ATIS-0300097.2017

Structure for the Identification of Communications Connections for Information Exchange

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American National Standard for Telecommunications

Structure for the Identification of Communications Connections for Information Exchange

Alliance for Telecommunications Industry Solutions

Approved June 9, 2017

American National Standards Institute, Inc.

Abstract

This standard provides the code and format structures necessary for identification of communications connections and describes the code structures with various combinations of data units represented within those structures. This standard contains clauses that cover its purpose and scope, described format structures and data elements for message trunks and message trunk groups, special services circuits, and facilities. It also contains definitions and references. Its intended use is to provide a standard that facilitates information exchange among humans and machines.

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.

The Alliance for Telecommunications 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 Systems (OSS) and Network Element (NE) functions and interfaces for the communications networks – with an emphasis on standards development related to U.S.A. communication networks in coordination with the development of international standards.

These codes are recognized as the de facto industry standards for information exchange. The code structure and format portion of this standard is compatible with the CLCI™ MSG and CLCI™ S/S code designs for the identification of circuits as well as CLFI™ for the identification of facilities. They are embedded in records for inventory management, capacity management, network and traffic routing, and trouble management/resolution, among others. They are also in widespread use in information exchange on ordering, provisioning, billing, and service assurance records within the industry.

ANSI guidelines specify two categories of requirements; mandatory and recommendation. The mandatory requirements are designated by the word *shall* and recommendation 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.

This standard contains two annexes which are for information only and is not considered part of this standard.

Suggestions for improvement of this standard are welcome. These should be sent to the Alliance for Telecommunications Industry Solutions, TMOC, 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 leadership:

M. Usry, TMOC Chair and Technical Editor (iconectiv)

Trademark Acknowledgments

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1 Scope & Purpose

This standard addresses the code and format structures for both circuit connections as well as facility connections. Both types of connections are depicted through seven application specific combinations of data unit representation (four format structures). The seven format structures are:

- Message trunk circuits.
- Message trunk groups.
- Special services circuits.
- Cable facilities.
- Cable facilities with pair identification.
- Carrier facilities.
- Carrier facilities with channel/time slot identification.

This standard is intended to support various intercompany processes for both humans and machines as it relates to business supporting functions. Some example applications include:

- *Planning, Forecasting, and Reporting.*
- *Engineering and Inventory Management*: Circuit/Design Layout Records (CLR/DLR).
- *Ordering*: Access/Local Service Request (ASR/LSR), Firm Order Confirmation (FOC).
- *Service Order/Work Order Processing.*
- *Billing*: Carrier Access (CABS).
- *Trouble Administration.*

This standard also outlines the responsibilities of the maintenance agent.

2 Normative References

The following standard contains provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

47 CFR § 52.7, *Code of Federal Regulations, Numbering, Administration, Definitions*.[1]

ATIS-0300251, *Structure for the Representation of Service Providers for Information Exchange*.[2]

ATIS-0300253, *Structure for the Representation of Location Entities for Information Exchange*.[3]

CFR Recommendation ITU-T E.164 (11/2010), *The international public telecommunication numbering plan*.[4]

3 Definitions, Abbreviations, & Acronyms

For a list of common communications terms and definitions, please visit the *ATIS Telecom Glossary*, which is located at < http://www.atis.org/glossary >.

3.1 Cable: A bound or sheathed group of individually insulated optical or electrical conductors.

3.2 Carrier Facility System: A transmission facility that provides several communication channels over a single bidirectional path. A carrier facility system generally consists of multiplex function at two terminal locations and an interconnecting path consisting of: (1) a higher-level facility system; (2) a facility assembly; or (3) combinations of carrier facility systems and facility assemblies.

3.3 Channel: A unit of assignable inventory within a carrier facility system. Channels may sometimes be referred to as *assignment slots* or *time slots*.

3.4 Code Structure: The basic characteristics of a code; its length and generic representation.

3.5 Data: A representation of facts, concepts, or instructions that are collected, organized, recorded, processed, and stored in a retrievable form suitable for communication, interpretation, or processing by human or automated means. [This definition refers to a group of facts taken as a unit; thus it is used with a singular verb.]

3.6 Data Composite: A collection of data elements treated as a unit.

3.7 Data Element: A single unit of data that in a certain context is considered indivisible. It cannot be decomposed into more fundamental segments of data that have useful meanings within the business.

3.8 Data Unit: A single kind of data for which the identification and description are identical for all occurrences. It may be a data element or a data composite.

3.9 Delimiter: Values which provide a means to identify the beginning and end of adjacent fields for mechanized systems, and to simplify overall code readability. While the specific values may differ from system to system, acceptable values are either an asterisk (*), virgule (/), or a period (.).

3.10 Facility: A physical or derived communications path between two locations, which can be intraoffice as well as interoffice. A facility is bounded by its transmission signal input to its equivalent transmission signal output, or its

[1] This document is available from the U.S Government Printing Office (GPO). < http://www.ecfr.gov/ >

[2] This document is available from the Alliance for Telecommunications Industry Solutions (ATIS) at < https://www.atis.org/docstore/product.aspx?id=26148 >.

[3] This document is available from ATIS at < https://www.atis.org/docstore/product.aspx?id=25679 >.

[4] This document is available from the International Telecommunication Union (ITU). < http://www.itu.int/rec/T-REC-E.164/en >