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September 13, 2010

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

FILED/ACCEPTED

SEP 13 2010

Federal Communications Commission
Office of the Secretary

Re: **GTE Open Network Architecture, CC Docket No. 92-256**
Phase I; Installation and Maintenance Non Discrimination Reports CC Docket No. 88-2,
Implementation of Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996, CC Docket No. 96-128

Dear Ms. Dortch:

Attached are the Semiannual 2010 ONA Nondiscriminatory Reports for Verizon being filed pursuant to FCC Orders in the above-styled dockets.

Please contact me should you have any questions.

Very truly yours,

E. Wagner

Attachment

No. of Copies rec'd 0
List ABCDE

September 2010 Semi Annual ONA Filing

Paper Reports (7)

- Consolidate BOC Service Descriptions
- Consolidate BOC APP 1 Relationship REPORT
- Consolidate BOC APP 2 CONTACTS
- Consolidate BOC APP 3 BSA MATRIX
- Consolidate BOC Tariff Reference Matrix
- Consolidate BOC Abbreviation Key
- Consolidate BOC APP A and B

CD (1)

- SEPTEMBER 2010 CONSOLIDATED BOC tariff ref matrix.xls
- SEPTEMBER 2010 CONSOLIDATED BOC Abbreviation KEY.DOC
- SEPTEMBER 2010 CONSOLIDATED BOC APPs A B.doc

Paper Report (2)

- GTE Tariff Reference Matrix
- fGTE Tariff Reference Matrix (sold properties as of 7/1/10)

CD (1)

- SEPTEMBER 2010 GTE DEPLOYMENT OF ONA SERVICES.DOC
- SEPTEMBER 2010 fGTE DEPLOYMENT OF ONA SERVICES.DOC
- SEPTEMBER 2010 GTE svc desc.doc
- SEPTEMBER 2010 GTE Relationship REPORT .doc
- SEPTEMBER 2010 GTE cons tariff ref matrix.xls
- SEPTEMBER 2010 GTE Abbreviation KEY.DOC
- SEPTEMBER 2010 fGTE cons tariff ref matrix.xls

Page	Generic Name of Service Abbreviated Name	Code	AZ	ID	IL	IN	MI	NV	NC	OH	OR	SC	WA	WI
67	Cxr Select On Rvrs Charg	1065	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
103	Data Over Voice (DOV)	1031									B	B	B	
107	Derived Ch (Monitoring)	1032												
74	Dist Ring Term Screen	1069		C	C	C	C	C	C	C	C	C	C	C
71	Distinctive Ringing	1068		C	C	C	C	C	C	C	C	C	C	C
131	Do Not Disturb	9010		C	C	C	C	C	C	C	C	C		C
99	Fast Select Accept Pkt	1007			BB	BB			B	BB	BB	B	B	
100	Fast Select Request Pkt	1008			BB	BB			B	BB	BB		B	
123	GTE® Dial DataLink	9021			C	C	B				B	B	C	C
136	High Cap Dig Handoff Svc	9024	B	BB	BB	BB	BB	B	BB	BB	BB	BB	B	BB
76	Hot Line	1070			C	C	C		C			C		C
130	Inband Signaling	9015	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
124	Last Number Redial	9003		C	C	C	C	C	C	C		C	C	C
82	MLHG UCD Line Hunting	1081	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
84	MLHG UCD With Queuing	1082	B	BB	BB	BB	BB	B	BB	BB	BB	BB	B	BB
78	MWI ATR Audible Msg Wtg	1073			C	C		C	C			B	C	C
126	MWI ATR Audible Rmp Bst	9019			C	C	B		B	C		C	C	C
137	MWI Activation (ARB)	9022			B									
112	MWI Activation (Audible)	1075	B		B	B	B	BB	B	B		B		
125	MegaConnect (SMDS)	9020			B				B		B			
110	Message Desk (SMDI)	1072	B	B	BB	BB	BB	B	B	BB	B	BB	B	BB
80	Multiline Hunt Group	1077	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
127	Multiplexing-Digital	9014	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
138	Premier Mssg Svc Interfc	9026	B		B	B	B	B	B	BB	B	B	B	B
135	Priority Packet	9018			BB	BB			B	BB	B		B	
128	Remote Call Forwarding	9006	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
108	Route Diversity	1096	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	B	BB
129	Saved Number Redial	9002			C	C	C		C	C	C	C	C	
109	Secondary Ch Capability	1034		B			BB		BB		B	BB	B	
86	Selective Call Forward'g	1084		C	C	C	C	C	C	C	C	C	C	C
88	Selective Call Rejection	1085		C	C	C	C	C	C	C	C	C	C	C
132	Special Call Waiting	9009			C	C	C		C	C	C	C	C	C
92	Speed Calling	1087	C	C	C	C	C	C	C	C	C	C	C	C
139	SS7MWI	9025	B		B	B	BB	B	B	BB	B	BB	B	B
115	Third Numb Bill Inhibitd	9012	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
94	Three Way Call Transfer	1089	B	BB	BB	BB	BB	B	BB	BB	BB	BB	B	BB
133	Three Way Calling	9005	C	C	C	C	C	C	C	C	C	C	C	C
96	Unif 7D Acc Num RCF	1090	B				B	B	B	B		B		

Abbreviations:

A=BSA
B=BSE
C=CNS
D=BSE/CNS

Under each state abbreviation the left column contains FCC tariff information and the right column contains state tariff information.

03/01/10 Page	Generic Name of Service Abbreviated Name	Code	AZ	ID	IL	IN	MI	NV	NC	OH	OR	SC	WA	WI
101	Acc To Cir Ch Transmissn	1026	B	BB	BB	BB	BB	B	BB	BB	BB	BB	B	BB
34	Alternate Routing	1041	B	BB	BB	BB		B	BB	BB	BB	BB	B	BB
114	Anonymous Call Block	9011		C	C	C	C	C	C	C	C	C		C
102	Automatic Protect Swtchg	1028	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	B	BB
36	Automatic Recall	1044		C	C	C	C	C	C	C	C	C	C	C
104	Bridging	1029	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
116	Busy Redial	9001		C	C	C	C	C	C	C	C	C	C	C
6	C1 Typ A - Ckt Sw Line	1039	A	AA	AA	AA	AA	A	A	AA	AA	AA	A	AA
8	C1 Typ B - Ckt Sw Trunk	1040	A	AA	AA	AA	AA	A	A	AA	AA	AA	A	AA
11	C2 Typ A - X.25 Pkt Sw	1001			A	A				A	A			
13	C2 Typ B - X.75 Pkt Sw	1002			AA	AA			A	AA	AA		A	
15	C3 Typ C - Ded Voice Grd	1017	AA	AA	AA	AA	AA	A	AA	AA	AA	AA	A	AA
17	C3 Typ D - Ded Prgm Audio	1018	AA	AA	AA	AA	AA	A	AA	AA	AA	AA	A	AA
19	C3 Typ E - Ded Video	1019	A	AA	AA	AA	AA	A	AA	AA	AA	AA	A	AA
21	C3 Typ F - Ded <64kbps	1020	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	AA
23	C3 Typ G - Ded 1.544Mbps	1021	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	AA
25	C3 Typ H - Ded >1.544Mbps	1022	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	AA
27	C3 Typ I - Ded Alrt Trnsp	1023	A	A	AA	AA	AA	A	A	AA	AA	AA	A	AA
29	C3 Typ K - Ded 64 kbps	1037		AA	AA	AA	AA	A	AA	AA	AA	AA	A	AA
31	C4 - Ded Ntwk Access Link	1025	A	A	AA	AA	AA	A	A	AA	AA	AA	A	AA
118	CF Fixed	9007	C	C	C	C		C	C	C	C		C	C
51	CF Mult Sim Call Interlsw	1062							C		C	C		C
54	CF Var Act w/o Crtsy Cal	1054			C	C		C		C			C	
55	CF Var Remote Act/Cntrol	1055						C					C	
52	CF Variable	1063		C	C	C	C	C		C			C	C
41	CFBL Interswitch	1047		C	C	C		C	B	C	C	C	C	C
39	CFBL Intraswitch	1046		C	C	C	C	C		C	C	C	C	C
43	CFBL/DA Cust Act/Deact	1048			C	C	C			C			C	C
45	CFBL/DA Cust Fwd To No.	1049			C	C				C			C	C
117	CFBL/DA Fixed	9006	C		C	C	C		B	C	C	B	C	C
49	CFDA Interswitch	1051		C	C	C		C	B	C	C		C	C
47	CFDA Intraswitch	1050		C	C	C	C	C		C	C	B	C	C
98	Call Det Recdg Rpts Pkt	1003			C	C								
119	Call Restriction Service	9017			C	C	C	C	C	C	C	C	C	C
120	Call Waiting	9004	C	C	C	C	C	C	C	C	C	C	C	C
57	Call Waiting Cancel	1058		C	C	C	C	C	C	C	C	C	C	C
59	Clld DN Deliv via DID	1057	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
61	Clg Blg Num Deliv FG B	1060	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
63	Clg Blg Num Deliv FG D	1061	BB	BB	BB	BB	B	BB	B	BB	BB	B	B	BB
65	Clg DN Deliv via ICLID	1064		BB	B		BB	BB	C	BB	BB	BB	B	BB
105	Conditioning	1030	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB
122	Cust Controllable Ring	9023			C	C	B	C	B	C		C	C	C
69	Cust Originated Trace	1066		C	C		C	C	C	C	C	C	C	C

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54	CF Var Act w/o Crtsy Cal	1054	C				C
55	CF Var Remote Act/Cntrol	1055	C				C
52	CF Variable	1053	C	C			C
41	CFBL Interswitch	1047	C	B	C	C	C
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43	CFBL/DA Cust Act/Deact	1048	C		C		C
45	CFBL/DA Cust Fwd To No.	1049	C		C		C
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C=CNS
D=BSE/CNS

Under each state abbreviation the left column contains FCC tariff information and the right column contains state tariff information.

BELL OPERATING COMPANIES

Service Descriptions

ONA Services User Guide

July 31, 2010

ONA Services

Names, Descriptions, Cross References

FOREWORD

Attached is the Services Descriptions section of the ONA Services User Guide, an update of information that was previously issued on January 31, 2010.

The Services Descriptions section of the ONA Services User Guide represents an agreement on thepart of the BOCs for uniform names and technical descriptions of the Basic Serving Arrangements (BSAs), Basic Service Elements (BSEs) and Complementary Network Services (CNSs) that relate to the ESP requests included in BOC ONA Special Report Number 1, Issue 2 (October 1987). That Special Report is a compilation of the 118 requests received by all the BOCs during the input process for ESP requests prior to filing of the 2/1/88 ONA Plans. Some items, marked with an asterisk (*) in their titles, have been deleted after the last issue of the report based on the availability of updated information indicating that they cannot be offered. For each service listed, a table is provided that gives an indication of which BOCs plan to offer the service, the individual BOC's product name, and whether the BOC classifies the service as a BSA, BSE or CNS.

The BSAs, which respond to the 118 ESP requests for ONA services, are listed in the following four categories of Basic Serving Arrangements:

- Circuit Switched Serving Arrangements

  A circuit switched basic serving arrangement (BSA) provides an enhanced service provider (ESP) with a connection to the circuit switched network.

- Packet Switched Serving Arrangements

  A packet switched BSA provides an ESP with a connection to the packet switched network.

- Dedicated Serving Arrangements

A dedicated BSA provides an ESP with a dedicated point-to-point connection through the network.

- Dedicated Network Access Link Serving Arrangements

  A dedicated network access link (DNAL) BSA provides a dedicated data channel between the ESP's termination and a designated central office which contains the specific features required by the ESP. The DNAL is used to transmit control information from the ESP to the network or to deliver information from the network to the ESP.

Following the BSAs are the BSEs and CNSs, which are listed in alphabetical order in the above four BSA categories. These BSEs and CNSs respond to the 118 ESP requests for ONA services that were made to all BOCs. A description of each BSE or CNS is provided, which includes a brief technical description and a table listing the product name for each company that offers the service.

Appendix 1 contains a set of descriptions of ONA services that are offered by one or more BOC in response to requests received independent of the 118 ESP requests received by all BOCs. Included is a technical description and a table with the product name for each company that offers the service.

Appendix 2 contains a list of BOC contacts.

Appendix 3 contains the BSA Matrix, a report that shows the relationship between the BSAs and the BSEs included in the ONA Services User Guide. Included is a table showing the generic name for each BSA, and the specific name used by each company offering the BSA. Also included is a set of tables, one for each BSA, listing which BSEs are associated with the BSA for each company. These matrices only include generic BSAs and BSEs, and do not include the CNSs or any region specific services.

This report does not supersede any information provided in the BOC ONA plans and amendments. All capabilities described are not available in all switching or transmission systems. Generic descriptions of BSAs do not imply that applicable generic functions and capabilities are available or compatible with all types of BSAs. In addition, generic descriptions are intended for informational purposes and their existence does not imply that specific products and/or services are necessarily tariffed and/or available in any or all state/ federal jurisdictions within a particular company's service area. The BSAs, BSEs and CNSs identified in this report cannot be ordered until appropriate tariffs are effective. Some ONA services may not be tariffed in all areas. The reader should refer to the individual BOC ONA plans and amendments or the BOC contacts listed in Appendix 2 to this report for information on BOC availability and deployment plans for the technical capabilities described in this report.

References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

Technical references that are publicly available are listed for each service, where available. Ordering information for each of the technical references may be found in the *Telcordia Technologies Catalog of Technical Information* (including ordering information for reference documents published by individual regional companies). To order, call 1-866-672-6997 toll free from anywhere in the USA; call (732) 699-6700 for foreign calls; fax (732) 336-2226.

Recently, various BOCs have completed, or are in the process of completing, corporate mergers. For this document, the old company names will continue to be used (for example, Bell Atlantic and NYNEX are listed separately, rather than being combined under the Verizon name; Southwestern Bell and Pacific Bell and Ameritech and BellSouth are listed separately, rather than being combined under the AT&T name).

Questions on this report should be directed to the BOC contacts listed in Appendix 2 to this report.

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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 2wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level1, 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.

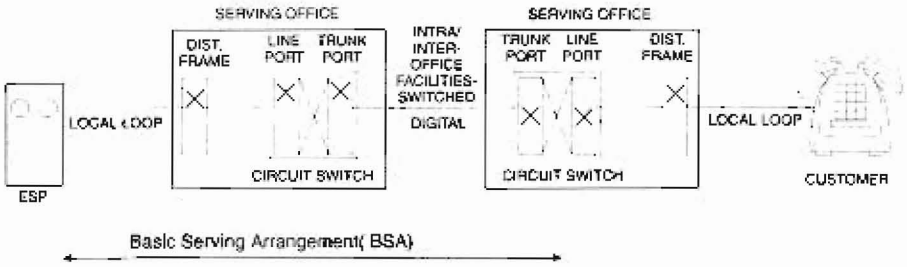
This line side connection could include alternative types of network connection, address and supervisory in-band or out-of-band signaling. Examples of network connections are standard telephone line or a line side type connection (e.g., PBX service). This BSA may support one-way or two-way directionality 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 – FX (3021)
	BA - Line Side BSA – IC (3022)
	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 canbe 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 wil 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,July 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)

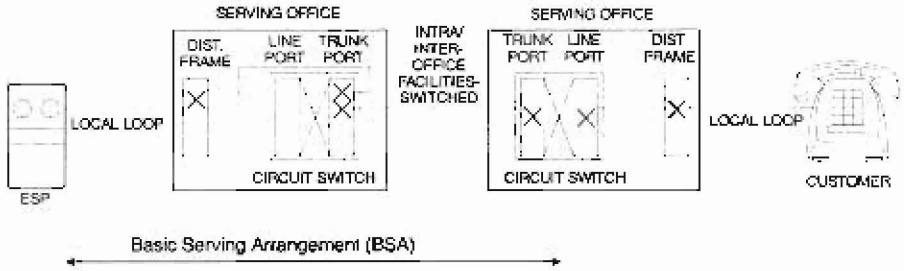
Service Description

A circuit switched trunk BSA provides an enhanced service provider (ESP) with atrunk 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
	BA - Trunkside BSA - 950 Option
	BA - Trunkside BSA - 10XXX Option (3025)
	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

Voice Grade – Trunk – 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 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 enduser 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, July 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, November 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. [No longer listed.]

- 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 Limitsand 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 12 - December 2009 (replaces GR-905, Issue 11)

- GR-394 LSSGR: 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 8 – November 2007 (replaces Issue 7)

References for Signaling Arrangements

- TA-NPL-000912 Compatibility Information for Telephone Exchange Service, Issue 1, February 1989. [No longer listed.]
- 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 ofvarious 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.31of 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 crossthe 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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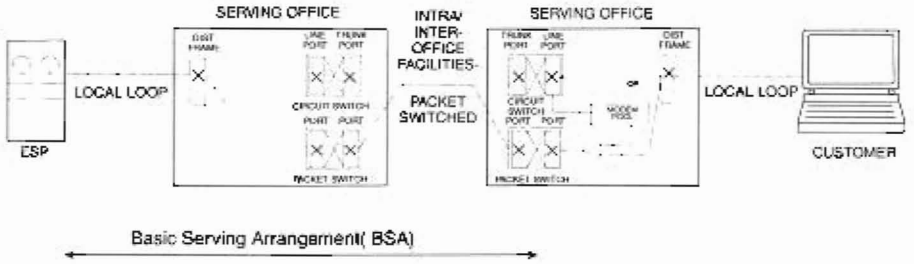

Alternatives

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[No longer listed.]
- 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)

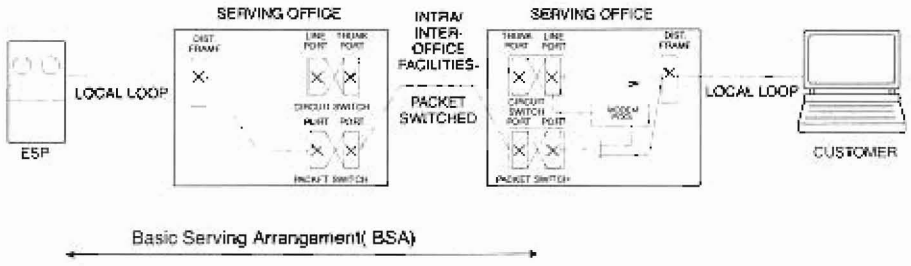
Service Description

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 UnionTelecommunication 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 acorrectly 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 dialin 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 referenceedocumentation.

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 [No longer listed.]
- 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 – Metallic Service NX - Metallic Service PB - Metallic Service SWB - Special Access - Metallic Qwest - Analog PLS - DCCS