



ATIS-0300240.2014 (R2020)

OPERATIONS, ADMINISTRATION, MAINTENANCE, AND PROVISIONING  
(OAM&P) – GENERIC NETWORK INFORMATION MODEL FOR  
INTERFACES BETWEEN OPERATIONS SYSTEMS AND NETWORK ELEMENTS

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## ATIS-0300240.2014, *Operation, Administration, Maintenance, and Provisioning (OAM&P) – Generic Network Information Model for Interfaces between Operations Systems and Network Elements*

Is an American National Standard developed by the **ATIS Telecom Management and Operations Committee (TMOC)**.

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American National Standard for Telecommunications

# Operations, Administration, Maintenance, and Provisioning (OAM&P) – Generic Network Information Model for Interfaces between Operations Systems and Network Elements

Alliance for Telecommunications Industry Solutions

Approved March 7, 2014

American National Standards Institute, Inc.

## Abstract

This standard is part of a series of standards that specifies interface requirements for the interface between Operations Systems (OSs) and Network Elements (NEs), describing a generic network model needed to develop Operations, Administration, Maintenance and Provisioning (OAM&P) application message standards for modern telecommunications networks. The term, *generic*, is used in this document to imply that the managed object classes and their properties described are applicable across different telecommunications technologies (e.g., SONET, ISDN) for the various OAM&P functions defined in ATIS-0300210. The major focus of this standard is alignment with the set of standardization efforts in ITU-T and ISO in the area of Network Management.

## Foreword

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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.

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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 identified 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, 1200 G Street NW, Suite 500, Washington, DC 20005.

At the time of consensus on this document, TMOC, which was responsible for its development, had the following leadership:

- T. Barrett, TMOC Chair (AT&T)
- S. Kiewel, TMOC Vice Chair (Ericsson)
- T. Barrett, Technical Editor (AT&T)

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American National Standard for Telecommunications –

# Operations, Administration, Maintenance, and Provisioning (OAM&P) – Generic Network Information Model for Interfaces between Operations Systems and Network Elements

## 1 Scope, Purpose, & Application

### 1.1 Scope

This standard is part of a series of standards that specifies interface requirements for the interface between Operations Systems (OSs) and Network Elements (NEs). It describes a generic network model needed to develop Operations, Administration, Maintenance, and Provisioning (OAM&P) application message standards for modern telecommunications networks. The term, *generic*, is used in this document to imply that the managed object classes and their properties described are applicable across different telecommunication technologies (e.g., SONET, ISDN) for the various OAM&P functions defined in ATIS-0300210. The major focus of this standard is alignment with the set of standardization efforts in ITU-T and ISO in the area of Network Management:

- *Structure of Management Information – Guidelines for the definition of managed objects* [ITU-T Recommendation X.722:1992].
- *Generic Network Information Model* [ITU-T Recommendation M.3100:2005].
- *Conformance Statement Proformas for Rec. M.3100, Generic Network Information Model* [ITU-T Recommendation M.3101:2005].
- System Management functions [ITU-T Recommendations X.730:1992, X.731:1992, X.733:1992, X.734:1992 and X.735:1992].

The alignment effort consists of:

- a) Adopting the relevant definitions in ITU-T Recommendation M.3100, where appropriate;
- b) Adopting the relevant definitions in ITU-T Recommendation M.3101, where appropriate;
- c) Adopting the relevant definitions from the set of System Management Function (SMF) documents, where appropriate; and
- e) Addressing in separate documents those aspects of the version 1 model that relate to the PDH transmission hierarchy.

It is the intention of this standard to continue to use and align with Open Systems Interconnection (OSI) management standards, where appropriate.

### 1.2 Purpose

Current telecommunications networks are populated by a large and increasing number of OSs and NEs supplied by different vendors. Both the number and variety of networks and services have grown, creating a diversity of network management needs. This growth has resulted in the proliferation of unique communication interfaces between OSs and NEs. The telecommunications industry stands to benefit from standardization of these interfaces, designed to