ATIS-0100021(2022-01)

ANALYSIS OF FCC REPORTABLE SERVICE OUTAGE DATA

TECHNICAL REPORT

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.

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

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[Revision of ATIS-0100021 (2012)]

Technical Report on

Analysis of FCC-Reportable Service Outage Data

Alliance for Telecommunications Industry Solutions

Approved January 25, 2022

Abstract

This Technical Report provides methods (guidelines and algorithms) for the analysis of service outage data reported to the FCC in response to outage reporting requirements which became effective in January 2005. These techniques are provided as an aid to the telecommunications industry, the public, individual reporting service providers, agencies, and committees with access to the reports or data captured from the reports.

Foreword

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.

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. The word *may* denotes an optional capability that could augment the standard. The standard is fully functional without the incorporation of this optional capability.

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

NRSC, at the time of developing this Technical Report, had the following leadership:

Carolyn Brown, NRSC Co-Chair (Lumen)
Andis Kalnins, NRSC Co-Chair (Verizon)

The **Outage Reporting Advisory Subcommittee** (ORAS), which was responsible for the development of this document, had the following leadership:

Becky Wormsley, NRSC ORAS Co-Chair (T-Mobile)
Christopher Desmond, NRSC ORAS Co-Chair (Verizon Wireless)

ATIS-0100021 Document Revision History

ATIS-0100021, *Analysis of FCC-Reportable Service Outage Data*, Published 2008
ATIS-0100021, *Analysis of FCC-Reportable Service Outage Data, Version 2*, Published 2012
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1 Purpose, Scope, & Application

In 2005, the FCC initiated a set of service outage reporting requirements for service providers [Ref 1]. These requirements extended reporting beyond the wireline segment of the telecommunications industry to include the wireless, satellite, and cable segments. In addition, it created metric threshold requirements for reporting and identified data items for reporting.

In 2012, noting the increased usage of VoIP-enabled telephone service, the FCC expanded part 4 outage reporting requirements to include VoIP service providers [Ref 2]. These requirements were subsequently amended in 2017 to account for advancements in telecommunications. Notably, the FCC adopted an OC3 based reporting metric of 667 OC3 minutes, to replace the existing DS3-based metric. A standard of 900,000 user minutes was implemented for wireless outages, as were adjustments to regulations regarding special facilities, public service answering points, and 911 facilities [Ref 3].

This Technical Report, ATIS-0100021(2022-01), provides techniques for the analysis of FCC-reportable service outage data relevant to the reporting requirements the FCC initiated in 2004.

1.1 Scope

This Technical Report replaces the work of ATIS-0100021 *Analysis of FCC-Reportable Service Outage Data, Version 2*, for applicability with respect to Network Outage Reporting System (NORS) data.

1.2 Application

This Technical Report enables the telecommunications industry and the general public to evaluate the reliability of telecommunications networks. The techniques outlined in this document allow for independent analysis of the outage data as reported to the FCC via NORS.

Additionally, Clause 5.2 of the document defines an outage index for wireline communications with the following parameters:

- Services affected (General Communications, and/or E911).
- Duration of the outage.
- Estimate of number of potentially affected customers.

2 References

[Ref 1] FCC 04-188, *In the Matter of New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, August 19, 2004.[1]

[1] This document is available from the Federal Communications Commission at < http://www.fcc.gov >.