



SBC-002-316-078

SBC Fiber Connector/Mode Policy

This document is issued to cover the latest SBC Corporate Policy with regard to FiberOptic Termination/Mode Standards on a going-forward basis.

TO: Network Planning and Engineering (Transport Equipment Engineer (TEE), Facility Equipment Engineer (FEE), Digital Transport Engineer (DTE), Maintenance Engineer, Space Planner, Frame Planner, Long Range Technical Planners), Circuit Provisioning, Outside Plant Engineering, Network Operations (LFO), Outside Plant Engineering, Special Services, Fundamental Network Planning and New Technology Introduction and Technology Resources Inc (TRI). This document is to be used internally within **SBC-13STATE** and their Authorized Vendors and have a limited distribution subject to the header/footer information.

Effective Date: January 1, 2003

Issue Date: January 1, 2003

Expires On: N/A

Related Documents: See Section 5

Superceded Documents: Supersedes SBC-FLASH-2001-015 dated June 2001 and SBC-NOTICE-000-000-606

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1. Reasons for Revision

This document has been reformatted from the original SBC-NOTICE-000-000-606, Fiber Connector Policy, dated November 21, 2002 into two separate documents:

SBC-002-316-078, *SBC-Fiber Connector/Mode Policy* will cover the standards associated with the global expectations and integration of products and services into the SBC Network. The original notice has evolved into this document reflecting all the latest upgrades and **SBC-13STATE** identity name changes.

SBC-002-316-079, *SBC-Connector/Mode Addendum by Application Services Approved for Use* will cover the specific product and service types that will be approved for use. This document will be updated as new products are approved for development in the NTI/PDP processes.

2. Introduction

The previous FiberOptic Connector Policy was communicated on SBC Construction Support FLASH-2001-015 that announced that all **SBC-13STATE** locations would commence using the SC-UPC SingleMode connectors exclusively on a going-forward basis with an effective date of July 15, 2001. While our corporate standard for terminations remains the SC-UPC SingleMode connector, effective with this document the termination of FiberOptic facilities to Network Equipment and Carrier Point of Presence Locations.

Per the Letter concerning the Standard Connector Policy signed by Christopher Rice, Senior Vice President-NP&E on November 21, 2002, this document covers the current **SBC-13STATE** FiberOptic Connector Policy Standard.

3. Purpose & Background

SBC Communications Inc. along with the other Incumbent Local Exchange Carriers (ILEC) have evolved toward a consistent use of the SC-UPC SingleMode connector/mode for the termination of FiberOptic Facilities. Recognizing this point, SBC moved SBC-Southwestern Bell to this standard in July 2001 and applied this same standard to all carriers and customers within the **SBC-13STATE** telco organization.

In 2002, SBC had three drivers for changes to this policy:

- Provisioning for the **GigaMan & MON Point-to-Point service** provisioning at the Outside Plant Customer and Demarcation Point using a SC-UPC MultiMode connector/type mode of transmission. This represented the need to support new services that the customers were requesting at the customer's premises.
- Provisioning the LC-UPC SingleMode connector for Network Elements dictated a small form factor on the faceplate of their equipment due to space constraints (exception basis). Not on the Fiber Distribution Frame. This was dictated by the manufacture industry providing smaller components that might not conform to typical telco standards.
- Two Long Distance (IXC) carriers have requested an expansion of the connector used to another type for the termination of FiberOptic services at their Long Distance Point of Presence (POP) site only. This request was based upon the IXC's standard for consistency within their POP.

4. Action & Conclusion

4A. SBC Gold Standard

On a going-forward basis, this policy reconfirms that the SBC standard for FiberOptic terminations is the SC-UPC, SingleMode interface for customers, CLECs, carriers and internal users, approved by John Monday, Vice President-Finance & Engineering Support (NP&E). This standard interface insures that network reliability is promoted through a standard network interface thereby reducing the overall costs in the network, with engineering and technical decisions becoming streamlined in a single process.

Due to the need to provide more near-term services with manufactured off-the-shelf components, SBC is modifying the policy to permit exceptions to this policy on a case-by-case basis due to technical shortfalls of Network Elements for the use of the LC-UPC SingleMode on the faceplate for small form factor connectors in the **Central Office only**. In addition, limitations on the near-term deployment of Video services for Fiber-to-the-Home will necessitate the use of

SC-APC, SingleMode (Angled) connectors using an Analog signal. When the Video is converted to Digital, the connector type will revert to the SC-UPC, SingleMode. The use of SC connectors with a MultiMode method of transmission is authorized for general use at both the **Customer Premises and the Point of Presence (POP) only**. SBC-002-316-079, SBC Fiber Connector/Mode Addendum by Application Services Approval for Use will provide the specific products and services that are approved for use under the auspices of this policy. The addendum document will be updated as new services are approved for introduction into the PDP/NTI development process.

Other Connectors and Modes of Transmission may be only approved as suitable for use on an exception basis by: Bernard Cross II, Associate Director-Loop Product Evaluation, Broadband Services, **SBC-13STATE** (972) 960-4906, E-Mail: bc6024@txmail.sbc.com. As other technology requirements become **necessary and cost justified**, SBC may elect to introduce new connector/mode types on a case-by-case basis with both this document and the addendum covering these changes.

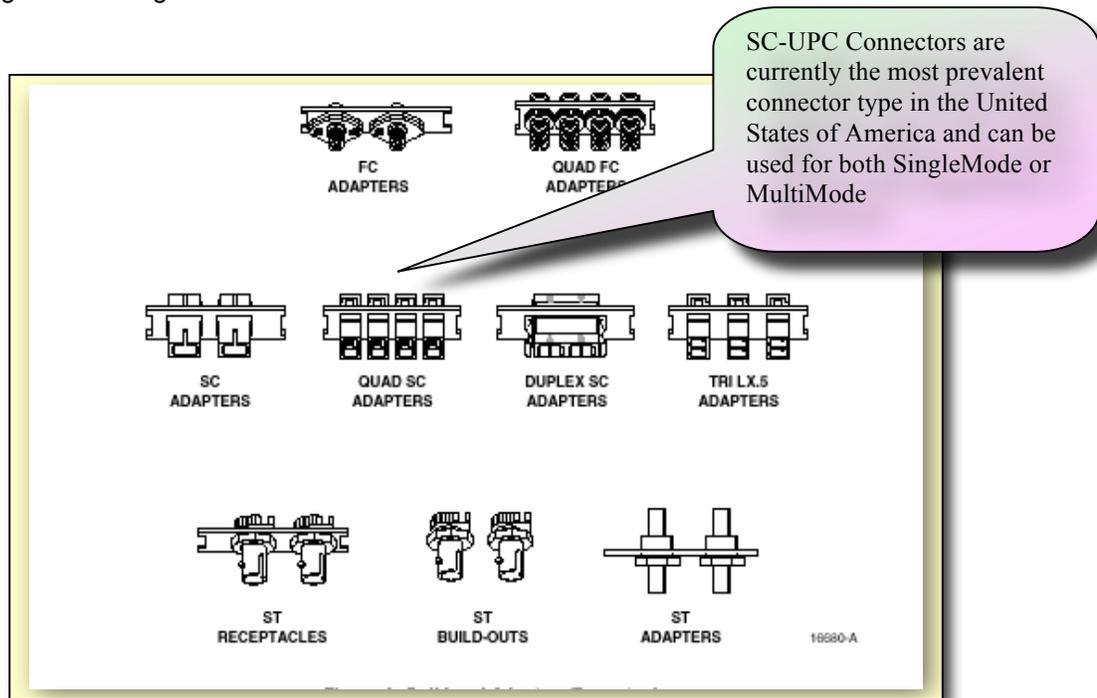


Illustration of Optical connector types in use today

The standard demarcation point for SBC Communications Inc. facilities is the SC-UPC SingleMode termination with the alternative solution being the SC-UPC MultiMode termination at the POP and Customer Premises as well. SBC has no obligation to construct new demarcation facilities or modify their "as is" facilities except through regulated retail product offerings as specified by State and Federal tariffs as a result of the Telecommunication Act's current obligations and their interpretations by the court and the commissions. The demarcation for Access Services (regulated retail product offerings) is defined in the Demarcation Policy for Access Services Terminated at Other Carrier's Point Of Presence (POP) Locations only. This demarcation policy allows some flexibility for the termination of FiberOptic facilities at Interexchange Carrier sites only; all other customer sites will receive the standard handoff connections specified by tariff.

An Interexchange Carrier (IXC) may request the option of providing and owning the demarcation device using one of the approved connectors listed below only. If the IXC provides

the demarcation device, they may also request the use of a transition jumper to connect to their device from the SBC equipment located at that site using the standard connector. The customer may be charged through the ICB / BFR process if the cost of installing and purchasing the transition jumper is significant. Likewise, if a Wholesale customer requests a non-standard connector at the IXC POP site only, they may do so using the ICB/BFR processes as well.

The transition jumper would have the SC-UPC SingleMode on one end and one of the following alternate approved connectors on the other end, listed below (all others would need to be approved by the SBC technical staff listed above):

LC-UPC, SingleMode

ST-UPC, SingleMode

FC-UPC, SingleMode

Any requests beyond the transition jumper solution for the IXC Point of Presence will be made through Steve Weinert, Associate Director-Network Planning & Engineering (Common Systems), **SBC-13STATE**, (214) 858-1355, E-Mail: sw0872@txmail.sbc.com. Any additional requests will be processed as an ICB/BFR with all costs being paid by the requestor.

4B. Approved SBC Central Office Terminations

The standard arrangement will be the SC-UPC, SingleMode termination within the Central Office. There are exceptions based upon manufacturer small form factor needs and specific products needs that are covered in SBC-002-316-079, SBC Connector/Mode Policy Addendum by Application Services Approval for Use. This addendum will specify the current approved arrangements in accordance with this policy and will be updated as new services are introduced into the PDP/NTI process.

4C. Approved Terminations for the Customer Premises Locations

The standard arrangement will be the SC-UPC, SingleMode or the SC-UPC MultiMode terminations (using a specific service offering) at the Customer Premises as specified by tariff. Specific products and service applications that are approved for use are covered in SBC-002-316-079, *SBC Connector/Mode Policy Addendum by Application Services Approval for Use*. This addendum will specify the current approved arrangements in accordance with this policy and will be updated as new services are introduced into the PDP/NTI process.

4D. Approved Term for Point of Presence IXC (POP) Long Distance Carrier Sites Only

The standard arrangement will be the SC-UPC, SingleMode or the SC-UPC MultiMode terminations (using a specific service offering) at the IXC (POP) as specified by tariff. In addition, the IXC (POP) locations may be provisioned through a transition jumper using a LC-UPC, SingleMode, ST-UPC, SingleMode or FC-UPC, SingleMode at the IXC's request. Specific products and service applications that are approved for use are covered in SBC-002-316-079, *SBC Connector/Mode Policy Addendum by Application Services Approval for Use*. This addendum will specify the current approved arrangements in accordance with this policy and will be updated as new services are introduced into the PDP/NTI process.

4E. FiberOptic Jumper Ordering

Outside Plant-Loop Product Evaluation has standardized on the FiberOptic Jumpers for SBC Corporation and has written the standard in the Product Approval Notice **SBC-PAN-2002-3001**, *FiberOptic Jumpers & In-Line Attenuators for Corporate Use*, dated June 2002.

This PAN establishes the manufacturer by **SBC-13STATE** as follows:

SBC-State	Manufacturer
SBC-California	Corning Cable Systems
SBC-Nevada	Corning Cable Systems
SBC-Texas	Corning Cable Systems
SBC-Missouri	Corning Cable Systems
SBC-Kansas	Corning Cable Systems
SBC-Arkansas	Corning Cable Systems
SBC-Oklahoma	Corning Cable Systems
SBC-SNET	Corning Cable Systems
SBC-Illinois	Alcoa Fujikura Ltd.
SBC-Wisconsin	Alcoa Fujikura Ltd.
SBC-Ohio	Alcoa Fujikura Ltd.
SBC-Michigan	Alcoa Fujikura Ltd.
SBC-Indiana	Alcoa Fujikura Ltd.

5. References

For further information or electronic copies of this document and related information, visit the internal SBC Local Exchange Carrier Web site: <http://ebiz.sbc.com/commonsystems> or <http://apex.sbc.com>

Document	Description	Issue & Date
SBC-002-216-074	SBC-Demarcation Policy for Access Services	Issue 2, June 2001
SBC-002-216-266	SBC-Turn-up and Test for FTTH	Issue 2, Nov 2002
SBC-002-316-043	SBC-FDF Frame Deployment M&P Replaces AM-915-890-953 effective Dec 2001 Replaces AM IL 95-07-017 effective Dec 2001	Issue 3, Dec 2001 Issue 4, Pending Dec 2002
SBC-002-316-053	SBC-Fiber Raceway Deployment M&P	Issue 3, Jan 2002
SBC-002-316-066	SBC-Breakout Bay Deployment in Support of the NORTEL OPTera Connect DX System	Issue 2. May 2002
SBC-002-316-072	SBC-BPON FTTH/FTTB Common Systems Provisioning	Issue 1, Jan 2003
SBC-002-316-078	SBC-Fiber Connector/Mode Policy	Issue 1, Jan 2003
SBC-002-316-079	SBC-Fiber Connector/Mode Addendum by Application Services Approved for Use	Issue 1, Jan 2003
SBC-002-203-001 Section 13	Infrastructure Deployment Guidelines, Transport, Wavelength Division Multiplexing (WDM)	June 2002
SBC-002-203-001 Section 12	Infrastructure Deployment Guidelines, Transport, Fiber Optic Splitters	June 2002
SBC-002-203-001 Section 4	Infrastructure Deployment Guidelines, Transport, Fiber Distribution Frames (FDF)	June 2002
SBC-C-500001-E-00	SBC-13STATE Fiber Raceway Drawings	Current
SBC-E-01110-E	SBC-13STATE Equipment Drawing for the Nortel OPTera Connect DX	Current
SBC-E-01110-W	SBC-13STATE Interconnection Drawing for the Nortel OPTera Connect DX	Current
SBC-E-00136-E	SBC-13STATE Fiber Cable Standards	Current
TP 76200MP-000	Network Equipment – Building Systems (NEBS)	Current
TP 76300MP-000	Installation Guide within the Central Office	Current
TP 76400MP-000	Detail Engineer Requirements for the C.O.	Current
TP 76500MP-000	Common Systems Standards for the SBC Communications Network	Current
F2.1731.01.053	SBC-TRI-BPON FTTH System and Architectural Overview	Jun 2001
RFQ2001000147	SBC RFQ for High Density-Fiber Distribution Frames	Nov 2001
SBC-PAN-2002-3001	SBC Standard for Fiber Jumpers & Attenuators	June 2002
PAN 20021030	SBC-Fiber Breakout Bay Product Approval Notice for the Nortel OPTera Connect DX Platform	Apr 2002
PAN 20011120	SBC-AIT Restricted Approval for AIT only with Sunset Clause for FMDF	Dec 2001
PAN 20021012	Fiber Management Tray (FMT) for Outside Plant	June 2002
PAN 19995259.0002	FDF OSP Panels with Tails/Stubs Standards	June 2002
PAN 19995259.0001	FMT Panels for Central Office Use	June 2002
PAN 19995259	Frames (FDF) and FiberOptic Apparatus	June 1999
PAN 19985043	Fiber Protection Systems (Raceways & Fiber Duct Work)	Aug 1998
BSP 800-003-150MP	SBC-Cable & Wire Installation for Cable Racks and (Fiber) Raceways	Issue 1, Sep 1998
SBC-NOT-000-000-473	SBC-Optical In-Line Attenuators for the FDF	Issue 1, June 2002
SBC-NOT-000-000-346	SBC-FMDF Restricted Use Approval with Sunset Clause Announcement	Dec 2001
FLASH-2001-015	SBC-Construction Support SC-ST Conv. in SWBT	Jun 2001
FLASH OSP-4/23/2002	SBC-Cleaner, Fiber Optic Connector Universal	Apr 2002
SO.520.99.043	TRI-Recommendation to Replace Biconic Connectors	Issue 1, Mar 1999
GR-449-CORE	Telcordia-Fiber Distribution Frames (FDF)	Issue 1, Dec 1999 Issue 2, Pending Jan 2003
ADCP-90-329	ADC-Fiber Breakout Bay Cable Routing Guide	Issue 3, Apr 2002
ADCP-95-007	ADC-FDF Interbay Cross-Connect Wiring Procedures	Jun 1999
ADC/Splitter & WDM Products	ADC-WDM Product Description	Issue 2, Jun 2001
ADC/AOFR	ADC-1310/1533/1557 Wavelength Division Mux/Demux	Issue 1, Aug 1996

6. Contact List

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7. Copyright Page

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Publisher: SBC Services Inc.
Three SBC Plaza, Rm 1610.A4
Dallas, Texas 75202