BSA Descriptions

BSAs have been arranged into four categories:

1. Circuit Switched
2. Packet Switched
3. Dedicated
4. Dedicated Network Access Link

Each category may have several types. Following are descriptions of the BSA categories and the associated BSA types.

1. Category 1 - Circuit Switched BSA

A circuit switched basic serving arrangement (BSA) provides an enhanced service provider (ESP) with a connection to the circuit switched network. This BSA is capable of supporting analog signals of approximately 300 to 3000 Hz or a circuit switched digital interface with a call type of digital encoded voice, 3.1 kHz or 7 kHz audio, 56 kbps or 64 kbps data transmission. This BSA may also transmit voice grade analog data. The transmission interface may be 2-wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level 1, or DS1 from DS3).

This BSA may support one-way or two-way directionality. Calls are set up and taken down on a call by call basis. The transport/usage element could be intra-office or inter-office.

Route diversity may be available with this serving arrangement.

1.1 Category 1, Type A - Circuit Switched Line BSA (1039)

Service Description

A circuit switched line BSA provides an ESP with a line side connection to the circuit switched network.

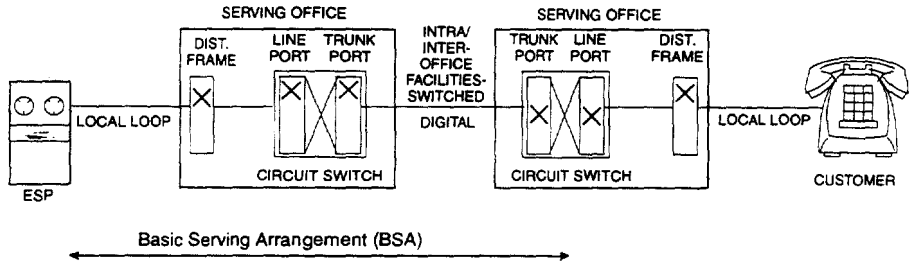
This line side connection could include alternative types of network connection, address and supervisory in-band or out-of-band signaling. Examples of network connections are standard telephone line or a line side type connection (e.g., PBX service). This BSA may support one-way or two-way directionality on a 2-wire or 4-wire transmission interface.

Calls are set up and taken down on a call by call basis. The calling scope may include, for example, an entire Local Access and Transport Area (LATA), a market area or be limited to all or part of a metropolitan area. Directory numbers are assigned from the North American Numbering Plan without any special routing or other use of the number.

Generic Name of BSA	Regional Company BSA Name
Category 1, Type A - Circuit Switched Line BSA*	AM - Circuit Switched Line
	BA - Business Individual Line
	BA - Line Side BSA
	BS - Voice Grade - Line - Circuit Switched
	NX - Circuit Switched - Line
	PB - Access Line Arrangement
	SWB - Circuit Switched - Line Side Basic Serving Arrangement (BSA-A)
	Qwest - Voice Grade - Line - Circuit Switched

* Based on the Federal Communications Commission (FCC) CC Docket 89-79 Order dated July 11, 1991, there will be a new line side BSA on FCC approval of tariffs submitted November 1, 1991.

Voice Grade – Line – Circuit Switched — BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Service Code Denial and Uniform Call Distribution.

Signaling

Signaling arrangements extend line circuit or signaling circuit alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. The signaling arrangement can be terminated on trunk-like or line side interfaces of the LEC switch. Examples of address signaling on an analog interface are dial pulse or dual tone multifrequency (DTMF) with supervisory signaling of loop start or ground start. A digital interface will offer address and supervisory signaling via an out-of-band standardized protocol.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-334 Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994
- Qwest's document 77316 Pacific Northwest Bell's Addendum to Voice Grade Switched Access Service TR-NPL-000334, April 1986.

1.2 Category 1, Type B - Circuit Switched Trunk BSA (1040)

Service Description

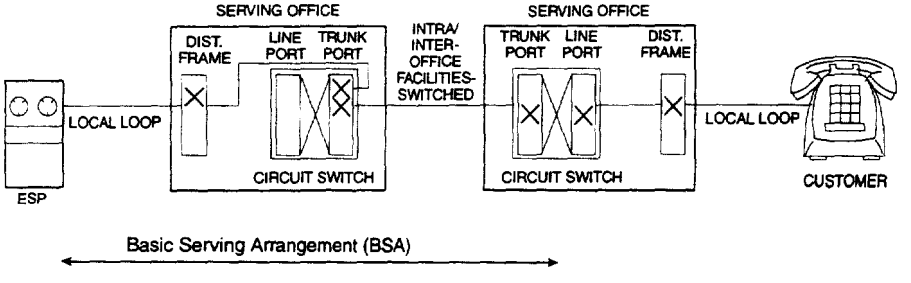
A circuit switched trunk BSA provides an enhanced service provider (ESP) with a trunk side connection to the circuit switched network.

Various types of network connections, address signaling and supervisory signaling are available. An example of network connections to the serving office may be direct trunk or a tandem connection. Calls are set up and taken down on a call-by-call basis. Different access arrangements, based on the North American Numbering Plan, are available from the Local Exchange Carriers (LEC). This BSA may support one-way or two-way directionality.

Generic Name of BSA	Regional Company BSA Name
Category 1, Type B - Circuit Switched Trunk BSA	AM - Circuit Switched Trunk
	BA - Trunkside BSA - 950 Option
	BA - Trunkside BSA - 10XXX Option
	BS - Circuit Switched Trunk - Voice Grade
	NX - Circuit Switched Trunk
	PB - Access Trunk Arrangement (950)
	PB - Access Trunk Arrangement (10XXX)
	SWB - Circuit Switched - Trunk Side Alternative B Basic Serving Arrangement (BSA-B)
	SWB - Circuit Switched - Trunk Side Alternative D Basic Serving Arrangement (BSA-D)
	Qwest - Voice Grade - Trunk - Circuit Switched

Alternatives

Voice Grade – Trunk – Circuit Switched — BSA



An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the LECs. Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Service Class Routing, Dial Pulse Address Signaling, and Cut Through.

Signaling

Signaling arrangements extend trunk circuit or signaling circuit alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. These signals are the means by which the end user initiates a request for service, holds a connection or releases a connection. The signaling arrangements can be terminated on line-like or trunk side interfaces of the LEC switch. Examples of point-of-termination supervisory signaling arrangements that may be ordered are Multi-Frequency (in-band), Signaling System 7 (SS7) (out of band), reverse battery and E&M.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-334 Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994

- GR-698 LSSGR: Feature Group B FSD 20-24-0300, Issue 1, June 2000 (replaces TR-TSY-000698 Issue 1 and Revision 1 – no technical changes)

- LSSGR FR-64 (formerly FR-NWT-000064), GR-690, FSD 20-24-0000, Exchange Access Interconnection, Issue 1, March 1991, Issue 2, September 1995, Revision 01, October 1996

- TR-NPL-000258 Compatibility Information for Feature Group D Switched Access Service, Issue 1, October 1985.

- SR-NPL-001321 Connection Setup Time for Feature Group D and Terminating Feature Group B, Special Report, Issue 1, February 1989.

- Ameritech reference: AM TR-TMO-000094 Switched Access Service Feature Group D, August 1992. (Written as a companion document to GR-334, Switched Access Service: Transmission Parameter Limits and Interface Combinations.)

References for SS7

- GR-905 Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and ISDN User Part (ISDNUP), Issue 2, Rev01 - December 1997, Rev02 – December 1998 (replaces TR-TSV-000905), Issue 3 – December 1999

- GR-394, Switching System Generic Requirements for Interexchange Carrier Interconnection (ICI) Using the Integrated Services Digital Network User Part (ISDNUP) (A module of LSSGR FR-64), Issue 2, December 1997, Rev01 – November 1998, Issue 3 – November 1999 (replaces TR-NWT-000394)

References for Signaling Arrangements

- TA-NPL-000912 Compatibility Information for Telephone Exchange Service, Issue 1, February 1989.
- SR-2275 Telcordia Notes on the Networks, Issue 4, October 2000 (replaces SR-TSV-02275, Issue 3)

2. Category 2 - Packet Switched Basic Serving Arrangement

A packet switched BSA provides an ESP with a connection to the packet switched network via virtual and permanent virtual circuit connections. This BSA is capable of supporting analog or digital signals of various transmission rates. The transmission interface may be 2-wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level 1, or DS1 from DS3).

2.1 Category 2, Type A - X.25 Packet Switched BSA (1001)

Service Description

The Type A Packet Switched BSA provides an ESP with X.25 or X.31 access to the BOC packet switching network via virtual and permanent virtual circuit connections. This interface conforms to Recommendations X.25 and X.31 of the International Telecommunication Union-Telecommunication Standardization Sector (ITU-TS) (formerly the International Telegraph and Telephone Consultative Committee [CCITT]).

X.25 includes physical, link and packet level procedures. At the physical level, data signaling rates of 1.2, 2.4, 4.8, 9.6 and 56 kbps are supported. The link level protocol supported at the interface is Link Access Protocol Balanced (LAPB). The main functions of the link level protocol are to ensure that the packets cross the Data Terminal Equipment/Data Communications Equipment (DTE/DCE) interface essentially error free and reach their destination in a correctly transmitted sequence. The network level access protocol provides the procedures required to set up, maintain and clear virtual calls. X.31 defines the recommended procedures for using Q.931 protocol to establish digital customer premises equipment (CPE) calls to a packet network in accordance with defined bearer services.

Generic Name of BSA	Regional Company BSA Name
Category 2, Type A - X.25 Packet Switched BSA	AM - Packet Switched Network Service (X.25)
	BA - Public Data Network: X.25
	BS - PulseLink® Packet Switching - X.25
	NX - INFOPATH® Packet Switching Service
	PB - Public Packet Switching (X.25)
	SWB - Packet Switched - MicroLink II℠ (X.25 Version)
	Qwest - Packet Switching (X.25)

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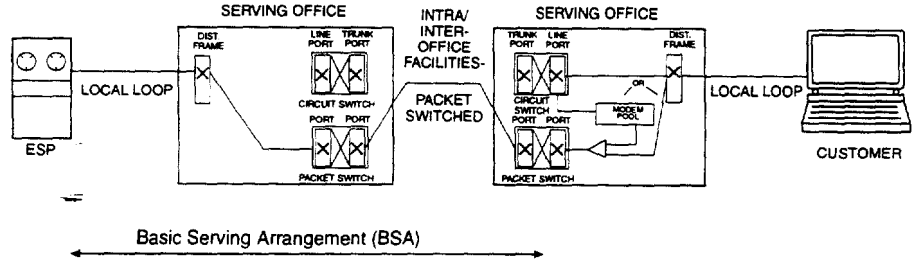

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Logical Channel, Flow Control Parameters, and Multiple Network Addresses.

Signaling

Signaling arrangements extend alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. Dial (circuit-switched) access provides low- to moderate-throughput Public Packet Switched Network (PPSN) access through the voice telephone network. With dial-in access, a customer terminal and modem are attached to the Public Switched Telephone Network (PSTN) loop. The customer dials a North American Numbering Plan (NANP) address and the PSTN routes the call to a PPSN dial-up port. The PPSN answers the call with a modem supporting one of several modem protocols.

With dial-out access, a call is routed to a PPSN interface supporting dial-out service. At this interface, the access concentrator obtains the NANP address and uses the ITU-TS (formerly CCITT) V.25 calling procedures to instruct the PPSN modem to establish a physical connection with the customer via the PSTN.

Dedicated (nonswitched) access provides the customer with continuously available interfaces to the PPSN.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-301 Public Packet Switched Network Generic Requirements (PPSNGR) (replaces TR-TSY-301, Issue 2), Issue 2, December 1997

- TR-NPL-000011 Asynchronous Terminal and Host Interface Reference, Issue 1, March 1985
- Ameritech TR-NPL-000001 Public Packet Services Technical Interface Specifications, Issue 2, September 1988
- Ameritech TR-NPL-000002 Technical Interface Specifications for X.25 Service, Issue 2, May 1988
- Ameritech TR-NPL-000003 Technical Interface Specifications for Asynchronous Service, Issue 2, May 1988
- Ameritech TR-NPL-000007 Digital Service Interface Specifications, Type 1, Issue B, December 1988
- Bell Atlantic TR 72211 Interface Specification For The Bell Atlantic Public Data Network, Issue C, December 1991
- BellSouth TR-73513 PulseLink® X.25 Interface Specification, Issue A, June 1987
- BellSouth TR-73516 PulseLink® Physical Interface Specification, Issue C, September 1991
- NYNEX NTR-74250 INFOPATH® Packet Switching Service X.25 Interface Specification, Issue 2, January 1988
- NYNEX NTR-74252 INFOPATH® Packet Switching Service Asynchronous Interface Specification, Issue 2, January 1988
- Pacific Bell PUB L-780060-PB Public Packet Switching (PPS) - Technical Interface Specification, Issue 1, August 1989
- Southwestern Bell Telephone Technical Publication TP 76800, MicroLink II℠ X.25/X.75 Reference, Issue 4, September 1994
- Qwest USWTR 77359 DIGIPAC® Service Interface Specifications For Public Packet Switching Network, Issue E, May 1994

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2.2 Category 2, Type B - X.75 Packet Switched BSA (1002)

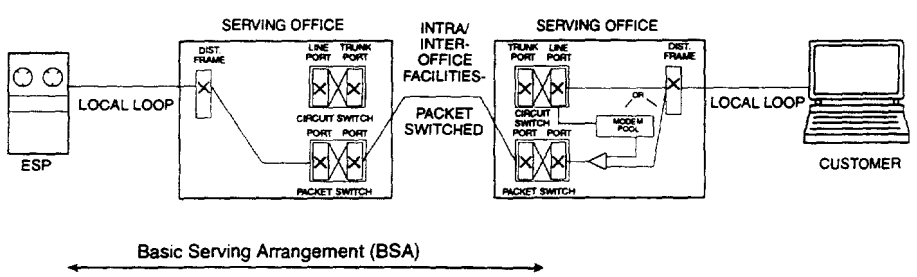
Service Description

The Type B Packet Switched BSA provides an ESP with X.75 access to the BOC packet switching network. The X.75 interface conforms to Recommendation X.75 of the International Telecommunication Union-Telecommunication Standardization Sector (ITU-TS) (formerly the International Telegraph and Telephone Consultative Committee [CCITT]).

X.75 includes physical, link and packet level procedures. At the physical level data signaling rates of 9.6 kbps are supported over analog or digital facilities. Speeds of 56 kbps are supported over digital facilities only. The link level protocol supported at the interface is Link Access Protocol Balanced (LAPB). The main functions of the link level protocol are to ensure that the packets cross the network interface essentially error free and reach their destination in a correctly transmitted sequence. The network level access protocol provides the procedures required to set up, maintain and clear virtual calls.

Generic Name of BSA	Regional Company BSA Name
Category 2, Type B - X.75 Packet Switched BSA	AM - Packet Switched Network Service (X.75)
	BA - Public Data Network: X.75
	BS - PulseLink® Packet Switching - X.75
	NX - INFOPATH® Packet Switching Service
	PB - Public Packet Switching (X.75)
	SWB - Packet Switched - MicroLink II℠ (X.75 Version)
	Qwest - Packet Switching (X.75)

Packet Switching BSA



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Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Logical Channel, Flow Control Parameters, and Multiple Network Addresses.

Signaling

Signaling arrangements extend alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. Dial (circuit-switched) access provides low- to moderate-throughput Public Packet Switched Network (PPSN) access through the voice telephone network. With dial-in access, a customer terminal and modem are attached to the Public Switched Telephone Network (PSTN) loop. The customer dials a North American Numbering Plan (NANP) address and the PSTN routes the call to a PPSN dial-up port. The PPSN answers the call with a modem supporting one of several modem protocols.

With dial-out access, a call is routed to a PPSN interface supporting dial-out service. At this interface, the access concentrator obtains the NANP address and uses the ITU-TS (formerly CCITT) V.25 calling procedures to instruct the PPSN modem to establish a physical connection with the customer via the PSTN.

Dedicated (nonswitched) access provides the customer with continuously available interfaces to the PPSN.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interface

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-301 Public Packet Switched Network Generic Requirements (PPSNGR) (replaces TR-TSY-301, Issue 2), Issue 2, December 1997
- TR-NPL-000011 Asynchronous Terminal and Host Interface Reference, Issue 1, March 1985
- Ameritech TR-NPL-000001 Public Packet Services Technical Interface Specifications, Issue 2, September 1988
- Ameritech TR-NPL-000003 Technical Interface Specifications for Asynchronous Service, Issue 2, May 1988
- Ameritech TR-NPL-000007 Digital Service Interface Specifications, Type 1, Issue B, December 1988
- Ameritech TR-NPL-000016 Technical Interface Specifications for X.75 Service, Issue 2, May 1988

- Bell Atlantic TR 72211 Interface Specification For The Bell Atlantic Public Data Network, Issue C, December 1991
- BellSouth TR-73515 PulseLink® X.75 Interface Specification, Issue B, April 1991
- BellSouth TR-73516 PulseLink® Physical Interface Specification, Issue C, September 1991
- NYNEX NTR-74250 INFOPATH® Packet Switching Service X.25 Interface Specification, Issue 2, January 1988
- Pacific Bell PUB L-780060-PB Public Packet Switching (PPS) - Technical Interface Specification, Issue 1, August 1989
- Southwestern Bell Telephone Technical Publication TP 76800, MicroLink II℠ X.25/X.75 Reference, Issue 4, September 1994
- Qwest USWTR 77359 DIGIPAC® Service Interface Specifications For Public Packet Switching Network, Issue E, May 1994

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3. Category 3 - Dedicated Basic Serving Arrangement

A dedicated BSA provides an ESP with a dedicated point-to-point connection through the network. This category of serving arrangements are available full-time so that individual calls are not set up and taken down. This BSA is capable of supporting analog or digital signals at various transmission rates. The transmission interface may be 2-wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level 1, or DS1 from DS3). It is also capable of providing supervisory signaling in some configurations.

Route diversity may be available with this serving arrangement.

3.1 Category 3, Type A - Dedicated Metallic BSA (1015)

Service Description

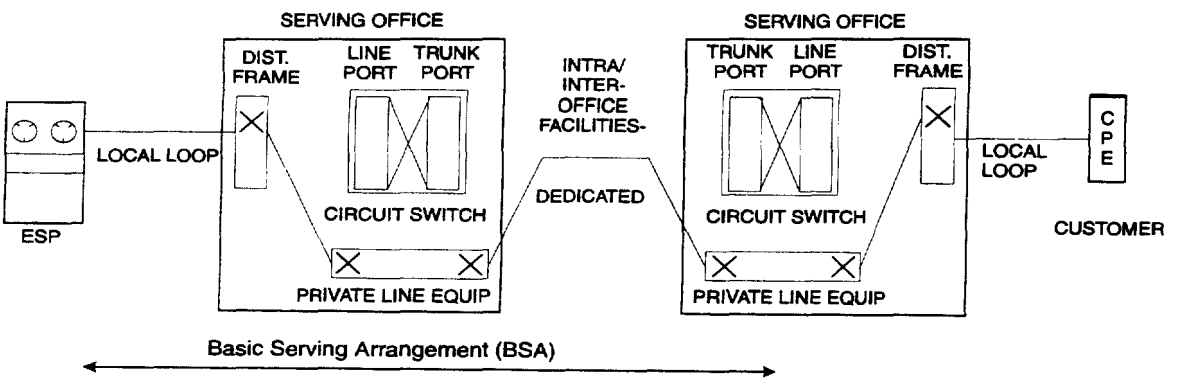
The Dedicated Metallic BSA provides a non-switched channel between the ESP and the ESP's client for the transmission of low speed varying signals at rates up to 30 baud. This service can only be provided where metallic facilities are available.

Metallic dedicated services are nonswitched services used for applications such as alarm, pilot wire protective relaying, and direct current (DC) tripping protective relaying. Interoffice metallic facilities will be limited in length to a total of five miles per channel. Metallic dedicated service (called MT1 in TR-NPL-000336 reference documentation) provides a metallic or equivalent pair between an end user and the service provider's point of termination.

Metallic dedicated service MT1 may have a second end user point of termination bridged to the first.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type A - Dedicated Metallic BSA	BA - Dedicated Metallic NX - Dedicated - Metallic PB - Metallic Service SWB - Special Access - Metallic Qwest - Analog PLS - DCCS

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be provision of services between customer designated premises through serving wire centers or between a customer designated premises and a telephone company hub.

Signaling

Metallic dedicated serving arrangements are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical interface with the LEC for metallic services is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

Reference

- TR-NPL-000336 Metallic and Telegraph Grade Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

3.2 Category 3, Type B - Dedicated Telegraph BSA (1016)

Service Description

The Dedicated Telegraph BSA provides a non-switched channel between the ESP and the ESP's client for the transmission of binary signals at rates of 0 to 75 baud or 0 to 150 baud.

Telegraph dedicated services are nonswitched services used for applications such as teletypewriter, telegraph grade control/remote metering, telegraph grade channel, telegraph grade extension, and telegraph grade entrance facilities. Certain applications must be provided using metallic facilities, and may only be offered where appropriate metallic facilities are available.

Telegraph Special Access services TG1 and TG2 may be available.

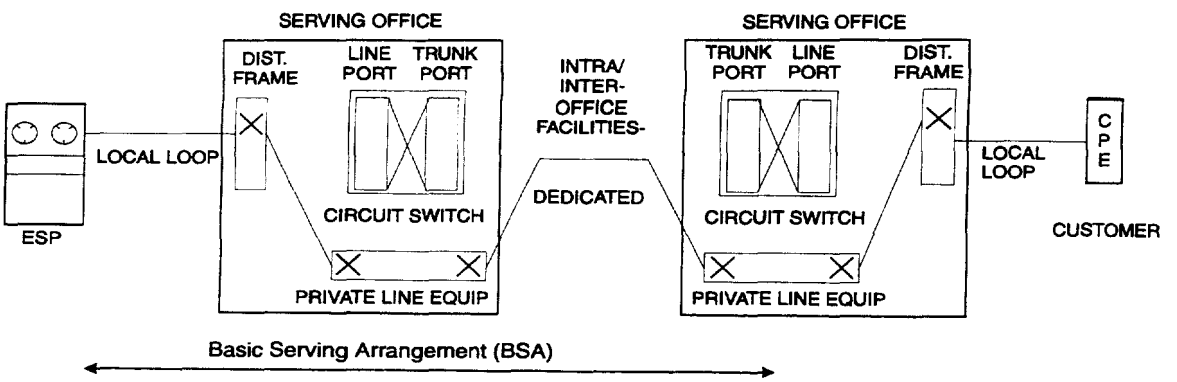
— TG1 service provides transmission of asynchronous transitions between two current levels at rates up to 75 baud between an end user and the ESP's point of termination. This service may be furnished for half-duplex or duplex operation in a two-point or multipoint configuration. Neither direct current (DC) continuity of this service nor the capability to continuously transport varying alternating current (AC) is assured.

— TG2 service provides transmission of asynchronous transitions between two current levels at rates up to 150 baud between an end user and the ESP's point of termination. This service may be furnished for half-duplex or duplex operation in a two-point or multipoint configuration. Neither DC continuity of this service nor the capability to continuously transport varying AC is assured.

Telegraph services TG1 and TG2 may have active or passive multipoint-bridging, the maximum number of bridges to be determined by service application design limitations.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type B - Dedicated Telegraph BSA	BA - Dedicated Telegraph NX - Dedicated - Telegraph Grade PB - Telegraph Grade Service Qwest - Analog PLS - LSDS

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some of all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: half duplex or full duplex operation in a two-point or multipoint configuration.

Signaling

Telegraph dedicated serving arrangements are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical interface with the LEC for metallic services is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. The NCI codes for the desired service must be specified by the customer when ordering telegraph grade services. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

Reference

- TR-NPL-000336 Metallic and Telegraph Grade Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

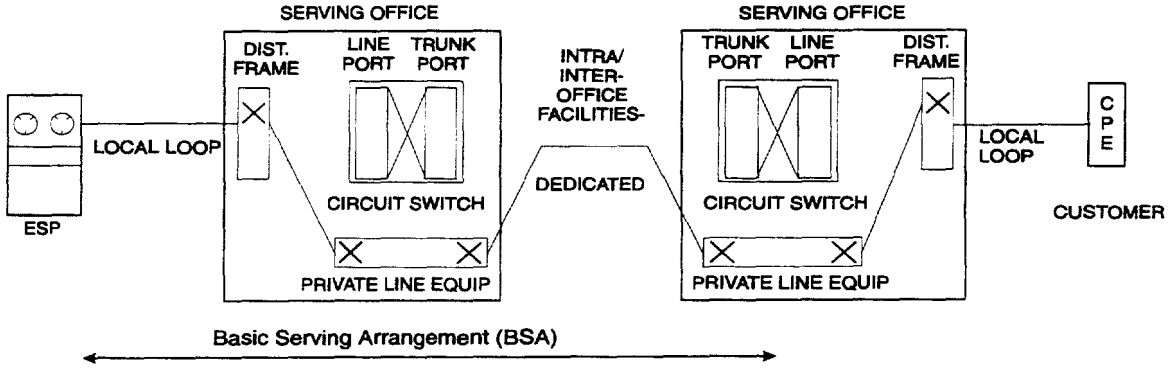
3.3 Category 3, Type C - Dedicated Voice Grade BSA (1017)

Service Description

The dedicated voice grade BSA provides an ESP with a dedicated connection through the network to the ESP's client. This BSA is capable of supporting the transmission of analog signals within an approximate bandwidth of 300 - 3000 Hz. The transmission interface may be 2-wire or 4-wire. Voice grade services are provided between service provider designated premises through serving wire centers or between a service provider designated premises and a telephone company hub. It is capable of providing various supervisory signaling alternatives.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type C - Dedicated Voice Grade BSA	AM - Direct Analog
	BA - Dedicated Voice-Grade
	BS - Dedicated - Private Line
	NX - Dedicated - Voice Grade
	PB - Voice Grade Service
	SWB - Special Access - Voice Grade
	Qwest - Analog PLS - VGS

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: transfer arrangement, improved termination, data capability, telephoto capability, and signaling capabilities.

Signaling

Signaling capability provides for the process by which one customer premises alerts another customer premises on the same service with which it wishes to communicate. These signals are the means by which the end user initiates a request for service, holds a connection or releases a connection. Examples of signaling arrangements are: loop-start, ground-start, E&M, and reverse-battery.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- TR-NWT-000335 Voice Grade Special Access Services - Transmission Parameter Limits and Interface Combinations, Issue 3, May 1993

- TR-NWT-000965 IntraLATA Voice Grade Private Line Services Transmission Parameter Limits and Interface Combinations, Issue 1 - October 1989, Revision 1 - December 1989, Issue 2 - December 1991

- GR-342 High-Capacity Digital Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-INS-000342)

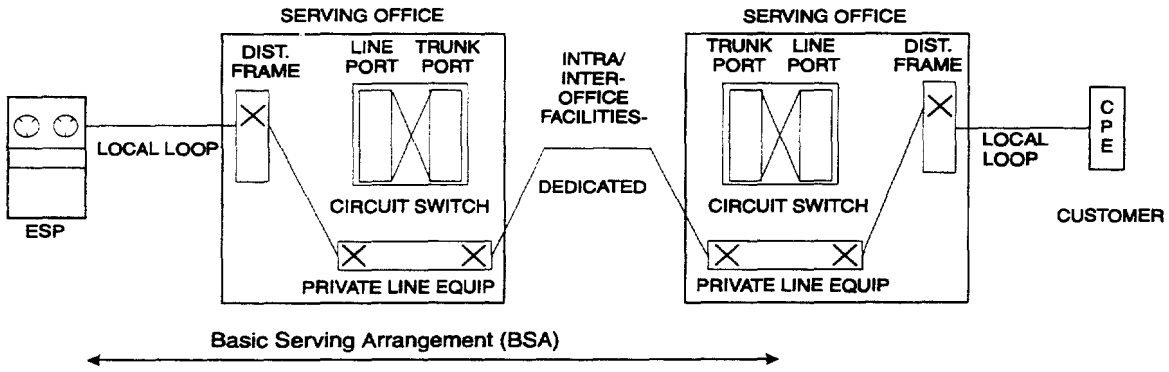
3.4 Category 3, Type D - Dedicated Program Audio BSA (1018)

Service Description

The dedicated program audio BSA provides an ESP with a one-way non-switched channel to the ESP's client that can pass an analog signal up to 15000 Hz. This serving arrangement is usually provided for transmission of music, but it is capable of voice and data within the band pass limits. Nominal frequency bandwidths for this serving arrangement are: 50 to 15000 Hz, 200 to 3500 Hz, 100 to 5000 Hz, 300 to 2500 Hz, or 50 to 8000 Hz.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type D - Dedicated Program Audio BSA	AM - Dedicated Program Audio BA - Dedicated Program Audio BS - Dedicated Program Audio NX - Dedicated - Program Audio PB - Program Audio Service SWB - Special Access - Program Audio Qwest - Analog PLS - AS

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: stereo and gain conditioning.

Signaling

Program Audio services are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as

perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-337 Program Audio Special Access and Local Channel Services, Issue 1, December 1995 (replaces TR-NPL-000337, Issue 1)
- TR-TSY-000431 15 kHz Digital Audio Terminal for Program or Television Requirements and Objectives, Issue 1, October 1987
- GR-342 High-Capacity Digital Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-INS-000342, Issue 1)
- TR-NPL-000339 Wideband Analog Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

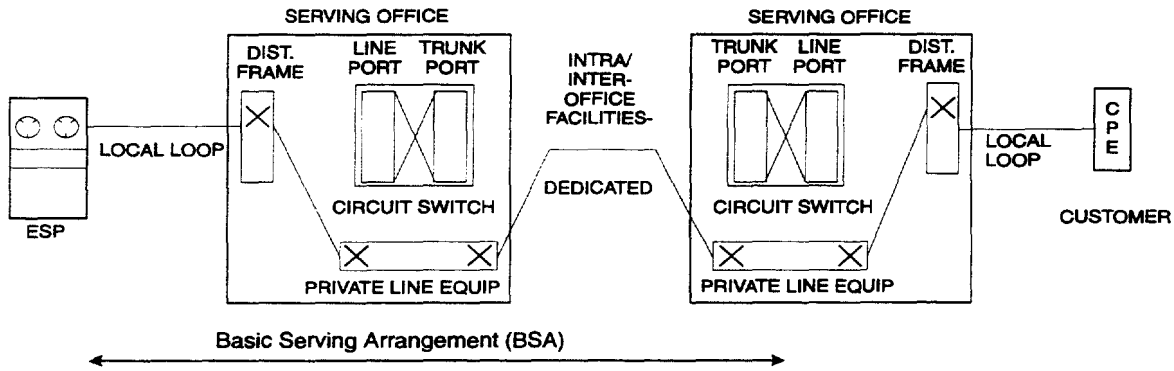
3.5 Category 3, Type E - Dedicated Video BSA (1019)

Service Description

The dedicated video BSA provides an ESP with a dedicated, broadband communications channel to the ESP's client. Applications may include (but are not limited to): full-time and part-time commercial broadcast quality television, noncommercial broadcast quality television, video teleconferencing, distance-learning applications, surveillance, closed-circuit television. The channel is capable of transmitting a standard 525 line/60 field monochrome or National Television Systems Committee (NTSC) color video signal and associated audio signals. The associated audio signal(s) may be either duplexed or provided as separate channels. Video services are provided between customer designated premises through Serving Wire Center(s) or between a customer designated premises and a telephone company hub.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type E - Dedicated Video BSA	AM - Dedicated Video
	BA - Dedicated Video Service
	BS - Dedicated Video
	NX - Dedicated - Video
	PB - Video Service
	SWB - Special Access - Video
	Qwest - Analog PLS - VS

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: 5 or 15 Hz audio channels, duplexed or separate channel audio signals, and video/audio delay difference.

Signaling

Video services are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes define the bandwidth and the provision of the audio signal(s) associated with a broadcast video channel. NCI codes are: (1) Total Conductors, (2) Protocol, (3) Impedance, (4) Protocol Options, and (5) Transmission Level Point (ignored for Television Special Access).

References

- GR-338: Television Special Access and Local Channel Services - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-TSV-000338, Issue 2)
- TR-TSY-000431 15 kHz Digital Audio Terminal for Program or Television Requirements and Objectives, Issue 1, October 1987
- Qwest Publication 77326 Qwest Fiber Optic Commercial Video Services, Issue D, December 1994

3.6 Category 3, Type F - Dedicated Digital (< 64 kbps) BSA (1020)

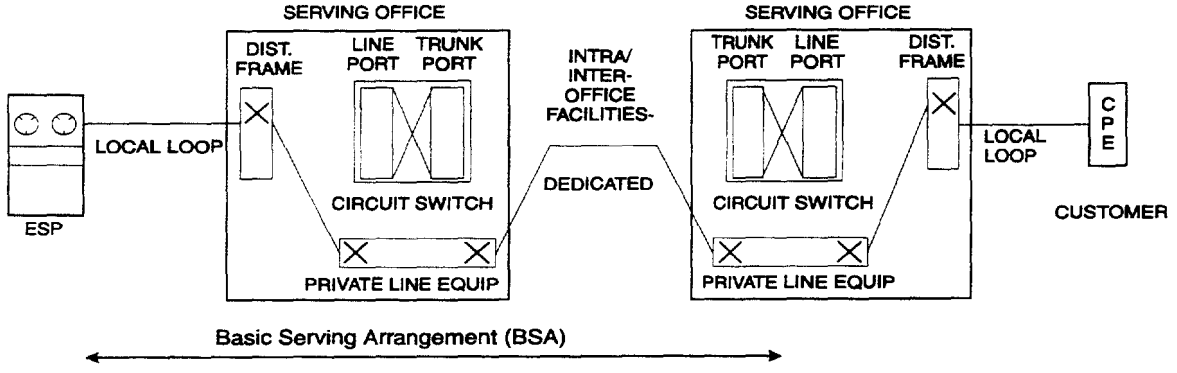
Service Description

The dedicated digital (< 64 kbps) BSA provides an ESP with a 4-wire digital channel to the ESP's client This serving arrangement provides for digital transmission of synchronous serial data at primary rates of 2.4, 4.8, 9.6, 19.2, or 56 kbps, plus associated secondary channel rates of 2.4, 4.8, 9.6, 19.2, or 56 kbps. Error Detection/Correction is an inherent part of this BSA.

Digital Data special access services are nonswitched channels that provide the capability to transmit digital data between two end user points of termination or and end user point of termination and a service provider point of termination.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type F - Dedicated Digital (< 64 kbps) BSA	AM - Ameritech Base Rate Services BA - Digital Data Service BS - SynchroNet® /DDS NX - Dedicated - Digital Data PB - Digital Data Service, Private Line Services SWB - Special Access - MegaLink℠ Data Qwest - Digital Data Service

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Transfer Arrangement.

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Signaling Arrangements

These services are available full-time and therefore supervisory signaling arrangements are not applicable. The signaling service is synchronous with timing provided through the LEC's facilities to the end user on the received bit stream. Individual calls are not set up and taken down.

Transmission Capabilities

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- TR-NWT-000341 Digital Data Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 2, February 1993
- Qwest document 77312 Qwest Digital Data Service, Technical Description, Issue D, October 1994

3.7 Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA (1021)

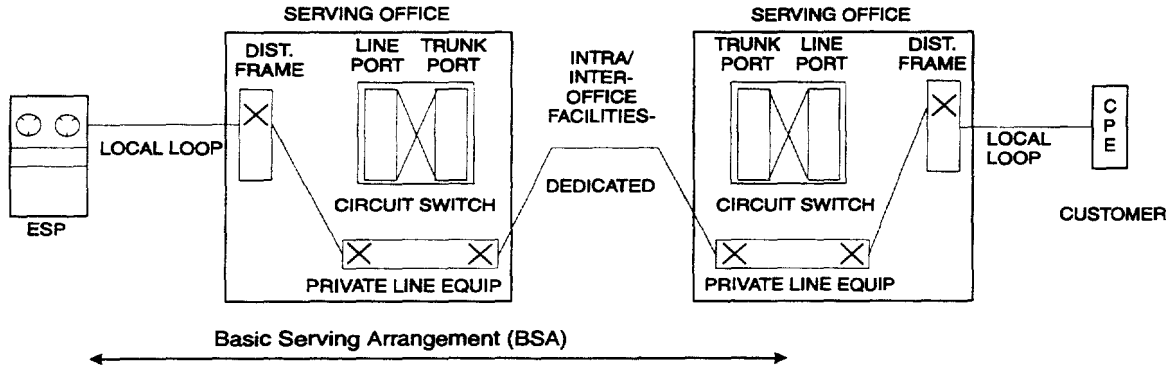
Service Description

The dedicated high capacity digital (1.544 Mbps) BSA provides an ESP with a dedicated channel. High Capacity Digital service is defined as a service that provides two-point, private-line, full duplex transmission at 1.544 Mbps isochronous serial data with a payload of 1.536 Mbps between an end user and an end user or between an end user and a LEC central office.

In some cases, this BSA can be provisioned for dedicated transport of Extended Superframe Format (ESF) datachannel capability.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA	AM - Ameritech DS1 Services BA - High Capacity Digital Service BS - MegaLink® /HiCap NX - Dedicated Digital - 1.544 Mbps PB - High Capacity Services (1.544 Mbps) SWB - Special Access - High Capacity (1.544 Mbps) Qwest - DS1 Service

Dedicated – Private Line – BSA



Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette

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