l) (l)
- Premium Time per technician outside of scheduled work day	\$45.00*	\$75.00*	(l) (l)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

15.5 Other Services (Continued)

15.5.4 Miscellaneous Services

(A) Additional Cooperative Acceptance Testing – Switched Access

<u>Testing Periods</u>	Each Half Hour or Fraction <u>Thereof</u>
Basic Time, Overtime* and Premium Time*	See the rates for additional labor as set forth in 15.5.3(C) preceding.

(D)

(D)

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. RATES AND CHARGES – TDS METROCOM (Continued)

15.5 Other Services (Continued)

15.5.4 Miscellaneous Services (Continued)

(C) Additional Manual Testing – Switched Access

To First Point
Of Switching

Additional Tests

Each Half
Hour or
Fraction
Thereof

Any other agreed to
tests, per technician

See the rates
for additional
Labor as set
forth in 15.5.3(C)
preceding

(T)
(T)

(D) Additional Cooperative Acceptance Testing – Special Access

Testing Periods

Basic Time, Overtime*
and Premium Time*

Each Half
Hour or
Fraction
Thereof

See the rates
for Additional
Labor as set
forth in 15.5.3(C)
preceding

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)

15.5 Other Services (Cont'd)

15.5.4 Miscellaneous Services (Cont'd)

(E) Additional Manual Testing – Special Access

	Each Half Hour or Fraction Thereof
<u>Testing Periods</u>	
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 15.5.3(C). preceding

(F) Maintenance of Service

	Each Half Hour or Fraction Thereof
Maintenance of Service <u>Periods</u>	
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 15.5.3(C). preceding

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)15.5 Other Services (Cont'd)15.5.4 Miscellaneous Services (Cont'd)

	<u>Monthly Rate</u>
(G) <u>Controller Arrangement</u>	
Per Arrangement	\$100.00
	<u>Nonrecurring Charge</u>
(H) <u>Presubscription</u>	
Per Telephone Exchange Service line or trunk*	\$5.00
(I) <u>Unauthorized PIC Change</u>	
- Residence/Business Per Telephone Exchange Service line or trunk	\$35.65
- Public and/or Semi- public pay telephone Per Telephone Exchange Service line or trunk	\$57.57

* This charge is generally billed to the end user who is the subscriber to the Telephone Exchange Service. In those instances where the IC both requests the presubscription change, and requests the associated charge be billed to it, the Telephone Company will bill the IC. In the event an end user is incorrectly presubscribed due to misassignment on the part of the Telephone Company, no charge shall apply. In the event an end user is incorrectly presubscribed due to misassignment on the part of the IC, and the IC is unable to document such an assignment, the Telephone Company will apply the charge to the IC responsible for the misassignment of the end user and assign the end user to an IC of the end user's choice.

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ACCESS SERVICE

15. **RATES AND CHARGES – TDS METROCOM** (Continued)

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ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)

15.6 Special Construction

15.6.1 Basis for Rate and Charges

Rates and charges are on an individual case basis.

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ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)15.7 Local Number Portability

	<u>Rate</u>
15.7.1 <u>Query Service</u>	
(A) LNP Query	
Prearranged, per Query	
End office	N/A
(B) Local Number Portability	
Non-Recurring Charge/Per Order	N/A
LNP Billing Charge	N/A

ACCESS SERVICE

15. Rates and Charges – TDS Metrocom (Cont'd)

15.8 Telecommunications Service Priority

		<u>Non-Recurring Rate</u>
15.8.1	Priority Installation or Restoration Activation	
	(A) Prime Service Vendor (Type 1 or 2 Service)	\$136.00
	(B) Prime Service Vendor (Type 3 Service)	\$136.00
		<u>Monthly Rate</u>
15.8.2	Priority Restoration Maintenance and Administration	
	(A) Prime Service Vendor (Type 1 or 2 Service)	\$3.00
	(B) Prime Service Vendor (Type 3 Service)	\$3.00

15.9 Public Packet Data Network

(A) Ethernet Service

Rates and charges are on an individual case basis.

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc.

15.1 Federal Universal Service Charge

15.1.1 Federal Universal Service Charge (FUSC)

Regulations concerning the Federal Universal Service Charge are set forth in Section 3 preceding.

	<u>Percentage</u>
(A) FUSC Surcharge Factor	(1)

(1) As approved by the Federal Communications Commission (FCC).

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Continued)

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15.2 End User Access Service

Regulations concerning End User Access Service are set forth in 4.6 proceeding.

(A) The rates for End User Common Line are:

	<u>Rate Per Month</u>	
(1) Primary Residence		
- Individual line or trunk, each		
State of Minnesota	\$6.50	(I)
State of North Dakota	\$6.50	
(2) Non-Primary Residence		
- Individual line or trunk, each		
State of Minnesota	\$6.50	(I)
State of North Dakota	\$6.50	(R)

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ACCESS SERVICE15. Rates and Charges – U.S. Link, Inc. (Continued)15.2 End User Access Service (Continued)

(A) The rates for End User Common Line are: (Continued)

	<u>Rate Per Month</u>	
(3) Single Line Business Subscriber		
- Individual line or trunk, each		
State of Minnesota	\$6.50	(I)
State of North Dakota	\$6.50	
(4) Multi-line Business Subscribers, including Centrex CO and CO-Like		
- Individual line or trunk, each		
State of Minnesota	\$6.50	(I)
State of North Dakota	\$6.50	

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.2 End User Access Service (Cont'd)

(A) The rates for End User Common Line are: (Cont'd)

	<u>Rate Per Month</u>	
(5) ISDN BRI		
- Per facility		
State of Minnesota	\$6.50	(l)
State of North Dakota	\$6.50	
(6) ISDN PRI, DS1		
- Per Facility		
State of Minnesota	\$29.75	
State of North Dakota	\$44.75	

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.3 Switched Access Service15.3.1 Nonrecurring Charges

	<u>Rate</u>
(A) <u>Local Transport - Installation Per Entrance Facility</u>	
- Voice Grade Two-Wire	\$161.00
- Voice Grade Four-Wire	\$161.00
- High Capacity DS1	\$181.00
- High Capacity DS3	\$499.00
(B) <u>Interim NXX Translation Per Order</u>	
Per LATA or Market Area	\$81.00
(C) <u>FGC and FGD Conversion of Multifrequency Address Signaling to SS7 Signaling or SS7 Signaling to Multifrequency Address Signaling</u>	
- Per 24 Trunks Converted or Fraction thereof on a Per Order Basis	\$260.00
(D) <u>Trunk Activation Per Order</u>	
- Per 24 Trunks Activated or Fraction thereof, on a Per Order Basis	\$260.00
(E) <u>Local Transport - Installation Per Line or Trunk</u>	\$220.00

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.3 Switched Access Service

15.3.2 Recurring Charges

	<u>Rate</u>	
(A) <u>Switched Access Service Charge, Per Access Minute</u>		
End User Access	\$0.003866	
Carrier-to-Carrier Access	\$0.002288	(R)
(B) <u>800 Data Base Access Service Queries</u>		
Per Query	\$0.004053	

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.3 Switched Access Service

15.3.3 Feature Group B (FGB) with an Abbreviated Dialing Arrangement (ADA) Rate Factor

In end offices that are equipped with equal access capabilities, premium rates apply to all FGB with ADA access minutes

In end offices that are not equipped with equal capabilities:

- Switched Access rates will apply.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.3 Switched Access Service15.3.4 Assumed Access minutes of Use

	<u>Assumed Minutes Per Month Per Line or Trunk</u>
(A) Feature Group A, Two Way Calling (1510 Originating, 2685 Terminating)	4195
(B) Feature Group A, Originating Only	1510
(C) Feature Group A, Terminating Only	2685
(D) Feature Group B, Two Way Calling (3132 Originating, 5568 Terminating)	8700
(E) Feature Group B, Originating Only	3132
(F) Feature Group B, Terminating Only	5568

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service

APPROVED

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

APPROVED

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15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

APPROVED

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15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

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15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

15.4.4 High Capacity Service¹

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¹ High Capacity Service rates for US Link are listed on sheets 15-15 to 15-17.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

15.4.4 High Capacity Service (Cont'd)¹

APPROVED

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¹ High Capacity Service rates for US Link are listed on sheets 15-15 to 15-17.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

15.4.4 High Capacity Service (Cont'd)¹

APPROVED

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¹ High Capacity Service rates for US Link are listed on sheets 15-15 to 15-17.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.4 Special Access Service (Cont'd)

15.4.5 Individual Case Filings¹

APPROVED

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¹ Individual Case Filings for US Link are listed on sheet 15-18.

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.5 Other Services (Cont'd)15.5.1 Access Ordering

	<u>Charge</u>
(A) <u>Access Order Charge</u>	
Per Order	\$81.00
(B) <u>Service Date Change Charge</u>	
A Service Data Change Charge will apply, on a per order per occurrence basis, for each service date changed. The Access Order Charge as specified in 15.5.1(A) preceding does not apply. The applicable charge is:	
Service Date Change Charge, Per Order	\$34.00
(C) <u>Design Change Charge</u>	
The Design Change Charge Will apply on a per order Per occurrence basis, for each Order requiring design change.	
Design Change Charge, per order	\$34.00
(D) <u>Miscellaneous Service Order Charge</u>	
Per Occurrence	\$34.00

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15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.5 Other Services (Cont'd)15.5.2 Additional Engineering

<u>Additional Engineering Periods</u>	<u>Each Half Hour or Fraction Thereof</u>
(A) Basic Time per engineer normally scheduled working hours	\$17.19
(B) Overtime per engineer outside of normally scheduled working hours	\$25.78
(C) Premium Time outside of scheduled work day, per engineer	\$34.38

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.5 Other Services (Cont'd)15.5.3 Additional Labor

<u>Additional Engineering Periods</u>	<u>Each Half Hour or Fraction Thereof</u>
(A) Installation or Repair	
- Overtime, outside of normally scheduled working hours on a scheduled work day, per technician	\$27.99*
- Premium Time, outside of scheduled work day, per technician	\$37.32*
(B) Stand by	
- Basic time, normally scheduled working hours, per technician	\$18.26
- Overtime, outside of normally scheduled working hours on a scheduled work day, per technician	\$27.38*
- Premium Time, outside of scheduled work day, per technician	\$36.51*

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

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15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.5 Other Services (Cont'd)15.5.3 Additional Labor (Cont'd)

<u>Additional Labor Periods</u>	<u>Each Half Hour or Fraction Thereof</u>	
	<u>Installation and Repair Technician</u>	<u>Central Office Maintenance Technician</u>
(C) Testing and Maintenance with other Telephone Companies, or Other Labor		
- Basic Time per technician normally scheduled working hours	\$18.66	\$17.91
- Overtime per technician outside of normally scheduled working hours on a scheduled work day	\$27.99*	\$26.86*
- Premium Time per technician outside of scheduled work day	\$37.32*	\$35.81*

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.5 Other Services (Cont'd)

15.5.4 Miscellaneous Services

(A) Additional Cooperative Acceptance Testing – Switched Access

<u>Testing Periods</u>	Each Half Hour or Fraction Thereof
Basic Time, Overtime* and Premium Time*	See the rates for additional labor as set forth in 15.5.3(C) preceding.

(B) Additional Automatic Testing – Switched Access

<u>To First Point of Switching</u>	
Additional Tests	<u>Per Test Per Transmission Path</u>
Gain-Slope Tests	\$2.89
C-Notched Noise Tests	\$2.89
1004 Hz Loss**	\$2.89
C-Message Noise**	\$2.89
Balance (return loss)**	\$2.89

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.5 Other Services (Cont'd)

15.5.4 Miscellaneous Services (Cont'd)

(C) Additional Manual Testing – Switched Access

To First Point
Of Switching

Additional Tests

Each Half
Hour or
Fraction
Thereof

Gain-Slope,
C-Notched Noise and
any other agreed to
tests, per technician

See the rates
for Additional
Labor as set
forth in 15.5.3(C)
preceding

(D) Additional Cooperative Acceptance Testing – Special Access

Each Half
Hour or
Fraction
Thereof

Testing Periods

Basic Time, Overtime*
and Premium Time*

See the rates
for Additional
Labor as set
forth in 15.5.3(C)
preceding

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.5 Other Services (Cont'd)

15.5.4 Miscellaneous Services (Cont'd)

(E) Additional Manual Testing – Special Access

	Each Half Hour or Fraction <u>Thereof</u>
<u>Testing Periods</u>	
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 15.5.3(C) preceding

(F) Maintenance of Service

	Each Half Hour or Fraction <u>Thereof</u>
<u>Maintenance of Service Periods</u>	
Basic Time, Overtime* and Premium Time*	See the rates for Additional Labor as set forth in 15.5.3(C) preceding

* A call out of a Telephone Company employee at a time not consecutive with the employee's scheduled work period is subject to a minimum charge of four hours.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.5 Other Services (Cont'd)

15.5.4 Miscellaneous Services (Cont'd)

APPROVED

Monthly
Rate

(G) Controller Arrangement

Per Arrangement \$100.00

Nonrecurring
Charge

(H) Unauthorized PIC Change

- Residence/Business
Per Telephone Exchange
Service line or trunk \$35.65
- Public and/or Semi-
public pay telephone
Per Telephone Exchange
Service line or trunk \$57.57

(D)

(D)

(T)

(D)

(D)

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ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.5 Other Services (Cont'd)15.5.4 Miscellaneous Services (Cont'd)(J) Blocking Service*

	<u>Nonrecurring Charge</u>
- Per exchange service line, or trunk and/or per Feature Group A Switched Access Line	\$11.20

-
- * Blocking access to 900 Service is offered to all subscribers at no charge
- (a) from November 1, 1993 through December 31, 1993 and
 - (b) at the time telephone service is established at a new number and for 60 days thereafter

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15. Rates and Charges – U.S. Link, Inc. (Cont'd)

15.6 Special Construction

15.6.1 Basis for Rate and Charges

Rates and charges are on an individual case basis.

ACCESS SERVICE

15. Rates and Charges – U.S. Link, Inc. (Cont'd)15.7 Local Number Portability

	<u>Rate</u>
15.7.1 <u>Query Service</u>	
(A) LNP Query	
Prearranged, per Query	
End office	\$.0032
(B) Local Number Portability	
Non-Recurring Charge/Per Order	\$40.00
LNP Billing Charge	\$274.00

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(N)

15. Rates and Charges – U.S. Link, Inc (Cont'd)

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15.8 Telecommunications Service Priority

		<u>Non-Recurring Rate</u>
15.8.1	Priority Installation or Restoration Activation	
	(A) Prime Service Vendor (Type 1 or 2 Service)	\$136.00
	(B) Prime Service Vendor (Type 3 Service)	\$136.00
		<u>Monthly Rate</u>
15.8.2	Priority Restoration Maintenance and Administration	
	(A) Prime Service Vendor (Type 1 or 2 Service)	\$3.00
	(B) Prime Service Vendor (Type 3 Service)	\$3.00

(N)

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