



**ATIS-0100012.2019**

## **Standard Outage Classification**



As a leading technology and solutions development organization, the Alliance for Telecommunications Industry Solutions (ATIS) brings together the top global ICT companies to advance the industry's most pressing business priorities. ATIS' nearly 200 member companies are currently working to address the All-IP transition, 5G, network functions virtualization, big data analytics, cloud services, device solutions, emergency services, M2M, cyber security, network evolution, quality of service, billing support, operations, and much more. These priorities follow a fast-track development lifecycle — from design and innovation through standards, specifications, requirements, business use cases, software toolkits, open source solutions, and interoperability testing.

ATIS is accredited by the American National Standards Institute (ANSI). The organization is the North American Organizational Partner for the 3rd Generation Partnership Project (3GPP), a founding Partner of the oneM2M global initiative, a member of the International Telecommunication Union (ITU), as well as a member of the Inter-American Telecommunication Commission (CITEI). For more information, visit [www.atis.org](http://www.atis.org).

---

## AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires review by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made towards their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

**CAUTION NOTICE:** This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

---

## Notice of Disclaimer & Limitation of Liability

The information provided in this document is directed solely to professionals who have the appropriate degree of experience to understand and interpret its contents in accordance with generally accepted engineering or other professional standards and applicable regulations. No recommendation as to products or vendors is made or should be implied.

NO REPRESENTATION OR WARRANTY IS MADE THAT THE INFORMATION IS TECHNICALLY ACCURATE OR SUFFICIENT OR CONFORMS TO ANY STATUTE, GOVERNMENTAL RULE OR REGULATION, AND FURTHER, NO REPRESENTATION OR WARRANTY IS MADE OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. ATIS SHALL NOT BE LIABLE, BEYOND THE AMOUNT OF ANY SUM RECEIVED IN PAYMENT BY ATIS FOR THIS DOCUMENT, AND IN NO EVENT SHALL ATIS BE LIABLE FOR LOST PROFITS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. ATIS EXPRESSLY ADVISES THAT ANY AND ALL USE OF OR RELIANCE UPON THE INFORMATION PROVIDED IN THIS DOCUMENT IS AT THE RISK OF THE USER.

NOTE - The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to whether use of an invention covered by patent rights will be required, and if any such use is required no position is taken regarding the validity of this claim or any patent rights in connection therewith. Please refer to [<http://www.atis.org/legal/patentinfo.asp>] to determine if any statement has been filed by a patent holder indicating a willingness to grant a license either without compensation or on reasonable and non-discriminatory terms and conditions to applicants desiring to obtain a license.

---

## ATIS-0100012.2019, *Standard Outage Classification*

Is an American National Standard developed by the ATIS **Network Reliability Steering Committee (NRSC)**.

*Published by*

**Alliance for Telecommunications Industry Solutions**  
**1200 G Street, NW, Suite 500**  
**Washington, DC 20005**

Copyright © 2019 by Alliance for Telecommunications Industry Solutions  
All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher. For information contact ATIS at 202.628.6380. ATIS is online at < <http://www.atis.org> >.

American National Standard for Telecommunications

## **STANDARD OUTAGE CLASSIFICATION**

Secretariat

**Alliance for Telecommunications Industry Solutions**

July 19, 2019

**American National Standards Institute, Inc.**

### **Abstract**

This Standard provides a standard on the classification of outages for use by the telecommunications industry.

## 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 Telecommunication Industry Solutions (ATIS) serves the public through improved understanding between carriers, customers, and manufacturers. The ATIS Network Reliability Steering Committee (NRSC) was formed at the request of the first Network Reliability Council (NRC-1) to monitor network reliability. NRSC is a consensus-based industry committee that analyzes the communications industry's reporting of network outages, makes recommendations aimed at improving network reliability, distributes the results of its findings to industry, and, where applicable, refers matters to appropriate industry forums for further resolution. The NRSC also reviews regulatory developments affecting network reliability and submits consensus-developed comments on matters of common interest to NRSC members.

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, NRSC Secretariat, 1200 G Street NW, Suite 500, Washington, DC 20005.

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

Andy Gormley, NRSC Co-Chair  
Andis Kalnins, NRSC Co-Chair  
Melvin Gail Linnell & Rick Canaday, NRSC Technical Editors

**TABLE OF CONTENTS**

---

**INTRODUCTION/EXECUTIVE SUMMARY ..... 1**

**1 SCOPE, PURPOSE AND APPLICATION ..... 1**

**2 NORMATIVE REFERENCES ..... 1**

**3 ABBREVIATIONS & ACRONYMS ..... 1**

**4 CLASSIFICATION OF OUTAGE CAUSE..... 2**

    4.1 OUTAGE CAUSE CATEGORIES ..... 2

*Category 1: What failed in order to cause the service outage?* ..... 2

*Category 2: Why did the service outage occur?* ..... 3

*Category 3: Who was responsible for the service outage?* ..... 4

    4.2 GENERAL GUIDANCE ..... 4

    4.3 EXAMPLES OF APPLICATION ..... 4

**ANNEX A – ADDITIONAL LEVELS OF CLASSIFICATION AND COMPARISON TO FCC OUTAGE CATEGORIES..... 8**

    A.1 ADDITIONAL LEVELS OF DETAIL FOR WHAT AND WHY ..... 8

    A.2 COMPARISON OF NORS AND STANDARD OUTAGE CATEGORIES ..... 0

**TABLE OF TABLES**

---

TABLE 1 WHAT PRIMARY ..... 2

TABLE 2 WHY PRIMARY ..... 3

TABLE 3 WHY SECONDARY ..... 3

TABLE 4 WHO ..... 4

TABLE 5 - EXAMPLES OF APPLICATION TO VARIOUS OUTAGE SCENARIOS ..... 5

TABLE 6 WHAT SECONDARY ..... 8

TABLE 7 WHY TERTIARY ..... 8

TABLE 8 COMPARISON OF NORS AND STANDARD OUTAGE CLASSIFICATION GUIDES ..... 0

## INTRODUCTION/EXECUTIVE SUMMARY

---

Various systems for classifying outages exist in the telecommunications industry: aside from each company’s internal classification systems, a number of systems exist within requirements documents. Several systems also exist within the Federal Communications Commission (FCC). The industry would benefit from a single standard system for classifying outages in the telecommunications industry. Such a system would provide a common language in the industry for outage cause definition. This is especially important for communication between vendors and service providers. It would also allow for comparable outage data to be collected throughout the industry. The standard addresses classification of outages with respect to cause.

In this revision of the Standard Outage Classification, an example is added as Appendix A to illustrate the degree to which the FCC Network Outage Reporting System (NORS) outage classification aligns with this standard. The example shows that additional levels of detail are used in the NORS classifications but not all classifications provide adequate information to identify the “what”, “why” and “who” of the outage according to the standard methodology.

## 1 SCOPE, PURPOSE AND APPLICATION

---

Various systems for classifying outages exist in the telecommunications industry: aside from each company’s internal classification systems, a number of systems exist within requirements documents. Several systems exist within the FCC also. The industry would benefit from a single standard system for classifying outages in the telecommunications industry. The standard addresses classification of outages with respect to cause.

## 2 NORMATIVE REFERENCES

---

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below.

Network Outage Reporting System: User Manual, Version 3, Federal Communications Commission, August 21, 2018.<sup>1</sup>

Network Outage Reporting System: Glossary of Fields NORS Reports, Version 3, Federal Communications Commission, July 25, 2016.<sup>2</sup>

## 3 ABBREVIATIONS & ACRONYMS

---

ANSI	American National Standards Institute
ATIS	Alliance for Telecommunications Industry Solutions
FCC	Federal Communications Commission

---

<sup>1</sup> This document is available at < <https://www.fcc.gov/files/nors-user-manualpdf> >.

<sup>2</sup> This document is available at < <https://www.fcc.gov/network-outage-reporting-system-nors> >.