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AMERITECH UNBUNDLED PORTS TECHNICAL SPECIFICATIONS

All Interested PartiesN/A

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Table of Contents

GENERAL

This document contains service descriptions and related technical information in support of the offering of unbundled end office and tandem office switch ports by Ameritech.

1. INTRODUCTION

1.1. PURPOSE

The intent of this document is to provide customers, service providers, and equipment manufacturers with a description of the service, and operational characteristics and interface descriptions for unbundled local, and tandem office switch ports offered by Ameritech.

1.2. REASON FOR REISSUE

This document is being revised to introduce the Unbundled Local Switching with Shared Transport (ULS-ST) product option and use of Unbundled Local Switching (ULS) as a component of the Unbundled Network Element - Platform (UNE-P), also know in the Ameritech Region as the Combined Platform Offering (CPO).

1.3. UNBUNDLED SWITCH PORTS

Unbundled switch ports allow the connection of an Alternative Service Provider's (ASP's) individual loops to the switching components of Ameritech's network. Switch ports provide access to the basic functionality of the switch, including signaling, digit reception and interpretations, routing and rating, and call supervision. Unbundled switch ports will use the same types of circuitry and will have the same capabilities and quality as the ports used by Ameritech in the provision of bundled services.

2. SERVICE DESCRIPTION

2.1. UNBUNDLED SWITCH PORTS

Unbundled switch ports provide access to the basic features and functionalities of the switch, including signaling, digit reception and interpretations, routing and rating, and call supervision. Unbundled switch ports will use the same types of circuitry and will have the same capabilities and quality as the ports used by Ameritech in the provision of its bundled services.

An unbundled switch port will be either an Unbundled Local Switch (ULS) port or an Unbundled Tandem Switch (UTS) port and consists of the central office switch hardware and software required to permit customers to transport or receive information over the public switched network. Ports provide access to the basic functionality of the switching components of Ameritech's network, including signaling, digit receipt and translations, routing and rating, and call supervision. Dial tone, translations, a telephone number, announcements, and touch-tone are inherent components of the ULS port. All of the features inherent to the switch are provided on a ULS port. (AIN based products are not part of the offering, except for Caller Identification with Name (CNAM). CNAM is provided in Ameritech via AIN rather than switch based TR1188, except in the DMS10 switch.) In addition, a ULS or UTS port includes a termination on the main (or other designated) frame and cabling between the frame and switch line card.

Unbundled Local Switching (ULS) trunk ports are dedicated to a CLEC's use. However, ULS line ports can be used with a switch's existing trunk ports to provide access to Shared Transport (see Unbundled Local Switching with Shared Transport section of this document).

Collocation is required for connection to an Unbundled Local Switch (ULS) port or an Unbundled Tandem Switch (UTS) port. However, collocation is not required for the provision of currently combined ULS-ST port and Unbundled Local Loop, which is known as Unbundled Network Element-Platform (UNE-P) or Combined Platform Offering (CPO) in the Ameritech Region.

The following unbundled switch port types are offered:

Basic exchange/Private Branch Exchange (PBX) loop start

Private Branch Exchange (PBX) ground start

Electronic business service (e.g., P-phone, with or without display)

Basic COPTS (Customer Owned Private Telephone Service) **Not offered with ULS-ST**

Direct Inward Dialing (DID)

Basic rate ISDN direct port

Centrex electronic business service (e.g., P-phone, with or without display) port

Centrex basic port

Centrex attendant port

Centrex ISDN port

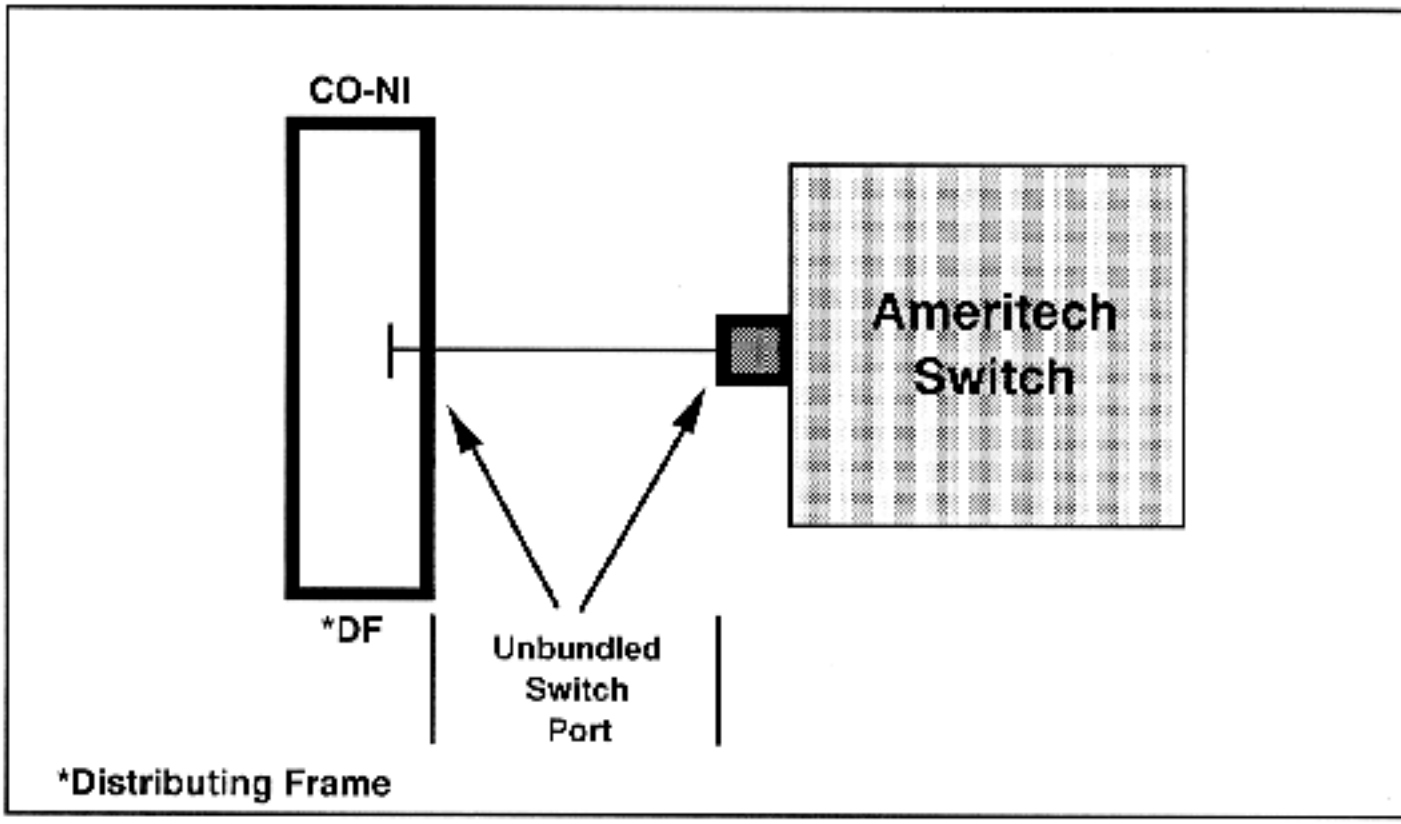
ISDN primary rate port

Digital trunking port

Custom routing trunk port

ULS/DS1 trunk port

Figure 1. Unbundled Switch Port



2.2. UNBUNDLED SWITCH PORT CAPABILITIES

The unbundled switch port provides access to Ameritech's switch functionality and to other public switched networks. The unbundled switch ports are divided into two types of ports: 1) Line Side Ports and 2) Trunk Side Ports.

1. Line Side Ports provide the following types of functions:

On-Hook and Off-Hook Detection

Dial Tone

Digit Reception and Interpretation (Dial Pulse or Dual Tone Multifrequency (DTMF))

Network Call Routing to the called telephone number

Audible Ringing and Power Ringing

Automatic Message Accounting (AMA) Recording

Disconnect Detection

Access to Ameritech's switch based services and features

2. Trunk Side Ports provide the following types of functions:

Digit Pulsing [Dial Pulse (DP), Dual Tone Multifrequency (DTMF) and Multifrequency (MF)]

Digit Reception and Interpretation

Network Routing toward terminating telephone number

Answer Detection and Supervision Signaling

2.3. UNBUNDLED LOCAL SWITCHING W/ SHARED TRANSPORT (ULS-ST)

Unbundled Local Switching (ULS) has an option that provides access to Shared Transport (ULS-ST). Shared transport is defined as the transmission facilities shared by more than one carrier, including the incumbent LEC, between the following switches in the incumbent LEC's network: end office to end office, end office to tandem, and between tandems. ULS-ST permits the Competitive Local Exchange Carrier (CLEC) to access the interoffice network of Ameritech for the origination and completion of calls to and from ULS ports to Ameritech end office switches or to other third-party switches. Shared transport is a component of ULS ports, which in turn can be a component of the UNE-P/CPO. Existing Ameritech routing tables contained in Ameritech switches will be used to provide ULS-ST. Through the use of originating and terminating AIN line triggers, ULS-ST provides local (originating and terminating) and access (originating and terminating) usage detail for the CLEC to bill their end users and perform billing settlements with respective carriers.

Unbundled Local Switching (ULS) is available with full customized routing using uniquely defined switch routing per port type (see Unbundled Local Switching Custom Routing section of this document) or with standard routing using existing switch routing of calls that is shared by all users of the port type such as retail, resale or unbundled. A CLEC can order custom routing for all Operator Services (OS) traffic, all Directory Assistance (DA) traffic, or all traffic via ULS Custom Routing. However, a CLEC cannot mix the use of ULS with Shared Transport and ULS

with custom routing in any end office switch. The only exception is when a CLEC that subscribes to ULS-ST chooses to custom route OS and/or DA traffic over a dedicated transport.

This option of ULS-ST with custom routing of OS or DA calls will utilize the Advanced Intelligent Network (AIN) originating trigger to invoke service logic capable of routing the local OS/DA calls to the CLEC's chosen Unbundled trunk port and unique or dedicated transport. This service will be provided on the existing AIN platform and Service Switching Point (SSP) software will be used on all switch types. Use of this unique OS/DA routing option requires that a port and trunk group be designated for each Number Plan Area (NPA) to be served with an end office switch's Unbundled Local Switching line ports. Use of ULS-ST without the unique OS/DA option will deliver all OS/DA calls to Ameritech's OS/DA platform where the corresponding SPID Branding product should be used to uniquely identify the arriving calls (i.e. Custom OS/DA Branding).

2.4. UNBUNDLED LOCAL SWITCHING (ULS) CUSTOM ROUTING

The ULS custom routing provides standard line class code routing as well as technically feasible custom routing guides and line class codes for the end office switch. This custom routing is designed to route calls from line ports or trunk ports to specific line ports or trunk groups by the class of call as well as to Ameritech's traditional services. For line side routing, the routing class of service directs the rating and screening. The digit interpretation is used to determine a call type. This call type differentiates the route to either an Inter exchange Carrier or to an intra office or interoffice location.

Each telephone number must be identified with accompanying entries for class of call and the rate center. The contents of these two attributes with screening information and traditional digit analysis are used as the "combined key" to find the appropriate call routing class of service.

For trunk side routing, the routing class of service directs the rating and screening for the route. This screening may be in the form of routing to a specific trunk group. Specialized routing may be employed when the call is routed to either reorder or an announcement.

The ULS custom routing can restrict or allow call completion to selected NXX codes (e.g., 900 or 976 NXX calls).

2.5. UNBUNDLED TANDEM SWITCHING (UTS)

Unbundled Tandem Switching (UTS) provides standard translations using routing guides and class codes to determine the routing through the tandem switch.

This tandem switch routing is designed to route calls from trunk ports or groups to specific trunk ports or groups by the class of call as well as to Ameritech's traditional services. This screening may be in the form of routing to a specific trunk port or group. Specialized routing may be requested (from CLEC via Bona Fide Request process) to route calls to either reorder or an announcement.

If the office is an Access Tandem, translations can interpret impulsed digit and specify routing to or from IXCs or subtending End Offices.

3. PROVISIONING

Unbundled switch ports are provisioned using Ameritech's operational support systems. These ports will be provisioned the same as ports used by Ameritech.

4. NETWORK CHANNEL AND NETWORK CHANNEL INTERFACE CODES

4.1. GENERAL

Network Channel (NC) codes describe, in standard format, the characteristics of the service channel. Network Channel Interface (NCI) codes describe the physical and electrical characteristics of the NI. These coding schemes are fully described in Bellcore Special Report SR-STS-000307, Industry Support Interface (ISI): NC/NCI Code Dictionary. The codes shown in this document have either been approved by the Bellcore chaired NC/NCI Common Language Organization, or approval has been requested.

NC/NCI codes below only reflect requirements for ULS switch ports. When ULS-ST ports are used with UNE-P/CPO, different NC/NCI codes may apply (refer to corresponding CPO ordering guide on CLEC website).

4.2. NC CODES

The NC codes currently available for unbundled switch ports are shown in Table A .

Table 1.
Table A - NC Codes

NC Code	Option Code Char 3	Option Code Char 4
SB	U Interlec Trunking	C End Office to E911 TDM D Local TDM to E911 TDM
SD	V Local Service	A Intterend Office (SS-7) B Intterend Office (MF) D Tandem Connect (SS-7) E Tandem Connect (MF)
	W Toll Service	A Tandem Connect (SS-7) B Tandem Connect (MF)
	X Assistance	B Directory Assistance (MF) E Operator Assistance (MF)
SN	A (2W) B (4W)	L Line Term T Trunk Term W TWLT *
UC	G CO Switching Function	L Line Term T Trunk Term W TWLT *
UD	G CO Switching Function	L Line Term T Trunk Term W TWLT

* Trunk With Line Treatment

4.3. NCI CODES

NCI codes describe the NI. Table B shows the currently available NCI codes for unbundled switch ports.

Table 2.
Table B - NCI Codes

NCI Code	Description
CO-NI	
02QC3.OOE	Loop Start Signaling
02QC3.OOC	Ground Start Signaling
02QC3.RVO	Reverse Battery Signaling
02QC3.RVT	Reverse Battery Signaling
04QC3.E1A	E&M Signaling
04QC3.M1A	E&M Signaling
02QC1.OOR	Electronic Business Set Interface, 8 KHz ASK Signaling
02QC5.OOS	ISDN BASIC
02QC3.OOT	Coin - Tone Controlled
02QC3.OOU	Coin - Battery Controlled

4.4. SWITCH PORT COMPATIBLE TLP RANGES AT THE CO-NI

Table 3.
Switch Port Transmission at the CO-NI

Protocol Code	Transmit Level	Receive Level
DX, EM, GO, GS, LO, LS, RV, NO	0.0dB	0.0dB to - 10dB

5. REFERENCES

1. Bellcore Technical Reference, FR-NWT-000064, LATA Switching Systems Generic Requirements (LSSGR).

2. Bellcore Special Report, SR-TSU-002275, Issue 1, March 1991. BOC Notes on the LEC Network - 1990.

3. Bellcore Technical Reference, TR-NWT-000334, Switched Access Service: Transmission Parameter Limits and Interface Combinations.

4. AM TR-NIS-000099 , Issue 3, August 1993, Ameritech's Caller ID, Caller ID with Name and Visual Message Waiting Indicator.

5. AM TR-TMO-000080 , Issue 2, June 1993. Ameritech Services Network Channel and Network Channel Interface Codes - General Availability.

6. Code of Federal Regulations, Section 47, Part 68 Connection of Terminal Equipment to the Telephone Network.

7. Bellcore Special Report ST-STS-000307, Industry Support Interface (ISI); NC/NCI Code Dictionary

6. ORDERING INFORMATION

To order specific documents, contact:

Ameritech Services

Information Manager, 3A09F

2000 W. Ameritech Center Drive

Hoffman Estates, IL 60196-1025

OR

Bellcore Documents may be ordered directly from:

Bellcore

Customer Relations

8 Corporate Place, Room 184A

Piscataway, NJ 08854-4156

800-521-CORE (2673) USA and Canada, (908) 699-5800 (all others)

OR

ANSI Documents may be ordered directly from:

American National Standards Institute

Attn: Customer Service

11 West 42nd Street

New York, NY 10036

(212) 642-4900

Readers are advised to check current status availability of all documents.