

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Alliance for Telecommunications Industry Solutions)	PS Docket No. _____
)	
Petition for Rulemaking to Modify Part 4 Rules)	
)	

**PETITION FOR RULEMAKING THE
ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS**

**Alliance for
Telecommunications
Industry Solutions**

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August 18, 2022

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SUMMARY

The Alliance for Telecommunications Industry Solutions (“ATIS”) Network Reliability Steering Committee (“NRSC”) requests that the Commission initiate a rulemaking to address important rule changes to the Federal Communications Commission’s (“Commission” or “FCC”) Part 4 rules.

(1) To facilitate the transition from legacy to NG911 systems and to support continued, timely notification of outages in the Network Outage Reporting System (“NORS”) as well as to Public Safety Answering Points (“PSAPs”) by Next Generation 911 (“NG911”) systems, ATIS NRSC recommends that the Commission modify Sections 4.7 and 4.9 of its rules by: (1) encouraging PSAPs or 911 Authorities to furnish covered 911 providers with data regarding population counts served by the PSAPs or 911 Authorities; and (2) requiring covered 911 service providers to use census or population data derived from other sources instead of telephone number counts to determine “user minutes” threshold criteria.

(2) ATIS NRSC recommends changes to Section 4.9(e)(2) of the Commission’s rules to prevent the overreporting of wireless events that do not have any impact on consumers’ ability to use 911 services or meet the existing rule’s definition of “outage.” Establishing a de minimis exception for events that affect four (4) or fewer macro cell sites located in Rural Service Areas or 14 or fewer macro cell sites located in Metropolitan Service Areas would result in outage reporting data that more accurately reflects the true impact on wireless services, while also decreasing the number of low-impact or no-impact wireless NORS outage reports.

(3) ATIS NRSC recommends that the Commission modify Section 4.9 to address the overreporting of outages affecting entities enrolled in Telecommunications Service Priority (“TSP”) Program at Priority Level 2. ATIS recommends that the Commission modify its rules to extend the minimum duration of reportable outages affecting entities enrolled in the TSP at Priority Level 2 from 30 minutes to four (4) hours. A change in the TSP reporting threshold from the current 30-minute reporting threshold to a four-hour reporting threshold would significantly reduce the number of withdrawn NORS reports.

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PETITION FOR RULEMAKING

Pursuant to Section 1.401 of the Commission’s Rules, ATIS requests that the Commission initiate a rulemaking to address three important rule changes to the Commission’s Part 4 rules:

- Changes to Sections 4.7 and 4.9 of the Commission’s rules to facilitate the transition from legacy to Next Generation 911 (“NG911”) systems and to support continued, timely notification of outages in the Network Outage Reporting System (“NORS”) and to Public Safety Answering Points (“PSAPs”) by NG911 systems;
- Changes to Section 4.9(e)(2) to address the overreporting of wireless events that do not impact consumers or meet the definition of “outage” through the establishment of a de minimis exception to its wireless outage reporting rules; and
- Changes to Section 4.9 to address the overreporting of outages affecting entities enrolled in Telecommunications Service Priority (“TSP”) Program at Priority Level 2.

The ATIS Network Reliability Steering Committee (“NRSC”) participants are subject-matter experts on communications network reliability and outage reporting, and the NRSC proposed these targeted rule changes based on its industry-leading expertise. These proposed changes serve the public interest by addressing gaps in the Part 4 rules and provide necessary updates to account for technological innovation. Accordingly, ATIS respectfully requests that the Commission move promptly to initiate a rulemaking.

ATIS is a standards and technical planning organization that develops and promotes international technical and operating standards for information and communications technologies. ATIS membership is diverse and includes wireless, wireline, VoIP, and Internet service providers, 911 service providers, equipment manufacturers, software developers, consumer electronics companies, and public safety agencies. ATIS is also the North American Organizational Partner of the Third Generation Partnership Project (“3GPP”), the global collaborative effort that has developed the 4G Long-Term Evolution (“LTE”) and 5G New Radio (“NR”) wireless specifications.

Nearly 600 subject-matter experts across the industry work collaboratively in ATIS’ open industry committees, including the NRSC. ATIS’ NRSC was formed in 1993 at the recommendation of the Commission’s first Network Reliability and Interoperability Council, which has since been re-chartered as the Communications, Security, Reliability, and Interoperability Council. The NRSC is comprised of industry experts with primary responsibility for examining, responding to, and mitigating service disruptions for communications companies. The NRSC strives to improve network reliability by providing timely, consensus-based technical and operational guidance to all segments of the communications industry. It addresses network reliability improvement opportunities in an open environment and advises the communications industry through the development of standards, technical requirements, reports, bulletins, best practices, and annual reports. The NRSC also collaborates with public safety associations and works with the Commission to provide input on the NORS and Disaster Information Reporting System.

I. PETITION FOR RULEMAKING

A. Targeted Changes to the Commission’s User Minute Metric Will Better Facilitate the Transition to NG911

ATIS NRSC recommends changes to Sections 4.7 and 4.9 of the Commission’s rules to facilitate the transition from legacy to NG911 systems and to support continued, timely notification of outages in NORS as well as to PSAPs by NG911 systems. Given that assigned telephone number data is not uniformly available in NG911 systems, ATIS NRSC recommends that the Commission modify Sections 4.7 and 4.9 of its rules by: (1) encouraging PSAPs or 911 Authorities to furnish covered 911 providers with data regarding population counts served by the PSAPs or 911 Authorities; and (2) requiring covered 911 service providers to use census or population data derived from other sources instead of telephone number counts to determine “user minutes” in instances where PSAPs or state 911 Authorities are unwilling or unable to provide information on the populations they serve.

1. Overview of the Existing Part 4 Rules

Communications providers covered by Part 4 of the Commission’s rules must notify the Commission and any affected PSAP if the providers’ facilities experience outages that meet the established threshold criteria. Providers must also submit outage reports to the Commission

using NORS.¹ Section 4.9 defines threshold criteria for outages, which vary by provider type.²

Under this section, covered 911 service providers must notify a PSAP-designated official of any outage “that potentially affects a 911 special facility.”³ Section 4.5(e) explains that an outage potentially affects a 911 special facility when, among other things:

- There is a loss of communications to PSAP(s) potentially affecting at least 900,000 user-minutes and:
 - the failure is neither at the PSAP(s) nor on the premises of the PSAP(s);
 - no reroute for all end users was available; and
 - the outage lasts 30 minutes or more; or
- There is a loss of ANI/ALI (associated name and location information) and/or a failure of location determination equipment, including Phase II equipment, for at least 30 minutes and potentially affecting at least 900,000 user-minutes (provided that the ANI/ALI or location determination equipment was then currently deployed and in use, and the failure is neither at the PSAP(s) or on the premises of the PSAP(s)).⁴

¹ The Commission established its Part 4 rules “to allow the Commission to obtain the necessary information regarding services disruptions in an efficient and expeditious manner and achieve significant concomitant public interest benefits.” *New Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830, ¶ 1 (2004). Following the June 2012 “derecho” storm that affected 911 service availability for millions of Americans, it amended its rules to ensure that PSAPs receive timely and actionable notification of 911 outages. *See Improving 911 Reliability*, Report and Order, 28 FCC Rcd 61785, ¶ 139 (2013) (“*2013 911 Reliability Order*”). Covered 911 service providers must now notify a PSAP’s designated contact person within 30 minutes of discovering an outage that potentially affects a 911 special facility and provide additional information, including the nature and geographic scope of the outage, the likely cause, and the estimated time for repairs. 47 C.F.R. § 4.9(h). Covered 911 service providers must communicate such information as it becomes available and within two hours of the initial contact. *Id.* The Commission intended for this amendment to “build[] on the Commission’s previous efforts to ensure that the public has access to a state-of-the art, reliable, and resilient 911 communications system.” *2013 911 Reliability Order*, ¶ 6 (internal quotations and citations omitted).

² *See* 47 C.F.R. § 4.9.

³ 47 C.F.R. § 4.9(h). *See generally* 47 C.F.R. § 9.19(a)(4) (defining “covered 911 service provider”).

⁴ 47 C.F.R. § 4.5(e)(1) and (e)4.

The definition of “user minutes” under Section 4.7(e) varies depending on the form of communication. For telephony, including non-mobile interconnected VoIP, Section 4.7(e)(1) defines “user minutes” as “assigned telephone number minutes,” which are calculated by “multiplying the duration of an outage, expressed in minutes, by the sum of the number of assigned numbers . . . potentially affected by the outage and the number of administrative numbers . . . potentially affected by the outage.”⁵ For all other forms of communications, “user minutes” are calculated by “multiplying the duration of an outage, expressed in minutes, by the number of end users potentially affected by the outage,” in accordance with Section 4.7(e)(2).⁶

2. The Transition to NG911 Is Creating Challenges for Accurate Outage Reporting

In many parts of the U.S., the communications industry is in the process of transitioning legacy 911 systems to NG911 systems, a process that will take many years.⁷ While many NG911 systems currently utilize transitional architecture,⁸ it is expected that most will transition to systems based on the National Emergency Number Association (“NENA”) i3 Standard for

⁵ 47 C.F.R. § 4.7(e)(1), (c). “Assigned numbers” are defined as “the telephone numbers working in the Public Switched Telephone Network under an agreement such as a contract or tariff at the request of specific end users or customers for their use. This excludes numbers that are not yet working but have a service order pending.” *Id.* § 4.7(b). “Administrative numbers” are defined as “the telephone numbers used by communications providers to perform internal administrative or operational functions necessary to maintain reasonable quality of service standards.” *Id.* § 4.7(a).

⁶ 47 C.F.R. § 4.7(e)(2).

⁷ At the end of 2019, NG911 was available to approximately 48% of the U.S. population. The adoption rate is growing, with approximately 85% of the U.S. population expected to be covered by the end of 2025. PR Newswire, *Next-Generation 911 to Cover Nearly 85% of the US Population by 2025, Says Frost & Sullivan* (May 6, 2020), <https://www.prnewswire.com/news-releases/next-generation-911-to-cover-nearly-85-of-the-us-population-by-2025-says-frost-sullivan-301053612.html>.

⁸ The i2 architecture is a combination of Time Division Multiplexing (“TDM”) and Internet Protocol (“IP”) technology.

Next Generation 911 (“NENA i3 Standard”).⁹ California, for example, has already begun deploying NG911 and is currently planning to have NG911 i3 architecture deployed statewide by late 2022 or early 2023.¹⁰ Other states are similarly working to deploy an i3 standard based NG911 system.¹¹

While the transition to NG911 is a positive trend, it raises practical concerns for compliance with the Commission’s Part 4 rules. Specifically, it is currently impossible for some covered 911 service providers to determine whether an outage potentially affects a 911 special facility under Section 4.5(e). As noted above, Section 4.7 of the Commission’s rules requires telephony providers to report outages to PSAPs based on the number of “user minutes,” which are determined by multiplying the duration of the outages by the sum of the number of assigned numbers. Legacy-covered 911 service providers have access to traditional wireline callers’ Assigned Telephone Number (“ATN”) and the 911 caller’s address in the Automated Location

⁹ NENA i3 Solution, NENA-STA-010: Detailed Functional and Interface Specification for the NENA i3 Solution, available at https://www.nena.org/page/i3_Stage3. This standard defines the structure and design of functional elements comprising the set of software services, network elements, and interfaces needed to process multi-media emergency calls and data for NG911. It also describes the protocols, interfaces, and systems that identify and locate 911 callers, route calls to the appropriate PSAP, and enable communications by voice, text, video, and data.

¹⁰ See Donny Jackson, *First NENA i3-Compliant NG911 Call to Be Delivered Today in California, Officials Say*, UrgentComm (Apr. 14, 2021), <https://urgentcomm.com/2021/04/14/first-nea-i3-compliant-ng911-call-to-bedelivered-today-in-california-officials-say/>.

¹¹ See, e.g., North Carolina Department of Information Technology, *Next Generation 911 Project Progress*, <https://it.nc.gov/about/boards-commissions/nc-911-board/next-generation-911/next-generation-911-project-progress> (last visited August 4, 2022) (targeting completing the migration of PSAPs to the Emergency Services IP Network and hosted call processing system by July 31, 2022); Arizona Department of Administration 9-1-1 Program, *Next Generation Core Service*, <https://az911.gov/next-generation-core-service>, (last visited August 4, 2022) (explaining status of NG911 deployments in state); State of Alaska NG9-1-1 Geographic Information System Draft Strategic Plan (Nov. 13, 2020), <https://aws.state.ak.us/OnlinePublicNotices/Notices/> (recommending the State of Alaska develop an NG911 implementation plan based on the NENA i3 standard).

Information (“ALI”) database. However, unlike legacy 911 systems, NG911 systems validate and route using Geographic Information Systems (“GIS”) data rather than an ALI database. As a result, covered 911 service providers that have implemented NG911 i3 do not have the ability to use the ATN counts and ALI database to determine the number of assigned telephone numbers potentially affected by an outage under Section 4.7(e). Additionally, all covered 911 service providers have seen the inaccuracy of ATN counts exacerbated by the increasing number of mobile wireless and VoIP services used by customers, as well as by a decreased use of wireline telephones.

3. The Commission Should Revise its Rules to Uniformly Rely on Widely Available Population Data

To address the lack of assigned telephone number data, ATIS NRSC recommends that the Commission initiate a rulemaking proposing that PSAPs or 911 Authorities voluntarily provide covered 911 providers with data regarding the populations the PSAPs or 911 Authorities serve. Such data would better enable covered 911 providers to report outages affecting NG911 systems, while also ensuring they remain consistent with the goal of the Commission’s outage reporting rules. The Commission has stated before that it aims to facilitate “accurate, uniform outage information,” and the proposed changes would further this goal.¹² Absent the proposed rule change, ATIS NRSC believes that the reporting of PSAP outages will become increasingly inaccurate, inconsistent, and unreliable.

ATIS NRSC further recommends that the Commission amend Section 4.7(e) of its rules to require that, if PSAPs or 911 Authorities are unwilling or unable to provide information on the

¹² *Amendments to Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration, 31 FCC Rcd 5817, ¶ 31 (2016) (“2016 R&O”). The 2016 R&O became effective in May 2018.

populations they serve, covered 911 service providers be required to use readily available census or population data derived from other sources¹³ instead of telephone number counts to determine “user minutes.”¹⁴ Census or population data offers an objective and reasonable representation of the population, and it can be used to estimate the number of users located within an outage area. U.S. census data also can be easily obtained, and annual updates are available.

While legacy 911 service providers do have the capability to use telephone numbers, ATIS NRSC believes that the Commission should require both legacy and NG911 systems to use either the population data provided by PSAPs (if available) or U.S. census or other population data. In either case, both legacy and NG911 systems should use population data, because such harmonization would ensure that all 911 providers, regardless of whether they are legacy or NG911, will base their reporting on population thresholds. Applying a single population threshold to both legacy and NG911 providers is particularly important because the use of such population data more accurately represents the potential impact to users by including both wireless and wireline users. ALI ATN counts reflect only landline customers, while population data is technologically neutral and more fairly represents potentially impacted users in an area, including wireless users. Requiring the use of population data by both legacy and NG911

¹³ Service providers can use shape files to derive census blocks. These may be overlaid with the PSAP geographic service area to determine the potentially impacted population. In the limited number of cases where census data is not applicable to a PSAP service area, the service provider may use other readily available approximate population data that best approximates potentially impacted users.

¹⁴ For more information on this proposed rule change, please see ATIS, Request for Commission Action (Apr. 27, 2021), <https://www.atis.org/wp-content/uploads/2021/04/NRSC-2021-00039R001Request-for-Streamlined-Waiver-Clean.pdf>; Comments of ATIS, In the Matter of Amendments to Part 4 of the Commission’s Rule Concerning Disruptions to Communications (July 30, 2021), https://www.fcc.gov/ecfs/file/download/DOC-5ebe46acde800000-A.pdf?file_name=Dkt%2015-80%2013-75%20and%2004-35%20-%20Comments.pdf.

providers will also avoid an “apples to oranges” comparison of outage trends, as use of population data is likely to increase the number of reportable outages. Although an increase will likely occur due to this change, this increase would be a result of more accurate reporting.

ATIS NRSC notes that originating service providers can continue to use their subscriber counts for outage reporting. Covered 911 service providers must notify a PSAP’s designated official of any outage “that potentially affects a 911 special facility.”¹⁵

ATIS NRSC believes that the proposed solution appropriately accommodates NG911 systems while providing the Commission with more accurate information on relevant outages affecting special offices and facilities consistent with the intent of the Part 4 rules. ATIS NRSC notes that industry is already seeing instances where some counties are using geospatial routing in lieu of the ALI database, which raises the specter of disparate and inaccurate outage reporting.

Irrespective of the transition to NG911 i3 architecture, the ALI database has become increasingly unrepresentative of the number of consumers potentially impacted by an outage because it does not include VoIP and mobile numbers. For example, an NRSC comparison found that relying on ALI telephone number counts to estimate populations would result in large errors for some counties. ATIS NRSC examined 158 counties to evaluate the relationship between telephone number counts and population. While this analysis showed a statistically significant positive correlation between TN counts and population, it also found that reliance on TN counts resulted in inaccurate estimations of populations impacted by outages. The result of this examination implies that reliance on the ALI database could result in inaccurate estimations

¹⁵ 47 C.F.R. § 4.9(h). *See generally* 47 C.F.R. § 9.19(a)(4) (defining “covered 911 service provider”).

of consumers impacted by outages.¹⁶ ATIS NRSC therefore believes population is a better depiction of potential outage impacts.

4. The Proposed Rule Changes Would Adjust the User Minute Metric and Create a New PSAP and Covered 911 Service Provider Method to Provide Population Data, to Aid the Transition to NG911

ATIS NRSC proposes that PSAPs and 911 Authorities be encouraged to provide covered 911 service providers with population data on an annual basis, which would be incorporated at 47 C.F.R. § 4.9. Although “PSAP” is defined at Section 9 of the Commission’s rules, “911 Authority” is a new term and a new definition for this term has been inserted at 47 C.F.R. § 4.7.¹⁷

ATIS NRSC also proposes adjusting the definition of “user minutes” at 47 C.F.R. § 4.7(e). Specifically, the change would involve the creation of a new subsection – § 4.7(e)(3) – that would create a user minute metric solely for covered 911 service providers (as that term is defined in 47 C.F.R. § 9.19). Covered 911 service providers would not be permitted to use ATN minutes and, instead, would be required to derive the number of end users from population data provided by PSAPs or 911 Authorities under the newly created § 4.9(i). If such population data

¹⁶ Some parties have also suggested that a PSAP contact database could promote uniformity in outage reporting and reduce costs to PSAPs and providers. As ATIS NRSC has explained previously in other filings, it supports the adoption of a national PSAP database. *See, e.g.*, Letter from Thomas Goode, General Counsel, ATIS, to James Wiley, Pub. Safety and Homeland Sec. Bureau, FCC (Oct. 29, 2020), https://www.fcc.gov/ecfs/file/download/DOC-5d8fca8101000000-A.pdf?file_name=NRSC%20PSAP%20Input%207%20December%202020.pdf. Additionally, ATIS NRSC urges the Commission to adopt a safe harbor for any national PSAP database that may be developed to protect carriers from potential liability for any violations of the Commission’s rules stemming from the provider’s reliance on information from the database.

¹⁷ NENA Master Glossary of 9-1-1 Terminology (NENA-ADM-000.24-2021), available at https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-adm-000.24-2021_final_2.pdf.

is unavailable, 911 service providers would be required to use other census data to calculate user minutes.

B. The Commission’s Outage Reporting Rules Should Be Revised to Address the Growing Deployment of 5G Wireless Networks

ATIS NRSC recommends changes to Section 4.9(e)(2) of the Commission’s rules to prevent the overreporting of wireless events that do not have any impact on consumers’ ability to use 911 services or meet the existing rule’s definition of “outage.” The Commission could achieve this result by establishing a de minimis exception to its wireless outage reporting rules to exempt events that affect four (4) or fewer macro cell sites located in Rural Service Areas or 14 or fewer macro cell sites located in Metropolitan Service Areas.

1. Overview of the Existing Part 4 Rules

Section 4.9(e)(1) of the Commission’s rules requires all wireless service providers to submit notifications to the Commission within 120 minutes of discovering an outage of at least 30 minutes duration in five discrete instances.¹⁸

Section 4.9(e)(2) further provides that “[i]n determining the number of users potentially affected by a failure of a switch, a wireless provider must multiply the number of macro cell sites disabled in the outage by the average number of users served per site, which is calculated as the total number of users for the provider divided by the total number of the provider's macro cell sites.”¹⁹

¹⁸ These include Mobile Switching Center outages, outages that potentially affect at least 900,000 user minutes, outages that affects at least 667 Optical Carrier 3 minutes, outages that potentially affect any special offices and facilities, and outages that potentially affect a 911 special facility. 47 C.F.R. § 4.9(e)(1).

¹⁹ 47 C.F.R. § 4.9.

2. The Commission’s Current Outage Reporting Rules Do Not Reflect the Reality of Evolving 5G Wireless Networks

ATIS NRSC notes that, with the transition to newer technologies (including specifically 5G), service providers are installing additional cell sites and increasing the densification of wireless infrastructure. These new systems are more resilient and reliable because they have greater overlaps in coverage between Mobile Switching Centers (“MSC”). The additional cell sites and increased densification make it highly unlikely that the loss of a single cell site (or small number of cell sites) would create an “outage.” As a result, the loss of a single cell site would not result in the “significant degradation in the ability of an end user to establish and maintain a channel of communications as a result of failure or degradation in the performance of a communications provider's network.”²⁰

The Commission’s existing outage reporting rules, however, require the submission of outage reporting whenever the number of macro cell sites disabled in the outage multiplied by the average number of users served per site equals or exceeds 900,000 user minutes. This results in the overreporting of wireless events that do not impact consumers’ ability to contact a PSAP and do not result in the significant degradation of the end user ability to establish or maintain 911 communications. Adoption of the rules proposed by ATIS NRSC would decrease unnecessary, inaccurate, and administratively burdensome outage reporting, thereby ensuring greater clarity on 911 outages while better meeting the goals of the Commission’s Part 4 rules.

3. The Commission Should Revise its Rules to Establish De Minimis Exceptions for Outages on Wireless Networks

ATIS NRSC recommends that the Commission establish a de minimis exception to its outage reporting rules pertaining to wireless events. Under this proposed de minimis exception,

²⁰ 47 C.F.R. § 4.5(a).

outage reports would not be required to be filed if an outage affects: four (4) or fewer macro cell sites located in Rural Service Areas (“RSAs”); or 14 or fewer macro cell sites located in Metropolitan Service Areas (“MSAs”).

Modifying reporting thresholds will more accurately reflect the true impact on wireless services, while also decreasing the number of NORS wireless reports pertaining to outages that have little or no impact to customers. ATIS NRSC studied NORS data from the third quarter of 2019 and found that application of this de minimis threshold resulted in a decrease in the number of low-impact events reported in NORS by 91.1% for MSAs and 53.5% for RSAs.²¹ ATIS NRSC believes that standardizing reporting thresholds for wireless providers would reduce the number of unimpactful reports associated with events that do not meet the Commission’s “outage” criteria (e.g., that do not result in a significant degradation in the ability of an end user to establish and maintain a channel of communications).

ATIS’ proposed threshold is also consistent with the goals articulated by the Commission when it adopted its cell site-based outage thresholds (i.e., easily determined, technologically neutral).²²

4. The Proposed Rule Change Would Create an Exception to Prevent Overreporting

ATIS NRSC proposes inserting new language into 47 C.F.R. § 4.9(e)(2) to create a de minimis exception to the outage reporting requirements for wireless service providers.

Specifically, reportable outages would be adjusted to apply only to disabled macro cell sites that

²¹ These figures are based on an ATIS NRSC evaluation of NRSC member outage reports.

²² See, e.g., 2016 R&O, ¶ 35 (“We believe that a more standardized, technologically neutral method for calculating the number of ‘potentially affected’ users for wireless network outages is critically important to ensure consistency in reporting across providers, regardless of the technological differences in their networks, and that such consistent reporting will enhance our situational awareness through more uniform, accurate, and reliable NORS data.”).

“exceed four (4) cell sites in any Rural Service Area or fourteen (14) cell sites in any Metropolitan Service Area.” Because “macro cell sites” are undefined in the statute, the proposed rule changes also add the definition of the term from the Commission’s May 26, 2016, *Report and Order*, adopting changes to its Part 4 rules. In that Order, the Commission explains that macro cells are high-powered wireless base stations owned by a wireless carrier intended to provide coverage to a large area of mobile network users (e.g., a county or parish). Macro cells have higher power outputs, typically in the tens of watts, and also have a higher efficiency output in covering large areas.²³

C. The Commission Should Revise its Rules to Reduce Unnecessary Overreporting of Outages Affecting Entities Enrolled in Telecommunications Service Priority Program at Priority Level 2

ATIS NRSC recommends that the Commission modify Section 4.9 to address the overreporting of outages affecting entities enrolled in Telecommunications Service Priority (“TSP”) Program at Priority Level 2. ATIS recommends that the Commission modify its rules to extend the minimum duration of reportable outages affecting entities enrolled in the TSP at Priority Level 2 from 30 minutes to four (4) hours.

1. Overview of the Existing Part 4 Rules

The Commission’s outage reporting rules require the submission of reports of outages lasting a minimum of 30 minutes, within 120 minutes of discovery, that potentially affect special offices and facilities.²⁴ Special offices and facilities are defined in Section 4.5(b) to include “entities enrolled in the TSP Program at priority Levels 1 and 2, which may include, but are not limited to, major military installations, key government facilities, nuclear power plants, and those

²³ 2016 R&O, ¶ 35 n.107.

²⁴ See, e.g., 47 C.F.R. §§ 4.9(a)(3), (c)(2)(iii), (e)(1)(iv), (f)(3).

airports that are listed as current primary (PR) airports in the FAA's National Plan of Integrated Airports Systems (NPIAS) (as issued at least one calendar year prior to the outage).”²⁵

2. Overreporting of TSP Priority 2 Outages Has Reduced the Effectiveness of the Commission’s Outage Reporting Framework

At the request of the Public Safety and Homeland Security Bureau, ATIS NRSC reviewed recent changes to TSP Levels 1 and 2 reporting criteria, noting that the number of reports regarding these facilities skyrocketed after the Commission adopted its May 2016 Report and Order²⁶ modifying the rules regarding outage reports for special offices and facilities. The Commission advised the NRSC that the volume of unnecessary reports has reduced the effectiveness of outage reporting.

ATIS NRSC examined this issue and has concluded that increasing the duration of reportable events impacting TSP Priority Level 2 would more effectively mitigate unwarranted overreporting, thereby providing the Commission with more actionable data regarding the true status of these services.

3. The Commission Should Adjust its Reporting Thresholds to Improve the Accuracy of its TSP Outage Reporting Framework

ATIS NRSC requests a change to the Commission’s rules to extend the minimum duration of reportable outages affecting entities enrolled in the TSP at Priority Level 2 from 30 minutes to four (4) hours. Under this proposed revision, providers would be required to submit an outage report affecting entities enrolled in the TSP at Priority Level 2 within 120 minutes of discovery if the outages last a minimum of four (4) hours.

²⁵ 47 C.F.R. § 4.5(b).

²⁶ 2016 R&O.

An analysis of outage data by ATIS NTSC indicates that a change in the TSP reporting threshold from the current 30-minute duration threshold to a four-hour duration threshold would reduce the number of withdrawn reports by approximately 41.6% and final reports by approximately 20.9% in a study of NORS outage data.²⁷ It is noted that withdrawals often occur when reports are filed out of an abundance of caution to meet the 30-minute threshold and are later found to not meet the reporting requirements. As TSP are single circuits, they may not have hit a reportability threshold if they were not TSP.

ATIS NRSC believes that this proposed change will result in more useful and impactful outage reports for the Commission.

4. The Proposed Rule Changes Would Adjust Outage Reporting Thresholds to Prevent Overreporting

ATIS NRSC proposes adjusting 47 C.F.R. § 4.9 to create a 4-hour outage reporting threshold for TSP priority Level 2 special offices and facilities. The proposed changes involve creating a distinction between TSP Priority Level 1 and Priority Level 2 special offices and facilities, and then inserting a 4-hour outage reporting threshold for the latter. The 30-minute outage reporting thresholds for TSP Level 1 and special 911 facilities remain unchanged.

II. CONCLUSION

ATIS requests that the Commission initiate a rulemaking to: (1) modify Sections 4.7 and 4.9 of the Commission's rules to facilitate the transition from legacy to NG911 systems and to support continued, timely notification of outages in the NORS and to PSAPs; (2) modify Section

²⁷ This figure is based on an ATIS NRSC evaluation of NRSC member outage reports. This evaluation also determined that changing the reporting threshold from 30 minutes to four (4) hours for Special Offices and Facilities enrolled in TSP Priority Levels 1 and 2 would reduce the number of outage reports by approximately 40% and the number of withdrawn reports by approximately 60%.

4.9(e)(2) to address the overreporting of wireless events that do not impact consumers or meet the definition of “outage” through the establishment of a de minimis exception to its wireless outage reporting rules; and (3) change Section 4.9 to address the overreporting of outages affecting entities enrolled in TSP Priority Level 2.

Respectfully submitted,

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August 18, 2022

ANNEX

ATIS NRSC requests that the Federal Communications Commission amends parts 4 of Title 47 of the Code of Federal Regulations as follows:

Part 4—DISRUPTIONS TO COMMUNICATIONS

Subchapter A—General

1. Amend Section 4.7 to read as follows:

(e) * * *

(3) User Minute Calculations for Covered 911 Service Providers. Notwithstanding subsections (1) or (2) above, covered 911 service providers shall use the mathematical result of multiplying the duration of an outage, expressed in minutes, by the number of end users potentially affected by the outage. Consistent with the requirements of § 4.9(i), the number of end users potentially affected by the outage shall be derived from:

(i) The population data provided by PSAPs or 911 Authorities pursuant to § 4.9(i); or

(ii) In instances where data under § 4.7(e)(3)(i) is unavailable:

A. The more recent of the Census Bureau's decennial census data, or population estimates or projections, with population estimates being the preferred data where available; or

B. Similar population data derived from other statistically reliable sources.

(g) 911 Authorities are defined as a State, County, Regional or other governmental entity responsible for 9-1-1 service operations. For example, this could be a county/parish or other local government, a special 9-1-1 or Emergency Communications District, a Council of Governments or other similar body.

2. Amend Section 4.9 to read as follows:

(a) *Cable.* All cable communications providers shall submit electronically a Notification to the Commission within 120 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage of:

(1) At least 30 minutes duration that:

(i) Potentially affects at least 900,000 user minutes of telephony service;

(ii) Affects at least 667 OC3 minutes;

(iii) Potentially affects any special offices and facilities enrolled at TSP Program priority Level 1 (in accordance with paragraphs (a) through (d) of § 4.5); or

(iv) Potentially affects a 911 special facility (as defined in paragraph (e) of § 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 911 facility as the provider's contact person for communications outages at that facility, and they shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on callers to that facility. (OC3 minutes and user minutes are defined in paragraphs (d) and (e) of § 4.7.) Not later than 72 hours after discovering the outage, the provider shall submit electronically an Initial Communications Outage Report to the Commission. Not later than thirty days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission. The Notification and the Initial and Final reports shall comply with all of the requirements of § 4.11.

(2) At least 4 hours duration that potentially affects any special offices and facilities enrolled at TSP Program priority Level 2 (in accordance with paragraphs (a) through (d) of § 4.5).

(c) *Satellite.*

(1) All satellite operators shall submit electronically a Notification to the Commission within 120 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, of an outage of at least 30 minutes duration that manifests itself as a failure of any of the following key system elements: One or more satellite transponders, satellite beams, inter-satellite links, or entire satellites. In addition, all Mobile-Satellite Service ("MSS") satellite operators shall submit electronically a Notification to the Commission within 120 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, of an outage of at least 30 minutes duration that manifests itself as a failure of any gateway earth station, except in the case where other earth stations at the gateway location are used to continue gateway operations within 30 minutes of the onset of the failure.

(2) All satellite communications providers shall submit electronically a Notification to the Commission within 120 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize:

(i) An outage of at least 30 minutes duration that manifests itself as:

(A) A loss of complete accessibility to at least one satellite or transponder;

(B) A loss of a satellite communications link that potentially affects at least 900,000 user-minutes (as defined in § 4.7(d)) of either telephony service or paging service;

(C) Potentially affecting any special offices and facilities enrolled at TSP priority Level 1 (in accordance with paragraphs (a) through (d) of § 4.5) other than airports; or

(D) Potentially affecting a 911 special facility (as defined in (e) of § 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 911 facility as the provider's contact person for communications outages at that facility, and they shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on callers to that facility.

(ii) An outage of at least 4 hours duration that manifests itself as potentially affecting any special offices and facilities enrolled at TSP priority Level 2 (in accordance with paragraphs (a) through (d) of § 4.5) other than airports.

(3) Not later than 72 hours after discovering the outage, the operator and/or provider shall submit electronically an Initial Communications Outage Report to the Commission. Not later than thirty days after discovering the outage, the operator and/or provider shall submit electronically a Final Communications Outage Report to the Commission.

(4) The Notification and the Initial and Final reports shall comply with all of the requirements of § 4.11.

(5) Excluded from these outage-reporting requirements are those satellites, satellite beams, inter-satellite links, MSS gateway earth stations, satellite networks, and transponders that are used exclusively for intra-corporate or intra-organizational private telecommunications networks, for the one-way distribution of video or audio programming, or for other non-covered services (that is, when they are never used to carry common carrier voice or paging communications).

(e)

(1) All wireless service providers shall submit electronically a Notification to the Commission within 120 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize:

(i) An outage of at least 30 minutes duration:

(A) Of a Mobile Switching Center (MSC);

(B) That potentially affects at least 900,000 user minutes of either telephony and associated data (2nd generation or lower) service or paging service;

(C) That affects at least 667 OC3 minutes (as defined in § 4.7);

(D) That potentially affects any special offices and facilities enrolled at TSP priority Level 1 (in accordance with paragraphs (a) through (d) of § 4.5) other than airports through direct service facility agreements; or

(E) That potentially affects a 911 special facility (as defined in paragraph (e) of § 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 911 facility as the provider's contact person for communications outages at that facility, and they shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on callers to that facility.

(ii) An outage of at least 4 hours duration that potentially affects any special offices and facilities enrolled at TSP priority Level 2 (in accordance with paragraphs (a) through (d) of § 4.5) other than airports through direct service facility agreements.

(2) In determining the number of users potentially affected by a failure of a switch, a wireless provider must multiply the number of macro cell sites disabled in the outage that exceed four (4) cell sites in any Rural Service Area or fourteen (14) cell sites in any Metropolitan Service Area by the average number of users served per site, which is calculated as the total number of users for the provider divided by the total number of the provider's macro cell sites, which for purposes of this section shall be considered as any high-powered wireless base stations owned by a wireless carrier intended to provide coverage to a large area of mobile network users (such as a county or parish), and with higher power outputs, typically in the tens of watts, with a higher efficiency output in covering large areas.

(3) For providers of paging service only, a notification must be submitted if the failure of a switch for at least 30 minutes duration potentially affects at least 900,000 user-minutes.

(4) Not later than 72 hours after discovering the outage, the provider shall submit electronically an Initial Communications Outage Report to the Commission. Not later than 30 days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission.

(5) The Notification and Initial and Final reports shall comply with the requirements of § 4.11.

(f) **Wireline.** All wireline communications providers shall submit electronically a Notification to the Commission within 120 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize:

(1) An outage of at least 30 minutes duration that:

(A) Potentially affects at least 900,000 user minutes of either telephony or paging;

(B) Affects at least 667 OC3 minutes;

(C) Potentially affects any special offices and facilities enrolled at TSP priority Level 1 (in accordance with paragraphs (a) through (d) of § 4.5); or

(D) Potentially affects a 911 special facility (as defined in paragraph (e) of § 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 911 facility as the provider's contact person for communications outages at that facility, and the provider shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on efforts to communicate with that facility. (OC3 minutes and user minutes are defined in paragraphs (d) and (e) of § 4.7.) Not later than 72 hours after discovering the outage, the provider shall submit electronically an Initial Communications Outage Report to the Commission. Not later than thirty days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission. The Notification and the Initial and Final reports shall comply with all of the requirements of § 4.11.

(2) An outage of at least 4 hours duration that potentially affects any special offices and facilities enrolled at TSP priority Level 2 (in accordance with paragraphs (a) through (d) of § 4.5).

(g) **Interconnected VoIP Service Providers.**

(1) All interconnected VoIP service providers shall submit electronically a Notification to the Commission:

(i) Within 240 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage of at least 30 minutes duration that potentially affects a 9-1-1 special facility (as defined in (e) of § 4.5), in which case they also shall notify, as soon as possible by telephone or other electronic means, any official who has been designated by the management of the affected 9-1-1 facility as the provider's contact person for communications outages at that facility, and the provider shall convey to that person all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on efforts to communicate with that facility;
or

(ii) Within 24 hours of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, ~~an outage of at least 30 minutes duration:~~

(A) An outage of at least 30 minutes duration that potentially affects at least 900,000 user minutes of interconnected VoIP service and results in complete loss of service; or

(B) An outage of at least 30 minutes duration that potentially affects any special offices and facilities enrolled at TSP priority Level 1 (in accordance with paragraphs § 4.5(a) through (d)).

(C) An outage of at least 4 hours duration that potentially affects any special offices and facilities enrolled at TSP priority Level 2 (in accordance with paragraphs § 4.5(a) through (d)).

(2) Not later than thirty days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission. The Notification and Final reports shall comply with all of the requirements of § 4.11.

(h) ***Covered 911 service providers.*** In addition to any other obligations imposed in this section, within thirty minutes of discovering an outage that potentially affects a 911 special facility (as defined in § 4.5), all covered 911 service providers (as defined in § 9.19(a)(4) of this chapter) shall notify as soon as possible but no later than thirty minutes after discovering the outage any official who has been designated by the affected 911 special facility as the provider's contact person(s) for communications outages at that facility and convey all available information that may be useful in mitigating the effects of the outage, as well as a name, telephone number, and email address at which the service provider can be reached for follow-up. The covered 911 service provider shall communicate additional material information to the affected 911 special facility as it becomes available, but no later than two hours after the initial contact. This information shall include the nature of the outage, its best-known cause, the geographic scope of the outage, the estimated time for repairs, and any other information that may be useful to the management of the affected facility. All notifications shall be transmitted by telephone and in writing via electronic means in the absence of another method mutually agreed upon in advance by the 911 special facility and the covered 911 service provider.

(i) ***PSAPs and 911 Authorities.*** Consistent with the requirements of § 4.7(e)(3), and where such data is available, PSAPs and 911 Authorities should provide covered 911 service providers on an annual basis with population counts served by such PSAPs or 911 Authorities.