

**ACCESS SERVICE****11. Special Facilities Routing of Access Services****11.1 Description**

The services provided under this tariff are provided over such routes and facilities as the Telephone Company may elect. Special Facilities Routing is involved when, in order to comply with requirements specified by the customer, the Telephone Company provides Switched Access Service, Special Access Service or Special Federal Government Access Service in a manner which includes one or more of the following conditions:

**11.1.1 Diversity**

Two or more circuits must be provided over not more than two different physical routes.

**11.1.2 Avoidance**

A circuit(s) must be provided on a route which avoids specified geographical locations.

**11.1.3 Diversity and Avoidance Combined****11.1.4 Cable-Only Facilities**

Certain Voice Grade services are provided on Cable-Only Facilities to meet the particular needs of a customer.

Service is provided subject to the availability of Cable- Only facilities. In the event of service failure, restoration will be made through the use of any available facilities as selected by the Telephone Company.

Avoidance and Diversity are available on Switched Access Service as set forth in Section 6 preceding; Metallic, Telegraph Grade and Voice Grade Special Access Services as set forth respectively in 7.4, 7.5 and 7.6 preceding and Special Federal Government Access Services as set forth in 10.5 preceding. Cable-Only Facilities are available for Switched Access Service as set forth in Section 6 preceding; Voice Grade Special Access Services as set forth in 7.6 preceding and Special Federal Government Access Services as set forth in 10.5 preceding.

## **ACCESS SERVICE**

### **11. Special Facilities Routing of Access Services (Cont'd)**

#### **11.1 Description (Cont'd)**

In order to avoid the compromise of special routing information, the Telephone Company will provide the required routing information for each specially routed service to only the ordering customer. If requested by the customer, this information will be provided when service is installed and prior to any subsequent changes in routing.

The rates and charges for Special Facilities Routing of Access Services are developed on an individual case basis. Such rates and charges for Special Facilities Routing of Access Services are as set forth in 17.4.6 following and are in addition to all other rates and charges that may be applicable for services provided under other sections of this tariff.

**ACCESS SERVICE**12. Specialized Service or Arrangements

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12.1 General

Specialized Service or Arrangements may be provided by the Telephone Company, at the request of a customer, on an individual case basis if such service or arrangements meet the following criteria:

- The requested service or arrangements are not offered under other sections of this tariff.
- The facilities utilized to provide the requested service or arrangements are of a type normally used by the Telephone Company in furnishing its other services.
- The requested service or arrangements are provided within a LATA.
- The requested service or arrangements are compatible with other Telephone Company services, facilities, and its engineering and maintenance practices.
- This offering is subject to the availability of the necessary Telephone Company personnel and capital resources.

Rates and charges and additional regulations if applicable, for Specialized Service or Arrangements are provided on an individual case basis and are as set forth in 17.4.7 following.

**ACCESS SERVICE****13. Additional Engineering, Additional Labor and Miscellaneous Services**

13.1 addresses Additional Engineering. 13.2 addresses Additional Labor (which is comprised of Overtime Installation, Overtime Repair, Standby, Testing and Maintenance with Other Telephone Companies, and Other Labor). 13.3 addresses Miscellaneous Services (which are comprised of Testing Services, Maintenance of Service and Telecommunications Service Restoration Priority). 13.4 addresses Presubscription.

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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.

**13.1 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 17.4.2 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) as set forth in 6.1.5 and 7.1.6 preceding.
- (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 17.4.1(B) following, does not apply unless the customer authorizes the Telephone Company to proceed with the Design Change.

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.2 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 13.2.1 through 13.2.5 following. The Telephone Company will notify the customer that additional labor charges as set forth in 17.4.3 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. When provisioning or restoring Telecommunications Service Priority services, the Telephone Company will, when possible, notify the customer of the applicability of these Additional Labor charges. (T)

13.2.1 Overtime Installation

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

13.2.2 Overtime Repair

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

13.2.3 Standby

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

13.2.4 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.

13.2.5 Other Labor

Other labor is that additional labor not included in 13.2.1 through 13.2.4 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.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services13.3.1 Testing Services

Testing Services offered under this section of the tariff are optional and subject to rates and charges as set forth in 17.4.4 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, as described in 6.2.4 and 7.1.7 preceding, are provided by the Telephone Company in association with Access Services and are furnished at no additional charge. (T)

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. (T)

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). (T)  
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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.1 Testing Services (Cont'd)(A) Switched Access Service (Cont'd)

Routine tests are those tests performed by the Telephone Company on a regular basis, as set forth in 6.2.4 preceding 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 Dial Tone Office for FGA, to the access tandem or end office for FGB (wherever the FGB service is ordered) and 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.

(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:

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

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.1 Testing Services (Cont'd)(A) Switched Access Service (Cont'd)(2) Additional Automatic Testing

Additional Automatic Testing (AAT) of Switched Access Services (Feature Groups B, 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 17.4.4(B) following.



**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.1 Testing Services (Cont'd)(A) Switched Access Service (Cont'd)(3) Additional Manual Testing

Additional Manual Testing (AMT) of Switched Access Services (Feature Groups A, B, 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.

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 17.4.4(C) following.

**ACCESS SERVICE**

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

13.3 Miscellaneous Services (Cont'd)

13.3.1 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 as set forth in 6.2.4(B) preceding or AAT as set forth in 13.3.1(A)(2) preceding.
- (B) The customer shall make the facilities to be tested available to the Telephone Company at times mutually agreed upon.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.1 Testing Services (Cont'd)(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

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

#### 13.3 Miscellaneous Services (Cont'd)

##### 13.3.1 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.

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.2 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 17.4.4(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.

13.3.3 Telecommunications Service Priority - TSP

- (A) Priority installation and/or restoration of National Security Emergency Preparedness (NSEP) telecommunications services shall be provided in accordance with Part 64.401, Appendix A, of the Federal Communications Commission's (FCC's) Rules and Regulations.

In addition, TSP System service shall be provided in accordance with the guidelines set forth in "Telecommunications Service Priority (TSP) System for National Security Emergency Preparedness (NSEP) Service Vendor Handbook" (NCSH 3-1-2) dated July 9, 1990, and "Telecommunications Service Priority System for National Security Emergency Preparedness Service User Manual" (NCSM 3-1-1) .

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- (x) Filed under authority of Special Permission No. 93-598 of the Federal Communications Commission.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.3 Telecommunications Service Priority - TSP (Cont'd)

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The TSP System is a service, developed to meet the requirements of the Federal Government, as specified in the Service Vendor's Handbook and Service User's Manual which provides the regulatory, administrative and operational framework for the priority installation and/or restoration of NSEP telecommunications services. These include both Switched and Special Access Services. The TSP System applies only to NSEP telecommunications services, and requires and authorizes priority action by the Telephone Company providing such services.

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For Switched Access Service, the TSP System's applicability is limited to those services which the Telephone Company can discreetly identify for priority provisioning and/or restoration.

- (B) A Telecommunications Service Priority charge applies as set forth in 17.4.4 when a request to provide or change a Telecommunications Service Priority is received subsequent to the issuance of an Access Order to install the service.

Additionally, a Miscellaneous Service Order Charge as set forth in 17.4.1 will apply to Telecommunications Service Priority requests that are ordered subsequent to the initial installation of the associated access service.

A Telecommunications Service Priority charge does not apply when a Telecommunications Service Priority is discontinued or when ordered coincident with an Access Order to install or change service.

In addition, Additional Labor rates as set forth in 17.4.3 may be applicable when provisioning or restoring Switched or Special Access Services with Telecommunications Service Priority.

When the customer requests an audit or a reconciliation of the Telephone Company's Telecommunications Service Priority records, a Miscellaneous Service Order Charge as set forth in 17.4.1 (D) and Additional Labor rates as set forth in 17.4.3 are applicable.

- (x) Filed under authority of Special Permission No. 93-598 of the Federal Communications Commission.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.3 Miscellaneous Services (Cont'd)13.3.4 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 17.4.4(H) following.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.4 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.

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- (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 business office. This choice will require the end user to dial an access code (10XXX or 101XXXX) for all interstate calls.

(C)

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 17.4.4(I) following applies.

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.4 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 6 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 17.4.4(I) 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**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.4 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 17.4.4(I) 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. (C)

For any change in selection after 6 months from the installation of Telephone Exchange Service, a nonrecurring charge, as set forth in 17.4.4(I) following applies.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.4 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 cancelling 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 cancelling 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 17.4.4(I) following for each end user line or trunk that is changed.

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**ACCESS SERVICE**

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

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)

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13.6 Unauthorized Primary Interexchange Carrier (PIC) Change

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For purposes of this section, a subscriber is defined as:

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- the party identified in the account records of the Telephone Company as responsible for payment of the telephone bill, or
- any adult person authorized by such party to change telecommunications services or to charge services to the account, or
- any person contractually or otherwise lawfully authorized to represent such party.

(N)

(C)

If an IC requests a PIC change on behalf of a subscriber and the subscriber subsequently denies requesting the change; the Telephone Company will:

- Notify both carriers involved in the unauthorized change allegation made by the subscriber. This notification must include the identity of both carriers.
- Direct the subscriber to the appropriate state regulatory agency or the Federal Communications Commission to file a complaint.
- Inform the subscriber that if he or she has not already paid charges to the unauthorized carrier, he or she is not required to pay for any charges incurred for the first 30 days after the unauthorized change.

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**ACCESS SERVICE**

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

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13.8 Blocking Service

13.8.1 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 and to customers who obtain Feature Group A Switched Access service under this

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.8 Blocking Service (Cont'd)13.8.1 International Blocking Service (Cont'd)

tariff. 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.

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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 101XXX-011+. When capable, the Telephone Company will route the blocked calls to a recorded message.

(C)

An International Blocking Service charge as set forth in 17.4.4(K) following is applicable for each new or existing exchange line or trunk or Feature Group A Switched Access line to which International Blocking Service is added or removed. 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.

A Miscellaneous Service Order Charge as set forth in 17.4.1(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) or Feature Group A Switched Access line(s). 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.

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.8 Blocking Service (Cont'd)13.8.2 900 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 and to customers who obtain Feature Group A Switched Access service under this tariff. 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.

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 17.4.4(K) 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 .

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.9 Billing Name and Address Service13.9.1 General Description

- (A) Billing Name and Address (BNA) Service is the provision by the Telephone Company to an interstate service provider who is a customer of the Telephone Company of the complete billing name, street address, city or town, state and zip code for a telephone number assigned by the Telephone Company. An interstate service provider is defined as an interexchange carrier, an operator service provider, an enhanced service provider or any other provider of interstate telecommunications services. (C)  
(C)
- (B) BNA Service is provided only for the purposes of allowing customers to bill their end users for telephone services provided by the customer, order entry and customer service information, fraud prevention, identification of end users who have moved to a new address, any purpose associated with equal access requirements, and information associated with Local Exchange Carrier (LEC) calling card calls, collect calls and third party calls. BNA information may not be resold or used for any other purpose including, but not limited to, marketing or merchandising activities. (T)  
(C)  
(C)
- (C) BNA information associated with listed/published telephone numbers will be provided. Requests for BNA information associated with non-published and unlisted telephone numbers will be provided, unless the subscriber to a non-published or unlisted telephone number has affirmatively requested that its BNA not be disclosed. (C)  
(C)

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.9 Billing Name and Address Service (Cont'd)13.9.2 Undertaking of the Telephone Company

- (A) A standard format for the receipt of BNA requests and the provision of BNA information will be established by the Telephone Company.
- (B) Standard response to BNA requests will be by First Class Mail. Standard format will be on paper. Optional Magnetic Tape formatting will be offered where available.
- (C) Where facilities are available, the customer may request an optional specialized output format required to meet a specific customer need.
- (D) The Telephone Company will make every effort to provide accurate and complete BNA data. The Telephone Company makes no warranties, expressed or implied, as to the accuracy or completeness of this information.
- (E) The Telephone Company will not disclose BNA information to parties other than interstate service providers and their authorized billing agents as defined in 13.9.1(A), preceding. BNA disclosure is limited to those purposes as defined in 13.9.1(B), preceding .
- (F) The Telephone Company reserves the right to request from an interstate service provider who has placed an order for BNA service, the source data upon which the interstate service provider has based the order. This request is made to ensure that the BNA information is to be used only for purposes as described in 13.9.1(B), preceding. The Telephone Company will not process the order until such time as the interstate service provider supplies the requested data .

(M)

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(C)

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(C) (M)

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.9 Billing Name and Address Service (Cont'd)13.9.3 Obligations of the Customer

- (A) The customer shall order BNA Service on a separate BNA Order. The order must identify both the customer's authorized representative and the address to which the information is to be sent.
- (B) The customer shall treat all BNA information as confidential. The customer shall insure that BNA information is used only for the purposes as described in 13.9.1(B), preceding. (C)
- (C) The customer shall not publicize or represent to others that the Telephone Company jointly participates with the customer in the development of the customer's end user records it assembles through the use of BNA Service.
- (D) Upon requests, the customer will provide to the Telephone Company the source data upon which the customer has based an order from BNA service. The Telephone Company will not process the order until such time as the customer provides the requested data.

13.9.4 Rate Regulations

- (A) For each order for BNA information received by the Telephone Company, a BNA Order Charge applies. In addition, a charge applies for each customer specific record provided. The BNA Order Charge and the Per Record Charge are specified in 17.4.4 following.
- (B) Where available, the customer may order the response formatted on Magnetic Tape. The Optional Magnetic Tape Charge is specified in 17.4.4 following and is in addition to the BNA Order Charge and the BNA Record Charge.
- (C) Where available, the customer may order an output format other than a standard paper format in order to meet a customer's specific requirement. This option is subject to an hourly programming charge as specified in 17.4.4 following and is in addition to the BNA Order Charge and the BNA Record Charge.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.10 Originating Line Screening (OLS) Service

(S) (y)

The Telephone Company will provide OLS Service to aggregators and other customers who obtain local exchange service from the Telephone Company under its general or local exchange tariff. OLS service enables customers to determine whether there are billing restrictions on exchange service lines from which a call originates. OLS service delivers codes on operator assisted calls made from aggregator locations to identify, calls originating from privately owned payphones, inmate locations, and hotels/motels, etc.

OLS Service is provided at no charge when ordered with the installation of new local exchange service. However, when an OLS code is added to an existing exchange service line, a charge is applied as set forth in 17.4.4(M). This charge is applied for each exchange service line to which an OLS code is assigned. The customer must specify the number of exchange service lines and each individual telephone number equipped.

A Miscellaneous Service Order Charge as set forth in 17.4.1(D) will apply to orders adding OLS codes that are placed subsequent to the initial installation of the associated exchange service line. This charge does not apply when OLS codes are removed from an exchange service line at the same time that the exchange service line is disconnected.

OLS codes may be delivered using Line Information Database (LIDB) or Flexible Automatic Number Identification (Flex ANI) technology. Those telephone companies delivering OLS codes using LIDB are identified in NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. TARIFF F.C.C. NO. 4, as are those companies delivering OLS codes using Flex ANI.

13.11 Nonchargeable Confirmation Services13.11.1 Billed Number Screening (BNS)

At the request of the customer, the Telephone Company business office will confirm BNS codes associated with a line to which a call is to be billed.

13.11.2 Originating Line Screening (OLS)

At the request of the customer, the Telephone Company business office will confirm OLS codes associated with an exchange service line from which a call originates.

(S) (y)

(y) All material coded with an "S" was originally filed under Transmittal No. 19 on January 8, 1997 to become effective on February 22, 1997.

**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.12 Coin Supervision Additive Service

The Telephone Company will provide Coin Supervision Additive Service to Payphone Service Providers (PSPs) who order local exchange service lines for the provision of pay telephone service and where the pay telephone equipment connected to the local exchange service lines requires central office coin supervision capability. The local exchange service lines used for the provision of pay telephone service are obtained from and subject to the terms and conditions under the Telephone Company's general and/or local tariffs.

Coin Supervision Additive Service provides the capability of central office line equipment to pass signals and/or tones from an exchange service line to a trunk terminating at the PSP's operator service provider. These signals enable an operator service provider to recognize coin deposits and return coins to the pay telephone user. Coin Supervision Additive Service also permits a suitably equipped operator service provider to automatically ring back the originating exchange service line upon completion of a call.

A Coin Supervision Additive Service charge as set forth in 17.4.4(N) following is assessed monthly to the PSP for each exchange service line for which Coin Supervision Additive Service is provided.

13.13 Central Office Blocking Service

Central Office Blocking With Operator Screening - Central office blocking with operator screening is offered to provide a choice of restrictions at the subscriber's option. These options will be available where line controlled public telephone service is provided on a usage rate service basis. Options are as follows:

Option 1 - Two-Way Service. Provides that third number and collect calls to Line Controlled Public Telephone Service are not allowed.

Option 2 - Two-Way Service. Provides screening information to the operator to prevent operator assisted sent-paid calls from being billed to the line. Further, third number and collect calls to Line Controlled Public Telephones are not allowed.

Option 3 - Two-Way Service. Provides central office blocking of seven digit local and 976 calls. Provides screening information to the operator to prevent operator assisted sent-paid calls from being billed to the lines. Further, third number and collect calls to Line Controlled Public Telephones are not allowed.

Option 4 - Two-Way Service. Provides central office blocking of 976 calls. Provides screening information to the operator to prevent operator-assisted sent-paid calls from being billed to the line. Further, third number and collect calls to Line Controlled Public Telephones are not allowed.

Option 5 - Two-Way Service. Provides central office blocking of sent-paid international calling upon certification by the payphone provider that the incidence of fraud in such calling is high. This service may be offered individually or in addition to either of the four options preceding.

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**ACCESS SERVICE**13. Additional Engineering, Additional Labor and Miscellaneous Services (Cont'd)13.14 Flexible Automatic Number Identification (Flex ANI)

The Telephone Company will provide Flex ANI Service to Payphone Service Providers (PSPs) who order tariffed local exchange service lines for the provision of pay telephone service. The local exchange service lines used for the provision of pay telephone service are obtained from and subject to the terms and conditions under the Telephone Company's general and/or local tariffs.

Flex ANI is a Common Switching Optional Feature that enhances the existing Automatic Number Identification (ANI) optional feature (described in 6.9.1 (F) preceding) by allowing FGD customers to receive additional information digits. Flex ANI provides additional information digits (described in 6.9.1 (AA) preceding). Flex ANI is available in suitably equipped end offices.

A monthly recurring charge, as set forth in 17.4.4(O) following, is associated with Flex ANI service. A Miscellaneous Service Order Charge as set forth in 17.4.1(D) will apply to orders for Flex ANI service placed subsequent to the initial installation of the associated exchange service line.

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**ACCESS SERVICE**

14. Reserved for Future Use

## ACCESS SERVICE

### 15. Access Service Interfaces and Transmission Specifications

15.1 contains Switched Access Service Options (which are comprised of Interface Groups, Supervisory Signaling, Entry Switch Receive Level and Local Transport Termination) and Transmission Specifications. 15.2 describes Special Access Service Network Channel (NC) codes and Network Channel Interface (NCI) codes. 15.3 contains Interface Group, Premises Interface Code and Standard Transmission Specifications applicable to Directory Access Service.

#### 15.1 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 15.1.1 following.

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(C)

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.

##### 15.1.1 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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 Local Transport Interface Groups (Cont'd)

Interface Group 1 is provided with Type C Transmission Specifications, as set forth in 15.1.2(C) following, and Interface Groups 2 through 10 are provided with Type A or B Transmission Specifications, as set forth respectively in 15.1.2(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 FGB, FGC or FGD when the first point of switching provides only four-wire terminations.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 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 point of (C)switching 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 FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

(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.

(C)  
(C)

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 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 FGA, such signaling will be loop start or ground start signaling. When the interface is associated with FGB, FGC or FGD, such signaling, except for two-way calling which is E&M signaling, will be reverse battery signaling.

(C) Interface Groups 3 through 5

Interface Groups 3 through 5 provide analog transmission at the point of termination at the customer designated premises. The various interfaces are capable of transmitting electrical signals at the frequencies illustrated following, with the capability to channelize voice frequency transmission paths. Certain frequencies within the bandwidth of the Interface Groups are reserved for Telephone Company use, e.g., pilot and carrier group alarm tones. Before the first point of switching, the Telephone Company will provide multiplex equipment to derive the transmission paths of frequency bandwidth of approximately 300 to 3000 Hz.

The interfaces are provided with individual transmission path SF supervisory signaling.

	<u>Interface Group Identification No.</u>	<u>Transmission Frequency Bandwidth</u>	<u>Analog Hierarchy Level</u>	<u>Maximum No. Of Channelized Voice Freq. Trans. Paths</u>
12	3	60-108kHz	Group	
60	4	312-552 kHz	Supergroup	
	5	564-3084 kHz	Mastergroup	600

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 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 .

(C)  
(C)

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>Max. No. of Channnelized Voice Freq. Trans. Paths</u>
6	1.544	DS1	24
7	3.152	DS1C	48
8	6.312	DS2	96
9	44.736	DS3	672
10	274.176	DS4	4032

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 Local Transport Interface Groups (Cont'd)(E) Local Transport Optional Features

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 17.4.1(A) following is applicable on a per order basis when nonchargeable optional features are added subsequent to the installation of service.

- Customer Specified Entry Switch Receive Level

Customer Specified Entry Switch Receive Level allows the customer to specify the receive transmission level at the first point of switching. The range of transmission levels which may be specified is described in Technical Reference TR-NPL-000334. This feature is available with Interface Groups 2 through 10 for Feature Groups A and B. (x)

- Customer Specification of Local Transport Termination

Customer Specification of Local Transport Termination allows the customer to specify, for Feature Group B routed directly to an end office or access tandem, a four-wire termination of the Local Transport at the first point of switching in lieu of a Telephone Company selected two-wire termination. This option is available only when the Feature Group B arrangement is provided with Type B Transmission Specifications.

- 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.

(x) Filed under authority of Special Permission No. 93-598 of the Federal Communications Commission.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 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 FGB, FGC or FGD

DX Supervisory Signaling,  
E&M Type I Supervisory Signaling,  
E&M Type II Supervisory Signaling, or  
E&M Type III Supervisory Signaling

- For Interface Group 2 associated with FGB, FGC or FGD and in 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. (T)

These optional Supervisory Signaling arrangements are not available in combination with the SS7 optional feature as described in 6.8.2 (C)(2) preceding. (T)

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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 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 15.2.2(A) following.

<u>Interface Group</u>	<u>Telephone Company Switch Supervisory Signaling</u>	<u>Premises Interface Code</u>	<u>A</u>	<u>Feature B</u>	<u>Group C</u>	<u>D</u>
1	LO	2LS2	X			
	LO	2LS3	X			
	GO	2GS2	X			
	GO	2GS3	X			
	LO, GO	2DX3	X			(T)
	LO, GO	4EA3-E	X			(T)
	LO, GO	4EA3-M	X			
	LO, GO	6EB3-E	X			
	LO, GO	6EB3-M	X			
	RV, EA, EB, EC	2DX3		X	X	X
	RV, EA, EB, EC	4EA3-E		X	X	X
	RV, EA, EB, EC	4EA3-M		X	X	X
	RV, EA, EB, EC	6EB3-E		X	X	X
	RV, EA, EB, EC	6EB3-M		X	X	X
	EA, EB, EC	6EC3			X	X
	RV	2RV3-0		X	X	X
	RV	2RV3-T		X	X	X
	SS7	2NO2			X	X
2	LO, GO	4SF2	X			
	LO, GO	4SF3	X			
	LO	4LS2	X			
	LO	4LS3	X			
	LO	6LS2	X			

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 Local Transport Interface Groups (Cont'd)(F) Available Premises Interface Codes (Cont'd)

Interface Group	Telephone Company Switch Supervisory Signaling	Premises Interface Code	A	Feature B	Group C	D
2 (Cont'd)	GO	4GS2	X			
	GO	4GS3	X			
	GO	6GS2	X			
	LO,GO	4DX2	X			
	LO,GO	4DX3	X			
	LO,GO	6EA2-E	X			
	LO,GO	6EA2-M	X			
	LO,GO	8EB2-E	X			
	LO,GO	8EB2-M	X			
	LO,GO	6EX2-B	X			
	RV,EA,EB,EC	4SF2		X	X	X
	RV,EA,EB,EC	4SF3		X		
	RV,EA,EB,EC	4DX2		X	X	X
	RV,EA,EB,EC	4DX3		X		
	RV,EA,EB,EC	6DX2			X	
	RV,EA,EB,EC	6EA2-E		X	X	X
	RV,EA,EB,EC	6EA2-M		X	X	X
	RV,EA,EB,EC	8EB2-E		X	X	X
	RV,EA,EB,EC	8EB2-M		X	X	X
	EA,EB,EC	8EC2-M			X	X
	RV	4RV2-O		X	X	X
	RV	4RV2-T		X	X	X
	RV	4RV3-O		X	X	
	RV	4RV3-T		X	X	
	SS7	4NO2			X	X
3	LO,GO	4AH5-B	X			
	RV,EA,EB,EC	4AH5-B		X	X	X
	SS7	4AH5-B			X	X
4	LO,GO	4AH6-C	X			
	RV,EA,EB,EC	4AH6-C		X	X	X
	SS7	4AH6-C			X	X
5	LO,GO	4AH6-D	X			
	RV,EA,EB,EC	4AH6-D		X	X	X
	SS7	4AH6-D			X	X



**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.1 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>Premises Interface Code</u>	<u>A</u>	<u>Feature B</u>	<u>Group C</u>	<u>D</u>
6	LO, GO	4DS9-15	X			
	LO, GO	4DS9-15L	X			
	RV, EA, EB, EC	4DS9-15		X	X	X
	RV, EA, EB, EC	4DS9-15L		X	X	X
	SS7	4DS9-15			X	X
7	LO, GO	4DS9-31	X			
	LO, GO	4DS9-31L	X			
	RV, EA, EB, EC	4DS9-31		X	X	X
	RV, EA, EB, EC	4DS9-31L		X	X	X
	SS7	4DS9-31			X	X
8	LO, GO	4DS0-63	X			
	LO, GO	4DS0-63L	X			
	RV, EA, EB, EC	4DS0-63		X	X	X
	RV, EA, EB, EC	4DS0-63L		X	X	X
	SS7	4DS0-63			X	X
9	LO, GO	4DS6-44	X			
	LO, GO	4DS6-44L	X			
	RV, EA, EB, EC	4DS6-44		X	X	X
	RV, EA, EB, EC	4DS6-44L		X	X	X
	SS7	4DS6-44			X	X
10	LO, GO	4DS6-27	X			
	LO, GO	4DS6-27L	X			
	RV, EA, EB, EC	4DS6-27		X	X	X
	RV, EA, EB, EC	4DS6-27L		X	X	X
	SS7	4DS6-27			X	X

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 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 15.1.3(A) and (B) following:

(A) Feature Group A

FGA is provided with either Type B or Type C Transmission Specifications. The specifications for the associated parameters are guaranteed to the first point of switching. Type C Transmission Specifications are provided with Interface Group 1 and Type B is provided with Interface Groups 2 through 10. Type DB Data Transmission Parameters are provided with FGA to the first point of switching.

(B) Feature Group B

FGB is provided with either Type B or Type C Transmission Specifications. The specifications for the associated parameters are guaranteed to the end office when routed directly or to the first point of switching when routed via an access tandem. Type C Transmission Specifications are provided with Interface Group 1 and Type B is provided with Interface Groups 2 through 10. Type DB Data Transmission Parameters are provided with FGB to the first point of switching.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 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) Type A Transmission Specifications

Type A Transmission Specifications is 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  $\pm 2.0$  dB

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 Standard Transmission Specifications (Cont'd)(E) Type A Transmission Specifications (Cont'd)(2) Attenuation Distortion

The maximum Attenuation Distortion in the 404 to 2804 Hz frequency band relative to the loss at 1004 Hz is -1.0 dB to +3.0 dB.

(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>
less than 50	32 dBrnCO
51 to 100	34 dBrnCO
101 to 200	37 dBrnCO
201 to 400	40 dBrnCO
401 to 1000	42 dBrnCO

(4) C-Notch Noise

The maximum C-Notch Noise, utilizing a -16 dBmO holding tone, is less than or equal to 45 dBrnCO.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 Standard Transmission Specifications (Cont'd)(E) Type A Transmission Specifications (Cont'd)(5) Echo Control

Echo Control, identified as Equal Level Echo Path 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	21 dB	14 dB
POT to End Office		
- Direct	N/A	N/A
- Via Access Tandem	16 dB	11 dB

(6) Standard Return Loss

Standard Return Loss expressed as Echo Return Loss and Singing Return Loss on two-wire ports of a four-wire point of termination shall be equal to or greater than:

<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
5 dB	2.5 dB

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 Standard Transmission Specifications (Cont'd)(F) Type B Transmission Specifications

Type B 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  $\pm 2.5$  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 +4.0 dB.

(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 B1</u>	<u>Type B2</u>
less than 50	32 dBrnCO	35 dBrnCO
51 to 100	33 dBrnCO	37 dBrnCO
101 to 200	35 dBrnCO	40 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 B2 will be provided. For Feature Groups A and B, Type B1 or B2 will be provided as set forth in Technical Reference TR-NPL-000334.

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(x)

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 Standard Transmission Specifications (Cont'd)(F) Type B Transmission Specifications (Cont'd)(5) Echo Control

Echo Control, identified as Impedance Balance for FGA and FGB and Equal Level Echo Path Loss for FGC and FGD, and expressed as Echo Return Loss (ERL) and Singing Return Loss (SRL), 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. The ERL and SRL also differ by Feature Group, type of termination, and type of transmission path. They are greater than or equal to the following:

	<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
POT to Access Tandem		
- Terminated in		
4-Wire trunk	21 dB	14 dB
- Terminated in		
2-Wire trunk	16 dB	11 dB
POT to End Office		
- Direct	16 dB	11 dB
- Via Access Tandem		
. For FGB access	8 dB	4 dB
. For FGC access		
(Effective		
4-Wire trans-		
mission path		
at end office)	16 dB	11 dB
. For FGC access		
(Effective		
2-Wire trans-		
mission path		
at end office)	13 dB	6 dB



**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 Standard Transmission Specifications (Cont'd)(F) Type B Transmission Specifications (Cont'd)(6) Standard Return Loss

Standard Return Loss, expressed as Echo Return Loss and Singing Return Loss, on two-wire ports of a four-wire point of termination shall be equal to or greater than:

<u>Echo Return Loss</u>	<u>Singing Return Loss</u>
-------------------------	----------------------------

5 dB

2.5 dB

(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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 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. For Feature Groups A and B, Type C1 or C2 will be provided as set forth in Technical Reference TR-NPL-000334. (x)  
(x)

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.2 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
- Via Access Tandem	8 dB	4 dB
	(for FGB only)	

15.1.3 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 A, B and C and also with Feature Group 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.

(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 dB.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.3 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 dBrnCO 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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.3 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 5 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.

(T)

(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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.1 Switched Access Service (Cont'd)15.1.3 Data Transmission Parameters (Cont'd)(B) Data Transmission Parameters Type DB (Cont'd)(3) Impulse Noise Counts

The Impulse Noise Counts exceeding a 67 dBrnCO 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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 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.

(C)  
(C)

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.

(C)  
(C)

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 (e.g., TG1 = Telegraph). 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 15.2.2(A) following which contains information necessary to develop NCI codes.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)

Comprehensive lists of allowed Network Channel (NC) and Network Channel Interface (NCI) codes are contained in Special Report (x) SR-ST5-000307. However, not all services contained in this Special (x) Report may be offered by the Telephone Company at this time. (x) (C) (x)

Lastly, 15.2.2(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>	<u>NCI</u>	<u>SECNCI</u>
LG-R	04DB2	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.

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 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> LC--	<u>NCI</u> 04LO2	<u>SECNCI</u> 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> HC--	<u>NCI</u> 04DS9-15	<u>SECNCI</u> 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-STIS-000307.

(C) (x)

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 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 15.2.2 following and the guidelines concerning specific parameters available for each service type as set forth in the specified Technical Publication.

(T)

(A) Technical Specifications Packages Metallic Service

SD Code NC Code	<u>Package</u>			
	<u>MTC*</u>	<u>MT1</u>	<u>MT2</u>	<u>MT3</u>
	<u>MQ</u>	<u>NT</u>	<u>NU</u>	<u>NV</u>
<u>Parameter</u>				
DC Resistance				
Between Conductors	X	X	X	
Loop Resistance	X			X
Shunt Capacitance	X			X
<u>Optional Features</u> <u>and Functions</u>				
Three Premises Bridging	X	X		X
Series Bridging	X		X	

The technical specifications are described in Technical Reference  
TR-NPL-000336.

(x)  
(x)

\* All parameters are available within ranges selected by the customer where technically feasible.

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(B) Technical Specifications Packages Telegraph Grade Service

SD Code NC Code	<u>Package</u>		
	<u>TGC*</u> <u>NO</u>	<u>TG1</u> <u>NW</u>	<u>TG2</u> <u>NY</u>
<u>Parameter</u>			
Telegraph Distortion	X	X	X
<u>Optional Features</u> <u>and Functions</u>			
Telegraph Bridging	X	X	X

The technical specifications are described in  
Technical Reference TR-NPL-000336 .

(x)

\* All parameters are available within ranges selected by the customer where technically feasible.

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(C) Technical Specifications Packages Voice Grade Service

		Package VG-												
SD Code	C*	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>W</u>
NC Code	<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>SE</u>
Parameter														
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
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
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 .

(x)  
↑  
(x)

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

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(C) Technical Specifications Packages Voice Grade Service (Cont'd)

	Package VG-														
	SD Code NC Code	C* <u>LQ</u>	1 <u>LB</u>	2 <u>LC</u>	3 <u>LD</u>	4 <u>LE</u>	5 <u>LF</u>	6 <u>LG</u>	7 <u>LH</u>	8 <u>LJ</u>	9 <u>LK</u>	10 <u>LN</u>	11 <u>LP</u>	12 <u>LR</u>	W <u>SE</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	X						X	X	X	X	X	X			
. Improved 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 Transfer		X	X	X	X	X			X	X	X				
Arrangement	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(D) Technical Specifications Packages Program Audio Service

SD Code NC Code	APC* <u>PQ</u>	Package			
		<u>AP1</u> <u>PE</u>	<u>AP2</u> <u>PF</u>	<u>AP3</u> <u>PJ</u>	<u>AP4</u> <u>PK</u>
<u>Parameter</u>					
Actual Measured Loss	X	X	X	X	X
Amplitude Tracking	X				
Crosstalk	X	X	X	X	X
Distortion Tracking	X				
Gain/Frequency					
Distortion	X	X	X	X	X
Group Delay	X				
Noise	X	X	X	X	X
Phrase Tracking	X				
Short-Term Gain					
Stability	X				
Short-Term Loss	X				
Total Distortion	X	X	X	X	X
Optional Features and Functions					
Central Office Bridging					
Capability	X	X	X	X	X
Gain Conditioning	X	X	X	X	X
Stereo	X				X

The technical specifications are described in Technical Reference  
TR-NPL-000337 and associated Addendum .

(x)  
(x)

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

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(E) Technical Specifications Packages Video Service

SD Code NC Code	Package		
	<u>TVC*</u> <u>TQ</u>	<u>TV1</u> <u>TV</u>	<u>TV2</u> <u>TW</u>
<u>Video Parameters</u>			
Insertion Gain	X	X	X
Field-Time Distortion	X	X	X
Line-Time Distortion	X	X	X
Short-Time Distortion	X	X	X
Chrominance-Luminance Gain			
Inequality	X	X	X
Chrominance-Luminance Delay			
Inequality	X	X	X
Amplitude/Frequency Characteristic	X	X	X
Luminance Non-Linear Distortion	X	X	X
Chrominance Non-Linear Gain			
Distortion	X	X	X
Chrominance Non-Linear Phase			
Distortion	X	X	X
Transient Synchronizing Signal			
Non-Linearty	X	X	X
Dynamic Gain Distortion			
- Picture Signal	X	X	X
- Synchronizing Signal	X	X	X
Differential Gain	X	X	X
Differential Phase	X	X	X
Chrominance-Luminance Intermodulation	X	X	X

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

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(E) Technical Specifications Packages Video Service (Cont'd)

SD Code NC Code	<u>Package</u>		
	<u>TVC*</u> <u>TQ</u>	<u>TV1</u> <u>TV</u>	<u>TV2</u> <u>TW</u>
<u>Audio Channel Parameters</u> <u>Associated with Video Service</u>			
Insertion Gain	X	X	X
Amplitude/Frequency Characteristic	X	X	X
Total Harmonic Distortion & Noise	X	X	X
Maximum Steady-State Test Levels	X	X	X
Gain Differential Between Channels	X	X	
Phase Differential Between Channels	X	X	
Crosstalk	X	X	X
Audio-To-Video Time Differential	X	X	X

The technical specifications are described in Technical Reference  
TR-NPL-000338 .

(x)

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

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(F) Technical Specifications Packages Digital Data Service

SD Code NC Code	Package						
	<u>D1</u> <u>XA</u>	<u>D2</u> <u>XB</u>	<u>D3</u> <u>XG</u>	<u>D4</u> <u>XH</u>	<u>D5</u> <u>XE</u>	<u>D6</u> <u>YN</u>	
<u>Parameter/Hubbed</u>							(C)
Error-Free Seconds	X	X	X	X	X	X	
<u>Optional Features</u> <u>and Functions/Hubbed</u>							(C)
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.							
<u>Optional Features</u> <u>and Functions/Non-Hubbed</u>							(N)
Public Packet Data Arrangement				X	X		(N)
Voltages which are compatible with Digital Data Service are delineated in Technical Reference TR-NWT-000341.							

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**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.1 Network Channel (NC) Codes (Cont'd)(G) Technical Specifications Packages High Capacity Service

SD Code NC Code	Package					
	<u>HC0</u> <u>HS</u>	<u>HC1</u> <u>HC</u>	<u>HC1C</u> <u>HD</u>	<u>HC2</u> <u>HE</u>	<u>HC3</u> <u>HF</u>	<u>HC4</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 .

(x)

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

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## **ACCESS SERVICE**

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

15.2 Special Access Service (Cont'd)

15.2.2 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 15.2 preceeding.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(A) Parameter Codes and OptionsParameter

<u>Code</u>	<u>Option</u>	<u>Definition</u>	
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	1.544 Mbps (DS1) ANSI Extended Superframe (ESF) Format and B8ZS Clear Channel Capability	
	- 15A	1.544 Mbps (DS1) Superframe (SF) format	(T)
	- 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	

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 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	(T)
DX -		duplex signaling interface at customer's point of termination	
DY -		duplex signaling interface at customer's end user's point of termination	

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 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 or customer's end user
NO -		no signaling interface, transmission only

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 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*	(T)
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.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 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. Such terminations were provided to customers in accordance with the F.C.C. Docket No. 20099 Settlement Agreement.

(x)  
(x)

(x) Filed under authority of Special Permission No. 93-598 of the Federal Communications Commission.



**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 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) Metallic

<u>Compatible</u>	<u>CIs</u>
2DC8-1	2DC8-2
2DC8-3	2DC8-3
4DS8-	2DC8-1
4DS8-	2DC8-2

(2) Telegraph Grade

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
2DB2-10	10IA8 2TT2-2 4TT2-2	4DB2-10	10IA8 2TT2-2 4TT2-2
2DB2-43*	10IA8 2TT2-2 2TT2-6 4TT2-2	4DB2-43*	10IA8 2TT2-6 4TT2-2
2TT2-2	2TT2-2	4DS8-	10IA8 2TT2-2 2TT2-6 4TT2-2 4TT2-6
2TT2-3	2TT2-2 4TT2-2		
2TT2-6	2TT2-6 4TT2-6	4TT2-2	4TT2-2
		4TT2-6	2TT2-6

\* Supplemental Channel Assignment information required.

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
2AB2	2AC2	2DB2	2DA2	2LR2	2LR2
2AB3	2AC2	2DB3	2DA2	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				

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

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

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)

(T)

(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>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		

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

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

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

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

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
4SF3	2LS2	6DA	4DA2	6DY32	DY2
	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		6EB2-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
	9EA3				4SF2
		6DY2	2DY2		4SF3
4TF2	2TF2		4DY2		6DY2
	4TF2		6DY2		6DY3
					6EA2-E
					6EA2-M

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
6EA2-E	6EB2-E 6EB2-M 6LS2 8EB2-E 8EB2-M 9DY2 9DY38	6EA2-M	6DY2 6DY3 6EA2-M 6EB2-E 6EB2-M 6LS2 EB2-E 8EB2-M 9DY2 9DY3	6EB3-E	2DY2 4DY2 4EA2-E 4EA2-M 4SF2 6DY2 6DY3 6EA2-E 6EA2-M 8EB2-E 8EB2-M 9DY2 9DY3 9EA2 9EA3
6EA2-M	2AC2 2DY2 2LA2 2LB2 2LC2 2LO3 2LS2 2LS3 2RV2-T 4AC2 4DY2 4EA2-E 4EA2-M 4LS2 4RV2-T 4SF2 4SF3	6EB2-E	2DY2 4DY2 4SF2 6DY2 6DY3 6EB2-E 6EB2-M 9DY2 9DY3 2DY2 4DY2 4SF2 6DY2 6DY3 6EB2-M 9DY2 9DY3	6EX2-A	2GS2 2GS3 2LS2 2LS3 4GS2 4LS2 4SF2 6GS2 6LS2



**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

<u>Compatible</u> <u>CI</u> s		<u>Compatible</u> <u>CI</u> s		<u>Compatible</u> <u>CI</u> s	
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
			4DY2		4DY2
			4LS2		4LS2
6GO2	2GO2		4RV2-T		4RV2-T
	2GS2		4SF2		4SF2
	2GS3		4SF3		4SF3
	4GS2		6DY2		6DY2
	4SF2		6DY3		6DY3
	6GS2		6EB2-E		6EB2-E
6LO2	2LS2		6EB2-M		6EB2-M
	2LS3		6LS2		6LS2
	4LS2		8EB2-E		8EB2-M
	4SF2		8EB2-M		9DY2
	6LS2		9DY2		9DY3
6LS2	2LA2		9DY3		
	2LB2				
	2LC2				
	2LO2				
	2LO3				
	4SF2				

**ACCESS SERVICE**15 Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(3) Voice Grade (Cont'd)

<u>Compatible</u>	<u>CI</u> s	<u>Compatible</u>	<u>CI</u> s	<u>Compatible</u>	<u>CI</u> s
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**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(4) Program Audio

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
2PG2-1	2PG1-1 2PG2-1	4DS8-15E	2PG1-3 2PG2-3
2PG2-3	2PG1-3 2PG2-3	4DS8-15F	2PG1-5 2PG2-5
2PG2-5	2PG1-5 2PG2-5	4DS8-15G	2PG1-8 2PG2-8
2PG2-8	2PG1-8 2PG2-8	4DA8-15H	2PG1-1 2PG2-1

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(5) Video

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
2TV6-1	4TV6-15 4TV7-15	4TV7-5	4TV6-5 4TV7-5
2TV6-2	6TV6-15 6TV7-15	4TV7-15	4TV6-15 4TV7-15
2TV7-1	4TV6-15 4TV7-15	6TV6-5	6TV6-5 6TV7-5
2TV7-2	6TV6-15 6TV7-15	6TV6-15	6TV6-15 6TV7-15
4TV6-5	4TV6-5 4TV7-5	6TV7-5	6TV6-5 6TV7-5
4TV6-15	4TV6-15 4TV7-15	6TV7-15	6TV6-15 6TV7-15

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(6) Digital Data

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

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

**ACCESS SERVICE**15. Access Service Interfaces and Transmission Specifications (Cont'd)15.2 Special Access Service (Cont'd)15.2.2 Network Channel Interface (NCI) Codes (Cont'd)(C) Compatible Network Channel Interfaces (Cont'd)(7) High Capacity

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>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

(8) Synchronous Optical Channel Service

<u>Compatible</u>	<u>CIs</u>	<u>Compatible</u>	<u>CIs</u>
4DS9-1S	4DU9-1S	02S0F-A	02S0F-A
4DS9-1K	4DU9-1K	02S0F-B	02S0F-B
		02S0F-C	02S0F-C
		02S0F-D	02S0F-D
		02S0F-E	02S0F-E
		02S0F-F	02S0F-F

(N)

(N)

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

**ACCESS SERVICE****16. Public Packet Data Network**

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

**16.1 Frame Relay Access Service****16.1.1 General****(A) General**

Frame Relay Access Service (FRAS) is a medium-speed, connection-oriented packet-switched data service that allows for the interconnection of Local Area Networks (LANs) or other compatible end user customer premises equipment for the purpose of connecting to an access customer's interstate network. The terminal equipment accumulates the customer data and puts it into a frame relay format suitable for transmission over the FRAS network. This terminal equipment must conform to American National Standards Institute and Committee Consultat de International Telegraphique et Telephonique (CCITT) standards.

FRAS permits customers to share network bandwidth for data transmissions.

Rates and charges for FRAS are set forth in 17.4.8 following. The application of rates for FRAS is described in 16.1.2 following.

**(T)**

In addition to the regulations and charges specified in this section, the general regulations and charges specified in other sections of this tariff apply as appropriate.

**(B) Service Description**

FRAS is a transport service that facilitates the exchange of variable length information units (frames) between customer connections. Frames travel a fixed path through the network with an address that specifies the permanent virtual connection. Addresses are read by the network processor and the frames are relayed to the preassigned destination.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.1 General (Cont'd)(B) Service Description (Cont'd)

The service includes: the End User Port, either Standard or Channelized, (also referred to as the User Network Interface (UNI)) connection, the Access Customer Port (also referred to as the Network-to-Network interface (NNI)) connection, and Permanent Virtual Connections (PVC) which have associated Committed Information Rates (CIRs). A special access facility (ordered out of Section 7 preceding) is used to connect to the frame relay switch. In addition to the foregoing services, the Telephone Company may also provide Frame Relay Access Connection arrangements described at Section 16.1.1(E) following, and Frame Relay Inter-Network Connection arrangements described at Section 16.1.1(F) following.

(N)  
—  
(N)

The Standard End User Port connection permits FRAS compatible end user customer premises equipment (CPE) to originate or terminate an interstate access service. Connections between end user customer premises equipment and the telephone company frame relay switch may be available at speeds of 56.0 kbps, 64.0 kbps, 1.544 Mbps, or 44.736 Mbps. The Channelized End User Port allows an end user to purchase FRAS at speeds of 56.0/64.0 kbps expandable, in addition to speeds greater than 64.0 kbps and up to 1.544 Mbps. Each End User Port connection requires the identification of a corresponding terminating port connection(s).

(C)  
(C)

The Access Customer Port connection connects the telephone company frame relay switch and the access customer's network. The facility connecting an access customer network to the telephone company frame relay switch may be offered at 1.544 Mbps or 44.736 Mbps as indicated in the Telephone Company's FRAS rates at Section 17.4.8 following.

(C)  
(N)

Connections are provided via Channel Terminations (see Section 7 Special Access Digital Data and High Capacity Services preceding). All regulations, rates and charges as specified in Section 7 will apply in addition to the rates and charges associated with FRAS.

All End User Port connections must be in conformance with American National Standards Institute (ANSI) standards T1.606-1990, T1.606 Addendum 1-1991, T1.606a-1992, T1.617, Annex D-1992. All Access Customer Port connections must be in conformance with ANSI standards T1.606b-1993 and Bellcore Technical Reference TR-TSV-001370, Issued: May 1993.



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.1 General (Cont'd)(B) Service Description (Cont'd)

PVCs are software defined, end-to-end, bi-directional communications paths that are established and dis-established via the access service order process. While no physical circuits are dedicated, the two network addresses (one from each port connection) are connected electronically to form a PVC.

There are two types of PVCs available. The standard PVC establishes a communications path between two ports on the same frame relay switch. The extended PVC establishes a communications path between two ports on two interconnected telephone company frame relay switches.

At the time service is ordered the number of PVCs will be identified along with their Committed Information Rates. CIR is the bit rate at which the FRAM network commits to transfer data. Committed Information Rates provide for frame relay switch throughput at designated speeds. (See 16.1.2 (A) (3) following.) This information is required for network routing purposes.

(C) Ordering Options and Conditions

Frame Relay Access Service is ordered under the Access Order provisions set forth in Section 5 preceding. Also included in that section are other charges which may be associated with ordering FRAS (e.g., Service Date Change Charges, Cancellation Charges, etc.).

A minimum of two FRAS port connections are required for data to be transported between customer designated premises.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.1 General (Cont'd)(C) Ordering Options and Conditions (Cont'd)

When placing an order for FRAS the customer must specify:

- The number of Permanent Virtual Connections (PVCs) required;
- the location of the ports for each PVC;
- the Committed Information Rates (CIRs) that will be associated with each PVC;
- that the traffic consists of more than ten percent interstate traffic.

The port connecting the special access facility to the telephone company frame relay switch must be ordered and provided at the same speed as the special access facility.

When connecting to the port of another customer, the ordering customer must obtain authorization from the other customer.

When an extended PVC is ordered, the customer is responsible for placing the order with all telephone companies involved.

(D) Acceptance Testing

At no additional charge, the Telephone Company will, at the customer's request, cooperatively test at the time of installation.

(E) Service Description for Frame Relay Access Connection (FRAC)

As an alternative to providing a FRAS connection between the customer designated premises (CDP) and the frame relay switch through a combination of an End User Port and Special Access Digital Data or High Capacity transport, the Telephone Company may provide the FRAS connection by a Frame Relay Access Connection (FRAC). The FRAC combines a frame relay compatible 56.0 kbps, 64.0 kbps, 1.544 Mbps or 44.736 Mbps digital transport facility with an End User Port on a frame relay switch. The FRAC includes the Telephone

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.1 General (Cont'd)(E) Service Description for Frame Relay Access Connection (FRAC)

Company facility between the CDP and the customer's serving wire center, the interoffice transport (if applicable) between the customer's serving wire center and a Telephone Company wire center equipped with a frame relay switch, and a Standard End User Port. The Standard End User Port is described at Section 16.1.1(B) preceding.

Telephone Companies offering FRAS under a FRAC arrangement are indicated by inclusion of a FRAC rate in Section 17.4.8 following.

(F) Service Description for Frame Relay Inter-Network Connection (FRIC)

As an alternative to providing a FRAS network to network connection between the Telephone Company's frame relay switch and the CDP through a combination of an Access Customer Port and Special Access High Capacity transport, the Telephone Company may provide the FRAS network to network connection by a Frame Relay Inter-network Connection (FRIC). The FRIC combines a frame relay compatible 1.544 Mbps or 44.736 Mbps digital transport facility with a port on a frame relay switch. The FRIC includes the Telephone Company facility between the customer designated premises (CDP) and the customer's serving wire center, the interoffice transport (if applicable) between the customer's Telephone Company serving wire center and a Telephone Company wire center equipped with a frame relay switch, and the Access Customer Port. The Access Customer Port is described at Section 16.1.1(B) preceding. The FRIC is offered at speeds of 1.544 Mbps or 44.736 Mbps.

A FRIC is not available for connection to customer frame relay networks that are not located within the Telephone Company's service area. Customers with frame relay networks located outside the Telephone Company's service area must separately order a FRAS Access Customer Port and Special Access High Capacity Channel transport in addition to any required PVC or FRAC services.

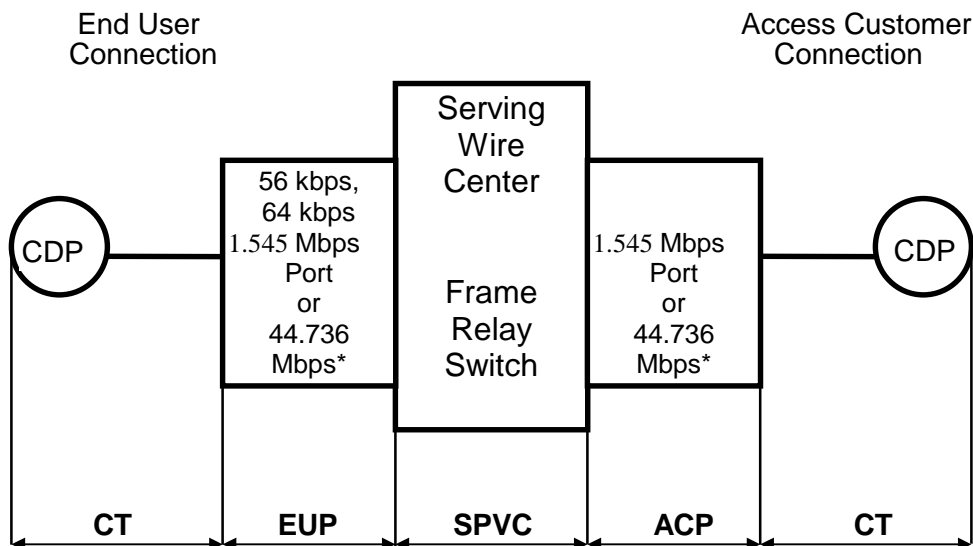
Telephone Companies offering FRAS under a FRIC arrangement are indicated by inclusion of a FRAC rate in Section 17.4.8 following.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations

This section contains the specific regulations governing the rates and charges that apply for Frame Relay Access Service.

(A) Rate Categories

The following diagrams depict a generic view of the components of FRAS and the manner in which the components are combined to provide Frame Relay Access Service and Interconnected Frame Relay Access Service.

**Frame Relay Access Service**

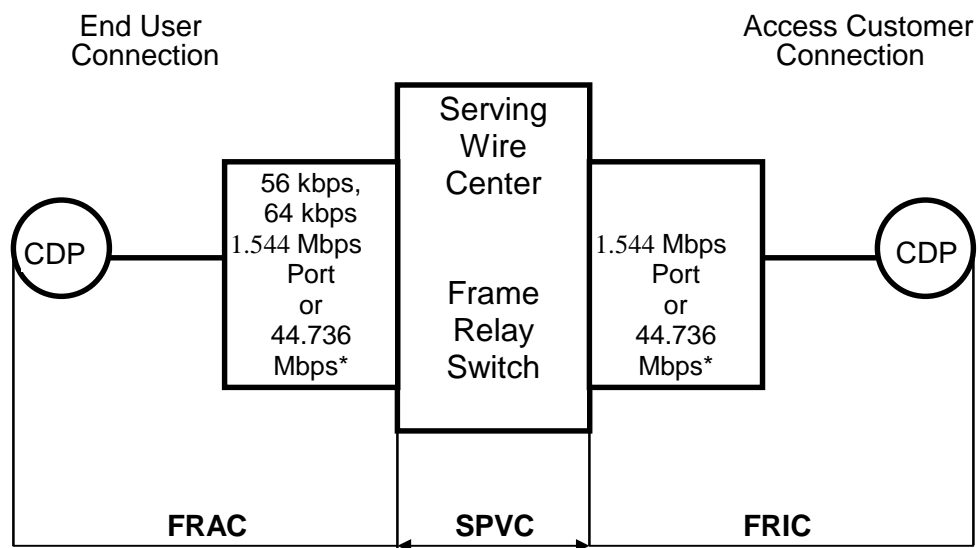
CDP - Customer Designated Premises  
CT - Channel Termination  
EUP - End User Port

SPVC- Standard Permanent Virtual Connection  
ACP - Access Customer Port

\* 44.736 Data speed availability is subject to individual Telephone Company offerings as indicated in Section 17.4.8 following.

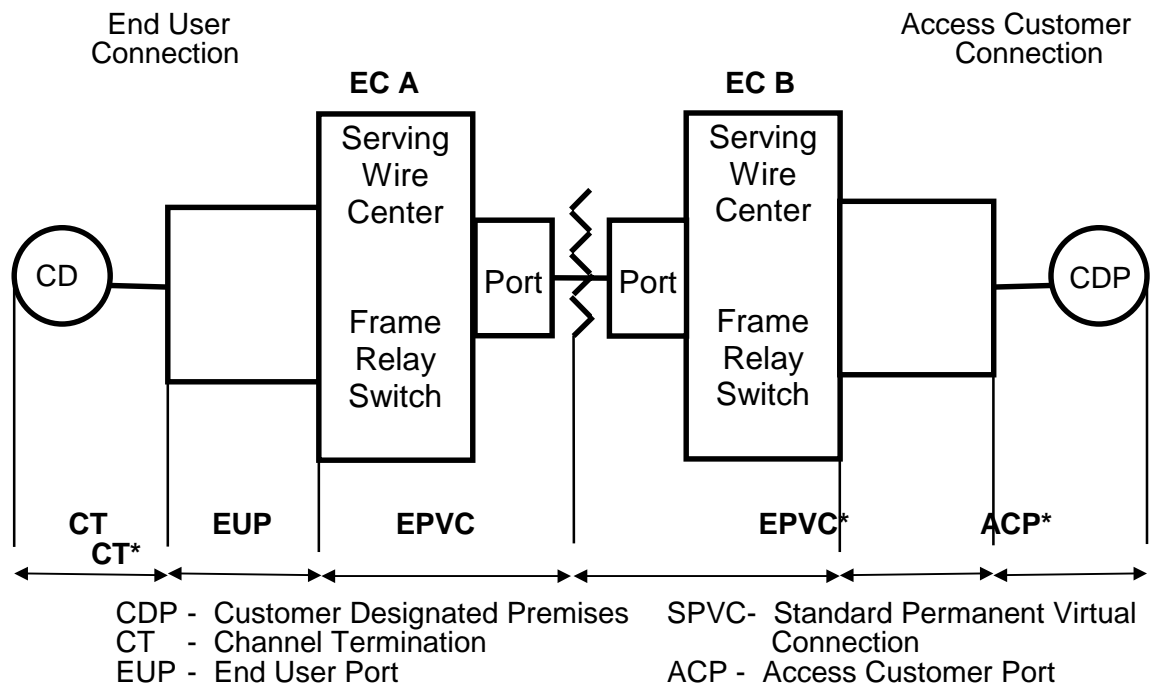
**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations**Frame Relay Access Service**

For Telephone Companies with Frame Relay Access Connection (FRAC) and Frame Relay Inter-network Connection (FRIC) rate elements (access customer located in Telephone Company service area)



CDP - Customer Designated Premises    SPVC - Standard Permanent Virtual Connection  
FRAC - Frame Relay Access Connection    FRIC - Frame Relay Inter-Network Connection

\* 44.736 Data speed availability is subject to individual Telephone Company offerings as indicated in Section 17.4.8 following.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(A) Rate Categories (Cont'd)**Interconnected  
Frame Relay Access Service**

\* The application of these charges by EC B is dependent upon EC B's access tariff.

Frame Relay Access Service is available at designated wire center locations only.

(1) End User Port - Standard

The Standard End User Port is the physical location in the telephone switching office where the special access facility of the customer connects to the FRAS Network. It receives the data frame from the end user customer's Local Area Network or other compatible CPE device and verifies that the end user connection and the corresponding access customer connection are valid before relaying the frame to the destination end point.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(A) Rate Categories (Cont'd)(1) End User Port - Standard (Cont'd)

The Standard End User Port consists of either a 56.0 kbps, 64.0 kbps, or a 1.544 Mbps port interface connection. The port connecting the special access facility to the telephone company frame relay switch must be ordered and provided at the same speed as the special access facility. (See 7.9 and 7.10 preceding.) When a term discount is applied to a special access DS1 facility connecting to a 1.544 port on a frame relay switch, the discount on the port will be equivalent to the discount on the special access DS1 facility. Section 7.2.8(A) preceding specifies the conditions under which a term discount is applicable.

(2) End User Port – Channelized

The Channelized End User Port allows an end user to purchase Frame Relay Access Service at speeds of 56/64 expandable, in addition to speeds greater than 64 kbps and up to 1.544 Mbps. Full DS1 connectivity between the customer designated premises (CDP) and the frame relay switch is required. End users must purchase a dedicated DS1 special access facility from their CDP to a Digital Access Cross-Connect System (DACS) at their serving wire center to access the channelized connection. The Channelized End User Port configuration connects the DACS located at the end user's serving wire center with a DS1 port on the Frame Relay Switch. The channelized DS1 facility from the end user's serving wire center to the frame relay switch is a direct connection between the frame relay switch and the serving wire center DACS and is available only for the provisioning of frame relay service.

(T)

(T)

End user customers can purchase a non-expandable Channelized End User Port available at speeds of 56 and 64 kbps. The end user must purchase a dedicated 56/64 kbps loop to a DS1 to a voice multiplexor at the serving wire center for each 56/64 kbps channelized port connection.

The Channelized End User Port element is available only for use with Frame Relay Access Service and where sufficient facilities exist to provide the service. In addition, pricing and provisioning of frame relay services provided jointly with other companies will be dependent upon other company's DS1 prices and their agreement to provide channelized transport in their or other companies operating areas.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(A) Rate Categories (Cont'd)(3) Access Customer Port

(C) (M)

The Access Customer Port is the physical location in the telephone company switching offices where the access customer's special access facility connects to the telephone company's FRAS network. It specifies how a frame relay switch sends and receives data from a frame relay access customer's network. The Access Customer Port is offered at a speed of 1.544 Mbps. The port connecting the special access facility to the telephone company frame relay switch must be ordered and provided at the same speed as the special access facility. (See 7.9 and 7.10 preceding.) Section 7.2.8(A) preceding specifies the conditions under which a term discount is applicable.

(M)

(4) Permanent Virtual Connection (PVC)

(C)

A PVC is a software defined communications path between two port connections within the FRAS network.

Each PVC is provisioned with a customer selected Committed Information Rate. The CIR is a transmission speed specified by the customer. CIRs range from 8 kbps to 768 kbps. The telephone company will provide switch capacity to permit the customer to transmit information with guaranteed delivery at the specified CIR. Transmissions at a rate above the subscribed CIR will be marked "Discard Eligible" (DE), and, should network congestion occur, are subject to being dropped by the network. If CIR is set equal to zero, then all frames will be marked DE. The CIR value selected cannot exceed the maximum transportation speed of the port at either end of the PVC.

(C)

(C)

Customers will be permitted to order multiple PVCs on a given port subject to switch limitations. Customers anticipating non-simultaneous transmission may order CIRs assigned to these multiple PVCs, the sum of which may theoretically exceed the actual throughput of the port. However, when simultaneous transmission of multiple PVCs occurs, the total of the transmission rate (CIRs) may not exceed the actual throughput of the port.

There are two types of PVCs available. The standard PVC establishes a communications path between the End User Port and the Access Customer Port on the same frame relay switch. The extended PVC establishes a communications path between the End User Port on a telephone company's frame relay switch and an Access Customer Port on another interconnected telephone company's frame relay switch.

Certain material currently found on this page formerly appeared on Original Page 16-7



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(A) Rate Categories (Cont'd)(5) Frame Relay Access Connection (FRAC)

The Frame Relay Access Connection (FRAC) rate element recovers the costs associated with the communication path between the end user's premises and the Telephone Company wire center equipped with a frame relay switch. The FRAC includes the physical transmission facility between the customer designated premises (CDP) and the customer's serving wire center, the interoffice transport (if applicable) between the customer's serving wire center and a wire center equipped with a frame relay switch, and the end user port on the Telephone Company's frame relay switch.

One FRAC charge applies per CDP at which the FRAS connection is terminated. This applies even if the CDP and the frame relay switch are collocated in a Telephone Company building.

Telephone Companies offering FRAS under a FRAC arrangement are indicated by inclusion of a FRAC rate in Section 17.4.8 following. Telephone Companies offering FRAS under a FRAC arrangement will assess a single monthly FRAC charge in lieu of separate charges for a Standard End User Port charge under Section 16.1.2(A)(1) preceding and Special Access Digital Data or High Capacity Service under, respectively, Sections 7.9 and 7.10 preceding.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(A) Rate Categories (Cont'd)(6) Frame Relay Inter-network Connection (FRIC)

The Frame Relay Inter-network Connection (FRIC) rate element recovers the costs associated with the communication path for a network-to-network connection between the customer designated premises (CDP) and the Telephone Company wire center equipped with a frame relay switch. The FRIC includes the physical transmission facility between the CDP and the customer's serving wire center, the interoffice transport (if applicable) between the customer's serving wire center and a wire center equipped with a frame relay switch, and the Access Customer Port on the CDP at which the FRAS connection is terminated. This applies even if the CDP and the frame relay switch are collocated in a Telephone Company building.

A FRIC is not available for connection to customer frame relay networks that are not located within the Telephone Company's service area. Customers with frame relay networks located outside the Telephone Company's service area must separately order a FRAS Access Customer Port and Special Access High Capacity Channel transport in addition to any required PVC or FRAC services.

Telephone Companies offering FRAS under a FRIC arrangement are indicated by inclusion of a FRAC rate in Section 17.4.8 following.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(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 as follows:

(1) Monthly Rates

Monthly rates are recurring rates that apply each month or fraction thereof that a FRAS is provided. For billing purposes, each month is considered to have 30 days.

(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 FRAS are: installation of service and service rearrangements. These charges are in addition to the Access Order Charges as specified in 17.4.1 following:

(a) Installation of Service

Nonrecurring charges apply for the installation of PVCs.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(B) Types of Rates and Charges (Cont'd)(2) Nonrecurring Charges (Cont'd)(b) Service Rearrangements

Service Rearrangements are changes to existing (installed) service.

A PVC Rearrangement Charge will be applied whenever a change is made to the CIR of an existing PVC after initial port installation and/or a change is made to the termination port destination of the PVC.

Administrative changes will be made without charge(s) to the customer. Administrative changes are as follows:

- Change of customer name,
- Change of customer or customer's end user premises address when the change of address is not a result of physical relocation of equipment,
- Change in billing data (name, address, or contact name or telephone number),
- Change of agency authorization,
- Change of customer circuit identification,
- Change of billing account number,
- Change of customer or customer's end user contact name or telephone number, and
- Change of jurisdiction.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.2 Rate Regulations (Cont'd)(C) Minimum Period

The minimum period for FRAS is one month and the full monthly rate will apply to the first month. Adjustments for quantities of services established or discontinued in any billing period beyond the minimum period are as set forth in 2.4.1(F). The minimum period for the Frame Relay Service 1.544 Mbps port are as set forth in 2.4.2 and 5.5.1.

(D) Optional Features

The Optional Features rate category provides for optional features which may be added to FRAS in order to improve its quality or utility to meet specific communications requirements.

(1) Data Link Channel Identifiers (DLCI)

This Feature provides for the assignment of DLCIs per end user or access customer port connection. One DLCI is required per end user or access customer port. When any two DLCIs are mapped together, a PVC can be created. An initial DLCI is included with each end user or access customer port. An additional charge applies for every DLCI after the first one for each type of port.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.3 Optional Rate Plans

A Term Discount plan is available for Frame Relay Access Service (FRAS). The Term Discount applies to the Frame Relay Access Connection (FRAC) and Frame Relay Inter-network Connection (FRIC) charges. The End User Port, Inter-network Customer Port charges, and Permanent Virtual Connections (PVCs) are not eligible for a Term Discount. Under the Term Discount plan, the current monthly rates for eligible services are reduced by a fixed percentage. The amount of the discount percentage differs based on the length of the service commitment period selected by the customer. The Term Discount percentages for FRAS are as set forth in 17.4.8 following.

The Term Discount Optional Rate Plan is only available for those Telephone Companies indicating the Term Discounts within their FRAS rate section in Section 17.4.8 following.

The minimum service period on a month-to-month basis is one month. Under an Optional Rate Plan, the minimum service period is twelve months.

(A) Term Discounts

FRAS may be ordered at the customer's option on a month-to-month basis or for Term Discount periods of 36 months (3 years) or 60 months (5 years).

The minimum service period for all Term Discount plans is twelve months. The customer must specify the length of the service commitment period at the time the service is ordered.

For customers that subscribe to the Term Discount plan for 36 or 60 months, the Term Discount percentage as set forth in 17.4.8 following will be frozen from Company initiated decreases for the entire discount period at the percent in effect at the beginning of the Term Discount period.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.3 Optional Rate Plans(A) Term Discounts (Cont'd)

If a Term Discount Percentage increase occurs during the term of an existing Term Discount plan, the increased percentage will be applied automatically to the remainder of the current Term Discount period.

At the end of the Term Discount period, the customer may convert to month-to-month service or subscribe to a new Term Discount plan. If the customer does not make a choice by the end of the discount period, the rates will automatically convert to month-to-month service rates.

To be included in a Term Discount plan, all eligible FRAS rate elements must be ordered for the same commitment term (i.e., all 36 months or all 60 months) and with the same service date. When additional capacity is subsequently added, it will be available only on a month-to-month basis unless the discount period of the entire service is upgraded.

As long as the number of FRAS connections included in a Term Discount plan remains constant, customer requests to install and disconnect FRAS connections, including changes affecting different wire centers and/or customer designated premises, will not change the current Term Discount period or the minimum service period, and Discontinuance of Service charges as set forth in (3) following will not apply.

(1) Upgrades in Term Discounts

Services provided under month-to-month rates or Term Discount rates may be upgraded to a Term Discount plan at any time without incurring FRAS nonrecurring charges or discontinuance charges for existing services. The new Term Discount plan must meet or exceed the service term of the plan being upgraded. For example, a service with a 36 month commitment period may be upgraded to a new 36 month or 60 month service period. The monthly rates will be those that are in effect at the time the service is upgraded. A new minimum service period applies to all FRAS that is upgraded.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.3 Optional Rate Plans(A) Term Discounts (Cont'd)(2) Upgrades in Capacity

If the customer chooses to upgrade a service under the Term Discount plan to a higher capacity (e.g., from 56.0 kbps to 64.0 kbps or from 56.0 kbps or 64.0 kbps to 1.544 Mbps), discontinuance charges will not apply, provided all the following conditions are met:

- the customer's order for the disconnect of the existing service and the installation of the new service are received at the same time and specifically reference the application of upgrade in capacity,
- the customer's disconnect order for the existing service must reference the service installation order,
- the new service has a total capacity greater than the total capacity of the service being discontinued and,
- the new Term Discount period meets or exceeds the Term Discount period being discontinued.

A new minimum service period applies to all upgrades. A Frame Relay Access Connection nonrecurring charge for an equivalent capacity of the existing services being upgraded to the higher speed service will not be assessed. FRAC nonrecurring charges will not apply to the upgraded lower speed services placed on the higher speed service if requested at the same time as the upgrade request. Nonrecurring charges will apply for capacity that exceeds the existing equivalent capacity.

(N)

(N)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.1 Frame Relay Access Service (Cont'd)16.1.3 Optional Rate Plans(A) Term Discounts (Cont'd)(2) Upgrades in Capacity (Cont'd)

Discontinuance charges will not apply should the customer choose to upgrade either a portion of or the entire FRAS under the Term Discount plan and move the service to a new customer location(s) where service is provided by the Telephone Company.

(3) Discontinuance of Service

If the customer chooses to disconnect all or a portion of the service prior to the expiration of the Term Discount period, discontinuance charges will apply to the portion of the service being discontinued.

Should the customer choose to discontinue a Term Discount plan prior to the completion of the minimum service period, discontinuance charges will apply. Discontinuance charges equal to one-hundred percent of the total undiscounted monthly rates, less any amounts previously paid, will apply for the minimum service period. Additionally, discontinuance charges of fifteen percent of the total undiscounted monthly charges will apply to the remaining portion of the discount service term.

Should the customer choose to discontinue service ordered under a Term Discount plan after the minimum service period but before the completion of the discount period, discontinuance charges will apply. Discontinuance charges of fifteen percent of the total undiscounted monthly charges will apply to the remaining portion of the discount period. For example, a customer has a 1.544 Mbps Frame Relay Access Connection which it chooses to discontinue after 33 months into a 60-month service term. The discontinuance charge would be 0.15 times 27 months times the undiscounted monthly rates for that service.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service16.2.1 General Description(A) Basic Service Description

Asymmetrical Digital Subscriber Line (ADSL) Service is an access data technology service offered at various downstream (Down) and upstream (Up) speeds. The "Up" speed represents transmission speed in kilobits per second (Kbps), from the point of demarcation at the customer's designated premises to the Telephone Company's ADSL connection point; while the "Down" speed represents transmission speed in Kbps or Mbps from the Telephone Company's ADSL connection point to the point of demarcation at the customer's designated premises. Actual speed may be affected by loop distance and other factors.

(C)

(C)

(C)

The ADSL Service may require a splitter at both the customer's designated premises and the Telephone Company's serving wire center to split the traffic between data and voice. The customer is responsible for providing and maintaining the splitter at the customer designated premises.

(B) Service Provisioning

ADSL Service is provisioned over existing Telephone Company copper facilities and transported to the Telephone Company's backbone network. ADSL Service provides a connection from the customer's designated location (CDL) to the ADSL connection point.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.1 General Description (Cont'd)(B) Service Provisioning (Cont'd)

Access from the Telephone Company's ADSL connection point will be provided via High Capacity Special Access Service and/or Frame Relay Access Service, where facilities permit. High Capacity Special Access Service is available in Section 7.10 preceding. Frame Relay Access Service is available in Section 16.1 preceding. If a customer utilizes Special Access Service or Frame Relay Access Service pursuant to sections 7.10 or 16.1 preceding, the associated rates and charges for such facilities shall apply in addition to the rates and charges associated with the ADSL rate element. (C)

The Telephone Company will qualify the local exchange service loop between the customer's designated premises and the serving wire center. The purpose of qualification is to determine the availability and suitability of existing Telephone Company facilities to provide the service, and to determine if Loop Conditioning is required to support ADSL Service. The Telephone Company will not provision this service on facilities which are not suitable for ADSL. (C)

The Telephone Company does not undertake to originate data, but offers the use of its ADSL service, where available, to customers for the purpose of transporting data originated by the customer or a third party.

All customers will be served from the nearest suitably equipped end office. Information pertaining to end offices equipped to provide ADSL Service is set forth in the National Exchange Carrier Association, Inc. (NECA) Tariff F.C.C. No. 4. ADSL Service will be provided subject to the availability and limitations of the Telephone Company wire centers and outside plant facilities. ADSL service is only available where technical capabilities permit such facility distance and type of physical plant.

(C) Responsibility of the Telephone Company

The Telephone Company will provision and maintain ADSL Service for the customer up to and including the Network Interface Device (NID) or the protector. The Telephone Company will advise the customer of the customer premises equipment (CPE) necessary to support ADSL Service that the customer will need to purchase.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.1 General Description (Cont'd)(D) Rights of The Telephone Company

ADSL Access Service will be provided over existing Telephone Company local exchange service lines. Rates and regulations for ADSL Access Service are in addition to any rates and regulations that apply for the associated local exchange service line provided under the terms and conditions in the Telephone Company's general and/or local exchange service tariffs. The Telephone Company will automatically disconnect ADSL Access Service when the associated local exchange service line is disconnected for any reason.

(N)  
|  
(N)

The Telephone Company will not provision ADSL service if the Telephone Company has reasonably determined that (a) it is not technically feasible over existing facilities or (b) it will cause interference problems within the Telephone Company's network or other facilities.

During the Telephone Company's network maintenance and software update period, it may be necessary to temporarily place the ADSL central office equipment out of service. The Telephone Company reserves the right to temporarily interrupt ADSL Service at other times in emergency situations.

(E) Responsibility of the Customer

The customer is responsible for providing the Telephone Company with the necessary information to provision ADSL Access Service (e.g., customer name, telephone number and premises address; billing name and address when different from the customer name and premise address; its Internet Protocol (IP) address; and the contact name and telephone number of the telecommunications service provider with which the customer's ADSL Access Service will interconnect).

(N)  
|  
(N)

The customer is responsible for providing compatible customer premises equipment (CPE) that is used for connection to ADSL Service.

The ISP/NSP customer is responsible for providing the Telephone Company with the necessary information (e.g., Data Link Connection Identifier(s), and/or Internet Protocol) to provision the ADSL Service.

The ISP/NSP customer will obtain the appropriate authorization to allow the Telephone Company to provision ADSL Service over the customer's end user's existing telephone exchange service line.

(C)  
(C)  
(C)

Where required, the ISP/NSP customer will be responsible for obtaining permission from its subscriber(s) for the Telephone Company's agents or employees to enter the customer's Designated premises at a mutually agreed upon time for the purpose of installing, inspecting, repairing, or upon termination of the service, removing the service components of the Telephone Company.

(C)

The ISP/NSP customer will deal directly with its end user customers with respect to all matters pertaining to the service provided, including marketing, sales, ordering, installation, maintenance, trouble reporting, repair, billing and collections.

(N)  
|  
(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.2 Rate Regulations(A) Rate Elements

There are three types of rates and charges applicable to ADSL Service. These are a monthly rate, a nonrecurring charge and a network reconfiguration charge.

(C)  
(N)  
(N)

The monthly rate applies each month or fraction thereof for each local exchange service line equipped with ADSL Service.

A nonrecurring charge applies per local exchange service line for the installation of ADSL Service.

A DSL Network Reconfiguration Charge applies when the ADSL Access Service customer's telecommunications service provider requests the Telephone Company to modify the Telephone Company's network to: 1) accommodate a change in the ADSL Access Service customer's existing IP address or 2) limit the data speed delivered over the customer's existing ADSL Access Service line. A nonrecurring charge applies for each request per ADSL Access Service line. The Telephone Company will bill the DSL Network Reconfiguration Charge to the ADSL Access Service customer's telecommunications service provider.

(N)

All changes to existing ADSL Access Service (including but not limited to change of telecommunications service provider), other than changes involving DSL network reconfigurations and administrative activities, will be treated as a discontinuance of the existing service and an installation of a new service. A nonrecurring installation charge will apply per ADSL Access Service line for this work activity.

(N)

Rates and charges for ADSL Service are set forth in 17.4.8 following.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.2 Rate Regulations (Cont'd)(B) Rate Application

ADSL Service is based on differing volume levels of ADSL connections per Section 17.4.8, following.

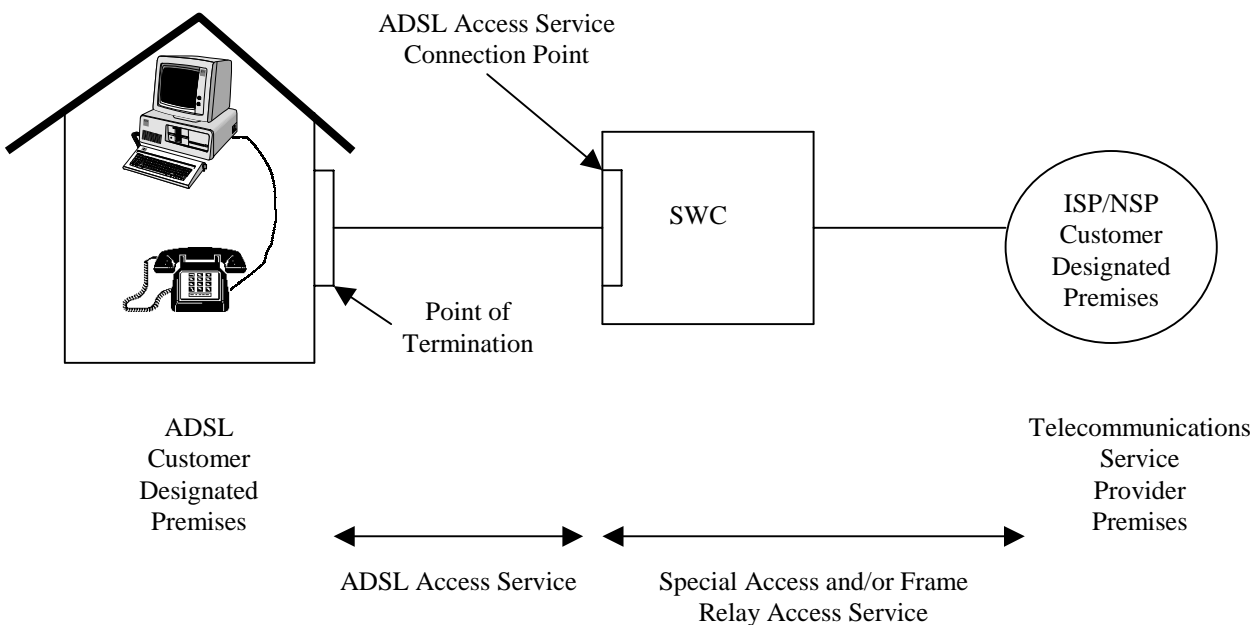
(C)

(C)

The rates applicable to ADSL Service provided under an ADSL Term and Volume Plan (ADSL-TVP) arrangement are specified in 17.4.8, following.

(C)

The following diagram depicts a typical ADSL Service configuration:

(C) Minimum Period

The minimum period for which ADSL Access Service is provided to a customer and for which charges are applicable is one month.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.2 Rate Regulations (Cont'd)(D) Moves

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

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

The provisions for moves of ADSL Access Service are the same as those described in Section 7.2.3, preceding, except that an Access Order Charge will not apply.

(E) Term and Volume Plan (TVP)(1) Description

The terms and conditions specified herein are applicable to ADSL Service and are in addition to other regulations as specified in this tariff.

The ADSL Term and Volume Plan (TVP) will allow customers discounted access rates based upon the volume and term commitment. Rates will be based upon the TVP selected by the customer.

Term plans of one (1), two (2) and three (3) years may be available to all customers at applicable rates set forth in the tariff regardless of when the subscription is made for a ADSL Service TVP arrangement. The customer must designate on the order the type of payment plan selected.

(C)

The minimum volume commitment of the TVP selected must be met within twelve (12) months after the TVP is initiated.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)

(N)

16.2.2 Rate Regulations (Cont'd)(E) Term and Volume Plan (TVP) (Cont'd)(2) Rate Application

Upon expiration of a TVP period, the customer may choose a new TVP period, convert to month-to-month or terminate service. The month-to-month rates will be those rates that are in effect at the time of conversion. If the customer fails to make a choice by the end of the TVP period, the ADSL Service will continue billing at the existing term and volume commitment level rates and a new TVP period will begin based on previously effective term and volume commitment. All terms and conditions, including Termination Liabilities will apply to the new TVP period.

Conversion to a month-to-month or different TVP period will require the customer to submit a change order. Conversion of existing TVP service to a different TVP period will be allowed without application of any nonrecurring charges.

(3) Changes in Length of TVP Period

The customer may elect to convert to a new TVP period subject to the following conditions:

- (a) Credit will not be given toward the new payment period for payments made under the original TVP arrangement.
- (b) Nonrecurring charges will not be reapplied for existing service(s).
- (c) If the new TVP period is shorter in length than the time remaining under the existing TVP, the change to the new TVP period constitutes a discontinuance of the existing TVP service and termination liability charges apply.

(N)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.2 Rate Regulations (Cont'd)(E) Term and Volume Plan (TVP) (Cont'd)(4) Rate Changes

The customer may terminate the TVP without penalty or liability should the rates increase during the term of the existing TVP, with the exception of rate changes that may occur as a result of FCC presubscription for rate increases.

(5) Annual Review

Each customer's TVP will be reviewed annually. The customer will be notified as to the status of the TVP if the in-service quantity of ADSL Services falls below the minimum volume commitment. An allowance of up to 3% will be considered as still having met the volume commitment. Where the customer has less than the volume commitment quantity for a specified discount, charges will be assessed.

If the total number of ADSL Services in service qualifies the customer for a different TVP rate, the customer will have the option of increasing the commitment quantity for the remainder of the plan.

(6) TVP Conditions

After enrolling in the plan, the customer may delete or add ADSL Services rated at the specified term period/threshold level rate at any time during the plan.

(D)  
—  
(D)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.2 Rate Regulations (Cont'd)(E) Term and Volume Plan (TVP) (Cont'd)(7) Shortfall Charges for Failing To Meet Commitment

At the annual review, if the total volume in service does not meet the volume commitment, a payment equal to the difference between the TVP rate and the highest rate that would have been charged for services not under the TVP plan plus 10% will be assessed. The payment will be calculated using the prorated ADSL Service aggregation quantity at the time of the review. The customer may choose to increase the volume commitment within 30 days after enrollment to the TVP and continue the TVP arrangement or choose to be billed on a going forward basis under either a different TVP or under the month-to-month rates. If after 30 days, the TVP volume levels are not met, the TVP will be automatically changed to the standard month-to-month rates.

(8) Termination Liability

When a TVP service is discontinued prior to the end of the commitment period, termination liability charges will apply, as set forth below, based on the remainder of the TVP period in effect at the time of disconnect.

One Year TVP – Prorated payment based on the ADSL Service Level Package mix times the number of remaining months of the first year's recurring charges.

Two Year TVP – Prorated payment based on the ADSL Service Level Package mix times the number of remaining months of the first and second year's recurring charges.

Three Year TVP – Prorated payment based on the ADSL Service Level Package mix times the number of remaining months of the first, second and third year's recurring charges.

(N)  
|  
(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.3 ADSL Service Discount Pricing Arrangement

(N)

(A) General

The telecommunications services offered under an ADSL Access Services Discount Pricing Arrangement (DPA) are provided at wholesale rates to the customer under the conditions listed below.

- (1) The customer purchases ADSL Service as described in Section 16.2.1, preceding, for the purpose of combining these telecommunications services with its own information service(s) to create a new retail service for sale to its end user customer(s).
- (2) In addition to the obligations specified in Section 16.2.1(E), preceding, the customer assumes the following obligations:
  - (a) The customer will deal directly with its end user customers with respect to all matters pertaining to the service provided, including marketing, sales, ordering, installation, maintenance, trouble reporting, repair, billing and collections. The customer will not direct its end users to contact the Telephone Company for any aspect of the service the customer provides.
  - (b) The customer will submit orders for ADSL Access Service to the Telephone Company in a format and manner designated by the Telephone Company.
  - (c) The customer will obtain the appropriate authorization to allow the Telephone Company to provision ADSL Access Service over the customer's end user's existing telephone exchange service line.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.3 ADSL Service Discount Pricing Arrangement (Cont'd)

(N)

(A) General (Cont'd)

When the customer purchases ADSL Service under the ADSL Service DPA, the rates and charges specified for a Telephone Company for the ADSL Service DPA will apply. The ADSL Service DPA is only available from those Telephone Companies with rates indicated for ADSL Service DPA in Section 17.4.8 following.

Services provided under the ADSL Service DPA are available under a Monthly Plan at the rates and charges specified in Section 17.4.8, following, or under an ADSL Service DPA Term Plan described in Section 16.2.3(B) following, at the rates and charges specified in Section 17.4.8, following.)

A monthly charge applies for each ADSL Service line covered under the DPA. A nonrecurring charge applies for the installation of each ADSL Service line under the DPA. A DSL Network Reconfiguration Charge as described at Section 16.2.2(a) preceding would apply for each requested reconfiguration for each ADSL Service line covered under the DPA.

The Telephone Company will bill the customer an Access Order Charge, per order, to convert an in-service ADSL Service line originally purchased under the provisions specified in Section 16.2.2, preceding, to the DSL Access Services DPA, provided the customer obtains written authorization from its end user authorizing such conversion, where necessary. Per-line nonrecurring charges specified in Section 17.4.8, following, do not apply to conversion of in-service ADSL lines to a DPA.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.3 ADSL Service Discount Pricing Arrangement (Cont'd)

(N)

(B) ADSL Service DPA Term Plan(1) Description

The ADSL Service DPA Term Plan provides the customer with reduced rates based on the length of the customer's term commitment and its selected pricing option. The ADSL Service DPA Term Plan is available for terms of one or three years with a choice of two pricing options. The Telephone Company will establish an ADSL Service DPA Term Plan for each Serving Wire Center (SWC) based on the customer's order notifying the Telephone Company which ADSL-equipped SWC(s) the customer wants included in the plan(s) and its selected term commitment and pricing option for each SWC. An Access Order Charge applies for each order to establish the initial ADSL Service DPA Term Plan(s).

When the customer subscribes to an ADSL Service DPA Term Plan, all in-service ADSL Access Service lines provided out of and subsequently installed at the included SWC will be billed the rates and charges specified in Section 17.4.8, following, for the length of the term commitment. In addition to the applicable ADSL Line Charges, the customer will be billed a recurring monthly ADSL Service DPA Term Plan Charge for each SWC included in an ADSL Service DPA Term Plan, as specified in Section 17.4.8, following, based on its selected pricing option.

If the Telephone Company decreases the rates specified in Section 17.4.8, following, during the term of a commitment period, the decreased rates will automatically be applied for the remainder of the current commitment period.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.3 ADSL Service Discount Pricing Arrangement (Cont'd)

(N)

(B) ADSL Service DPA Term Plan (Cont'd)(1) Description (Cont'd)

At the end of the ADSL Service DPA Term Plan, the customer may elect to establish a new ADSL Service DPA Term Plan commitment, convert to the rates available under the Monthly Plan, or discontinue service. If the customer does not make an election by the end of the ADSL Service DPA Term Plan, the rates for all ADSL Service lines will automatically be converted to the rates available under the Monthly Plan specified in Section 17.4.8, following. An Access Order Charge will not apply to any election made by the customer at the end of the ADSL Service DPA Term Plan.

An ADSL Service DPA Term Plan is subject to payment for early termination as described in Section 16.2.3(B)(4), following.

(2) Upgrades in ADSL Service DPA Term Plan

A customer may terminate an ADSL Service DPA Term Plan without the application of a termination liability charge when the customer replaces its original ADSL Service DPA Term Plan commitment with a new ADSL Service DPA Term Plan commitment provided the length and pricing option of the new ADSL Service DPA Term Plan commitment is equal to or greater than the length and pricing option of the original ADSL Service DPA Term Plan commitment. An Access Order Charge will not apply when the customer replaces an existing ADSL Service DPA Term Plan with a new ADSL Service DPA Term Plan commitment under this provision.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.2 Asymmetrical Digital Subscriber Line (ADSL) Service (Cont'd)16.2.3 ADSL Service Discount Pricing Arrangement (Cont'd)

(N)

(B) ADSL Service DPA Term Plan (Cont'd)3) Termination without Liability

A customer may terminate an ADSL Service DPA Term Plan without the application of a termination liability charge if the Telephone Company increases the ADSL Service DPA Term Plan monthly rates described in Section 17.4.8, following, during the term of the existing commitment. The customer has 90 days following such rate increase to notify the Telephone Company in writing of its intent to terminate its ADSL Service DPA Term Plan under this section; otherwise, the increased rates will apply for the remainder of the commitment period.

(4) Termination with Liability

If the customer elects to terminate its ADSL Service DPA Term Plan(s) prior to the end of the commitment period for any reason other than specified in (2) or (3), preceding, a termination liability charge will apply. For each ADSL Service DPA Term Plan terminated prior to the end of the commitment period, the Telephone Company will bill the customer a charge equal to the monthly ADSL Service DPA Term Plan Charge for its selected pricing option as specified in Section 17.4.8, following, multiplied by the number of months remaining in the commitment period.

ADSL Service DPA Monthly Plan rates as described in Section 17.4.8, following, will apply to all in-service ADSL Lines following the early termination of an ADSL Service DPA Term Plan.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.3 Symmetrical Digital Subscriber Line Access Service16.3.1 General

Symmetrical Digital Subscriber Line (SDSL) Access Service provides the customer the ability to transmit data to (upstream rate) and receive data from (downstream rate) a DSL Access Service Connection Point at the same speed using the Telephone Company's existing local exchange copper facilities. A DSL Access Service Connection Point is an interconnection point designated by the Telephone Company that aggregates data traffic from and to Telephone Company SDSL-equipped Serving Wire Centers (SWCs). The DSL Access Service Connection Point may be located within the operating territory of the Telephone Company or in the operating territory of another telephone company, provided both telephone companies agree to such an arrangement.

At the DSL Access Service Connection Point, the customer's SDSL Access Service must be connected to a telecommunications service provider's customer designated premise using the Telephone Company's Special Access Services when the Connection Point is located within the Telephone Company's operating territory. When the Connection Point is located in the operating territory of another telephone company, the customer's SDSL Access Service must be connected to a telecommunications service provider's customer designated premises using equivalent access services provided by that telephone company.

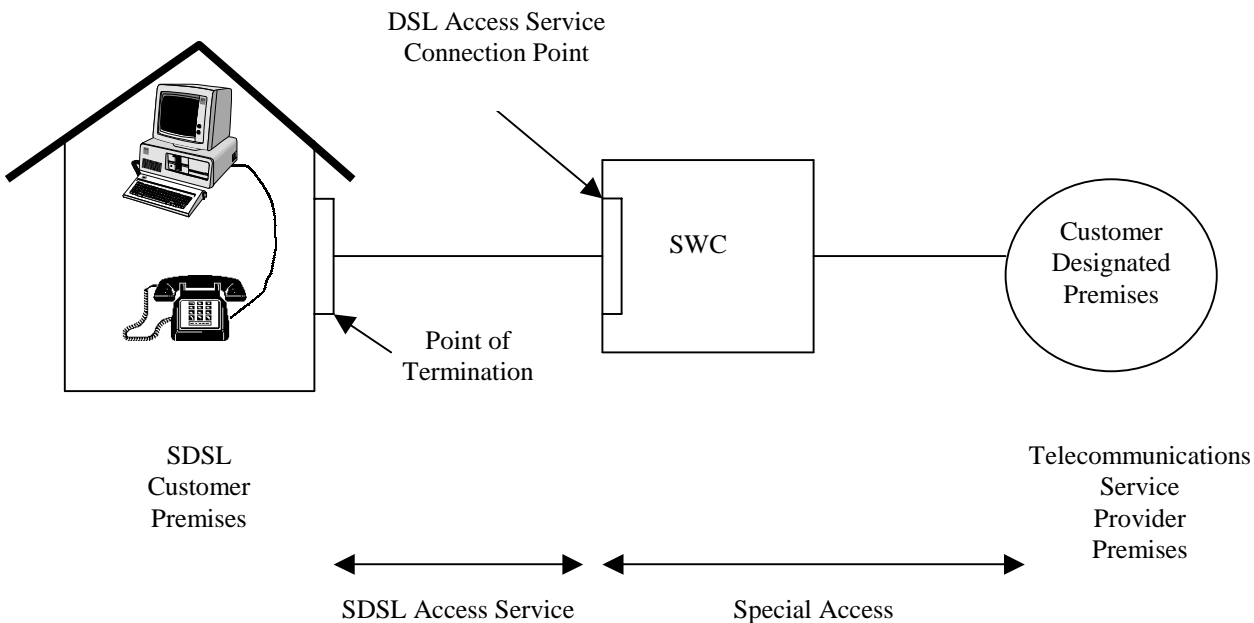
SDSL Access Service is available as two service options, i.e., SDSL Voice-Data and SDSL Data-Only.

- (A) The SDSL Voice-Data option provides transmission of data signals at a peak data transmission speed of up to 1.544 Mbps using the Telephone Company's existing local exchange service line. This option may be used for simultaneous voice and data communications. (C)
- (B) The SDSL Data-Only option provides transmission of data signals at a peak transmission speed of up to 1.544 Mbps using the Telephone Company's existing local exchange copper facilities. This option does not provide the ability to transmit voice communications. (C)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.3 Symmetrical Digital Subscriber Line Access Service (Cont'd)16.3.1 General (Cont'd)

A generic view of how SDSL Access Service would be interconnected with a telecommunications service provider's network is depicted in the figure following. In this example, the customer's SDSL-equipped serving wire center is designated as a DSL Access Service Connection Point. The customer orders SDSL Access Service pursuant to the provisions specified in this section. The SDSL Access Service customer's telecommunications service provider orders Special Access Service pursuant to the provisions specified in Section 7.10 preceding to connect its customer designated premises to the DSL Access Service Connection Point.

SDSL ACCESS SERVICE

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.3 Symmetrical Digital Subscriber Line Access Service (Cont'd)16.3.2 Limitations

SDSL Access Service is available as two service options as described above. Peak speeds are not guaranteed by the Telephone Company due to factors that may affect the actual speeds delivered, including the SDSL Access Service customer's distance from the Telephone Company Serving Wire Center, condition of the existing copper facilities, and limitations in the telecommunications service provider's network design.

The Telephone Company does not provide customer premises equipment (CPE) in conjunction with the SDSL Access Service offering.

SDSL Access Service may not be used in conjunction with multi-point Special Access Service configurations as described in 7.1.3, preceding.

SDSL Access Service will be furnished where suitable facilities exist as determined by the Telephone Company. The Telephone Company will identify its SDSL-equipped Serving Wire Centers and DSL Access Service Connection Points in the NATIONAL EXCHANGE CARRIER ASSOCIATION, INC. Tariff F.C.C. No. 4.

SDSL Access Service will be provided over existing Telephone Company local exchange service facilities. When the customer orders the SDSL Voice-Data option, the rates and regulations for SDSL Access Service are in addition to any rates and regulations that apply for the associated local exchange service line provided under the terms and conditions in the Telephone Company's general and/or local exchange service tariffs. The Telephone Company will automatically disconnect the SDSL Access Service Voice-Data option when the associated local exchange service line is disconnected for any reason.

Rates and regulations for Special Access Service will apply for the access service(s) provided between the telecommunications service provider's customer designated premises and the DSL Access Service Connection Point, as described in Section 7.10 preceding.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.3 Symmetrical Digital Subscriber Line Access Service (Cont'd)16.3.3 Undertaking of the Telephone Company

The Telephone Company will provide SDSL Access Service at the rates and charges set forth in 17.4 as follows:

- (A) The Telephone Company will determine if the associated local exchange service line or copper facilities are suitable for use with the SDSL Access Service option ordered by the customer. Service will not be provided on facilities that the Telephone Company determines are not suitable for SDSL Access Service or on facilities that produce interference with other services provided by the Telephone Company.
- (B) The Telephone Company, after determining if the facilities are suitable for SDSL Access Service, will notify the customer if the customer's CPE is compatible with the equipment deployed in the Telephone Company's Serving Wire Center and if any additional CPE is necessary to support SDSL Access Service.
- (C) The Telephone Company will provision and maintain SDSL Access Service from the DSL Connection Point to the Point of Termination at the SDSL Access Service customer's premises.

16.3.4 Obligations of the Customer

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

- (A) The customer is responsible for providing the Telephone Company with the necessary information to provision SDSL Access Service (e.g., customer name, telephone number and premises address; billing name and address when different from the customer name and premises address; customer contact name and telephone number and the contact name and telephone number of the telecommunications service provider with which the customer's SDSL Access Service will interconnect).
- (B) The customer is responsible for providing and maintaining all required customer provided equipment (CPE), which is compatible with SDSL Access Service.
- (C) The ISP/NSP customer will obtain the appropriate authorization to allow the Telephone Company to provision SDSL Voice-Data Access Service over the customer's end user's existing telephone exchange service line.
- (D) The ISP/NSP customer will deal directly with its end user customers with respect to all matters pertaining to the service provided, including marketing, sales, ordering, installation, maintenance, trouble reporting, repair, billing and collections.

(N)  
|  
(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.3 Symmetrical Digital Subscriber Line Access Service (Cont'd)16.3.5 Rate Regulations

This section contains the regulations governing the rates and charges that apply for SDSL Access Service. Regulations governing the rates and charges for the Special Access Services provided under tariff used in conjunction with SDSL Access Service are as specified in Section 7.10 preceding.

(A) Minimum Period

The minimum period for which SDSL Access Service is provided to a customer and for which charges are applicable is one month.

(B) Moves

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

- The Point of Termination at the SDSL Access Service customer designated premises
- The SDSL Access Service customer designated premises

The provisions for moves of SDSL Access Service are the same as those described in 7.2.3, preceding, except that an Access Order Charge will not apply to move orders for the SDSL Access Service Voice-Data option.

(C) Temporary Suspension of Service

When the associated local exchange service line over which the SDSL Voice-Data option is provided is temporarily suspended, the SDSL Access Service and one-half of the SDSL Line Charge monthly rate will be temporarily suspended for the time period that the associated local exchange service is suspended.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.3 Symmetrical Digital Subscriber Line Access Service (Cont'd)16.3.5 Rate Regulations (Cont'd)(D) Rate Categories

There are three types of rates and charges applicable to SDSL Access Service. These are a monthly rate, a nonrecurring charge and a network reconfiguration charge.

(C)  
(N)  
(N)

The monthly rate applies each month or fraction thereof for each SDSL Voice-Data option and SDSL Data-Only option ordered by the customer.

A nonrecurring charge applies for each SDSL Voice-Data and SDSL Data-Only option ordered by the customer for the installation of SDSL Access Service.

A DSL Network Reconfiguration Charge applies when the SDSL Access Service customer's telecommunications service provider requests the Telephone Company to modify the Telephone Company's network to: 1) accommodate a change in the SDSL Access Service customer's existing IP address or 2) limit the data speed delivered over the customer's existing SDSL Access Service line. A nonrecurring charge applies for each request per SDSL Access Service line. The Telephone Company will bill the DSL Network Reconfiguration Charge to the SDSL Access Service customer's telecommunications service provider.

(N)

All changes to existing SDSL Access Service (including but not limited to change of service option, change of service level speed and/or change of telecommunications service provider), other than changes involving DSL network reconfigurations and administrative activities, will be treated as a discontinuance of the existing service and an installation of a new service. A nonrecurring installation charge will apply per SDSL Access Service line for this work activity.

(N)

Rates and charges for SDSL Access Service are as set forth in 17.4.8 following.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA)

## 16.4.1 General Description

Telecommunications Service Provider Service Access (TSPSA) is a fast packet, cell based service technology which can support applications requiring high bandwidth, high performance transport and switching. TSPSA allow customers who have requirements for high speed, inter-premises connectivity to interconnect their multiple locations via a Network Gateway Interface (NGI) or a User-Network Interface (UNI) element from the customer's premises to the Telephone Company's serving wire center; or via a Network Link (NL) element with UNI for interconnection between contiguous exchanges within the Telephone Company's serving area.

TSPSA operates using standard cell relay signaling protocol. TSPSA provides high-speed, low-delay networking capabilities suited for bandwidth intensive data, voice or video business applications that require near-real-time communication support among multiple locations.

Customers may expand the capabilities of TSPSA by ordering Inverse Multiplexing for User Network Interface (IMA UNI). IMA UNI allows customers to send multiple streams of traffic requiring bandwidth greater than a 1.53 Mbps, but less than 44.7 Mbps to the ATM network. The customer must provide an access device capable of the IMA function. This CPE must be located at the customer's premises.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.2 Service Provisioning

- (A) Provisioning of this service is subject to the availability and operational limitations of the Telephone Company's equipment and associated facilities. Provisioning of this service is limited to locations within the Telephone Company's service area.
- (B) TSPSA requires the use of CPE that functions as a multiplexer, bridge or router. The CPE must be compatible with the Telephone Company's equipment and facilities and must conform to industry standards and specifications set forth in the Telephone Company's technical publications (TPs) 76625, 76839 and 76700.
- (C) The Telephone Company will provision TSPSA up to and including the network interface located on the customer's premises. The placement of the network interface shall be located in a manner consistent with federal and state regulatory requirements. This location will be at each customer's premises unless specified otherwise and agreed to by the Telephone Company.
- (D) When a customer requires the modification of standard service components not otherwise provided in this tariff, the modification may be furnished at the option of the Telephone Company as specified in Section 12, Specialized Service or Arrangements.
- (E) The customer shall be responsible for obtaining permission for the Telephone Company's agents or employees to enter the customer's premises at a mutually agreed upon time for the purpose of installing, inspecting, repairing or, upon termination of the service, removing the equipment of the Telephone Company.
- (F) Network equipment installed by the Telephone Company on the customer's premises shall remain the property of the Telephone Company. The customer or user may not rearrange, disconnect, remove, attempt to repair, remote test or interface with any network equipment installed by the Telephone Company without the prior written consent of the Telephone Company.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.2 Service Provisioning (Cont'd)

(G) When the TSPSA is used in connection with CPE, the operating characteristics of such CPE must not interfere with the Telephone Company's network. CPE must not:

- (1) endanger the safety of the Telephone Company's employees or the public;
- (2) damage, harm, require change in or alteration of the equipment or other services of the Telephone Company;
- (3) or interfere with the proper operation of the Telephone Company's equipment.

Upon notice from the Telephone Company that the equipment provided by the customer or user is causing, or is likely to cause, such hazard or interference, the customer shall take such steps as shall be necessary to remove or prevent such hazard or interference.

(H) The services provided under this tariff are provided over such routes and facilities as the Telephone Company may elect. Requests for special facilities or routing will be provided in accordance with Section 11 of this tariff.

(N)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.3 Ordering Specifications and Provisions

(A) The customer will access the TSPSA network, where facilities exist, via a minimum of one NGI, UNI, or NL, for each customer premises or network end point as detailed below:

- (1) NGI is the point of interconnection between the Telephone Company's communications facilities and the ISP/NSP customer. The NGI is provided using standard cell relay User-Network Interface signaling protocol. The NGI includes the port access only into the Telephone Company's TSPSA network.

The customer must select one of the following interfaces:

- DS1 NGI is available at a bandwidth of 1.5 Mbps;
- DS3 NGI is available at a bandwidth of 40 Mbps; and
- OC3 NGI is available at a bandwidth of 148 Mbps.

In addition to the NGI, a DS1, DS3 or OC3 facility, where facilities exist and are tariffed, must be ordered from Section 7 (Special Access Service).

- (2) UNI – the point of interconnection between the Telephone Company's communications facilities and the CPE. The UNI is provided using standard cell relay User-Network Interface signaling protocol. The UNI includes the facility and port access into the Telephone Company's network.

The customer must select one of the following interfaces and applicable bandwidths for each UNI:

- 1.53 Mbps UNI is available in bandwidths to 1.5 Mbps;
- 44.7 Mbps UNI is available in bandwidths up to 40 Mbps; and
- 155.5 Mbps UNI is available in bandwidths up to 144 Mbps.

- (3) A Network Link (NL) is an optional element that may be purchased for an additional charge to establish a dedicated link between the Telephone Company's facilities located in contiguous exchanges. NL service is available at 1.53 Mbps only and cannot be purchased without an associated UNI.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.3 Ordering Specifications and Provisions (Cont'd)

- (B) The Virtual Channel Connections (VCC), and Virtual Path Connections (VPC) define paths across the Telephone Company's TSPSA network. The customer must indicate the VCC/VPC bandwidth, designate the connection and select the preferred bit rate enforcement (CBR or UBR) when ordering.
- (1) Each VCC/VPC consumes a portion of an NGI or UNI interface bandwidth. The following VCC/VPC bandwidth selections are available for the TSPSA:
- 1.53 Mbps available in increments of 64 Kbps up to 1500 Kbps,
  - 44.736 Mbps available in increments of 1 Mbps up to 40 Mbps, and
  - 155.5 Mbps available in increments of 1 Mbps up to 148 Mbps.
  - VCC is a logical connection that exists between one TSPSA switch port and another TSPSA switch port.
  - VPC is a group of logical connections that exists between one TSPSA switch port and another TSPSA switch port. A VPC connection typically is used to route multiple, customer-defined VCCs as a group. It is the customer's responsibility to configure and maintain the individual VCCs within a VPC connection.
- (2) The Telephone Company will provision bit rate enforcement on each VCC/VPC as selected by the customer. A VCC/VPC may be designated as Constant Bit Rate (CBR) or Unspecified Bit Rate (UBR):
- CBR supports applications that are delay sensitive, such as voice and some types of video. CBR is offered as a premium service for an additional charge as set forth in 17.4.8.2 Monthly Rates and Nonrecurring Charges following.
  - UBR supports applications that generate bursty and time-varying traffic. UBR is included in the basic TSPSA, where facilities exist.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.3 Ordering Specifications and Provisions (Cont'd)

## (C) Inverse Multiplexing for User Network Interface (IMA UNI)

The IMA UNI enables the aggregation of various speed, multiple traffic streams, conversion to ATM cells and distribution across multiple DS1s. IMA UNI must be provisioned over copper DS1s and includes the port access.

The customer must specify the speed for the IMA UNI. IMA UNI is available at the following speeds: 3 Mbps, 4.5 Mbps, 6 Mbps and 12 Mbps.

## (D) Inverse Multiplexing for Network Link (IMA NL)

The IMA NL enables the aggregation of various speeds, multiple traffic streams, conversion to cell relay cells and distribution across multiple DSIs. IMA NL includes port access and is available at the following speeds: 3 Mbps, 4.5 Mbps, 6 Mbps, and 12 Mbps. The customer must specify the desired speed.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.4 Limitations

- (A) The Telephone Company does not undertake to originate data, but offers the use of its service elements, where facilities exist, to customers for the purpose of transporting customer originated data.
- (B) The responsibility of the Telephone Company shall be limited to furnishing the TSPSA network. Subject to this responsibility, the Telephone Company shall not be responsible for the through transmission of signals generated by the CPE or for the quality of, or defects in, such transmission or the reception of signals by the CPE
- (C) The Telephone Company undertakes the responsibility to maintain and repair the service it furnishes.

The Telephone Company will provide the customer reasonable notification of service-affecting activities that may occur in the normal operation of its business. Such activities may include, but are not limited to, routine preventative maintenance and major switching machine change-outs, equipment additions and removals or rearrangements. The Telephone Company will work cooperatively with the customer to determine the notification requirements.

Maintenance of Service regulations and charges are set forth in 13.3.2, Maintenance of Service, for customer reported trouble.

The Telephone Company may request additional customer information as may be required to permit the Telephone Company to maintain the TSPSA network and to ensure that the service arrangement is in compliance with regulations contained in this section.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.4 Limitations (Cont'd)

- (D) The Telephone Company shall not be responsible for error correction. TSPSA switches may discard frames with errors. The switches may also discard frames when the network supporting TSPSA is in a state of congestion.
- (E) The Telephone Company shall not be responsible for installation, operation, maintenance or adapting the TSPSA to the technological requirements of any specific CPE.
- (F) The Telephone Company shall not be responsible to the customer or user if changes in any of the equipment, operations or procedures of the Telephone Company used in the provision of TSPSA render any facilities provided by the customer or user obsolete or require modification or alteration of such equipment or system or otherwise affect its use or performance, provided the Telephone Company has met any applicable information disclosure requirements otherwise required by law.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.5 Rate Elements

The following describes the rate elements available for TSPSA. Specific rates and charges for these elements are set forth in 17.4.8.2 of this tariff.

## (A) Network Gateway Interface (NGI)

The NGI rate element is a standard defined interface using cell relay User-Network Interface signaling protocol. The NGI includes only the port access to the TSPSA network.

NGI's are offered, where Telephone Company facilities exist, at the following rates: 1.53 Mbps with bandwidths up to 1.5 Mbps; 44.7 Mbps with bandwidths up to 40 Mbps; and 155.5 Mbps with bandwidths up to 144 Mbps.

A monthly rate and nonrecurring charge applies for each NGI installed from the customer's network interface to the central office-based TSPSA switch.

## (B) User-Network Interface (UNI)

The UNI rate element is a standard defined User-Network Interface which offers customer access to the TSPSA network. This element includes the facility from the customer premises, and the port access.

UNIs are offered, where Telephone Company's facilities exist, at the following rates: 1.53 Mbps with bandwidths up to 1.5 Mbps; 44.7 Mbps UNI with bandwidths up to 40 Mbps; 155.5 Mbps UNI with bandwidths up to 144 Mbps.

A monthly rate and nonrecurring charge applies for each UNI installed from the customer's network interface to the central office based TSPSA switch.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.5 Rate Elements (Cont'd)

## (C) Network Link (NL)

A Network Link (NL) is an optional element that may be purchased for an additional charge to establish a dedicated link between two central office based TSPSA switches. A NL cannot be purchased without an associated UNI and is available at 1.53 Mbps only.

## (D) Virtual Channel Connection/Virtual Path Connection (VCC/VPC)

The VCC/VPC rate element provides virtual connections between a customer's UNIs.

A monthly rate and nonrecurring charge applies for each VCC or VPC element provisioned for a customer's NGI, UNI or NL.

## (E) Constant Bit Rate (CBR)

The CBR rate element supports applications where variable delays in transmission would negatively impact the information content. VCC/VPCs provisioned with CBR are intended for applications requiring minimal delay variation and loss.

An additional monthly rate and nonrecurring charge applies for each VCC/VPC bandwidth increment provisioned with CBR.

## (F) Inverse Multiplexing for User Network Interface (IMA UNI)

The IMA UNI enables the aggregation of various speed, multiple traffic streams, conversion to cell relay cells and distribution across multiple DS1s. IMA UNI must be provisioned over copper DS1s and includes the port access. The customer must specify the speed for the IMA UNI. IMA UNI is available at the following speeds: 3 Mbps, 4.5 Mbps, 6 Mbps and 12 Mbps.

## (G) Inverse Multiplexing for Network Link (IMA NL)

The IMA NL enables the aggregation of various speeds, multiple traffic streams, conversion to cell relay cells and distribution across multiple DSIs. IMA NL includes port access and is available at the following speeds: 3 Mbps, 4.5 Mbps, 6 Mbps, and 12 Mbps. The customer must specify the desired speed.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.6 Rate Applications

There are two types of rates and charges that apply to the various rate elements for TSPSA. These are monthly recurring rates and nonrecurring charges.

## (A) Monthly Rates

Monthly Rates are fixed recurring rates that apply each month, or fraction thereof, that a specific rate element is provided. For billing purposes each month is considered to have thirty (30) days.

## (1) Minimum Period

TSPSA is provided for a minimum period of one year. When service is disconnected prior to the expiration of the one (1) year minimum period or the optional three (3) year term period, monthly charges are applicable for the balance of the period ordered by the customer.

If service is disconnected after the one or three year period ordered, monthly charges will be based on the actual number of days the service is furnished. In order to determine the charges for a fractional portion of a month, a month is considered to have 30 days.

Monthly recurring rates are applicable to TSPSA rate elements described in 16.4.5, preceding.

(N)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.6 Rate Applications (Cont'd)

## (B) Nonrecurring Charges

Nonrecurring charges are one-time charges applicable for the installation of each NGI, UNI, NL, VCC, VPC, IMA UNI, and IMA NL.

In addition to the installation of service charge, a nonrecurring order charge will apply as specified in Section 17 following.

A change that cannot be supported by the bandwidth of the existing service connection will require a new service connection.

## 16.4.7 Term Pricing

## (A) General

TSPSA-Term Pricing Plan (TPP) provides the customer with rate stabilization and discounted tariff rates. The TSPSA-TPP provides for a one or three year service period for rate stabilization. Charges for the one and three year plans are specified in Section 17 following.

TSPSA TPP annual/or three year rates will be exempt from Telephone Company initiated rate increases throughout the selected service period. Should the Telephone Company increase its rates during the TSPSA-TPP service period, the customer will continue to pay the rates in effect at the time the customer elected to establish service under TSPSA-TPP.

## (B) Service Available under TSPSA-TPP

A customer may elect to participate in an TSPSA-TPP for NGI, UNI, IMA UNI, NL and IMA NL rate elements. No term period is required or available for VCC, VPC, or CBR rate elements.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.7 Term Pricing (Cont'd)

## (C) Terms and Conditions

The customer must specify the length of the service period at the time the TSPSA-TPP is established.

## (D) Pricing Plan Conversion

The customer may request an existing TSPSA provided on a one (1) year plan be converted to a three (3) TPP.

Prior to the expiration of the original service period, the customer may convert an existing TSPSA-TPP service period to a new service period without incurring termination charges provided the new service period is equal to or greater than the remaining portion of the original service period.

When the customer converts to a greater term commitment, actual time in service for the original TPP will be applied to the new TPP. However, no credits or refunds will apply for the billing of actual time in service for the previous TPP.

## (E) Renewal

The customer must provide the Telephone Company notice of intent to renew a one-year TPP no later than 60 days prior to its expiration. The renewal rates will be the rates that are currently in effect and available to all customers. If the customer elects not to renew the TPP, or does not notify the Telephone Company of its intent to renew the TPP, the customer's service will automatically be billed under the tariffed month-to-month rates in effect at the time the TPP expires.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

## 16.4 Telecommunications Service Provider Service Access (TSPSA) (Cont'd)

## 16.4.7 Term Pricing (Cont'd)

## (F) Termination of a TPP

Customers requiring the termination of a TPP prior to the expiration date, excluding any TPP terminated as a result of a pricing plan conversion will be charged in full for the remaining months of the term plan ordered. Customers terminating a three (3) year TPP prior to expiration will also be charged for any difference between one (1) year and three (3) year installation charges.

For example, a customer with 1 - 1.53 UNI port and a three (3) year TPP who disconnects after 24 months would pay a termination liability of \$7800.00.

(1.53 UNI port @ \$600.00/mo. X 12 mos. = \$7200.00  
Difference between one (1) year and three (3) year  
installation = \$600.00)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS)16.5.1 General Description(A) Basic Service Description

Multi-Megabit Ethernet Transmission Service (METS) is a high-speed (10 or 100 Mbps) packet based service for the transmission of data between a customer designated location (CDL), the customer's Serving Wire Center, and an Internet Service Provider (ISP).

METS provides dedicated bandwidth at a rate of 10 or 100 Mbps.

METS is suitable for data transmission only.

(B) Service Provisioning

METS is provisioned over existing Telephone Company facilities. METS will be provided subject to the availability and limitations of the Telephone Company wire centers and outside plant facilities. New construction may be undertaken at the option of the Telephone Company at additional cost.

The subscriber is provided with an Ethernet electrical interface.

METS is available 24 hours per day, 7 days per week, except for preventative maintenance.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.1 General Description (Cont'd)(C) Responsibility of the Telephone Company

The Telephone Company will provision and maintain METS for the customer.

The Telephone Company is not responsible for the installation, operation, or maintenance of any equipment provided by the customer.

Company provided shared network equipment, for use in METS is not accessible for the customer.

(D) Responsibility of the Customer

The customer is responsible for the provision and maintenance of all customer provided equipment and to insure that the operating characteristics of this equipment are comparable with and does not interfere with the service offered by the Telephone Company.

16.5.2 Typical Arrangements

Typical arrangements are shown on the following page. The acronyms used in the diagrams are as follows:

CDP – Customer Designated Premises

CDPI – Customer Designated Premises Interface

ISPI - Internet Service Provider Interface

MPI – Meet Point Interface

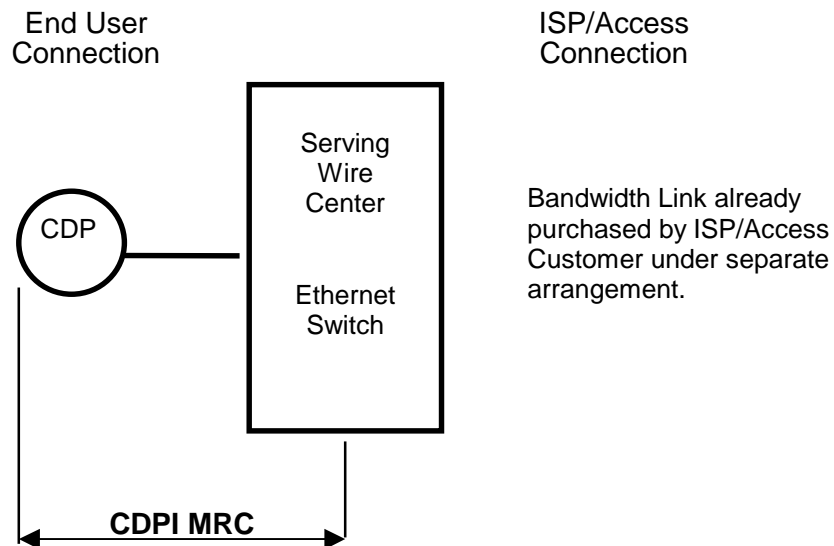
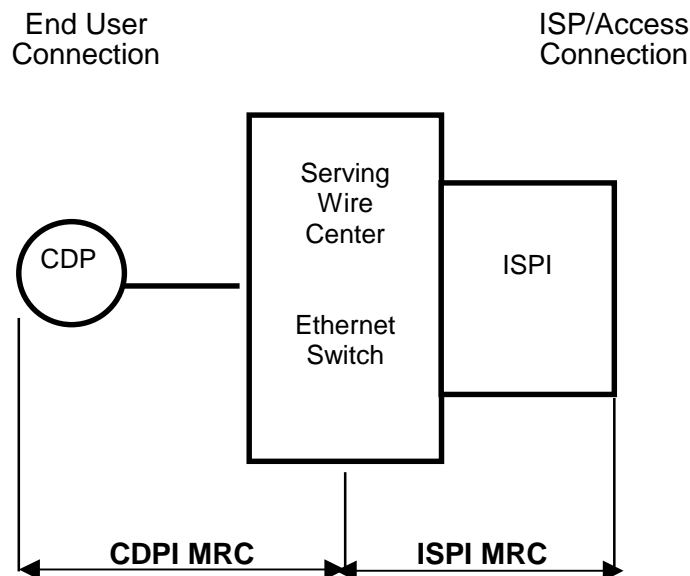
MRC – Monthly Recurring Charge

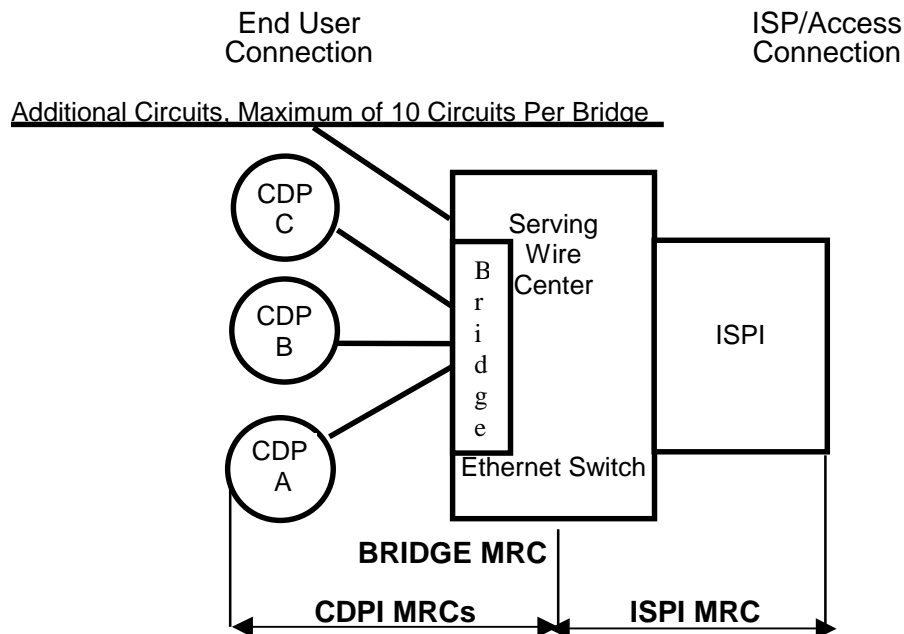
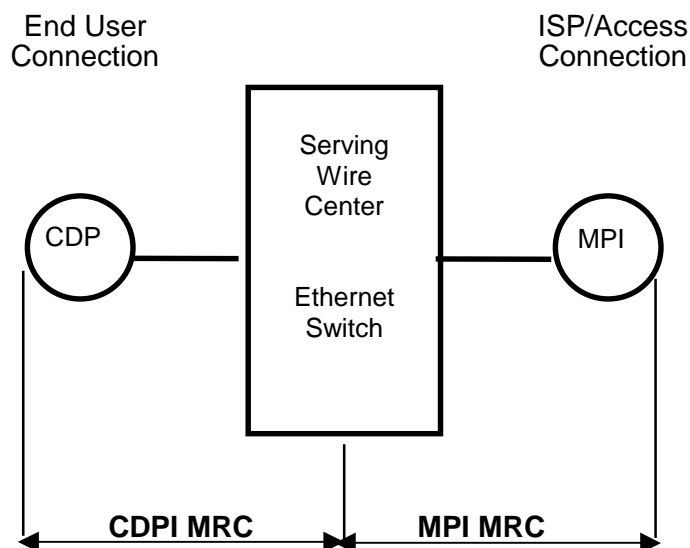
SWC –Serving Wire Center

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.2 Typical Arrangements

The following diagrams depict generic views of the components of Megabit Ethernet Transmission Service (METS) and the manner in which the components are combined to provide METS.

**METS Connection to Existing Access Connection****METS Connection to ISP Interface (ISPI) at Ethernet Serving Wire Center**

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.2 Typical Arrangements (Cont'd)**METS Connection to ISP Interface (ISPI) at Ethernet Serving Wire Center With Bridging****METS Connection to Meet Point Interface (MPI)**

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.3 Rate Regulations

This section contains the regulations governing the rates and charges that apply for METS.

(A) Minimum Period

The minimum period for which METS is provided to a customer and for which charges are applicable is twelve months.

(B) METS Term Pricing Plan (METS TPP)(1) General

METS Term Pricing Plan (METS TPP) provides the customer with rate stabilization of tariff rates in effect at the time of installation. The METS TPP provides for a one, two or three-year service period for rate stabilization.

METS TPP one-year, two-year or three-year rates will be exempt from Telephone Company initiated rate increases throughout the selected service period. The METS customer shall enter into a commitment with the Telephone Company to establish the METS TPP. Should the Telephone Company increase its rates during the METS-TPP service period, the customer will continue to pay the rates in effect at the time the customer elected to establish service under a METS-TPP. An individual METS TPP does not apply to METS Service installed subsequent to the execution of the individual METS TPP commitment. A separate METS TPP commitment is required for subsequent METS Service installations.

(N)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.3 Rate Regulations (Cont'd)(B) METS Term Pricing Plan (METS TPP) (Cont'd)(2) Services Available Under METS TPP

A customer may elect to participate in a METS-TPP for the METS Customer Designated Premises Interface (CDPI), the METS Internet Service Provider Interface (ISPI), the METS Bridge Interface and the METS Meet Point Interface (MPI).

(3) Renewal

The customer must provide the Telephone Company notice of intent to renew a METS TPP no later than 60 days prior to its expiration. The renewal rates will be the rates that are currently in effect and available to all customers. If the customer elects not to renew the METS TPP, or does not notify the Telephone Company of its intent to renew the METS TPP, the customer's service will automatically be billed under the tariffed month-to-month rates in effect at the time the METS TPP expires.

(4) Termination of a METS TPP

Customers requiring the termination of a METS TPP prior to the expiration date will be charged in full for the remaining months of the term plan ordered.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.3 Rate Regulations (Cont'd)(C) Rate Elements

There are five types of rates and charges applicable to METS. These are a nonrecurring charge and four types of monthly recurring charges.

(1) METS Nonrecurring Charge

A single METS Nonrecurring charge applies to each METS circuit installed by the Telephone Company, whether the circuit is provisioned only between the Customer Designated Premises (CDP) and the SWC Ethernet switch for which an existing link to another carrier or Internet Service Provider (ISP) already exists or is provisioned beyond the SWC Ethernet switch to an Internet Service Provider Interface (ISPI) or to a Meet Point Interface (MPI) with another carrier.

(2) METS Customer Designated Premises Interface (CDPI)

The METS Customer Designated Premises Interface (CDPI) rate element is for a standard Ethernet defined interface between the CDP and the Telephone Company serving wire center (SWC) at which the Ethernet switch or router is located. Standard Ethernet signaling protocols provided by the Telephone Company shall apply to the interface. The CDPI rate element includes termination at both the CDP and the SWC, the facility from the CDP to the SWC, port access to the Ethernet switch and the Ethernet switch.

A CDPI charge applies to each METS connection between a CDP and the SWC at which the Ethernet switch designated by the Telephone Company is located.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.3 Rate Regulations (Cont'd)(C) Rate Elements (Cont'd)(3) METS Internet Service Provider Interface (ISPI)

The Internet Service Provider Interface (ISPI) rate element is for a standard Ethernet defined interface between the SWC Ethernet switch and an ISP with a presence in the SWC. ISP presence in the SWC may be either through local facilities for an ISP physically located in the Telephone Company's local exchange service area or through an interexchange carrier with an existing connection for an ISP not located in the Telephone Company's local exchange service area. Standard Ethernet signaling protocols provided by the Telephone Company shall apply to the interface. The ISPI rate element includes termination at both the network side of the Telephone Company Ethernet switch and the connection to the ISP's existing connection.

An ISPI charge applies to each connection for a METS circuit originating at a CDP and terminating at the Telephone Company Ethernet switch which is, in turn, connected to the ISP's existing connection at the Ethernet switch SWC.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.3 Rate Regulations (Cont'd)(C) Rate Elements (Cont'd)(4) METS Bridge Interface

The METS Bridge Interface provides for the bridging of up to ten (10) CDPI links to one ISPI link or one CDPI link at the serving wire center. A METS Bridge Interface monthly recurring charge applies to each METS Bridge Interface in addition to the METS CDPI monthly recurring charges for each of the circuits connected to the METS Bridge Interface and, if applicable, METS ISPI or MPI monthly recurring charges. In the event a METS Bridge Interface is installed for existing METS CDPIs, without installation of additional CDPIs at the same time, a METS Nonrecurring charge shall apply in addition to the METS Bridge Interface monthly recurring charges.

(5) METS Meet Point Interface (MPI)

The METS Meet Point Interface (MPI) rate element is for a standard Ethernet defined interface between the SWC Ethernet switch and an ISP through a circuit jointly provided by the Telephone Company and another carrier. Standard Ethernet signaling protocols provided by the Telephone Company shall apply to the interface. The ISPI rate element includes termination at the network side of the Telephone Company Ethernet switch and the Telephone Company's portion of the facilities up to the meet point.

An MPI charge applies to each connection for a circuit originating at a CDP and terminating at the Telephone Company Ethernet switch which, in turn, is connected to the ISP through a circuit provided jointly by the Telephone Company with another carrier.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.5 Multi-Megabit Ethernet Transmission Service (METS) (Cont'd)16.5.3 Rate Regulations (Cont'd)(D) Mileage Bands

The monthly recurring charges described in Section 16.5.1.(B) above are applied on the basis of mileage bands. Mileage bands are determined on the basis of end-to-end airline miles (ALM) from the CDP to the other end of the circuit provided by the Telephone Company. For METS circuits connected to an existing ISP interface located at the Ethernet switch SWC, the end-to-end ALM are the miles from the CDP to the Ethernet switch SWC.

The airline mileage to be used in determining the Mileage Band for METS monthly recurring charges will be calculated under the mileage measurement procedures described at Section 7.2.5 of this Tariff.

The METS mileage bands are as follows:

<u>Band</u>	<u>End-to-End Airline Miles</u>
A	0 to 3
B	Over 3 to 6
C	Over 6

(E) Service Suspension

Suspension of service by the Customer during the service period is not allowed.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service16.6.1 General Description(A) Basic Service Description

High Speed Internet (HSI) Access Service is a high-speed packet based service for the transmission of data between local exchange customer designated premises and Internet Service Providers (ISPs) by the Telephone Company designated data technology and equipment. HSI Access Service is offered at various downstream (Down) and upstream (Up) speeds. The "Up" speed represents transmission speed in kilobits per second (Kbps) or megabits per second (Mbps), from the point of demarcation at the customer's designated premises to the Telephone Company's HSI Access Service Connection Point; while the "Down" speed represents transmission speed in Kbps or Mbps from the Telephone Company's HSI Access Service Connection Point to the point of demarcation at the customer's designated premises. Actual speed may be affected by loop distance and other factors.

The HSI Access Service may require a splitter at both the customer's designated premises and the Telephone Company's serving wire center to split the traffic between data and voice. The customer is responsible for providing and maintaining the splitter at the customer designated premises.

(B) Service Provisioning

HSI Access Service is provisioned over existing Telephone Company copper facilities and transported to the Telephone Company's backbone network. HSI Access Service provides a connection from the customer's designated location (CDL) to the HSI Access Service Connection Point.

Access from the Telephone Company's HSI Access Service Connection Point will be provided via High Capacity Special Access Service, Synchronous Optical Channel Service and/or Frame Relay Access Service, where facilities permit. High Capacity Special Access Service is available in Section 7.10 preceding. Synchronous Optical Channel Service is available in Section 7.11 preceding. Frame Relay Access Service is available in Section 16.1 preceding. If a customer utilizes Special Access Service or Frame Relay Access Service pursuant to sections 7.10 or 16.1 preceding, the associated rates and charges for such facilities shall apply in addition to the rates and charges associated with the HSI Access Service rate element.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.1 General Description (Cont'd)(B) Service Provisioning (Cont'd)

High Capacity Service and/or Synchronous Optical Channel Service ordered by a customer for connection to the Telephone Company's HSI Access Service Connection Point includes the HSI Access Service Connection. Regulations concerning HSI Access Service Connection are at Section 7.10.3.(E) preceding respecting 1.544 Mbps and 44.736 Mbps High Capacity Service and Section 7.11.3.(C) preceding respecting OC3 Synchronous Optical Channel Service, OC3c Synchronous Optical Channel Service or 100 Mbps Ethernet Channel Service.

The Telephone Company will qualify the local exchange service loop between the customer's designated premises and the serving wire center. The purpose of qualification is to determine the availability and suitability of existing Telephone Company facilities to provide the service, and to determine if Loop Conditioning is required to support HSI Access Service. The Telephone Company will not provision this service on facilities which are not suitable for HSI Access Service.

The Telephone Company does not undertake to originate data, but offers the use of its HSI Access Service, where available, to customers for the purpose of transporting data originated by the customer or a third party.

HSI Access Service is limited to use for transmission of data between the designated premises of a local exchange customer of the Telephone Company and the local exchange customer's ISP. The high speed data transmission path installed by the Telephone Company under an HSI Access Service offering for use for transmission of data between the designated premises of a local exchange customer and the local exchange customer's ISP may also be used by the local exchange customer for transmission of data for purposes of receiving one-way video services. Use of the HSI Access Service for one-way video transmission is subject to the availability and technical capability of the Telephone Company. The video service provider must connect to the Telephone Company HSI Access Service Connection Point. This connection is subject to the technical capability of the Telephone Company's interconnecting facilities. The connection must be provisioned under applicable rates, terms and conditions for appropriate jurisdiction.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.1 General Description (Cont'd)(B) Service Provisioning (Cont'd)

All customers will be served from the nearest suitably equipped end office designated by the Telephone Company. HSI Access Service will be provided subject to the availability and limitations of the Telephone Company wire centers and outside plant facilities. HSI Access Service is only available where permitted by technical capabilities of the Telephone Company, including but not limited to facility distance and type of physical plant.

(C) Responsibility of the Telephone Company

The Telephone Company will provision and maintain HSI Access Service for the customer up to and including the Network Interface Device (NID) or the protector. The Telephone Company will advise the customer of the customer premises equipment (CPE) necessary to support HSI Access Service that the customer will need to purchase. The Telephone Company will provide to the ISP technical specifications for connection to the Telephone Company's HSI Access Service applicable to the technology deployed by the Telephone Company.

(D) Rights of the Telephone Company

HSI Access Service will be provided over existing Telephone Company local exchange service lines. Rates and regulations for HSI Access Service are in addition to any rates and regulations that apply for the associated local exchange service line provided under the terms and conditions in the Telephone Company's general and/or local exchange service tariffs. The Telephone Company will automatically disconnect HSI Access Service when the associated local exchange service line is disconnected for any reason.

The Telephone Company will not provision HSI Access Service if the Telephone Company has reasonably determined that (a) it is not technically feasible over existing facilities or (b) it will cause interference problems within the Telephone Company's network or other facilities.

During the Telephone Company's network maintenance and software update period, it may be necessary to temporarily place the HSI Access Service central office equipment out of service. The Telephone Company reserves the right to temporarily interrupt HSI Access Service at other times in emergency situations.

(N)



**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.1 General Description (Cont'd)(E) Responsibility of the Customer

The customer is responsible for providing the Telephone Company with the necessary information to provision HSI Access Service (e.g., customer name, telephone number and premises address; billing name and address when different from the customer name and premise address; its Internet Protocol (IP) address; and the contact name and telephone number of the ISP with which the customer's HSI Access Service will interconnect).

The customer is responsible for providing compatible customer premises equipment (CPE) that is used for connection to HSI Access Service.

When HSI Access Service is ordered by the ISP, the ISP customer is responsible for providing the Telephone Company with the necessary information (e.g., Data Link Connection Identifier(s), and/or Internet Protocol) to provision the HSI Access Service.

The ISP customer will obtain the appropriate authorization to allow the Telephone Company to provision HSI Access Service over the customer's end user's existing telephone exchange service line.

Where required, the ISP customer will be responsible for obtaining permission from its subscriber(s) for the Telephone Company's agents or employees to enter the customer's designated premises at a mutually agreed upon time for the purpose of installing, inspecting, repairing, or upon termination of the service, removing the service components of the Telephone Company.

The ISP customer will deal directly with its end user customers with respect to all matters pertaining to the service provided, including marketing, sales, ordering, installation, maintenance, trouble reporting, repair, billing and collections.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.2 Rate Regulations(A) Rate Elements

There are three types of rates and charges applicable to HSI Access Service. These are a monthly rate, a nonrecurring charge and a network reconfiguration charge.

The monthly rate applies each month or fraction thereof for each local exchange service line equipped with HSI Access Service.

A nonrecurring charge applies per local exchange service line for the installation of HSI Access Service.

An HSI Access Service Network Reconfiguration Charge applies when the HSI Access Service customer's ISP requests the Telephone Company to modify the Telephone Company's network to accommodate a change in the HSI Access Service customer's existing HSI Access Service line. A nonrecurring charge applies for each request per HSI Access Service line. The Telephone Company will bill the HSI Access Service Network Reconfiguration Charge to the HSI Access Service customer's ISP. No HSI Access Service Network Reconfiguration Charge shall apply where the change requested by the HSI Access Service customer is for a change in HSI Access Service transmission speed.

All changes to existing HSI Access Service (including but not limited to change of ISP), other than changes involving HSI Access network reconfigurations and administrative activities, will be treated as a discontinuance of the existing service and an installation of a new service. A nonrecurring installation charge will apply per HSI Access Service line for this work activity.

Rates and charges for HSI Access Service are set forth in 17.4.8 following.

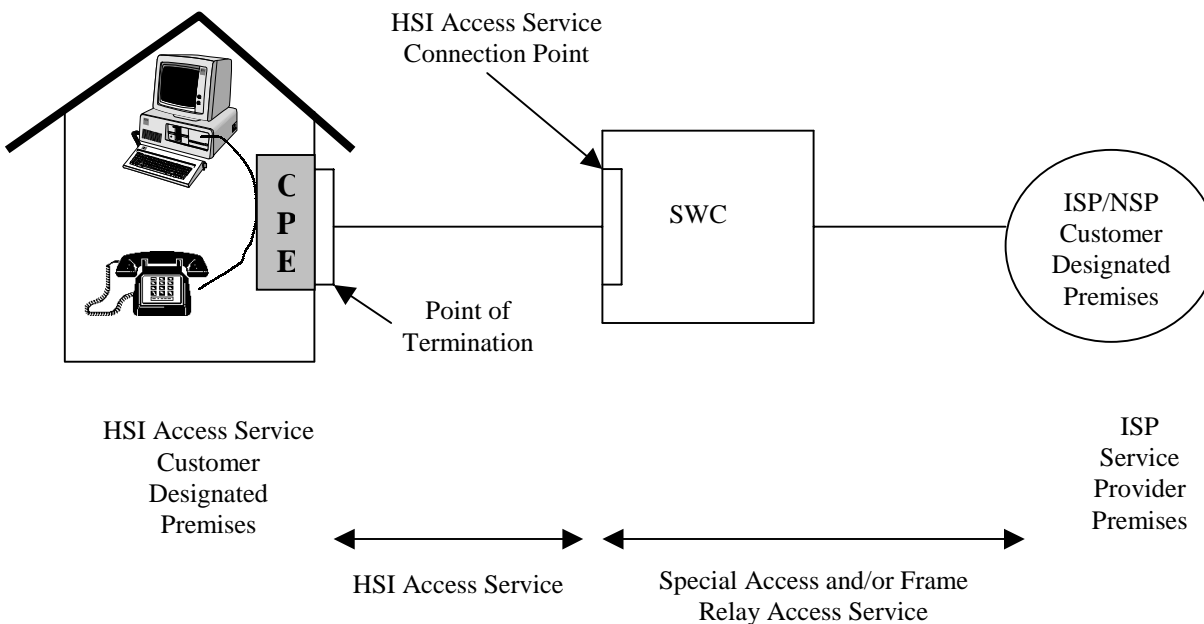
(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.2 Rate Regulations (Cont'd)(B) Rate Application

HSI Access Service is based on differing volume levels of HSI Access Service connections per Section 17.4.8, following.

The rates applicable to HSI Access Service provided under an HSI Access Service Term and Volume Plan (HSI Access Service-TVP) arrangement are specified in 17.4.8, following.

The following diagram depicts a typical HSI Access Service configuration:

(C) Minimum Period

The minimum period for which HSI Access Service is provided to a customer and for which charges are applicable is one month.

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.2 Rate Regulations (Cont'd)(D) Moves

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

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

The provisions for moves of HSI Access Service are the same as those described in Section 7.2.3, preceding, except that an Access Order Charge will not apply.

(E) Term and Volume Plan (TVP)(1) Description

The terms and conditions specified herein are applicable to HSI Access Service where the Telephone Company offers an HSI Access Service Term and Volume Plan (TVP) and are in addition to other regulations as specified in this tariff. If the Telephone Company is offering an HSI Access Service TVP, the TVP will be included in the HSI Access Service rate section in Section 17.4.8, following. If TVP rates are not indicated in Section 17.4.8, the Telephone Company does not provide an HSI Access Service TVP.

The HSI Access Service Term and Volume Plan (TVP) will allow customers discounted access rates based upon the volume and/or term commitment. Rates will be based upon the TVP selected by the customer. TVP plans for an HSI Access Service offered by a Telephone Company, if any, will be indicated in the Telephone Company's respective rate section for HSI Access Service in Section 17.4.8 following.

Term plans of one (1), two (2) and three (3) years may be available to all customers at applicable rates set forth in the tariff regardless of when the subscription is made for an HSI Access Service TVP arrangement. The customer must designate on the order the type of payment plan selected.

The minimum volume commitment of the TVP selected must be met within twelve (12) months after the TVP is initiated.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.2 Rate Regulations (Cont'd)(E) Term and Volume Plan (TVP) (Cont'd)(2) Rate Application

Upon expiration of a TVP period, the customer may choose a new TVP period, convert to month-to-month or terminate service. The month-to-month rates will be those rates that are in effect at the time of conversion. If the customer fails to make a choice by the end of the TVP period, the HSI Access Service will continue billing at the existing term and volume commitment level rates and a new TVP period will begin based on previously effective term and volume commitment. All terms and conditions, including Termination Liabilities will apply to the new TVP period.

Conversion to a month-to-month or different TVP period will require the customer to submit a change order. Conversion of existing TVP service to a different TVP period will be allowed without application of any nonrecurring charges.

(3) Changes in Length of TVP Period

The customer may elect to convert to a new TVP period subject to the following conditions:

- (a) Credit will not be given toward the new payment period for payments made under the original TVP arrangement.
- (b) Nonrecurring charges will not be reapplied for existing service(s).
- (c) If the new TVP period is shorter in length than the time remaining under the existing TVP, the change to the new TVP period constitutes a discontinuance of the existing TVP service and termination liability charges apply.

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6.2 Rate Regulations (Cont'd)(E) Term and Volume Plan (TVP) (Cont'd)(4) Rate Changes

The customer may terminate the TVP without penalty or liability should the rates increase during the term of the existing TVP, with the exception of rate changes that may occur as a result of FCC presubscription for rate increases.

(5) Annual Review

Each customer's TVP will be reviewed annually. The customer will be notified as to the status of the TVP if the in-service quantity of HSI Access Services falls below the minimum volume commitment. An allowance of up to 3% will be considered as still having met the volume commitment. Where the customer has less than the volume commitment quantity for a specified discount, charges will be assessed.

If the total number of HSI Access Services in service qualifies the customer for a different TVP rate, the customer will have the option of increasing the commitment quantity for the remainder of the plan.

(6) TVP Conditions

After enrolling in the plan, the customer may delete or add HSI Access Services rated at the specified term period/threshold level rate at any time during the plan.

(N)

(N)

**ACCESS SERVICE**16. Public Packet Data Network (Cont'd)

(N)

16.6 High Speed Internet (HSI) Access Service (Cont'd)16.6. Rate Regulations (Cont'd)(E) Term and Volume Plan (TVP) (Cont'd)(7) Shortfall Charges for Failing To Meet Commitment

At the annual review, if the total volume in service does not meet the volume commitment, a payment equal to the difference between the TVP rate and the highest rate that would have been charged for services not under the TVP plan plus 10% will be assessed. The payment will be calculated using the prorated HSI Access Service aggregation quantity at the time of the review. The customer may choose to increase the volume commitment within 30 days after enrollment to the TVP and continue the TVP arrangement or choose to be billed on a going forward basis under either a different TVP or under the month-to-month rates. If after 30 days, the TVP volume levels are not met, the TVP will be automatically changed to the standard month-to-month rates.

(8) Termination Liability

When a TVP service is discontinued prior to the end of the commitment period, termination liability charges will apply, as set forth below, based on the remainder of the TVP period in effect at the time of disconnect.

One Year TVP – Prorated payment based on the HSI Access Service Level Package mix times the number of remaining months of the first year's recurring charges.

Two Year TVP – Prorated payment based on the HSI Access Service Level Package mix times the number of remaining months of the first and second year's recurring charges.

Three Year TVP – Prorated payment based on the HSI Access Service Level Package mix times the number of remaining months of the first, second and third year's recurring charges.

(N)

