



ATIS-0100071

**Network Reliability Steering Committee 2021-2022
Operational 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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Published by

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

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**Network Reliability Steering Committee 2021-2022
Operational Report**

March 2023

DATE: March 2023

TO: Stakeholders of the Nation’s Public Communications Networks

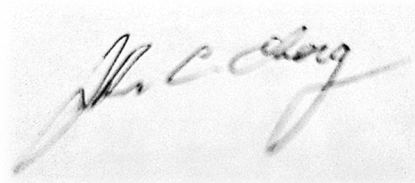
Service disruptions, although infrequent, remind us how dependent we are on communications networks. During these events, communication providers demonstrate how seriously they take their responsibility to provide reliable services for consumers and businesses, expending significant efforts to mitigate outages and quickly restore service. Once service is restored, equal efforts are expended to analyze the disruption, identify areas for improvement, and implement those improvements. The owners and operators of these networks, along with the equipment vendors they partner with, are firmly committed to building and maintaining reliable and resilient networks. This commitment has been demonstrated again and again – on a day-to-day basis, and in the face of natural and manmade disasters.

The Network Reliability Steering Committee (NRSC) remains committed to this effort by analyzing outage and reliability trends and recommending actions that can help prevent outages or reduce their impact. Its members work together to ensure that communication systems continue to remain secure and reliable. These efforts ultimately benefit consumers, business, the industry, and the nation as a whole.

This report provides a snapshot of the issues addressed by the NRSC over the last two years (2021-2022). As you will see, the efforts of the NRSC, guided by input from member company subject matter experts, as well as the FCC, are primarily directed toward ensuring that meaningful data is being collected and analyzed to better understand the cause and mitigation of outages, and provide agencies with situational awareness of the health of the nation’s communications networks. Likewise, NRSC has worked to encourage the streamlining of outage notifications for public safety purposes. Ultimately, the NRSC utilizes this information to develop industry guidance that directly impacts and improves the nation’s networks. These efforts build upon previous NRSC work and form a strong foundation for ensuring that communication networks continue to be reliable and resilient. This foundation is especially useful in light of ongoing changes to the communications network, including the significant growth of wireless networks, expansion of 5G networks, and the evolution to an all-Internet Protocol (IP) network. The nation depends on these networks to provide emergency communications, enable commerce, and support individual communications. As these changes to the network occur, the NRSC remains committed to, and will continue working toward, maintaining network reliability and resiliency.



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Table of Contents

Executive Summary	iv
About the NRSC	iv
Changing Regulatory Environment & Changing Industry	iv
Network Reliability and Resiliency	iv
9-1-1.....	iv
Cybersecurity.....	v
Outage Reporting and Data Sharing	v
Highlights.....	v
Special Studies/Task Forces.....	v
Subcommittees.....	v
NRSC Initiatives, Studies, and Filings.....	v
Publications	vi
1 Introduction.....	1
1.1 History of the NRSC.....	1
1.1.1 Several Catastrophic Outage Events.....	1
1.1.2 The Network Reliability Council is Established.....	1
1.1.3 The FCC Mandates Outage Reporting	1
1.1.4 The NRC Recommends the Formation of the NRSC	1
1.1.5 The FCC Makes Changes in Outage Reporting	1
1.1.6 Disaster Response.....	2
1.2 Factors Affecting Network Reliability	2
2 Health of the Nation’s Public Networks	2
2.1 Introduction to Special Studies/Task Forces	3
2.1.1 Investigate Recommendations for PSAP Contact Database.....	3
2.1.1.1 Background.....	3
2.1.1.2 Team Activity	3
2.1.1.3 Conclusion/Ongoing Work.....	3
2.2 Subcommittees	3
2.2.1 Best Practices Subcommittee	3
2.2.1.1 Background.....	3
2.2.1.2 Best Practices Team Activity	4
2.2.1.3 Conclusion	4
2.2.2 Regulatory Subcommittee.....	4
2.2.2.1 Background.....	4
2.2.2.2 Regulatory Team Activity.....	5
2.2.2.2.1 NRSC comments on FCC Public Notice (PN) on Wireless Service Providers’ Safety Measures for their Customers During Disasters	5
2.2.2.2.2 NRSC comments on FCC Notice of Proposed Rulemaking (NPRM) to Improve 911 Reliability.....	5
2.2.2.2.3 NRSC opposition to California Public Utility Commission (CA PUC) Petition for Reconsideration (PFR).....	5
2.2.2.2.4 NRSC comments and reply comments on FCC Notice of Proposed Rulemaking (NPRM) to Promote Network Resiliency	5
2.2.2.2.5 NRSC/ESIF comments on National Association of State 911 Administrators (NASNA) Petition to Facilitate the Implementation of and Transition to NG 911.....	5
2.2.2.2.6 Input to the Communications Sector Coordinating Council (CSCC) Regarding CISA Questions on Continuity of the Economy (COTE)	6
2.2.2.2.7 NRSC Joint Ex Parte Presentation Regarding FCC PSAP Notifications and 9-1-1 Reliability Certifications.....	6
2.2.2.3 Petition for Rulemaking	6
2.2.2.3.1 Determining Best Counts for NG 9-1-1 Outage Reporting	6

2.2.2.3.2	Request for Change to Telecommunications Service Priority (TSP) 2 Outage Reporting Threshold.....	7
2.2.2.3.3	Request for Change to Wireless Outage Reporting Threshold	7
2.2.2.4	Conclusion	7
2.2.3	Outage Reporting Advisory Subcommittee (ORAS) (Christopher Desmond and Becky Wormsley) ...	7
2.2.3.1	Background.....	7
2.2.3.2	NRSC ORAS Team Activity.....	7
2.2.3.2.1	Intra-Company Outage Reporting Consistency	7
2.2.3.2.2	Update ATIS-0100021, Analysis of FCC-Reportable Service Data Version 2	8
2.2.3.2.3	NORS and DIRS Information Sharing for State Agencies Accessing Data.....	8
2.2.3.2.4	Review and Suggest Revisions to NORS Manual and Glossary.....	8
2.2.3.2.5	Determine Best Methods to Normalize Network Growth	8
2.2.3.3	Conclusion	8
3	Conclusion	9
3.1	For the Common Good	9
3.2	Future Plans	9
4	Participation.....	9
4.1	Participating NRSC Member Companies (2021-2022)	9
4.2	NRSC Subcommittee Participants	9
4.3	Companies/Organizations in Attendance at the 2021-2022 Public NRSC Quarterly Meetings	12

Executive Summary

About the NRSC

The Alliance for Telecommunications Industry Solutions' (ATIS) NRSC addresses network reliability improvement opportunities of service providers and vendors, in a noncompetitive environment, and allows participants to develop standards, technical requirements, technical reports, bulletins, Best Practices, and reports on the health of the nation's communications networks. The NRSC also coordinates industry improvements in network reliability through outage analysis. The mission statement¹ of the NRSC is:

The NRSC strives to improve network reliability by providing timely consensus-based technical and operational expert guidance to all segments of the public communications industry.

As a trusted expert, the NRSC addresses network reliability improvement opportunities in an open, noncompetitive environment. The NRSC advises the communications industry through developing and issuing standards, technical requirements, technical reports, bulletins, Best Practices, and annual reports.

The NRSC accomplishes this through:

- identifying potential network reliability issues through an opportunity evaluation process,
- establishing subcommittees that address network reliability issues, and conducting special studies that may lead to industry recommendations and/or the development of Best Practices,
- developing industry feedback, both formal and informal, to the FCC on network reliability,
- providing industry feedback to the FCC on the Network Outage Reporting System (NORS) and the Disaster Information Reporting System (DIRS) and providing an opportunity for the public to be informed on network outages and ongoing efforts to resolve network reliability concerns.

This Operational Report covers the period of 2021 through 2022. A brief history of the NRSC is provided in the *Introduction* of this report (page 1).

Changing Regulatory Environment & Changing Industry

The last two Operational Reports (2017-2018 and 2019-2020) cited an increased focus on issues related to network reliability and resiliency and to the obligation of industry to report communications outages. This focused attention has, if anything, increased over the last two years, with numerous regulatory measures being enacted and industry responding to various high-profile service interruptions. Continuity of emergency services, information sharing, cybersecurity, and the continued move to an all-IP network have received the bulk of attention, although reliability of legacy networks remains a critical piece of the equation.

Network Reliability and Resiliency

On May 25, 2016, the FCC proposed new reporting rules and thresholds aimed at improving the resiliency of mobile wireless networks by simplifying the methodology required to calculate reportable events. These rules went into effect in May of 2018 and have drastically increased the number of outages reported to the FCC. Looking at the increase, one might conclude that reliability and resiliency have decreased; however, that would not reflect the true nature of the outages in the context of a growing network and increased reporting requirements. In 2022, NRSC filed a Petition for Rulemaking to address this (see clause 2.2.2.3 for further details). The NRSC is committed to partnering with the industry and the FCC to look at reliability and resiliency through the lenses of outage reporting.

9-1-1

On September 11, 2017, the FCC held a 9-1-1 roundtable with the carriers, the industry, and public safety. The objective of this roundtable was to discuss outage notifications to public safety and public safety notifications to the public, including reaching out to persons with disabilities. As a result of this roundtable, the NRSC formed the Situational Awareness for 9-1-1 Outages Task Force to investigate standardizing a best practice for how to notify public safety entities during a 9-1-1 outage event. Unlike other NRSC Task Forces, this one was open to the public, which afforded the NRSC the ability to partner with Public Safety Answering Points (PSAPs), public safety, the Association of Public-Safety Communications Officials (APCO), the National Association of State 911 Administrators (NASNA), and the National Emergency Number Association (NENA). While the Task Force was sunset in October 2019, the NRSC continues to work with PSAPs and public safety entities to standardize PSAP

¹ This mission statement can be found on NRSC's webpage at < <https://www.atis.org/committees-forums/nrsc/nrsc-mission/> >