Ameritech

AM-TR-NIS-000118

Ameritech's Analog Display Services Interface (ADSI) Feature Download

Reference material to CPE vendors for Ameritech's ADSI Network Interface Specification

To: CPE Vendors

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Related Documents: FR-NWT-000012 (which includes: SR-TSV-002727; TR-NWT-001273, Issue 1; TR-NWT-000030, Issue 2; SR-INS-002461, Issue 1; SR-TSV-002476, Issue 1; SR-TSV-002697, Issue 1, SR-NWT-002495, Issue 1; SR-TSV-002578, Issue 1.); TR-NWT-000575, Issue 1, and AM-TR-NIS-000099, Issue 3.

Canceled Documents: N/A

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Table of Contents

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1.   INTRODUCTION

1.1.   General

This document describes the technical network interface specification for Ameritech's Analog Display Services Interface (ADSI) Feature Download. Once an Ameritech customer has received the Ameritech Feature Download using the ADSI to the customer's ADSI compatible CPE, the customer will be able to more easily use Ameritech's basic customer features. Examples might include (subject to the needs of Ameritech's customers) Call Forwarding, Three Way Calling, Automatic Callback and Repeat Dialing.

The Ameritech customer will normally only be connected to the Ameritech ADSI Server once near the approximate time of purchase (and on rare occasions if the ADSI CPE should loss it's feature load). Once the customer has disconnected from the Ameritech ADSI Feature Download, the customer will be able to, under the direct control of the ADSI CPE, view a menu of Ameritech basic feature options and choose to use the feature by simply depressing a softkey on the ADSI compatible CPE.

The ADSI compatible CPE will use normal network signaling to interact with the Ameritech Public Switched Network. Examples of ADSI CPE generated signals would be DTMF, Switch Hook Flashes, Disconnects, etc.

1.2.   Reasons For Reissue

{If Ameritech should decide to implement any future ADSI enhancements, this document will be reissued and the reason for the reissue will be outlined in this section.}

2.   AMERITECH'S FEATURE DOWNLOAD

2.1.   Purpose

Ameritech's Feature Download service allows a customer with ADSI compatible Customer Premises Equipment (CPE) to receive a one time (with some exceptions) download of a default service script using the ADSI. This default service script, once downloaded to the ADSI CPE and once disconnected from the Ameritech ADSI Server, will allow the Ameritech customer to see display screens on the ADSI CPE and the Ameritech customer can provide responses to the ADSI CPE using softkeys. With Ameritech's default service script loaded in the ADSI CPE, the customer has visual support for the customer's use of Ameritech's basic telephone services.

2.2.   *Capabilities*

The Analog Display Services Interface is described in Bellcore's TR-NWT-001273, Issue 1, December 1992, "Generic Requirements for an SPCS to Customer Premises Equipment Data Interface for Analog Display Services", and TR-1273 Technical Bulletins 1, 2 and 3. Compatibility guidelines for ADSI CPE are described in Bellcore's companion to TR-1273, SR-INS-002461, Issue 1, December 1992, "Customer Premises Equipment Compatibility Considerations for the Analog Display Services Interface", and SR-2461 Technical Bulletins 1, 2 and 3. the ADSI is an expansion of the Bellcore TR-NWT-000030, Issue 2, analog interface.

The Bellcore ADSI TR has several possible enhancements that can be considered for future development (i.e. Switch to Peripheral [TR-1273, Section 4.1, Part I], Switch to Alternate Character Sets [TR-1273, Section 4.1, Part s], Switch to Graphics Mode [TR-1273, Section 4.1, Part t]) which Ameritech will not be implementing as part of this offering.

This interface focuses on the enabling capability (Default Feature Download) which allows ADSI CPE to simplify interactions with Ameritech's basic network services. In addition, since ADSI is a generic protocol, it is expected that other providers may also use this capability to simplify interactions with their services. This is done transparently to Ameritech's public switched network.

The Ameritech customer with ADSI compatible CPE can place a telephone call to the Ameritech ADSI Server. When successfully connected to the Ameritech ADSI Server, the ADSI compatible CPE will receive an Ameritech default Feature Download.

3.   TR-1273 INTERFACE

3.1.   *Physical Network Interface*

The physical Network Interface (NI) is the point of connection between the Ameritech ADSI Server equipment and the ADSI CPE provided by the customer. Interconnection from the Ameritech ADSI Server is the ADSI CPE is via a standard voice grade dial up analog telephone connection over the public switched network.

Figure 1 shows a typical ADSI Feature Download arrangement.

Quoting from Bellcore's SR-TSV-002727, "ADSI Guide" for the Family of Requirements (FR-12):

"TR-1273, discusses ADSI protocol (the three layers [Physical Layer, Datalink Layer, Message Layer]) and standard ADSI data message parameters. Use for general understanding of ADSI and its protocol. The abstract CPE is introduced and salient functionality is described along with each of the corresponding data messages of the ADSI protocol.

TR-30, can be used to gain an understanding of ADSI and its protocol. It describes the standard modem-based technology from an SPCS to a CPE, which was extended for the ADSI. It provides some of the lower-layer requirements for the ADSI protocol."

The ADSI Protocol Physical Layer is responsible for the transmission of the physical data units between the Ameritech Server's modem and the customer's ADSI compatible CPE modem across the network interface. This layer is also responsible for the physical, electrical and transmission requirements of DTMF signaling and Frequency Shift Keying (FSK) signaling for ADSI.

Details for the Physical Layer can be found in Bellcore's TR-1273 (with references to Bellcore's TR-30) in Section 3.1.

Figure 1. Typical Analog Display Services Interface (ADSI) Script Download Arr.
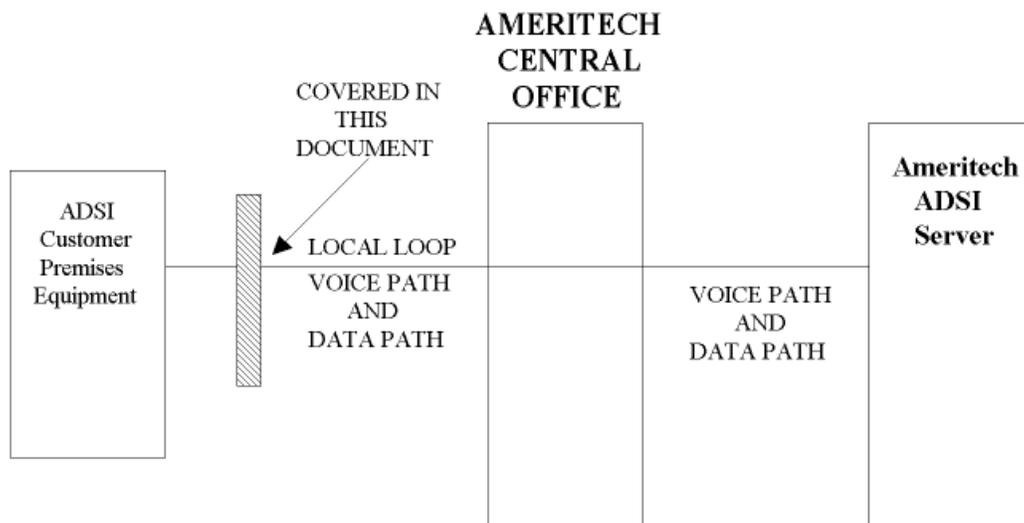
3.2. Datalink Layer

The Datalink Layer provides reliable data transmission between the Ameritech Server and the customer's ADSI compatible CPE. This layer establishes and releases the datalink connections and detects transmission errors.

Details for the Datalink Layer can be found in Bellcore's TR-1273 (with references to Bellcore's TR-30) in Section 3.2.

3.3.   *Message Layer*

The Message Layer covers the character set and data codes which are used and the way the data should be displayed on the customer's ADSI compatible CPE.

Details for the Message Layer can be found in Bellcore's TR-1273 (with references to Bellcore's TR-30) in Section 3.3.

4.   REFERENCES

1.   FR-NWT-000012, Family of Requirements: Analog Display Services Interface (ADSI) (which includes SR-TSV-002727; TR-NWT-001273, Issue 1, with Technical Bulletins; TR-NWT-000030, Issue 2; SR-INS-002461, Issue 1, with Technical Bulletins; SR-TSV-002476, Issue 1; SR-TSV-002697, Issue 1; SR-NWT-002495, Issue 1, with Technical Bulletins; SR-TSV-002578, Issue 1)

2.   TR-NWT-000575, Issue 1, October 1992, "Calling Identity Delivery with Call Waiting."

3.   SR-NWT-002024, Issue 1, April 1992, "Customer Premises Equipment Compatibility Considerations for the SPCS-to-CPE Data Transmission Interface."

4.   TR-NWT-001188, Issue 1, December 1991, "CLASS Calling Name and Delivery Generic Requirements."

5.   TR-TSY-000031, Issue 3, January 1990, "CLASS Feature: Calling Number Delivery."

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

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