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STRUCTURE AND REPRESENTATION OF TRACE MESSAGE FORMATS FOR INFORMATION EXCHANGE

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ATIS-0300269.2006, *Structure and Representation of Trace Message Formats for Information Exchange*

Is an American National Standard developed by the **Coding and Language Data Representation (CLDR) Subcommittee** under the **ATIS Telecom Management and Operations Committee (TMOC)**.

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American National Standard for Telecommunications

STRUCTURE AND REPRESENTATION OF TRACE MESSAGE FORMATS FOR INFORMATION EXCHANGE

Secretariat

Alliance for Telecommunications Industry Solutions

Approved August 14, 2006

American National Standards Institute, Inc.

Abstract

This standard provides the specifications for trace message formats. This standard contains sections that cover its purpose and scope, and describe data elements, code structures, and applications. It also contains definitions and references.

FOREWORD

The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

This document is entitled *Structure and Representation of Trace Message Formats for Information Exchange*. This American National Standard provides the code and format structure necessary for representing trace message formats. This standard contains sections that cover the purpose and scope of this information.

This standard provides a common trace message format for SDH and SONET. There is no distinction between path/Tandem Connection/section or SDH/SONET trace message structures. This standard addresses 1, 16, and 64-byte trace message structures, applicable to SONET and SDH. Application of this standard to optical networks is for further study.

The code structure and format portion of this standard is compatible with ITU G.831, which supports the use of either ITU-T Recommendation E.164 numeric codes or ISO 3166 alphabetic codes to describe the terminating country in the first one, two, or three significant bytes of the Access Point Identifier (API). The format for the remaining bytes of the 16-byte format provides options that allow for:

- E.164 International Dialing Plan;
- Identification of the international carrier/network operator;
- Identification of the regional/national carrier/operator; and
- Identification of the regional/national physical location entity that corresponds to the access point.

The format for the remaining bytes of the 48 bytes of the full 64-byte format provides options that allow for:

- Description of the source/origination location, or equipment detail (for auto-discovery);
- Sink/termination location;
- Facility function; and
- Facility serial number using standardized international (ITU-T Recommendation M.1400) and/or regional/national designations.

The additional capabilities of regional/national standards (e.g., the description of the Channel/Pair/Time Slot of a facility within T1.238-2003) can also be supported within the 64-byte format.

This standard contains two annexes. Annex A, *CRC-7 polynomial algorithm for 16/64 byte trace message*, is normative and Annex B, *64-byte message structure that contains carriage return (CR), line feed (LF) characters as message separators*, is informative.

The Alliance for Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The Telecom Management and Operations Committee (TMOC) – formerly T1M1 -- develops operations, administration, maintenance and provisioning standards, and other documentation related to Operations Support System (OSS) and Network Element (NE) functions and interfaces for communications networks - with an emphasis on standards development related to U.S. communication networks in coordination with the development of international standards.

ANSI guidelines specify two categories of requirements: mandatory and recommendation. The mandatory requirements are designated by the word *shall* and recommendations by the word *should*. Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages.

Suggestions for improvement of this document are welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, TMOC Secretariat, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time it approved this document, TMOC, which is responsible for the development of this Standard, had the following members:

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The Coding and Language Data Representation (CLDR) Subcommittee was responsible for the development of this document.

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