
STANDARDS PROJECT: HDSL2

TITLE: HDSL2 Standards Project Proposal

SOURCE: Ameritech

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DATE: December 8, 1997 - Sacramento Ca.

DISTRIBUTION TO: T1E1.4

ABSTRACT:

T1E1's work towards a HDSL2 standard requires a suitable standards project. T1E1 currently has two approved HDSL-related project: 1) The HDSL Study Project, which is not chartered to develop a standard, and 2) the Single Pair HDSL Standards project which is restricted to the rate of 768 kb/s. Thus, a new project is needed to address a HDSL2 standard for the 1.544 Mb/s bit rate, and other rates. T1E1.4 is asked to review the attached Committee T1 Project Proposal, for possible recommendation to T1E1 for letter ballot.

NOTICE

This contribution has been prepared to assist Standards Committee T1 - Telecommunications. This document is offered to the Committee as a basis for discussion and is not a binding proposal on Ameritech Services. The requirements are subject to change in form and numerical value after further study. Ameritech Services specifically reserves the right to add to, amend, or withdraw the statements contained herein.

Standards Committee T1 - Telecommunications
Project Proposal

1. Project Identification

1.1 Title

Standards project for Twisted Wire Pair Interface for Next Generation High bit-rate Digital Subscriber Line (otherwise referred to as HDSL2) Transmission Technology

1.2 Submitted by

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1.3 Date

December 8, 1997

2. Description

2.1 Description of Proposed Project

This project will develop an ANSI standard for the Twisted Wire Pair Interface for Next Generation High bit-rate Digital Subscriber Line (HDSL2) Transmission Technology. A twisted wire pair interface with a symmetric line rate in the approximate range of 256 kb/s to 2.5 Mb/s will be defined. Particular attention will be given to the transport of a 1.544 Mb/s payload. The HDSL2 standard will specify all layer one aspects required to ensure compatibility between different equipment. These aspects include the bit rates, transmission method, line code, pulse shape, frame structure, embedded operations channel, start-up procedure, and maintenance and operations functionality.

2.2 Proposed Program of Work

This standards project will maintain consistency with the results of the TIE1 HDSL Study Project. It will utilize the findings and recommendations of the Study Project to develop a standard for HDSL2 transmission technology, including a complete specification of the signals transmitted by the transceivers at both ends of the line. The standard will attempt to ensure compatibility between different implementations.

The resulting HDSL2 standard shall assure spectral compatibility with existing DSL systems including: ADSL, ISDN-BRI, DDS, and existing HDSL.

2.2.1 Work Products

A standard based on HDSL2 technology.

2.2.2 Milestones

<u>Milestone</u>	<u>Target Date</u>
Project Approved by Committee T1	2Q98
Draft Standard Ready for TSC Ballot	3Q98
Standard Approved by Committee T1	4Q98
Standard Approved by ANSI	1Q99

2.3 Project Assignment and Resources

2.3.1 Technical Subcommittee Assignment

It is recommended that this project be assigned to TSC T1E1

2.3.2 Technical Subcommittee Resources

TSC T1E1 currently has a Study Project on HDSL. The participants in this Working Group have the requisite knowledge of the technology to develop a transmission technology standard.

2.3.3 External Resources Required

None anticipated

3. Justification of Need for the Proposed Project

3.1 Description of Need

HDSL2 technology offers significant potential benefits for both Telecommunications Service Providers and their Customers. With HDSL2 it is not necessary to locate regenerative repeaters in locations such as manholes which are difficult to service and maintain. Carriers will be able to provision services (e.g.: interactive video communications, remote learning, fractional DS1, image transmission, LAN interconnection multimedia, and advanced database services) more rapidly.

3.2 Existing Standards for Practices

There are no existing ANSI standards for Metallic transmission based on HDSL or HDSL2. T1E1.4

currently has a Study Project on HDSL. The results that have been achieved in the study project should be utilized in this standards project.

4. Related Standards Activity

4.1 Other T1 Technical Subcommittees

Liaison should be initiated with TIM1 on maintenance issues.

4.2 Other Domestic Standards Activities

Liaison with other US committees will be undertaken if the need arises.

4.3 International Standards Activities

ETSI TM6 and ITU SG 15 develops Reports and Recommendations on Digital Transmission. As progress is made within this project, consideration should be given to ETSI TM6 and ITU SG 15 Question 4.