

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Amendments to Part 4 of the Commission’s Rules) PS Docket No. 15-80
Concerning Disruptions to Communications)
)
New Part 4 of the Commission’s Rules) ET Docket No. 04-35
Concerning Disruptions to Communications)

NOTICE OF PROPOSED RULEMAKING, SECOND REPORT AND ORDER AND ORDER ON RECONSIDERATION

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I. INTRODUCTION

1. By this action, the Federal Communications Commission (Commission) takes important steps to update its Part 4 outage reporting rules. The current outage reporting rules have served the Commission well for over a decade. Since Part 4 and its associated Network Outage Reporting System (NORS) were established in 2004,¹ the Commission has gained considerable experience administering NORS, which has improved its ability to detect adverse outage trends and facilitate industry-wide network improvements. This item builds on that experience. In the *Notice of Proposed Rulemaking (Notice)*, we seek comment on targeted proposals to improve our Part 4 rules in light of these developments. In the *Second Report and Order*, we decline to adopt a 2004 proposal to expand upon the outage reporting requirements adopted for airports.² Finally, in an *Order on Reconsideration*, we dispose of seven pending Petitions for Reconsideration (Petitions) filed in response to the *2004 Part 4 Report and Order*.³ Each petition is granted, denied or dismissed to the extent indicated.

II. BACKGROUND

2. The *2004 Part 4 Report and Order* established the Commission’s Part 4 outage reporting rules, which require certain providers of communications to electronically file reports of network outages that exceed specified thresholds of magnitude and duration.⁴ In a brief *Further Notice of Proposed Rulemaking* that accompanied the *2004 Part 4 Report and Order*, the Commission sought comment on

¹ See New Part 4 of the Commission’s Rules Concerning Disruptions to Communications, ET Docket No. 04-35, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 16830 (2004) (*2004 Part 4 Report and Order* and *2004 Further Notice of Proposed Rulemaking*, respectively).

² See *2004 Further Notice of Proposed Rulemaking*, 19 FCC Rcd at 16867-68 ¶ 67. A general aviation airport is one that is not regularly served by a certified air carrier (other than a chartered air carrier) and is not a commuter service airport. See 14 C.F.R. § 152.3. These airports are smaller than those already included in Section 4.5(b) of the Commission’s rules, 47 C.F.R. § 4.5(b).

³ See Cingular Wireless LLC (Cingular) Petition for Reconsideration, ET Docket 04-35 (Jan. 3, 2005) (Cingular Petition); Organization for the Promotion and Advancement of Small Telecommunications Companies (OPATSCO) Petition for Reconsideration and Clarification, ET Docket 04-35 (Jan. 3, 2005) (OPASTCO Petition); Qwest Corporation and Qwest Communications Corporation (Qwest), Petition for Reconsideration, ET Docket 04-35 (Jan. 3, 2005) (Qwest Petition); Sprint Corporation (Sprint), Petition for Reconsideration (Jan. 3, 2005) (Sprint Petition); CTIA – The Wireless Association (CTIA) Petition for Partial Reconsideration and Motion for Partial Stay (Dec. 23, 2004) (CTIA Petition); AT&T, BellSouth, MCI, SBC and Verizon (collectively, Joint Petitioners) Petition for Reconsideration, ET Docket 04-35 (Dec. 23, 2004) (Joint Petition); United States Telecom Association (USTA) Petition for Reconsideration, ET Docket 04-35, (Dec. 16, 2004) (USTA Petition). Two additional petitions for reconsideration, filed by BellSouth Corporation and Syniverse Technologies, Inc., respectively, have been withdrawn. See BellSouth Petition for Reconsideration and/or Clarification, ET Docket 04-35 (Jan. 3, 2005) (BellSouth Petition); Syniverse Petition for Reconsideration, ET Docket 04-35 (Dec. 30, 2004) (Syniverse Petition). Throughout this document we refer to each Petitioner by the name under which it filed its Petition, notwithstanding any subsequent mergers or acquisitions that changed its corporate identity.

⁴ See *2004 Part 4 Report and Order*. These rules went into effect on January 3, 2005.

the narrow issue of whether to expand the scope of the newly adopted airport outage reporting requirements from three airport categories—currently primary, commercial service, and reliever airports—to include a fourth category, general aviation airports.⁵

3. In November 2004, the United States Telecom Association (USTA) filed a Petition for Partial Stay seeking a stay of the obligation to report DS3 simplex outages (which USTA referred to as “DS3 simplex events”).⁶ In the *Part 4 Partial Stay Order*,⁷ the Commission denied the Petition but on its own motion stayed enforcement of the DS3 simplex reporting obligation as to outages rectified within five days.⁸ The Commission explained that it was issuing this partial stay to allow itself time “to develop a full record pertaining to the issue of ‘DS3 simplex events,’” including the reporting burdens the rule as originally adopted would impose on providers.⁹

4. The Commission also received nine Petitions for Reconsideration of various aspects of the *2004 Part 4 Report and Order*, seven of which remain pending.¹⁰ These seven petitions are disposed of in the *Order on Reconsideration* below.

5. In March 2012, the Commission amended Part 4 to extend its outage reporting requirements to interconnected Voice over Internet Protocol (VoIP) service providers.¹¹ These amendments became effective on December 16, 2012.¹²

III. NOTICE OF PROPOSED RULEMAKING

6. In this *Notice*, we seek comment on proposals to improve the Commission’s Part 4 rules. Specifically, we seek to apply nearly a decade of experience administering the NORS program and analyzing outage reports, which has provided perspective on those aspects of the Part 4 rules that might be refined so as to improve the quality and usefulness of the outage data the Commission receives. Our primary goal remains ensuring the reliability and resiliency of the Nation’s communications system, and in particular strengthening the Nation’s 911 system.

A. Costs and Benefits

7. We seek comment on the potential costs and benefits associated with each proposal considered below. As a general matter, we seek to determine the most cost-effective approach for modifying existing policies and practices to achieve the goals of our proposed rules. We ask that

⁵ See *id.* at 16867-68, para. 67. The term “general aviation airport” includes airports that do not receive scheduled commercial service or do not hold at least 10 locally-owned aircraft and are at least 20 miles from the nearest National Plan of Integrated Airport Systems airport. See 14 C.F.R. § 152.3. See Federal Aviation Administration, National Plan of Integrated Airport Systems (NPIAS), Report to Congress, 2001-2005, http://www.faa.gov/airports/planning_capacity/npias/reports/historical/media/2001/NPIAS_Narrative_01.pdf. General aviation airports are smaller than those already included in Section 4.5(b) of the Commission’s rules, 47 C.F.R. § 4.5(b).

⁶ See USTA Petition; Joint Petition.

⁷ See New Part 4 of the Commission’s Rules Concerning Disruptions to Communications, ET Docket No. 04-35, *Order Granting Partial Stay*, 19 FCC Rcd 25039 (2004) (*Part 4 Partial Stay Order*).

⁸ See *id.* at 25039, 25040-41 ¶ 3.

⁹ *Id.* at 25039 ¶ 3.

¹⁰ See *supra* note 3.

¹¹ See The Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Rule To Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers, PS Docket No. 11-82, *Report and Order*, 27 FCC Rcd 2650 (2012) (*2012 Part 4 VoIP Report and Order*).

¹² Extension of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers, 77 Fed. Reg. 25088 (Apr. 27, 2012).

commenters provide specific data and information, such as actual or estimated dollar figures, including a description of how the data or information was calculated or obtained and any supporting documentation. Vague or unsupported assertions regarding costs or benefits generally will receive less weight and be less persuasive than more specific and supported statements.

8. Some of the proposals advanced today would likely increase the number of reports, and some would likely decrease the number of reports. We estimate that, overall, adoption of the proposed rules may result in the filing of a total of 339 additional reports industry-wide per year, representing a \$54,240 cost increase.¹³ Given the breadth of industry sectors subject to Part 4, we believe this estimated total cost impact to be *de minimis*, and, in any event, significantly outweighed by the benefits to the public interest from adopting these changes. The modest proposals set forth in this *Notice* will improve the Commission's ability to fulfill its statutory mission and inform policymaking, such as the Commission's efforts to safeguard the public safety attributes of networks as critical communications transition to Internet Protocol-based platforms. In addition, we expect that adoption of the proposed rules will enhance the Commission's effective coordination with the Department of Homeland Security (DHS) and other federal agencies on matters of national security and emergency preparedness, response, and recovery. We seek comment on whether, or to what extent, the proposed rule changes below will help the Commission achieve these goals.

B. Call Failures

9. *Reporting of Outages that Significantly Degrade Communications to PSAP(s)*. We first seek comment on whether to amend our rules to clarify the circumstances under which degradation of communications to a PSAP constitutes a reportable outage under Section 4.9(e)(1) of our rules.¹⁴ Some providers may be interpreting this provision narrowly to require reporting only when there is a complete, *i.e.*, when a PSAP is rendered unable to receive *any* 911 calls for a long enough period to meet the reporting threshold. Under this interpretation, a failure or degradation that prevents hundreds or even thousands of 911 calls from completing might fail to qualify as a reportable outage if some 911 calls continued to reach the PSAP throughout the event. We believe that such a narrow reading of the provision is not consistent with the intent of the Part 4 outage reporting process and that the rule should not be left open to this interpretation during an event that debilitates 911 service.

10. From the initial adoption of outage reporting over 20 years ago, the Commission has recognized that a significant degradation of service may constitute a reportable disruption. In 1992, the Commission clarified under the former Part 63 outage reporting rules that “an outage is a significant degradation in the ability the customer normally would have to establish and maintain a channel of communications. The fact that some traffic might be getting through during a period of massive disruption would not mean an outage has not occurred.”¹⁵ In adopting Part 4 in 2004, the Commission

¹³ This net cost increase is the sum of a \$526,560 in cost increases and \$472,320 in cost reductions. The projected cost increases are associated with proposed requirements for reporting outages that significantly degrade 911 communications (\$1,600); radio access network overload events in wireless networks (\$67,200); simplex outages that persist forty-eight hours or longer (\$163,200); and wireless outages in rural areas based on geographic impact (\$294,560). The cost reductions are associated with proposals to raise the threshold for reporting major facility outages (\$453,600) and to clarify when airport-related outages are subject to reporting (\$18,720). We project that other proposals contained in the *Notice* will not have an appreciable cost impact.

¹⁴ See 47 C.F.R. 4.9(e)(1). The proposals contained in this *Notice* are aimed at improving the Part 4 network outage reporting process and do not prejudice any issue the Commission may take up in another docket or proceeding to address the reliability of 911 service. *see, e.g.*, 911 Governance and Accountability, PS Docket 14-193, *Policy Statement and Notice of Proposed Rulemaking*, 29 FCC Rcd 14208 (2014).

¹⁵ Notification by Common Carriers of Service Disruptions, CC Docket No. 91-273, *Report and Order*, 7 FCC Rcd 2010, 2012 ¶ 11 (1992). Section 63.100(a)(1) of our rules defines an “outage” as a “significant degradation in the ability of a customer to establish and maintain a channel of communications as a result of failure or degradation in the performance of a carrier’s network.” 47 C.F.R. § 63.100(a)(1).

again defined a reportable outage to include a significant degradation.¹⁶

11. The fundamental purpose of Part 4 is to collect information on “service disruptions that could affect homeland security, public health or safety, and the economic well-being of our Nation.”¹⁷ A network malfunction or higher level issue that prevents large numbers of 911 calls from completing certainly disrupts service in a manner that endangers public safety, irrespective of whether any PSAP has suffered a complete loss of ability to receive 911 calls. Moreover, requiring reporting under such circumstances would permit systematic analysis of the conditions that lead to these degradations and help reveal potential solutions. Without the benefits of such reporting, the Commission may not have sufficient, timely information to address serious incidents of this magnitude.

12. Accordingly, we propose revising Section 4.5(e)(1) to clarify that any network malfunction or higher-level issue that significantly degrades or prevents 911 calls from being completed constitutes a “loss of communications to PSAP(s),” regardless of whether the PSAP is rendered completely unable to receive 911 calls. We seek comment on this proposed clarification. How would a provider determine the need to report an outage that results only in a partial “loss of communications” to a PSAP? Should the provider simply calculate user minutes potentially affected as it would for a complete loss of communications, and then multiply that figure by the percentage of PSAP communications capacity that has been “lost” to determine whether the 900,000 user minutes threshold has been reached?¹⁸ Is the percentage of lost capacity equivalent to the percentage of trunks serving a PSAP that have been disabled, or are there factors (*e.g.*, built-in redundancy) that complicate the relationship between these parameters? Should a “loss of communications to PSAP(s)” be defined to include only “losses” that exceed a certain magnitude? For instance, should we specify that a “loss of communications” to a PSAP occurs only when at least 80 percent of the trunks serving a PSAP are disabled? As another possibility, should we consider establishing a separate reporting threshold based on the number of 911 calls that actually fail to be completed as the result of an outage? If so, should we set a uniform numerical threshold, or should the threshold be relative to the number of users a PSAP serves? Should the Commission require reporting of any outage of at least thirty minutes’ duration that exceeds some threshold level of impairment to the communications capabilities of any PSAP, irrespective of the number of user minutes potentially affected? If so, how should the Commission define such a threshold? Are there other metrics and thresholds the Commission should consider that could better capture this type of degradation in the ability to complete 911 calls? What are the potential advantages and disadvantages of any such alternatives?

13. We also seek comment on the costs and benefits of the various measures mentioned above. Even assuming that the measures would expand reporting obligations, we do not believe that any such measures would have a substantial cost impact. Over the previous three years, the Commission has been made aware of only a handful of events that appear to have produced a “significant degradation in communications to a PSAP(s)” without resulting in a complete loss of such communications. For purposes of estimating reporting costs, we could treat those years as a best case scenario and instead posit

¹⁶ See 47 C.F.R. § 4.5(a) (defining “outage” as a “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”); *2004 Part 4 Report and Order*, 19 FCC Rcd 16830 at 16860-62 ¶¶ 54-55, notes 168, 182 (explaining that “[d]egradation” differs from the term “outage” in that it connotes a reduction in the quality of service that could be experienced by some (but not necessarily all of the) users as a total outage).

¹⁷ *2004 Part 4 Report and Order*, 19 FCC Rcd at 16832 ¶ 1.

¹⁸ The Commission adopted the 900,000 user-minute threshold as the mathematical result of multiplying the duration of an outage expressed in minutes by the number of users potentially affected by the outage. This formula was the result of combining two key elements of the former Part 63 requirements (30 minutes and 30,000 users), which resulted from discussions with industry stakeholders. See *2004 Part 4 Report and Order*, 19 FCC Rcd at 16833-34, 16858-62, 16866 ¶¶ 2, 4, 52-53, 55-56, 64, note 5; *2012 Part 4 VoIP Report and Order*, 27 FCC Rcd at 2684-87, ¶¶ 83-91.

that as many as ten such events a year would be reportable were we to adopt any of the various measures considered above. Assuming further that each reportable event requires two hours of staff time to report,¹⁹ at eighty dollars per hour, we conclude that adoption of any of the considered measures would result in a total cost increase of \$1,600 per year. These estimates were developed in 2004 during the process to obtain approval for the information collection associated with the original Part 4 rules and were subject to public comment both then and at periodic intervals since to renew the collection authorization.²⁰ We believe these estimates remain valid, especially in light of both advances in information technology that have permitted providers to streamline processes and providers' increasing familiarity with the NORS outage reporting process. We seek comment on the foregoing analysis, including the assumptions used to arrive at the cost estimate and the extent to which these estimates appropriately reflect the costs associated with reporting. Interested parties should include information regarding whether the submission process (i.e., time to fill out the form, review by management and filing) takes two hours. We also seek comment as to whether we could achieve our objectives in a less costly, less burdensome, or more efficient manner.

14. *Call Failures in the Wireless Access Network.* We next seek comment on the reporting of wireless call failures that result from congestion in the access network, a problem often encountered during emergencies.²¹ In particular, the inability of a radio access network (RAN) to support excess demand for radio channels may not constitute a reportable "failure or degradation" under our current rules, yet pervasive call failures undermine the reliability of networks for consumers regardless of their cause.²² Because this appears to be predominantly an issue with wireless networks, we propose to amend our Part 4 rules to require the reporting of systemic wireless call failures that result from RAN overloading.

15. Such failures appear to be most prevalent during and in the immediate aftermath of major disasters, when call volume is particularly heavy. To provide a more complete understanding of the problem, we seek comment on the failure rate of wireless calls. How often and under what circumstances do wireless calls fail in RANs? How different is that failure rate from the rate experienced during ordinary circumstances? How different is that from failure rates in wireline networks – including both TDM and IP-based networks – in both extraordinary (e.g., during or immediately after a weather event)

¹⁹ This two-hour estimate, which we use throughout this Notice, includes the time necessary to file the notification, initial report, and final report. See 47 C.F.R. § 4.11.

²⁰ See generally *2004 Part 4 Report and Order*; *2012 VoIP Report and Order*; Federal Communications Commission, Part 4 of the Commission's Rules Concerning Disruptions to Communications OMB Control# 3060-0484 Supporting Statement (2004)(entered into ET Docket No. 04-35, PS Docket No. 15-80); Federal Communications Commission, Part 4 of the Commission's Rules Concerning Disruptions to Communications OMB Control# 3060-0484 Supporting Statement (2007), <http://www.reginfo.gov/public/do/DownloadDocument?documentID=55066&version=1>; Federal Communications Commission, Part 4 of the Commission's Rules Concerning Disruptions to Communications OMB Control# 3060-0484 Supporting Statement (2011), <http://www.reginfo.gov/public/do/DownloadDocument?documentID=251530&version=1>; Federal Communications Commission, Part 4 of the Commission's Rules Concerning Disruptions to Communications OMB Control# 3060-0484 Supporting Statement (2012), <http://www.reginfo.gov/public/do/DownloadDocument?documentID=337494&version=1>; Federal Communications Commission, Part 4 of the Commission's Rules Concerning Disruptions to Communications OMB Control# 3060-0484 Supporting Statement (2014) <http://www.reginfo.gov/public/do/DownloadDocument?documentID=500173&version=1>.

²¹ For instance, this problem was observed in the aftermath of the derecho storm of 2012 and the Boston Marathon bombings in 2013.

²² The Commission already requires reporting of interexchange carrier (IXC) and local exchange carrier (LEC) tandem facility outages of at least thirty minutes' duration in which 90,000 or more calls are blocked. See 47 C.F.R. § 4.9(b).

and typical circumstances? How often and with what impact is “load shedding” applied whereby a provider intentionally decreases network functionality to allocate available resources to the most critical functions?

16. We also seek comment on ways to measure the customer impact of call failures caused by RAN congestion. The most obvious potential metric is percent of calls failed. Is there a surrogate metric more readily attainable that can provide the Commission with similar information? What are the relative strengths and weaknesses of each metric? What would be the appropriate reporting threshold? Are there alternative ways of defining the reporting threshold that would generate more useful information without imposing unreasonable burdens on reporting entities? Are there other indicators the Commission could track that would help it better understand the network dynamics that prevent a wireless network from effectively handling calls once a certain saturation point is reached? Are these indicators likely to vary depending on the technology used to provide service?

17. We also seek comment on the costs, burdens and benefits of requiring providers to report widespread call failures in wireless RANs. To estimate these costs, we first assume that wireless access networks and interoffice networks are engineered to achieve comparably low rates of call failure (*i.e.*, blocked calls). We base this assumption on the fact that the nation’s communications networks are vastly interdependent, which we believe could encourage the implementation of similarly robust parameters across networks, *e.g.*, call blocking monitoring and measuring. This leads us to assume that these two types of networks have a comparable rate of calls blocked and, therefore, would have a comparable number of outage reports. We seek comment on these assumptions. As the Commission receives approximately 420 reports per year of interoffice facility outages, we estimate that adoption of the proposed requirement would result in the filing of an additional 420 reports per year. Assuming further that two hours of staff time are necessary to file the reports on each outage, at eighty dollars per hour, we tentatively conclude that the adoption of the requirement would result in an annual increase of \$67,200 in reporting costs.²³ We also assume that providers are already technically capable of tracking call failures at each cell site, and that they do so as a matter of practice, and they thus would not incur additional costs in tracking reportable outages under the proposed rule. We seek comment on this cost estimate, including its underlying assumptions. We believe these costs would be outweighed by the concomitant benefits of improved Commission awareness of the frequency and impact of RAN-overload events on wireless customers, and of providing the Commission with greater understanding about the overall health of the nation’s networks and, thereby, the ability to work with industry toward improved reliability and situational awareness goals to ultimately achieve and sustain more reliable and resilient communications networks.²⁴

18. *Call Failures in the Non-Wireless Access Network.* The Commission’s rules also do not require reporting on widespread call blockages in the non-wireless local access network to the extent such events involve no “failure or degradation” of the network. We seek comment on whether the Commission should impose similar reporting requirements on these types of outages. If so, how should such requirements be defined, and what costs and benefits would attend their adoption? Is there evidence that congestion in the access portion of a wireline network causes significant amount of calls to fail?

C. Major Transport Facility Outages

1. Appropriate Metric and Threshold

19. The Commission requires reporting of “failures of communications infrastructure components having significant traffic-carrying capacity.”²⁵ This reporting standard is currently defined in

²³ See *supra* ¶ 13, note 20.

²⁴ 2012 Part 4 VoIP Report and Order, 27 FCC Rcd. 2650, 2657, 2661, 2663-65, 2678-79 ¶¶ 13-14, 23-24, 30-35, 67.

²⁵ 2004 Part 4 Report and Order, 19 FCC Rcd at 16895 ¶ 128.

terms of impact on Digital Signal 3 (DS3) circuits,²⁶ a type of digital circuit that was the standard unit of purchase for communications capacity when the Part 4 rules were adopted in 2004.²⁷ Since then, increases in bandwidth requirements have shifted the majority of traffic onto larger circuits and optical facilities (*i.e.*, fiber). Based on our analysis of NORS data, it appears that an increasing proportion of the outages reported under this DS3-based standard are minor disruptions unlikely to have a significant impact on communications or jeopardize public safety. Moreover, the reporting of minor outages such as these inundates the Bureau with information that may not be sufficiently useful to justify the attendant reporting burden. Accordingly, we seek comment on whether upward adjustment of the reporting threshold for transport facility outages could reduce reporting burdens while preserving the Commission's ability to obtain critical information about communications reliability.

20. In its Petition for Reconsideration of the *2004 Part 4 Report and Order*, Qwest (now CenturyLink) argued that the outage reporting threshold should be defined in terms of impact on "OCn"-level circuits (*i.e.*, optical circuits such as OC1 and OC3) rather than DS3 circuits.²⁸ Qwest contends that a "DS3 level outage below an OCn level outage rarely would implicate a material network failure"²⁹ and that a DS3-based reporting requirement would produce a substantial number of service disruption filings and impose undue costs and burdens on carriers. OCn-level reporting, it maintains, is "a more appropriate threshold since events impacting OCn-type services are usually larger events affecting more subscribers"³⁰ Alternatively, Qwest argues that the Commission should require reporting of DS3 outages only on a quarterly basis.³¹

21. In the years since the Part 4 rules were adopted and Qwest filed its petition, the industry has come to rely more heavily on circuits larger than the DS3, including OCn-level circuits, for transport of communications traffic. We thus believe it may be appropriate to express the reporting threshold for transport facility outages in terms of impact on higher capacity circuits. In particular, we propose to define the threshold in terms of "OC3 minutes", *i.e.*, based on impact on OC3 circuits or other circuits or aggregations of circuits that provide equal or greater capacity. We believe that expression of the outage threshold in "OC3 minutes" may better indicate the magnitude of network outages to which the Part 4 rules were designed to apply. We seek comment on this proposal.

22. We further seek comment on raising the reporting threshold to account for changes in how networks are scaled and designed. The current threshold of 1,350 DS3 minutes—which is equivalent to 450 OC3 minutes—was selected, consistent with our goals of technological neutrality, to match the

²⁶ "DS3" denotes a digital circuit with a digital signal (DS) data rate of approximately 44.7 megabits per second (Mbps).

²⁷ *2004 Part 4 Report and Order*, 19 FCC Rcd at 16895 ¶ 128.

²⁸ Qwest Petition at 5-6. High-speed fiber-optic connections are measured in Optical Carrier or "OC" transmission rates. These rates include several standardized bandwidth amounts supported by Synchronous Optical Networking (SONET) connections. They are generically referred to as OCn, where the "n" represents a multiplier of the basic OC-1 transmission rate, which is 51.84 Mbps. OC rates are used to measure speeds of high-speed optical networks, from local business-to-business connections, to the highest bandwidth connections used for the Internet backbone. Small and medium sized businesses that require high-speed Internet connectivity may use OC3 or OC12 connections. ISPs that require much larger amounts of bandwidth may use one or more OC48 connections. Generally, OC192 and greater connections are used for the Internet backbone, which connects the largest networks in the world together. For example, OC1 denotes and optical carrier transmission speed of 51.840 Mbps. A DS3 signal operates at 44.736 Mbps. Therefore, reporting at the DS3 level is a lower communications carry capacity threshold than the OCn level.

²⁹ Qwest Petition at 6.

³⁰ *Id.* According to Qwest, a DS3 line can support up to 672 subscribers, while an OC3-type service can support "potentially more than 2,000 end users." *Id.*

³¹ *Id.* at 8.

900,000 user minutes threshold put in place for voice-grade services,³² based on a calculation of 667 voice-grade users per DS3.³³ Yet, as communications services transition to more advanced technologies, greater capacity often carries the same number of users. In the emerging VoIP environment, we believe that 450 voice-grade equivalent users is a better estimate of the carrying capacity of a single DS3.³⁴ This would mean that, to retain equivalency with the 900,000 user minutes threshold, the major facilities outage threshold should be adjusted to 2,000 DS3 minutes—or 667 OC3 minutes. We seek comment on this analysis and on the resultant proposal.

23. We also seek comment on the cost savings that would accrue from this proposal. We observe that there were 2,208 major transport facility outages reported in 2013 that did not affect OC3-grade or equivalent circuits, and an additional 627 that did not exceed 667 OC3 minutes. We accordingly believe that the proposed changes to the reporting requirements for major transport facility outages could reduce the number of associated reports filed each year by as many as 2,835. Assuming that each such report would have required two staff hours to complete, at eighty dollars per hour, we conclude that the proposed adjustments of the reporting threshold for major facility outages would reduce reporting costs by \$453,600.³⁵ We seek comment on this cost analysis and its underlying assumptions.

2. Simplex Outage Reporting

24. A simplex event occurs when circuits that are configured with built-in path protection, as when arranged in a protection scheme such as a Synchronous Optical Network (SONET) ring, lose one of the paths. Under such configurations, when one of the circuits fails, traffic is diverted to a back-up circuit or “protect path,” and a “simplex event” has occurred. We propose to shorten from five days to 48 hours the reporting timeframe for this type of event.³⁶

25. In the *2004 Part 4 Report and Order*, the Commission rejected a proposal to exempt “simplex events” from the reach of these requirements and determined that such events would constitute reportable outages.³⁷ The Commission reasoned that, although such events do not immediately result in any loss of communications, they eliminate redundancies that prevent major losses of communications from occurring and provide valuable insight into the actual resiliency of critical networks.³⁸ Later that year, in the *Part 4 Partial Stay Order*, the Commission granted a stay of this requirement as to outages

³² *2004 Part 4 Report and Order*, 19 FCC Rcd at 16895 ¶ 128.

³³ Thus, we estimated that an outage disabling a single DS3—or 667 voice-grade users—would need to persist for 1,350 minutes to have an impact equivalent to the 900,000 user minutes that triggers a reportable outage under the Part 4 rules applicable to voice-grade services.

³⁴ We have recently estimated that a single VoIP call requires 100 kbps of bandwidth. See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126, *Tenth Broadband Progress Notice of Inquiry*, FCC 14-113 (rel. Aug. 5, 2014) at 8, Table 2. As a single DS3 has a bandwidth of 44.736 Mbps, we estimate that 450 voice-grade equivalent users can be carried per DS3 ($450 \approx 44.736/.100$) in the current VoIP environment. We seek comment on this analysis.

³⁵ See *supra* ¶ 13, note 20.

³⁶ Currently, reporting of simplex events is based on loss of DS-3 facilities. See 47 C.F.R. §§4.7, 4.9. Above, in the discussion of major network transport facility outages, we propose to revise the metric for reporting those outages from DS3-based to OC3-based. See *supra* Section III.C.1. In this section, we address the independent concern of the appropriate time frame for reporting simplex events on major network facilities, regardless of whether measured as DS or OC.

³⁷ See *2004 Part 4 Report and Order*, 19 FCC Rcd at 16898-99 ¶ 134.

³⁸ *Id.*

that persist for less than five days.³⁹ In issuing this partial stay, the Commission contemplated “developing a full record” on this issue, including on the costs that providers would incur in complying with the rule as originally adopted.⁴⁰

26. Qwest, USTA, and the Joint Petitioners (*i.e.*, AT&T, BellSouth, MCI, SBC and Verizon) argue in their Petitions that it is overly burdensome to report simplex events.⁴¹ In its response to the Petitions, the National Association of State Utility Consumer Advocates (NASUCA) argued that circuits are “critical” for commerce and national defense, including, “Federal Reserve, ATM and other bank and commercial transactions, FAA flight controls, [and] the Defense Department[,]” and that simplex outages should thus be reported.⁴²

27. In their Petitions, providers highlighted the Network Reliability and Interoperability Council (NRIC) best practices that recommend that simplex outages be repaired expeditiously.⁴³ The Joint Petitioners assert that simplex events are “almost always resolved during normal maintenance periods,”⁴⁴ which are typically scheduled daily during periods of low network utilization. BellSouth Telecommunications stated that “restoration activities for electronics are typically scheduled to take place during the next maintenance window along with other critical activities that place service at risk.”⁴⁵ It further disclosed that its maintenance windows are “typically late at night or early in the morning each day of the week, including weekends.”⁴⁶ NASUCA suggested that the Commission require reporting of simplex events lasting longer than twenty-four hours, which it believes would be consistent with standard industry practice.⁴⁷

28. Because simplex events are typically scheduled for repair during daily maintenance cycles as Petitioners suggest, such outages should generally be rectified within twenty-four to forty-eight hours in the normal course of business.⁴⁸ Neglecting to address simplex outages within forty-eight hours of their discovery would thus contravene an established industry best practice. Recent years have witnessed an increase in the reporting of simplex outages, even under the relaxed, five-day standard set

³⁹ *Part 4 Partial Stay Order*, 19 FCC Rcd at 25043 ¶ 9; *see also 2004 Part 4 Report and Order*, 19 FCC Rcd at 16900-01 ¶ 134.

⁴⁰ *Part 4 Partial Stay Order*, 19 FCC Rcd at 25040 ¶ 3.

⁴¹ Joint Petition at 8-10; Qwest Petition at 10-12; USTA Petition at 6-16.

⁴² Comments of NASUCA, ET Docket No. 04-35 at 4 (Mar. 22, 2005) (NASUCA Comments).

⁴³ *See* Joint Petition at 6. The Network Reliability and Interoperability Council (NRIC) was an FCC federal advisory committee comprised of the representatives from communications industry and public safety to facilitate enhancement of emergency communications networks, homeland security, and best practices across the burgeoning telecommunications industry. NRIC’s successor advisory committee is the Communications Security, Reliability, and Interoperability Council (CSRIC). The best practices developed by both NRIC and CSRIC are available at <http://transition.fcc.gov/pshs/advisory/>.

⁴⁴ *See id.*; *see also* Declaration of William C. Leach, on Behalf of AT&T, pp 8, attached at Attachment E (“AT&T Declaration”); BellSouth Affidavit, pp10; SBC Affidavit, pp8; Verizon Declaration pp6; Letter from Michael Fingerhut, Sprint, to Marlene H. Dortch, FCC, ET Docket No, 04-35, at 2 (filed Nov. 8, 2004) (Sprint Ex Parte).

⁴⁵ *Aff. of Archie McCain on Behalf of Bellsouth Telecommunications, Inc.* USTA references the practices of BellSouth: “BellSouth’s maintenance windows typically are late at night or early in the morning each day of the week, including weekends.” USTA Petition at 9.

⁴⁶ *Id.* Cox also notes that repairs are made in the “low maintenance window part of the day.” NCTA Ex Parte at 2. Sprint reported that maintenance windows occur “sometime after midnight, when traffic flows are minimal.” Sprint Ex Parte at 2.

⁴⁷ NASUCA Comments at 5.

⁴⁸ *Id.*

forth in the *Part 4 Partial Stay Order*.⁴⁹ This suggests that the best practice is not being followed.

29. In light of these observations, we propose improving our reporting requirements for simplex events to require reporting of any such event not rectified within forty-eight hours of its discovery as a reportable outage. We seek comment on the choice of forty-eight hours after discovery of a reportable outage as the point at which providers must report the outage. Are providers correct in asserting that the vast majority of these outages are likely to be repaired within a forty-eight-hour window and thus would remain exempt from reporting?⁵⁰ How common are outages that last longer than forty-eight hours but shorter than five days after they are discovered as reportable outages? Do the outages that persist longer than five days tend to be particularly large in scope or difficult to repair? Is there an alternative threshold for the reporting of simplex events that the Commission should consider? If so, what is the threshold and what are its advantages?

30. We also seek comment on whether, and to what extent, reducing the reporting threshold from five days to forty-eight hours would increase costs on providers. We believe that this proposed change would create incentives for providers to repair simplex outages in a timelier manner, without imposing an undue cost burden. We would expect that adoption of this proposal would increase the number of reportable events, given that there are likely a number of simplex events that exceed the shorter 48 hour threshold proposed in this Notice of Proposed Rulemaking, but do not exceed the longer 5-day threshold currently in the Commission's rules. We propose a proportional estimate that the shortened reporting window threshold would double the number of simplex outages subject to reporting, this would amount to an increase of approximately 1,250 reports per year. However, the proposed change from DS3 to OC3-based reporting for major network transport facility outages would reduce the number of simplex-based reports⁵¹ because events affecting a small number of DS3s would no longer be reportable. Assuming that we reduce the simplex reporting window threshold from five days to 48 hours, and adopt OC3 as the metric threshold, we estimate these conditions combined will result in an estimated 1,020 additional outage reports.⁵² Assuming further that two staff hours required to file each report, at eighty dollars per hour, this increase in the number of filed reports would carry with it an increased cost of \$163,200.⁵³ We believe these costs would be outweighed by the concomitant benefits of improved Commission awareness of the extent of industry best practices implementation in this area, and of providing the Commission's with greater understanding about the overall health of the nation's networks and, thereby, the ability to work with industry toward improved reliability and situational awareness goals to ultimately achieve and sustain more reliable and resilient communications networks.⁵⁴ We seek comment on this analysis and its underlying assumptions.

D. Wireless Outage Reporting Metrics

31. *Reporting Wireless Outages Generally.* One of the Commission's goals in creating Part 4

⁴⁹ The *Part 4 Partial Stay Order* concedes that a five-day maintenance window for correcting simplex outages might be tolerated "[i]n the worst case scenario." *Part 4 Partial Stay Order*, 19 FCC Red at 25043 ¶ 8.

⁵⁰ Aff. of Archie McCain on Behalf of Bellsouth Telecommunications, Inc. USTA references the practices of BellSouth: "BellSouth's maintenance windows typically are late at night or early in the morning each day of the week, including weekends." USTA petition at 9. Cox also notes that repairs are made in the "low maintenance window part of the day." NCTA Ex Parte at 2. Sprint reported that maintenance windows occur "sometime after midnight, when traffic flows are minimal." *Sprint Ex Parte* at 2.

⁵¹ An OC3 is equivalent to three DS3s.

⁵² We calculate 1,020 reports = 1,250 additional DS3-based reports due to reduction to 48 hours threshold – 230 reports only affecting one or two DS3s. We base this calculation on the 230 outage reports previously received by the Commission in 2013, for events affecting one or two DS3s.

⁵³ See *supra* ¶ 13, note 20.

⁵⁴ See *supra* note 25.

in 2004 was to establish outage reporting rules that apply regardless of technology employed.⁵⁵ The Commission continued to advance technological neutrality as a policy goal in 2012,⁵⁶ and we attempt to do so here with these proposals. To this end, we intend for the outage reporting rules to apply in the same manner to providers using different technologies. We have observed over the last several years that wireless providers use different methods to calculate the number of users “potentially affected” by an outage, and we seek to find a uniform method of calculating this number that can be used by all reporting wireless providers, regardless of underlying technology. Wireless service providers in particular are directed to calculate this number “by multiplying the simultaneous call capacity of the affected equipment by a concentration ratio of 8.”⁵⁷ This measurement of call capacity is undertaken at the mobile switching center (MSC), which avoids the “computational difficulties” of directly measuring outages within the more dynamic radiofrequency (RF) portion of the network.⁵⁸ However, as wireless technologies have continued to evolve, providers implementing different technologies have employed various methods of measuring the call capacity of their MSCs for purposes of outage reporting. Based on our analysis of the data, it appears that this variation among providers and technologies has led to inconsistencies in reporting that may compromise the Commission’s ability to reliably detect wireless network outage trends. The lack of a clear and consistent process for measuring and reporting wireless outages also undermines the technology neutrality that lies at the heart of the Part 4 rules.⁵⁹

32. In light of these observations, we propose adopting a more standardized, technology neutral method⁶⁰ for calculating the number of users “potentially affected” by a wireless network outage. Specifically, we seek comment below on two possible calculation methods, each of which we believe holds the potential to produce more reliable and consistent data than is currently being reported.

33. There are two potential approaches that would accomplish this objective. First, the wireless provider could calculate the total number of users potentially affected by an outage by multiplying the number of cell sites disabled as part of the outage by the average number of users it serves per site, assuming for purposes of the calculation that each user is served by a single site and site assignments are distributed evenly throughout the provider’s network. Alternatively, a wireless provider could determine by reference to its Visitor Location Register⁶¹ the actual number of users that were being served at each affected cell site when the outage commenced. We seek comment on the strengths and weaknesses of each of these calculation methods. How significantly would adoption of either proposed method affect current reporting practices? Are either or both methods preferable to the variety of methods used by providers to measure “simultaneous call capacity” under the existing rule? What are the drawbacks or limitations of each proposed method? Are there ways of modifying either method to improve its utility? Would adoption of either method unduly favor certain network technologies or deployment configurations over others? Is either method more technology neutral than the other? We also seek comment on the costs and benefits that would attend adoption of either calculation method. We

⁵⁵ *2004 Part 4 Report and Order*, 19 FCC Rcd at 16860-61 ¶ 54 (referencing a general goal to create rules that apply regardless of technology employed); *2012 Part 4 VoIP Report and Order*, 27 FCC Rcd at 2656, 2677 ¶¶ 9, 65 (explaining technological neutrality).

⁵⁶ *Id.*

⁵⁷ See 47 C.F.R. §§ 4.7(e), 4.9(e); see also *2004 Part 4 Report and Order*, 19 FCC Rcd at 16887 ¶ 108. The “concentration ratio of 8” is used to calculate the number of users “potentially affected” by a wireless outage based on “the generic parameters that are routinely used in basic telecommunication traffic analysis.” *Id.* at 16888 ¶ 110.

⁵⁸ See *2004 Part 4 Report and Order*, 19 FCC Rcd at 16889 ¶ 111.

⁵⁹ See *supra* note 56.

⁶⁰ *Id.*

⁶¹ A Visitor Location Register holds data regarding the subscribers who are roaming in the location area of an MSC and minimizes the number of queries from the MSC to the home location register, where data resides regarding network subscribers.

do not believe that adoption of either proposed calculation would have an appreciable cost impact. We seek comment on this assumption.

34. Finally, we seek comment on whether to adopt a separate and additional wireless outage reporting requirement based on the geographical scope of an outage, irrespective of the number of users potentially affected. We believe that doing so could provide the Commission with valuable information on the reliability of wireless service in less densely populated areas. As the percentage of calls to 911 from wireless devices continues to increase, the negative impact to the public from large geographic areas losing wireless coverage for emergency calls grows in significance. We seek comment on these observations. Were the Commission to adopt a geography-based reporting requirement for wireless outages, how should it define the threshold? Should providers be required to report any outage that disrupts service over a specified percentage (*e.g.*, 5 percent) of the provider's advertised coverage footprint or some more granular level (*e.g.*, at the State, county, or zip code)?

35. We also seek comment on the costs and benefits that would attend adoption of a geography-based reporting threshold. To estimate the cost of a potential, new geographic-based reporting threshold, we need to estimate the number of additional reports that would be filed under such a threshold. We estimate this number as (1) the number of additional outage reports that would be generated by geography-based reporting (2) minus the number of reports that would be submitted for outages that meet the current 900,000 user-minute threshold. For this purpose and based on our experience reviewing a decade's worth of outage data, we estimate that geography-based reporting would generate additional reports in counties where a company has fifteen or fewer cell sites. The number of counties with fifteen or fewer cell sites represents 2.7 percent of the total number of cell sites nationwide.⁶² Using as a guide counties with fifteen or fewer cell sites, a disruption to communications would be reportable under a geographic coverage standard if one or two cell sites in the county are down. We next estimate, based on historical NORS data, that each cell site has a 22.6 percent chance of experiencing an outage within a given year. Finally, we adopt CTIA's estimate that 301,779 cell sites were in operation nationwide as of the end of 2012.⁶³ Based on these data, we conclude that adoption of a geography-based reporting requirement would likely result in the filing of 1,841 additional reports per year.⁶⁴ Assuming that two staff hours are required to file each report, at eighty dollars per hour, we further conclude that the additional reporting would carry with it a \$294,560 cost burden.⁶⁵ We believe these costs would be outweighed by the concomitant benefits of improved reporting on wireless outages in less-populated areas, and of providing the Commission's with greater understanding about the overall health of the nation's networks and, thereby, the ability to work with industry toward improved reliability and situational awareness goals to ultimately achieve and sustain more reliable and resilient communications networks.⁶⁶ Are there steps the Commission could take to reduce the reporting burden associated with such a requirement?

36. *Estimating the Number of "Potentially Affected" Wireless Users for Outages Affecting a PSAP.* A reportable outage affecting a 911 special facility—or PSAP—occurs, *inter alia*, whenever: (1) there is a loss of communications to a PSAP potentially affecting at least 900,000 user-minutes; (2) the outage is not at the PSAP; (3) a complete reroute is not possible; and (4) the outage lasts 30 minutes or more.⁶⁷ In its Petition for Reconsideration, Sprint requests clarification of Section 4.9(e)(5), arguing that

⁶² This percentage is based on analysis of data collected from companies given to the Commission during activations from the Disaster Information Reporting System (DIRS) in 2012.

⁶³ CTIA, CTIA Year-End 2012 Semi-Annual Wireless Industry Survey, <http://blog.ctia.org/2013/05/02/semi-annual-survey> (last visited Mar. 27, 2015).

⁶⁴ $301,779 \times 0.226 \times 0.027 \approx 1,841$.

⁶⁵ See *supra* ¶ 13, note 20.

⁶⁶ See *supra* note 25.

⁶⁷ 47 C.F.R. § 4.5(e)(1).

“if an outage affects only one of the subtending PSAPs, only those customers whose calls would have been routed to such PSAP would potentially be affected.”⁶⁸ Sprint requests that wireless providers be permitted to divide the capacity of the Mobile Switching Center (MSC), as defined in the rule, by the number of subtending PSAPs in order to more accurately estimate the number of end users potentially affected by an outage affecting a given PSAP. T-Mobile supported of Sprint’s proposal.⁶⁹

37. We propose a slightly modified version of Sprint’s proposal. Rather than have providers divide capacity equally among subtending PSAPs in order to calculate numbers of users potentially affected, we propose that capacity be allocated to each PSAP in reasonable proportion to its size in terms of number of users served.⁷⁰ We believe that this clarification would limit reporting to those significant outages that potentially impact public safety and for which the rules are intended. Moreover, this calculation method is consistent with what we observe to be the current reporting practice. We seek comment on this proposal. We also seek comment on any potential new burdens that would result from this clarification. We do not believe that adoption of the proposed modification would have an appreciable cost impact. We seek comment on this assumption.

E. Special Offices and Facilities

38. *Identifying “Special Offices and Facilities.”* Part 4 requires various classes of communications providers to report outages that potentially affect “special offices and facilities,”⁷¹ a term defined in Section 4.5(b) to include “major military installations, key government facilities, nuclear power plants, and [relatively major airports].”⁷² It further states that National Communications System (NCS)⁷³ member agencies will determine which of their facilities qualify as major military installations or key government facilities. Prior to the dissolution of the NCS in 2012,⁷⁴ none of its member agencies provided any guidance as to which of their facilities should be included in these categories. In the wake of NCS’s dissolution and the establishment of the Executive Committee on National Security and Emergency Preparedness Communications,⁷⁵ we seek alternative means of identifying “special offices and facilities” for purposes of Part 4.

39. We propose to classify as “special offices and facilities” those facilities enrolled in or eligible for the Telecommunications Service Priority (TSP) program, which prioritizes the restoration and provisioning of circuits used by entities with National Security/Emergency Preparedness (NS/EP) responsibilities and duties. The TSP framework for restoring critical circuits comprises five priority levels, with levels 1 and 2 reserved for critical national security and military communications and the

⁶⁸ Sprint Petition at 3. Sprint also seeks clarification that “the wireless carrier’s obligation is to report outages on its network and not those occurring on other carriers’ networks.” *Id.* at 2-3. Section 4.5(e) is clear on this point: wireless carriers must report outages “experienced on facilities that they own, operate, lease or otherwise utilize.” 47 C.F.R. § 4.5(e).

⁶⁹ T-Mobile Comments at 3.

⁷⁰ That is, Sprint’s proposal suggests dividing the capacity of the MSC evenly by the number of PSAPs, while our proposal would base the allocation on the size of the subtending PSAP rather than providing for equal division.

⁷¹ See 47 C.F.R. § 4.9(a)(3), (c)(2)(iii), (e)(3), (f)(3), (g)(ii)(B).

⁷² 47 C.F.R. § 4.5(b). The rules separately provide for the reporting of outages affecting a “911 special facility.” See 47 C.F.R. § 4.5(e).

⁷³ The NCS comprised a consortium of federal agencies charged with managing the Nation’s emergency communications. See Exec. Order No. 12,472, 49 Fed. Reg. 13,471 (Apr. 3, 1984), *amended by* Exec. Order No. 13,286, 68 Fed. Reg. 10,619 (Feb. 28, 2003) and Exec. Order No. 13,407, 71 Fed. Reg. 36,975 (June 26, 2006).

⁷⁴ See Exec. Order No. 13, 618, 77 Fed. Reg. 40,779 (Jul. 6, 2012).

⁷⁵ See *id.* at Section 3.1 (establishing an Executive Committee to serve as a forum to address national security/emergency preparedness communications matters).

remaining levels dedicated to the protection of public safety and health and the continued functioning of the economy.⁷⁶ TSP-enrolled facilities include military installations; federal cabinet-level department and agency headquarters; state governors' offices; Federal Reserve Banks; national stock exchanges; federal, state, and local law enforcement facilities; hospitals; airports; major passenger rail terminals; nuclear power plants; oil refineries; and water treatment plants.

40. We seek comment on this proposal. If the TSP framework is suitable for identifying "special offices and facilities," should the rule apply only to facilities enrolled in the program?⁷⁷ If so, should there be a separate, free "outage reporting only" category created for facilities that are eligible for TSP but not otherwise enrolled? Should "special offices and facilities" instead be defined to include any facility that would be eligible for TSP? If so, how would a provider determine which of the facilities it serves are eligible for the program? In addition, if TSP eligibility or enrollment is used to define "special offices and facilities" under Part 4, should facilities at all priority levels be included or only those at the highest levels? Should the rules expressly exempt providers from reporting any information about a TSP-enrolled facility that is protected under a confidentiality or non-disclosure agreement with a TSP participant? Are there ways in which the TSP framework is unsuitable as a basis for classifying "special offices and facilities"? For instance, are there critical facilities that would fail to qualify as "special offices and facilities" under this approach? If so, should we consider broadening the scope of the definition to include facilities that are guaranteed priority restoration under "TSP-like" provisions in service-level agreements? Are there alternative classification frameworks that would be more suitable? We also request comment on the costs and benefits of these proposed options. We do not believe that redefining the term "special offices and facilities" as considered in this *Notice* would have an appreciable cost impact. We seek comment on this assumption. Which means of defining the term "special offices and facilities" would strike the optimal balance between useful results and minimal costs to all parties? We expressly seek comment from our national security agencies on the types of communications sector critical infrastructure they believe should be included in such reporting.

41. *Section 4.13*: Section 4.13 directs special offices and facilities to report outages to the NCS, which may then forward the reported information to the Commission at its discretion.⁷⁸ No such reports were ever forwarded to the FCC from the NCS prior to the latter's dissolution in 2012. However, the Commission separately imposes requirements on communications providers to report outages that potentially affect "special offices and facilities" as that term is defined Section 4.5.⁷⁹ Accordingly, we propose deleting Section 4.13 from our rules as redundant with respect to information that providers are already required to supply, and obsolete with respect to obligations regarding the NCS. We seek comment on this proposal. Would deleting this provision have any practical impact on the Commission's ability to gather information about critical outages? Should the Commission establish a voluntary mechanism for operators of "special offices and facilities" to share information directly with the Commission about outages affecting their facilities? What benefits to network reliability and public safety might be realized were such reports filed directly with the Commission? Should the Commission encourage or require providers to report information regarding outages affecting "special offices and facilities" to member agencies of the former NCS or to agencies that have absorbed NCS functions?

42. *Airport Reporting Requirements*: Section 4.5(b) defines "special offices and facilities" to include all airports listed as "current primary (PR), commercial service (CM), and reliever (RL) airports in the Federal Aviation Administration's (FAA) National Plan of Integrated Airports Systems (NPIAS)."⁸⁰ In its Petition for Reconsideration of the *2004 Part 4 Report and Order*, Sprint asks the

⁷⁶ See 47 C.F.R. Part 64 app. A § 12(c).

⁷⁷ TSP is a paid service.

⁷⁸ 47 C.F.R. § 4.13.

⁷⁹ See 47 C.F.R. § 4.9(a)(3), (c)(2)(iii), (e)(3), (f)(3), (g)(ii)(B).

⁸⁰ 47 C.F.R. § 4.5(b).

Commission to clarify that outages that “potentially affect” such airports (and are thereby reportable under various subsections of Section 4.9 of the rules)⁸¹ are classified as such only to the extent they have a potential impact on critical communications.⁸² Such an interpretation is consistent with language proposed but not adopted in the Part 4 rulemaking proceeding, under which an outage potentially affecting an airport would have been defined as one that: (i) disrupts 50 percent or more of the air traffic control links or other FAA communications links to any airport; (ii) has caused an Air Route Traffic Control Center (ARTCC) or airport to lose its radar; (iii) has caused a loss of both primary and backup facilities at any ARTCC or airport; or (iv) has affected an ARTCC or airport that is deemed important by the FAA as indicated by FAA inquiry to the provider’s management personnel.⁸³

43. We propose clarifying the circumstances under which providers must report outages potentially affecting airport communications. In doing so, we first observe that most of the reports filed in this category have concerned outages not significant enough to pose a substantial threat to public safety, particularly at smaller regional airports. In light of this observation, we seek comment on amending the definition of “special offices and facilities” to exclude all airports other than those designated “primary commercial service” airports in the NPIAS. This category includes the nation’s most heavily trafficked airports, where even minor degradations in critical communications can pose grave threats to public safety and national security. To what extent would this proposed restriction of the scope of Section 4.5(b) affect current reporting practice? Would it put the Commission at risk of failing to learn of serious outages?

44. We next seek comment on clarifying the types of communications that must be jeopardized for an outage to be held to “potentially affect” an airport. As an initial matter, we find compelling Sprint’s argument that only outages relating to critical communications should be included.⁸⁴ The definition of an outage potentially affecting an airport proposed in the original Part 4 rulemaking proceeding (and discussed above) would exclude communications such as these not directly related the role of airports as critical transportation infrastructure. Should the Commission adopt this proposed definition? Are there circumstances this definition fails to cover under which an outage should be held to “potentially affect” an airport? Should the definition include all communications outages that could impact the safety and security of the airport, passengers, crew or staff? On the other hand, should the Commission declare that outages potentially affecting airports include only those that affect FAA communications links? Are there are other ways of delineating this category of outages that we should consider? We also seek comment on the costs and benefits of clarifying the scope of outages that “potentially affect” airports as discussed above. In 2013, the Commission received 117 reports of airport-related outages that do not appear to have implicated critical communications and thus would likely not be reportable under any clarification of the rules considered above. We thus estimate that such a clarification would reduce the number of reports filed annually by 117. Assuming that each report requires two staff hours to complete, at \$80 per hour, this reduction in the number of reports filed would represent a cost savings of \$18,720.⁸⁵ We seek comment on this analysis.

45. Finally, we seek comment on the relationship between the general definition of “special offices and facilities” in Part 4 and the special provisions for airports. Were the Commission to classify “special offices and facilities” using the familiar TSP framework, under which airports are eligible facilities, could it eliminate as redundant its separate requirements to report outages affecting airports?

⁸¹ See 47 C.F.R. § 4.9(a)(3), (c)(2)(iii), (e)(3), (f)(3), (g)(ii)(B).

⁸² Sprint Petition at 4-5.

⁸³ New Part 4 of the Commission's Rules, *Notice of Proposed Rulemaking*, 19 FCC Rcd 3373, 3406, app. A (2004) (2004 Part 4 NPRM). This definition was previously codified in Section 63.100(a)(6), among the outage reporting rules that Part 4 supplanted.

⁸⁴ See Sprint Petition at 4-5.

⁸⁵ See *supra* ¶ 13, note 20.

Would doing so make the rules clearer and more efficient, or would it create the risk of critical airport outages going unreported? Should the Commission instead broaden the scope of the airport-based reporting rules to include other modes of public transportation or even wider to other critical infrastructure, perhaps based on the “critical infrastructure sectors” identified by DHS?⁸⁶ Does the TSP framework already adequately encompass such infrastructure for purposes of Part 4 reporting? Do answers to any of these questions depend on whether “special offices and facilities” are defined to include all TSP-eligible facilities or only those facilities enrolled in the program?

46. *Reporting Obligations of Satellite and Terrestrial Wireless Service Providers.* The Part 4 rules applicable to satellite and terrestrial wireless providers exempt these classes of providers from reporting outages potentially affecting airports.⁸⁷ In carving out these exemptions, the Commission explained that “the critical communications infrastructure serving airports is landline based.”⁸⁸ In separate Petitions, CTIA, Cingular Wireless and Sprint each argue that wireless providers should be similarly exempt from reporting outages pertaining to all other “special offices and facilities.”⁸⁹ CTIA argues in support of its petition that “the rationale for excluding wireless carriers from outage reporting for airports applies with equal force to all special offices and facilities.”⁹⁰ That is, “[j]ust as with airports, wireless providers do not generally assign dedicated access lines to specific end users, and therefore do not have dedicated access lines for the critical portions of any of the special offices and facilities.”⁹¹ The Commission notes, however, the continued growth in the use of wireless networks, including in and around facilities that may qualify as “special offices and facilities” under the current rules or under various proposals we are considering.

47. As we consider changes to the outage reporting rules that pertain to “special offices and facilities,” we seek comment on how such rules should apply to satellite and terrestrial wireless providers. Does airport communications infrastructure remain “landline based,” and are other facilities the Commission might classify as “special offices and facilities” served by a similar infrastructure? If so, should the Commission exempt wireless providers from any requirement to report outages potentially affecting “special offices and facilities,” as Petitioners request? Should we grant a similarly broad exemption to satellite providers? On the other hand, should the rules specify that a wireless or satellite provider must report outages potentially affecting any “special offices [or] facilities” to which it has assigned dedicated access lines? Are there other service arrangements that should give rise to an obligation to report wireless or satellite outages potentially affecting “special offices [or] facilities”? More generally, are there other circumstances where reporting from wireless or satellite providers on outages potentially affecting a special office or facility might provide the Commission with valuable information it would not receive otherwise? We also seek comment on the costs and benefits that would attend adoption of any rules in this area. We observe that wireless and satellite providers have historically filed few, if any, reports pertaining to outages affecting special offices and facilities. We thus estimate any further relaxation of their obligations to report such outages would not have an appreciable cost impact. We seek comment on this analysis.

F. Part 4 Information Sharing

48. *Sharing of NORs Data with State Public Utility Commissions.* Section 4.2 provides that

⁸⁶ See Dep’t of Homeland Security, Critical Infrastructure Sectors, <https://www.dhs.gov/critical-infrastructure-sectors> (last visited Mar. 27, 2015).

⁸⁷ See 47 C.F.R. §§ 4.9(c)(2)(iii), (e)(4).

⁸⁸ See 2004 Part 4 Report and Order, 19 FCC Rcd at 16867 ¶ 66.

⁸⁹ See CTIA Petition at 2-3; Cingular Petition at 4; Sprint Petition at 3-4; see also Comments of Dobson Communications Corp., ET Docket No. 04-35 at 6-7 (Mar. 2, 2005).

⁹⁰ CTIA Petition at 2.

⁹¹ *Id.* at 3.

reports filed in NORS are presumed confidential and thus withheld from routine public inspection.⁹² The Commission routinely shares NORS reports with the Office of Emergency Communication at DHS, which may “provide information from those reports to such other governmental authorities as it may deem to be appropriate,”⁹³ but the Commission does not share NORS information directly with state governments. In the absence of routine access to NORS data, many states independently require communications providers to file network outage reports with their public utility commissions or similar agencies.⁹⁴ The content of such reporting overlaps to a great extent with the information providers must report to the Commission under Part 4.

49. In 2009, the California Public Utility Commission filed a petition (CPUC Petition) in which it requests that the Commission amend its rules to permit state agencies to directly access the NORS database.⁹⁵ CPUC also informally requests that the Commission grant it password-protected access to those portions of the NORS database that contain data relating to communications outages in the State of California. CPUC argues that reliable access to network outage data is “necessary to perform its traditional role of protecting public health and safety through monitoring of communications network functionality.”⁹⁶ Direct access to NORS, CPUC further argues, is the most effective means of obtaining such information. CPUC cites as precedent for its requested access to NORS the Commission’s *Numbering Resource Optimization* proceeding, in which the Commission divulged confidential telephone numbering data to States on the condition that they have adequate protections in place to shield the information from public inspection.⁹⁷

50. In 2010, the Public Safety and Homeland Security Bureau (Bureau) issued a Public Notice inviting public comment on the CPUC Petition.⁹⁸ Several states, including Missouri, Massachusetts, New York, as well as NASUCA, filed comments in support California’s proposal that the Commission permit state governments more direct access to NORS data.⁹⁹ Other commenters, including several communications providers, ATIS and USTA, argued that such sharing should be permitted only to the extent that stringent security measures are put in place to protect the data from public disclosure.¹⁰⁰

⁹² 47 C.F.R. § 4.2.

⁹³ See *2004 Part 4 Report and Order*, 19 FCC Rcd at 16856 ¶ 47.

⁹⁴ See, e.g., California Public Utilities Commission, Decision Adopting General Order 133-C and Addressing Other Telecommunications Service Quality Reporting Requirements, D.09-07-019 (2009), http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/104429.htm.

⁹⁵ See Petition of the California Public Utilities Commission and the People of the State of California, ET Docket No. 04-35 (Nov. 12, 2009).

⁹⁶ *Id.* at 14.

⁹⁷ *Id.* at 15-17; see also CC Docket No. 99-200.

⁹⁸ See Public Safety and Homeland Security Bureau Seeks Comment on Petition for Rulemaking by the California Public Utilities Commission Requesting That State Public Utilities Commissions Be Granted Direct Access to the Commission’s Network Outage Reporting Systems, ET Docket No. 04-35, RM-11588, *Public Notice*, DA 10-220 (PSHSB 2010) (CPUC Public Notice).

⁹⁹ See Comments of the Missouri Public Service Commission, ET Docket No. 04-35 (Feb. 26, 2010); Comments of the Massachusetts Dep’t of Telecommunications and Cable, ET Docket No. 04-35 (Mar. 4, 2010); Comments of the New York Public Service Commission, ET Docket No. 04-35 (Mar. 4, 2010); Comments of NASUCA, ET Docket No. 04-35 (Mar. 4, 2010).

¹⁰⁰ See Comments of AT&T, ET Docket No. 04-35 (Mar. 4, 2010) (AT&T 2010 Comments); Reply Comments of T-Mobile, ET Docket No. 04-35 (Mar. 19, 2010); Reply Comments of ATIS, ET Docket No. 04-35 (Mar. 19, 2010); Reply Comments of USTA, ET Docket No. 04-35 (Mar. 19, 2010); Reply Comments of CTIA, ET Docket No. 04-35 (Mar. 19, 2010); Reply Comments of Verizon and Verizon Wireless, ET Docket No. 04-35 (Mar. 19, 2010). Several of these commenters also asserted that individual state reporting requirements, especially those that differ

(continued....)

51. Granting states access to NORS data on a confidential basis could advance compelling state interests in protecting public health and safety in an efficient manner. We further observe that none of the commenters on CPUC's petition made the case that such sharing would be unworkable in practice or would undermine the core purposes of NORS. Accordingly, we propose granting states¹⁰¹ read-only access to those portions of the NORS database that pertain to communications outages in their respective states.¹⁰² In advancing this proposal, we reaffirm our view that NORS data should be presumed confidential and shielded from public inspection. We thus propose that, in order to receive direct access to NORS, a state must certify that it will keep the data confidential and that it has in place confidentiality protections at least equivalent to those set forth in the federal Freedom of Information Act (FOIA).¹⁰³

52. We seek comment on the foregoing proposal. How can the FCC ensure that the data is shared with officials most in need of the information while maintaining confidentiality and assurances that the information will be properly safeguarded? Should personnel charged with obtaining the information be required to have security training? Should the identity of these individuals be supplied to the FCC? Should states be required to report or be penalized for breaches of the confidentiality of information obtained from NORS? Should a provider be permitted to audit a state's handling of its outage data? Should states be granted access to NORS data only on the condition that such access replace any separate outage reporting required under state law? Should NORS allow the placement of caveats with respect to the sharing of any data elements?

53. We also seek comment on limitations on states' use of NORS data. When outage information is provided to state public officials or state public utility commissions, should the state be required to notify the FCC and service providers if the state seeks to share the data with parties outside its direct employ? Should states' use of NORS data be restricted to activities relating to its "traditional role of protecting public health and safety?" If so, what activities does this role encompass, and how should the Commission enforce any such limitation on states' use of the data? We seek comment on exactly what information should be shared with state officials. Should states be granted access to the notification, initial report and final reports? Should providers' outage coordinators' contact information be redacted before the information is shared with the states? Finally, we seek comment on the costs and benefits of sharing state specific NORS outage data with state entities. We believe that the proposed sharing of NORS data with states would not have an appreciable cost impact. We seek comment on this assumption. What is the best way to balance security and convenience with the costs and benefits to all involved parties?

54. *Federal Agency Requests to Access NORS.* The Commission also has received occasional requests from agencies other than DHS for access to NORS data. Thus far, we have provided the information only to DHS, which may share relevant information with other federal agencies at its discretion.¹⁰⁴ However, we recognize the validity of requests from other federal partners to have their own direct access to the NORS database when these requests are made for national security reasons. Accordingly, we propose entertaining requests from other federal agencies for access to NORS data, and

(Continued from previous page) _____

from the FCC Part 4 rules, should be eliminated if a state is granted access to NORS data. *See, e.g., AT&T 2010 Comments at 9-10.*

¹⁰¹ We seek comment on defining the term "State" for purposes of this proposal to include the District of Columbia, U.S. territories and possessions, and Tribal nations.

¹⁰² We find that notice-and-comment rulemaking is the appropriate vehicle for addressing this significant policy matter; accordingly, we hold in abeyance CPUC's informal request for access to California-specific NORS data, pending the completion of this rulemaking.

¹⁰³ *See Review of the Emergency Alert System, EB Docket 04-296, 26 FCC Rcd 1460, 1488 ¶ 73 (imposing such a condition on the sharing of confidential EAS test data with state governments).*

¹⁰⁴ *See 2004 Part 4 Report and Order, 19 FCC Rcd at 16856 ¶ 47.*

acting upon such requests on a case-by-case basis. We seek comment on this proposed approach to handling such requests. Should there be limitations on DHS access or access by other federal agencies? Under what circumstances should this information be shared? Should the entities seeking NORS data specify how they intend to use the information, and if, or with whom, they intend to share it? Should they be required to demonstrate that sufficient safeguards are in place to ensure that the information be seen only by necessary parties? Should such sharing be undertaken in accordance with the procedures established under Section 0.442 of the Commission's rules for the sharing of presumptively confidential information with other federal agencies?

55. *Information Sharing with the National Coordinating Center for Communications (NCC).* We next seek comment on the sharing of information collected under Part 4 with the NCC.¹⁰⁵ Would access to outage data collected in NORS contribute to the NCC's mission? Under what terms, if any, should such access be provided? Should the Commission instead continue to leave to the discretion of individual providers what network outage information they choose to share with the NCC? Would the Commission's provision of Part 4 information to the NCC discourage industry participation in that program? Is there a subset of data collected under Part 4 that the Commission could share with the NCC while upholding the confidentiality presumption established for Part 4? Would the sharing of network outage data in aggregate or generalized form be useful to the NCC? Finally, we assume that such information sharing would not have any appreciable cost impact. We seek comment on this assumption.

IV. SECOND REPORT AND ORDER (ET DOCKET NO. 04-35)

56. In the *2004 Further Notice of Proposed Rulemaking* that accompanied the *2004 Part 4 Report and Order*, the Commission sought comment on a proposal to extend outage-reporting requirements for special offices and facilities to cover general aviation airports, a category that includes airports smaller than those already covered by Section 4.5(b) of the rules.¹⁰⁶ No comments were received on this proposal, and there remains a lack of record support for its adoption. Moreover, adoption of the proposal would run counter to the reasoning underlying some of our proposals in the *Notice of Proposed Rulemaking* above. In particular, we sought comment on excluding from the definition of "special offices and facilities" all airports other than the nation's most heavily trafficked airports, because reports of airport-related outages at such airports have not been significant enough to pose a substantial threat to public safety. Alternatively, we consider, among other potential changes to Section 4.5(b), the elimination of airport-specific reporting requirements as duplicative of our proposed TSP-based reporting requirements. Accordingly, we decline to adopt the proposal to extend Section 4.5(b) to cover general aviation airports.

V. ORDER ON RECONSIDERATION (ET DOCKET NO. 04-35)

57. As discussed above, the Commission received nine Petitions for Reconsideration of aspects of the *2004 Part 4 Report and Order*. Two of those petitions have been withdrawn;¹⁰⁷ seven remain pending. We dispose of these remaining petitions as indicated below.

A. Issues Considered in the *Notice of Proposed Rulemaking*

58. Certain proposals considered in the *Notice of Proposed Rulemaking (Notice)* above incorporate issues raised in various petitions. These issues include whether to replace the DS3-based reporting threshold for major network outages with an OCn-based threshold;¹⁰⁸ how to calculate the

¹⁰⁵ See *id.*

¹⁰⁶ *2004 Further Notice of Proposed Rulemaking*, 19 FCC Rcd at 16867-68 ¶ 67.

¹⁰⁷ The BellSouth Petition was withdrawn on October 16, 2012. The Syniverse Petition was withdrawn on October 26, 2012.

¹⁰⁸ See Qwest Petition at 6.

number of wireless users “potentially affected” by an outage that affects a PSAP;¹⁰⁹ the scope of the requirement to report outages that potentially affect airports;¹¹⁰ and the reporting obligations of wireless providers with respect to outages that potentially affect special offices and facilities.¹¹¹ As we are considering in the current proceeding the merits of Petitioners’ requests for relief on these issues, we will incorporate into the record here those portions of Petitioners’ petitions that present substantive arguments on these issues.¹¹² Any other aspects of the petitions relating to these issues are dismissed as moot.

B. Other Issues

59. We now consider those issues raised in the various Petitions that we have not addressed in the *Notice*. We grant or deny each Petition to the extent indicated below.

1. Reporting Obligations of “Pure Resellers”

60. Before withdrawing its Petition, BellSouth requested therein that the Commission clarify Section 4.9(f) to “expressly state that pure resellers (those that do not own, operate, or maintain switching, routing, or transmission facilities) are exempt from the Commission’s reporting requirements to the extent that a network failure occurs on resold facilities that are owned, operated, or maintained by an underlying facilities-based provider.”¹¹³ BellSouth argued that pure resellers should not be subject to Part 4 reporting obligations because resellers do not have direct access to the outage information that must be reported, and that the only way that a pure reseller becomes aware of a network outage is “typically” through “customer calls, news reports...or from the underlying facilities based provider itself” and that “[n]one of these methods ... are routine or foolproof.”¹¹⁴ Sprint also addresses this issue in its Petition, focusing on Section 4.3(b) of the rules,¹¹⁵ arguing that pure resellers of wireless service “would not be able to provide any information on the extent and duration of the outage or the cause of the outage.”¹¹⁶ Rather, Sprint argues, the Commission can obtain this information from reports filed by the underlying facilities-based provider because “customers of these [pure reseller] providers are included in the reports of the affected underlying [facilities-based] wireless carrier.”¹¹⁷

61. NASUCA argued in its responsive pleading, on the other hand, that separate reporting by a pure reseller and its underlying facilities-based communications provider would ensure “that ... the

¹⁰⁹ See Sprint Petition at 2-3.

¹¹⁰ See Sprint Petition at 4-5.

¹¹¹ See CTIA Petition at 2-3; Cingular Petition at 4; Sprint Petition at 3-4.

¹¹² We also incorporate into the record those portions of any responsive pleadings filed in connection with the Petitions that present substantive arguments relevant to these issues. See EB Docket 04-35.

¹¹³ BellSouth Petition at 12. BellSouth argued that pure sellers were not afforded adequate notice to comment on the possibility of pure resellers being subject to outage reporting requirements because the rule proposed in the *Part 4 FNPRM* included the condition that carriers subject to the reporting requirements would only be those “that operate transmission, routing, or switching facilities and provide interstate or international communication,” functions that pure resellers do not perform. *Id.* at 11. BellSouth further maintained that omitting this language from the final rule has “an enormous impact on pure resellers and completely changes their reporting obligations.” *Id.*

¹¹⁴ BellSouth Petition at 11.

¹¹⁵ Sprint argues that the provision “includ[ing] ... affiliated and non-affiliated entities that maintain or provide communications networks or services used by the provider in offering such communications” could be read as encompassing a wireless service provider that does not own any wireless facilities or maintain a wireless network. Sprint Petition at 5.

¹¹⁶ *Id.* at 5.

¹¹⁷ *Id.* Qwest supports the position that pure resellers of facilities-based carrier services should be exempt from the Part 4 outage reporting requirements. See Qwest Comments at 1.

Commission ... will have a deeper understanding of the full impact of the outage.”¹¹⁸ It maintained that “only the reseller knows how many telephone numbers in the block it acquired from the LEC [local exchange carrier] are operational and thus affected by the outage,” and it therefore “must be obliged to provide that information.”¹¹⁹

62. Although the applicability of outage reporting requirements to “pure resellers”¹²⁰ of communications services was not expressly addressed in *2004 Part 4 Report and Order*, the rules adopted therein require “[a]ll . . . communications providers” in covered categories to file reports upon “discovering that they have experienced” a qualifying outage “on any facilities that they own, operate, lease or otherwise utilize.”¹²¹ Thus, resellers in the covered categories are within the reach of the Part 4 rules insofar as they “lease or otherwise utilize” facilities to provide communications services to their customers.

63. The underlying purpose of the Part 4 outage reporting rules is to improve network reliability and resiliency, particularly as it affects the Nation’s 911 system, by providing the Commission with the ability to analyze data regarding significant outages, regardless of the network(s) in which the underlying causal factors lie. This information enables the Commission to analyze how outages in one network affect other networks and to identify adverse trends. “Pure resellers” may lack direct access to the network facilities they use to provide service, but we agree with NASUCA that such providers may be uniquely positioned to provide information on outages affecting their customers. Similarly, outages induced from higher-level issues may stem from resellers’ systems or applications. Finally, we observe that the Commission routinely receives reports of outages pertaining to facilities not under the direct control or ownership of the filing party, and such reports provide a valuable perspective on the course and impact of outages affecting multiple providers. We therefore deny Sprint’s petition with respect to this issue.

2. Reporting of Planned Network Outages

64. CTIA, Cingular and Sprint request reconsideration of the Commission’s decision to treat planned outages related to network maintenance, repair, and upgrades the same as other outages for purposes of its reporting requirements. CTIA and Cingular maintain that planned system outages should not be reportable events, arguing that normal operational and maintenance requirements of providers may require planned service disruptions in order to conduct maintenance, perform upgrades, or complete repair work, and that these disruptions are intended to enhance network reliability.¹²² They also argue that mandated reporting of planned outages imposes undue burdens on providers. Sprint does not argue for the elimination of reporting requirements for planned outages, but rather advocates for an alternative filing requirement whereby providers would file a single report 72 hours after a planned outage.¹²³

65. NASUCA opposes any modification to the requirements for reporting planned outages.¹²⁴

¹¹⁸ NASUCA Comments at 13.

¹¹⁹ *Id.*

¹²⁰ A “pure reseller,” as that term has been defined, “uses none of its own facilities to serve a customer; rather, such a reseller purchases service from a facilities owner and resells that service to a customer.” Federal-State Joint Board on Universal Service, *Order on Reconsideration*, CC Docket No. 96-45, 19 FCC Rcd 23824, 23827 n.16 (2004). Such providers may include mobile virtual network operators (“MVNOs”), *i.e.*, mobile wireless providers that contract with facilities-based providers to offer service to customers using the latter provider’s radio spectrum and network infrastructure.

¹²¹ See 47 C.F.R. § 4.9(a), (c), (e), (f); *see also id.* at § 4.9(d), (g)(i), (g)(ii).

¹²² See CTIA Petition at 7; Cingular Petition at 2-3. *But cf.* Sprint Petition at 6 (failing to provide any clear reason why the Commission should reconsider its decision to require outage reporting for planned outages).

¹²³ Sprint Petition at 6.

¹²⁴ See NASUCA Comments at 13-14.

NASUCA argues that, as far as consumer and national security interests are concerned, a planned outage is still an outage.¹²⁵ NASUCA urges the Commission not to weaken Commission authority at a time that it must be exercised more firmly than ever before because of heightened national security concerns.¹²⁶

66. The arguments raised by Petitioners on this issue were previously considered and addressed by the Commission in the *2004 Part 4 Report and Order*.¹²⁷ In declining to exempt planned outages from the outage reporting requirements it was adopting, the Commission acknowledged the reliance of both public safety personnel and the general public on wireless services for both emergency and routine communications.¹²⁸ Petitioners have not presented facts or arguments in their Petitions that would lead us to reconsider the conclusion that such reliance creates a need for reporting of planned wireless network outages.¹²⁹ Indeed, reliance on wireless services for emergency-related communications has only increased since adoption of the *2004 Part 4 Report and Order*, making it ever more imperative that wireless network outages are fully reported on a timely basis irrespective of their cause.¹³⁰ In addition, the reporting burden associated with such reporting was fully considered in the original rulemaking proceeding.¹³¹ We decline to revisit that issue here. While we acknowledge the difficulties involved in maintaining complex communications networks, we continue to find that exempting planned outages from the scope of reporting would detract from the purposes of Part 4. For the foregoing reasons, we deny the Petitions of CTIA, Cingular and Sprint with respect to reporting of planned network outages.

3. Rural Provider Reporting Obligations

67. OPASTCO requests that the Commission reconsider its Part 4 outage reporting

¹²⁵ *Id.* at 14 (“An outage is an outage regardless of when it occurs. . . . Nor is such planned/unplanned outage distinction relevant to stated national security concerns.”).

¹²⁶ *Id.* at 17.

¹²⁷ *2004 Part 4 Report and Order*, 19 FCC Rcd at 16889-90 ¶ 114.

¹²⁸ *Id.*

¹²⁹ In fact, parties had the opportunity to make these arguments, and did in fact file comments doing so, which the Commission considered in adopting the requirement at issue. *See, e.g.*, CTIA Petition at 6-7 (stating that planned outages should not be considered reportable events); CTIA Comments at 13 (“[T]he Commission should amend its proposed rules governing outages to make clear that only ‘unplanned’ outages of 30 minutes or more would be potentially reportable.”); Cingular Petition at 1 (requesting that the Commission reconsider applying its outage requirements to planned outages); Cingular Comments at 13, 15 & n.40 (recommending a metric that included only unplanned failures); Sprint Petition at 6 (stating that carriers should only have to file one report of a planned outage that meets the reporting criteria within 72 hours of the outage); *see also 2004 Part 4 Report and Order*, 19 FCC Rcd at 16889 ¶ 106 (noting Nextel’s argument that the proposed rules are inconsistent and CTIA’s argument that wireless MSC outages should be exempt from reporting requirements). *But cf. id.*, 19 FCC Rcd at 16889-90 ¶ 114 (rejecting Nextel’s argument that the proposed rules are inconsistent). While the Commission did not specifically consider facts and arguments of Sprint’s proposed single field report 72 hours after discovery of a planned outage, the Commission did consider facts and arguments generally concerning the filing requirements. *See id.* at 16866, 16869-71 ¶¶ 64, 72-74.

¹³⁰ We observe that 38 percent of American households have discontinued their landline telephone service and now rely on wireless phones exclusively. *See* Stephen J. Blumberg and Julian V. Luke, *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July-December 2012*, National Center for Health Statistics, Centers for Disease Control, June 2012, <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201306.pdf> (last visited Mar. 27, 2015). Also, the State of California reports that 75 percent of 911 calls in the state originate from wireless phones. *See also, e.g.*, State of California, California 911 Emergency Communications Branch, Summary of Wireless Calls by PSAPs (illustrating that between December 2011 and March 2013, 75 percent of 911 calls statewide came from wireless phones) (filed in PS Docket No. 11-60 on July 17, 2013).

¹³¹ *See 2004 Part 4 Report and Order*, 19 FCC Rcd at 16912 ¶ 166.

obligations insofar as they apply to rural telephone companies.¹³² In support of its Petition, OPASTCO alleges both procedural and substantive deficiencies in the *2004 Part 4 Report and Order*. First, OPASTCO contends that the Commission did not provide sufficient opportunity for comment on the information collections associated with its Part 4 rules before the Office of Management and Budget (OMB) approved them.¹³³ Second, it alleges that the established 120-minute deadline for filing an initial notification is unduly burdensome as applied to rural providers.¹³⁴ Finally, OPASTCO asserts that the Commission's Paperwork Reduction Act (PRA) analysis fails to account fully for the burdens that rural providers will incur in assessing whether they serve "special facilities" as specified in Section 4.5(b) or in reporting on their implementation of NRIC best practices.¹³⁵ Dobson and TDS Telecom each filed responses in support of OPASTCO's petition.¹³⁶

68. Neither OPASTCO nor its supporting commenters offer persuasive arguments for reconsideration of the Commission's outage reporting requirements as applied to rural telephone providers. First, any alleged procedural deficiency in OMB's approval of the Part 4 information collection has been made moot by the passage of time, as the public has been given subsequent opportunities to comment on the collection as part of OMB's periodic review and re-approval process. We find that this established process is the appropriate forum for addressing perceived deficiencies in the PRA analysis associated with the Commission's Part 4 requirements.

69. We also find that OPASTCO misstates the burden that accrues to rural providers in complying with the 120-minute deadline for filing initial notifications. This obligation extends to outages that last for at least 30 minutes and potentially affect at least 900,000 user minutes, but the 120-minute timeframe for filing an initial notification of the outage commences only upon discovery that a reportable outage exists. Although providers have an obligation to take reasonable steps to discover outages, there is no prescribed timeframe for detecting the presence of an outage, only for reporting on outages that the provider has determined meet the reporting criteria.¹³⁷ In practice, then, providers often have much longer than 120 minutes from the onset of an outage to file the notification. Our experience administering NORS has demonstrated that the established 120-minute deadline sets an appropriate balance between the Commission's need to be timely apprised of critical outages and the needs of providers to deploy scarce resources effectively when these outages occur. In the nine years since the rules went into effect, we are unaware of any small rural provider that has been significantly challenged in complying with the 120-minute deadline. We are therefore not persuaded that this requirement is too burdensome as applied to rural providers.

70. For the foregoing reasons, we deny the OPASTCO Petition.

4. DS3 Simplex Outage Reporting

71. Several Petitioners seek reconsideration of the requirement that providers report "DS3 simplex" outages and propose relaxation of the requirement.¹³⁸ In the *Part 4 Partial Stay Order* the Commission rejected arguments that this requirement should be eliminated outright, but it stayed the

¹³² See OPASTCO Petition at 7.

¹³³ See *id.* at 1-2.

¹³⁴ See *id.* at 3-5.

¹³⁵ See *id.* at 6-7.

¹³⁶ See Dobson Comments at 2-4; Comments of TDS Telecommunications Corp., ET Docket No. 04-35 at 2-4 (Mar. 2, 2005) (TDS Telecom Comments).

¹³⁷ OPASTCO further asserts that the *2004 Part 4 Report and Order* was not clear on when this 120-minute timeframe begins. OPASTCO Petition at 5. Although we believe that the *2004 Part 4 Report and Order* was clear on this point, our discussion here in this Order provides further clarification, as OPASTCO requests.

¹³⁸ See Joint Petition; Qwest Petition at 8-12; USTA Petition.

reporting obligation insofar as it applied to outages rectified within five days of their discovery.¹³⁹ Petitioners have not presented facts or arguments beyond those considered and rejected in the *Part 4 Partial Stay Order* that would support reconsideration of the DS3 reporting obligation as applied to outages that persist longer than five days. In fact, as explained in the *Notice* above, the volume of DS3 simplex outages reported in recent years has led us to propose tightening our DS3 simplex reporting requirements. Accordingly, Petitioners' request for reconsideration of this matter is denied.

5. Withdrawal of Notifications and Initial Reports

72. In its Petition, Sprint requests that the Commission codify in Section 4.11 its stated policy that providers may "withdraw notifications and initial reports in legitimate circumstances."¹⁴⁰ Although the Commission has consistently followed this policy throughout the tenure of NORS, we agree that codifying it in our rules may provide greater assurance to providers. Accordingly, on this issue we grant Sprint's request and amend Section 4.11 accordingly.

VI. PROCEDURAL MATTERS

A. Regulatory Flexibility Act

73. As required by the Regulatory Flexibility Act of 1980 (RFA),¹⁴¹ the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) for this *Notice*, of the possible significant economic impact on small entities of the proposals addressed in this document. The IRFA is set forth as Appendix D. As further required by the RFA, the Commission has prepared a Final Regulatory Certification (Certification) for the *Second Report and Order* and *Order on Reconsideration*. The Certification is set forth as Appendix E. Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments indicated on the first page of this *Notice*. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this *Notice*, including the IRFA, as well as the *Second Report and Order* and *Order on Reconsideration* and their Certification, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).¹⁴² In addition, the *Notice* and its IRFA, and the *Second Report and Order* and *Order on Reconsideration* and their Certification (or summaries thereof), will be published in the Federal Register.

B. Paperwork Reduction Act of 1995

74. The *Notice* in this document contains proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

75. The rules adopted in the *Second Report and Order* and *Order on Reconsideration* in this document contain no new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.

¹³⁹ See *Part 4 Partial Stay Order*, 19 FCC Rcd at 25040-41 ¶ 3.

¹⁴⁰ Sprint Petition at 6. See also *2004 Part 4 Report and Order*, 19 FCC Rcd at 16908, ¶ 156 (citing as a possible "legitimate circumstance" the filing of a notification "under the mistaken assumption that the outage was required to be reported").

¹⁴¹ See 5 U.S.C. § 603.

¹⁴² See 5 U.S.C. § 603(a).

C. *Ex Parte* Rules

76. The proceeding this *Notice* initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.¹⁴³ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

D. Comment Filing Procedures

77. Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments should be filed in PS Docket 15-80. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission’s Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

¹⁴³ 47 C.F.R. § 1.1200 *et seq.*

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

VII. ORDERING CLAUSES

78. ACCORDINGLY IT IS ORDERED that, pursuant to the authority contained in Sections 1, 4(i), 4(j), 4(o), 201(b), 214(d), 218, 251(e)(3), 301, 303(b), 303(g), 303(r), 307, 309(a), 309(j), 316, 332, 403, 615a-1, and 615c of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i)-(j) & (o), 201(b), 214(d), 218, 251(e)(3), 301, 303(b), 303(g), 303(r), 307, 309(a), 309(j), 316, 332, 403, 615a-1, and 615c, this *Notice of Proposed Rulemaking, Second Report and Order* and *Order on Reconsideration* in ET Docket 04-35 and PS Docket 15-80 is ADOPTED, effective thirty (30) days after the date of publication in the Federal Register.

79. IT IS FURTHER ORDERED that, pursuant to Sections 4(i), 302, 303(e) 303(f), 303(g), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 302a, 303(e), 303(f), 303(g), 303(r), and 405, the Petitions for Reconsideration filed by Cingular Wireless, CTIA-The Wireless Association, Qwest Communications, the Organization for the Promotion and Advancement of Small Telecommunications Companies, Sprint and the United States Telecom Association, and the Petition for Reconsideration filed jointly by AT&T, BellSouth, MCI, SBC and Verizon, in ET Docket No. 04-35, ARE GRANTED, DENIED and DISMISSED to the extent indicated herein.

80. IT IS FURTHER ORDERED that, pursuant to Sections 4(i), 302, 303(e) 303(f), 303(g), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 302a, 303(e), 303(f), 303(g), 303(r), and 405, the Commission's rules ARE HEREBY AMENDED as set forth in Appendix B.

81. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of the *Notice of Proposed Rule Making, Second Report and Order* and *Order on Reconsideration*, including the Initial Regulatory Flexibility Analysis and the Final Regulatory Certification, to the Chief Counsel for Advocacy of the U.S. Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A**Parties Filing Petitions for Reconsideration**

AT&T, BellSouth, MCI, SBC and Verizon (Joint Petition)

BellSouth*

CTIA- The Wireless Association

Cingular Wireless LLC

National Association of State Utility Consumer Advocates (NASUCA)

Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO)

Qwest Corporation

Sprint

Syniverse Technologies*

United States Telecom Association

**petitions subsequently withdrawn*

Commenting Parties on Petitions for Reconsideration

Dobson Communications Corporation (Dobson).

National Association of State Utility Consumer Advocates (NASUCA)

SBC Communications Inc.

T-Mobile USA, Inc. (T-Mobile)

Verizon

APPENDIX B**Final Rules**

For the reasons discussed in the preamble, the Federal Communications Commission amends Part 4 of Title 47 of the Code of Federal Regulations (C.F.R.) as follows:

PART 4 – DISRUPTIONS TO COMMUNICATIONS

1. The authority citation for Part 4 is amended to read as follows:

Authority: Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 154, 155, 201, 251, 307, 316.

2. Section 4.11 is amended by inserting the following sentence at the end of the section to read as follows.

§4.11 Notification and initial and final communications outage reports that must be filed by communications providers.

* * * * * Notifications and initial reports may be withdrawn under legitimate circumstances, *e.g.*, when the filing was made under the mistaken assumption that an outage was required to be reported.

APPENDIX C

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend Part 4 of Title 47 of the Code of Federal Regulations (C.F.R.) as follows:

1. The authority citation for Part 4 continues to read as follows:

Authority: Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 154, 155, 201, 251, 307, 316.

2. Section 4.2 is amended to read as follows:

§ 4.2 Availability of reports filed under this part.

Reports filed under this part will be presumed to be confidential. A State government may file a request with the Public Safety and Homeland Security Bureau for read-only access to information filed under this part concerning outages that occur within the State. The Public Safety and Homeland Security may grant the request upon certification that the State will maintain the confidentiality of the information and that it has in place confidentiality protections equivalent to those of the Freedom of Information Act to protect the information from public inspection. Public access to reports filed under this part may be sought only pursuant to the procedures set forth in 47 CFR § 0.461. Notice of any requests for inspection of outage reports will be provided pursuant to 47 CFR 0.461(d)(3).

3. Section 4.5 is amended by revising paragraph (e)(1) to read as follows:

§ 4.5 Definitions of outage, special offices and facilities, and 911 special facilities.

* * * * *

(e) * * *

(1) There is a partial or complete 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 at lasts 30 minutes or more; or

* * * * *

4. Section 4.7 is amended by revising paragraph (d) to read as follows:

§ 4.7 Definitions of metrics used to determine the general outage-reporting threshold criteria.

* * * * *

(d) OC3 minutes are defined as the mathematical result of multiplying the duration of an outage, expressed in minutes, by the number of previously operating OC3 circuits or their equivalents that were affected by the outage.

* * * * *

§ 4.9 [Amended]

5. Section 4.9 is amended by replacing “DS3” with “OC3” in paragraphs (a)(2), (a)(4), (b), (e)(3), (e)(5), (f)(2) and (f)(4), and replacing “1,350” with “667” in paragraphs (a)(2), (b), (e)(3) and (f)(2).
6. Section 4.13 is removed.

APPENDIX D

Initial Regulatory Flexibility Analysis (*Notice*)

1. As required by the Regulatory Flexibility Act of 1980, as amended (“RFA”),¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (“IRFA”) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *Notice of Proposed Rulemaking (Notice)* above. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments provided in “Comment Filing Procedures” of this proceeding. The Commission will send a copy of the *Notice*, as well as this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the *Notice* and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

2. The *Notice* seeks comment and information on a variety of issues related to the Commission’s Part 4 outage reporting rules, including proposals to:

- Clarify the requirement to report outages that significantly degrade communications to Public Safety Answering Points (PSAPs);
- Adopt requirements to report widespread call failures that result from radio access network (RAN) congestion;
- Replace the current threshold (based on “DS3 minutes”) for reporting major network outages with a threshold based on optical (*i.e.*, OC-3) transmission rates;
- Require reporting of DS3 Simplex outages that persist for less than five days but for more than forty-eight hours;
- Adopt a common, technologically neutral method for calculating the number of wireless users “potentially affected” by an outage;
- Clarify the reporting metric for estimating the number of “potentially affected” wireless users for outages that affect Public Switched Answering Points (PSAPs);
- Update the requirements that mandate reporting of outages that affect airports and other “special offices and facilities”; and
- Grant NORS access to state government agencies upon request and certification that the state has measures in place to protect the data from public disclosure.

3. The Commission traditionally has addressed reliability issues by working with communications service providers to develop and promote best practices that address vulnerabilities in the communications network, and by measuring the effectiveness of best practices through outage reporting. Under the Commission’s current rules, the outage reporting process has been effective in improving the reliability, resiliency and security of communications services. Commission staff collaborates with individual providers and industry bodies to review outage results and address troublesome areas, and these efforts have resulted in dramatic reductions in outages. The aim of updating the outage reporting rules is to further improve the reliability, resiliency and security of communications services.

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract with America Advancement Act of 1996 (CWAAA), Pub. L. No. 104-121, 110 Stat. 847 (1996). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996.

² See 5 U.S.C. § 603(a).

³ See *id.*

B. Legal Basis

4. The legal basis for the rules proposed in the *Notice* are contained in Sections 1, 2, 4(i)-(k), 4(o), 218, 219, 230, 256, 301, 302(a), 303(f), 303(g), 303(j), 303(r), 403, 621(b)(3), and 621(d) of the Communications Act of 1934, 47 U.S.C. §§ 151, 152, 154(i)-(k), 154(o), 218, 219, 230, 256, 301, 302a(a), 303(f), 303(g), 303(j), 303(r), 403, 621(b)(3), and 621(d), and Section 1704 of the Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1998, 44 U.S.C. § 3504.

C. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the proposed rules, if adopted.⁴ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁵ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁶ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.⁷

1. Wireline Providers

6. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers, which are establishments primarily engaged in operating or providing access to transmission facilities and infrastructure that they own or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks.⁸ Under that size standard, such a business is small if it has 1,500 or fewer employees.⁹ Census Bureau data for 2007, show that there were 3,188 firms in this category that operated for the entire year. Of this total, 3,144 had employment of 999 or fewer, and 44 firms had had employment of 1,000 employees or more.¹⁰ Thus under this category and the associated small business size standard, the majority of these incumbent local exchange service providers can be considered small.

7. The Commission has included small incumbent LECs in this present RFA analysis. As noted above, a "small business" under the RFA is one that, inter alia, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and "is not

⁴ 5 U.S.C. § 603(b)(3).

⁵ 5 U.S.C. § 601(6).

⁶ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

⁷ Small Business Act, 15 U.S.C. § 632 (1996).

⁸ See *2007 NAICS Definition 517110 Wired Telecommunications Carriers*, U.S. CENSUS BUREAU, <http://www.census.gov/eos/www/naics/index.html> (search "2007 NAICS Search" for "517110 ") (last visited Mar. 27, 2015).

⁹ See 13 C.F.R. § 121.201, NAICS code 517110.

¹⁰ *EC0751SSSZ5, Information: Subject Series – Establishment and Firm Size: Employment Size of Firms for the United States: 2007 Economic Census*, U.S. CENSUS BUREAU, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ5&prodTtype=table (last visited Mar. 27, 2015).

dominant in its field of operation.”¹¹ The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope.¹² The Commission has therefore included small incumbent LECs in this RFA analysis, although the Commission emphasizes that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

8. *Interexchange Carriers.* Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers, which are establishments primarily engaged in operating or providing access to transmission facilities and infrastructure that they own or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks.¹³ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁴ Census Bureau data for 2007 show that there were 3,188 firms in this category that operated for the entire year. Of this total, 3,144 had employment of 999 or fewer, and 44 firms had employment of 1,000 employees or more.¹⁵ Thus, under this category and the associated small business size standard, the Commission estimates that the majority of interexchange carriers are small entities that may be affected by our proposed action.

2. Wireless Providers – Fixed and Mobile

9. *Wireless Telecommunications Carriers (except Satellite).* Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category.¹⁶ This category is composed of establishments that operate and maintain switching and transmission facilities to provide communications via the airwaves. As holders of spectrum licenses, these establishments use the licensed spectrum to provide services, such as cellular phone services, paging services, wireless Internet access, and wireless video services.¹⁷ The SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.¹⁸ For the category of Wireless Telecommunications Carriers (except Satellite), Census data for 2007, which supersede data contained in the 2002 Census, show that there were 1,383 firms that

¹¹ See *supra* note 7.

¹² The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” See 15 U.S.C. § 632(a)(1); see also 5 U.S.C. § 601(3) (stating that the term “small business” has the same meaning as the term “small business concern” as defined in the Small Business Act). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. See 13 C.F.R. § 121.102(b).

¹³ See 2007 NAICS Definition 517110 *Wired Telecommunications Carriers*, U.S. CENSUS BUREAU, <http://www.census.gov/eos/www/naics/index.html> (search “2007 NAICS Search” for “517110”) (last visited Mar. 27, 2015).

¹⁴ See 13 C.F.R. § 121.201, NAICS code 517110.

¹⁵ EC0751SSSZ5, *Information: Subject Series – Establishment and Firm Size: Employment Size of Firms for the United States: 2007 Economic Census*, U.S. CENSUS BUREAU, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ5&prodType=table (last visited Mar. 27, 2015).

¹⁶ See 2007 NAICS Definition 517210 *Wireless Telecommunications Carriers (Except Satellite)*, U.S. CENSUS BUREAU, <http://www.census.gov/eos/www/naics/index.html> (search “2007 NAICS Search” for “517210”) (last visited Mar. 27, 2015).

¹⁷ See 2007 NAICS Definition 517210 *Wireless Telecommunications Carriers (Except Satellite)*, U.S. CENSUS BUREAU, <http://www.census.gov/eos/www/naics/index.html> (search “2007 NAICS Search” for “517210”) (last visited Mar. 27, 2015).

¹⁸ 13 C.F.R. § 121.201 (listing wireless telecommunications carriers under NAICS code 517210 and identifying 1,500 employees as the maximum size standard for the business to be considered small). The now-superseded, pre-2007 CFR citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

operated that year.¹⁹ Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees. Thus under this category and the associated small business size standard, the majority of firms can be considered small. Similarly, according to Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.²⁰ Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.²¹ Consequently, the Commission estimates that approximately half or more of these firms can be considered small. Thus, using available data, we estimate that the majority of wireless firms can be considered small.

3. Satellite Service Providers

10. *Satellite Telecommunications Providers.* Two economic census categories address the satellite industry. The first category, Satellite Telecommunications, has a small business size standard of \$15 million or less in average annual receipts, under SBA rules.²² The second category is “All Telecommunications Providers,” which is discussed in a separate section.

11. The category of *Satellite Telecommunications* “comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”²³ Census Bureau data for 2007 show that 512 Satellite Telecommunications firms that operated for that entire year.²⁴ Of this total, 464 firms had annual receipts of under \$10 million, and 18 firms had receipts of \$10 million to \$24,999,999.²⁵ Consequently, the Commission estimates that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

4. Cable Service Providers

12. *Cable Companies and Systems.* The Commission has developed its own small business size standards for the purpose of cable rate regulation. Under the Commission’s rules, a “small cable company” is one serving a total of 400,000 or fewer subscribers over one or more cable systems.²⁶ Industry data indicate that all but ten cable operators nationwide are small under this size standard.²⁷ In

¹⁹ *EC0751SSSZ5, Information: Subject Series – Establishment and Firm Size: Employment Size of Firms for the United States: 2007 Economic Census*, U.S. CENSUS BUREAU, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ5&prodType=table (last visited Mar. 27, 2015).

²⁰ FCC, TRENDS IN TELEPHONE SERVICE 5-5 (2010).

²¹ *Id.*

²² 13 C.F.R. § 121.201, NAICS code 517410.

²³ *2007 NAICS Definition 517410 Satellite Telecommunications*, U.S. CENSUS BUREAU, <http://www.census.gov/eos/www/naics/index.html> (search “2007 NAICS Search” for “517410”) (last visited Mar. 27, 2015).

²⁴ *EC0751SSSZ4, Information: Subject Series – Establishment and Firm Size: Receipts Size of Firms for the United States: 2007 Economic Census*, U.S. CENSUS BUREAU, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ4&prodType=table (last visited Mar. 27, 2015).

²⁵ *See id.*

²⁶ 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation, MM Docket No. 93-266, MM Docket No. 93-215, FCC 95-196, *Sixth Report and Order and Eleventh Order on Reconsideration*, 10 FCC Rcd 7393, 7408 ¶ 28 (1995).

²⁷ *See* PROQUEST, BROADCASTING & CABLE YEARBOOK 2010 C-2 (2009) (data current as of Dec. 2009).

addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.²⁸ Industry data indicate that, of the 6,101 systems nationwide, 4,410 systems have less than 10,000 subscribers, and an additional 258 systems have between 10,000-19,999 subscribers.²⁹ Thus, under this standard, most cable systems are small.

13. *Cable System Operators.* The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."³⁰ The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.³¹ Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.³² We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,³³ and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

5. All Other Telecommunications

14. The 2007 NAICS defines "All Other Telecommunications" as follows: "This U.S. industry comprises establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from satellite systems. Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry."³⁴ This category has a size standard of \$25 million or less in annual receipts.³⁵ Census Bureau data for 2007 show that there were a total of 2,383 firms that operated for the

²⁸ 47 C.F.R. § 76.901(c) (providing that "[t]he service area of a small system shall be determined by the number of subscribers that are served by the system's principal headend, including any other headends or microwave receive sites that are technically integrated to the principal headend").

²⁹ See TELEVISION & CABLE FACTBOOK 2009 F-2 (Albert Warren, ed., 2008) (data current as of Oct. 2008). The data do not include 957 systems for which classifying data were not available.

³⁰ 47 U.S.C. § 543(m)(2); see also 47 C.F.R. § 76.901(f) ("A small cable operator is an operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."); 47 C.F.R. § 76.901(f) at nn.1-3 (discussing how the Commission calculates subscriber counts and affiliation percentages for the purposes of determining whether an entity qualifies as a small cable operator).

³¹ See FCC Announces New Subscriber Count for the Definition of Small Cable Operator, *Public Notice*, DA 01-158, 16 FCC Rcd 2225 (2001).

³² See BROADCASTING & CABLE YEARBOOK 2006 A-8, C-2 (Harry A. Jessell ed., 2005) (data current as of June 30, 2005); TELEVISION & CABLE FACTBOOK 2006 D-805 to D-1857 (Albert Warren ed., 2005).

³³ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules.

³⁴ 13 C.F.R. § 121.201, NAICS code 517919.

³⁵ *Id.*

entire year.³⁶ Of this total, 2,305 firms had annual receipts of under \$10 million and 41 firms had annual receipts of \$10 million to \$24,999,999.³⁷ Consequently, we estimate that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

15. The rules proposed in the *Notice* would require telecommunications providers to report those outages that meet specified NORS Notice and Reports reporting threshold criteria, largely determined by the number of end users potentially affected by the outage and the duration of the outage. In the Commission's experience administering NORS, small *companies* only rarely experience outages that meet the NORS Notice and Reports reporting threshold criteria. Accordingly, while some of the rule revisions proposed in the *Notice* would likely decrease the number of outages reported annually, while others may lead to increases, we would expect these impacts to be less pronounced for smaller entities. But notwithstanding any revisions we propose to the Part 4 reporting requirements, we expect that telecommunications providers to continue to track, investigate, and correct all of their service disruptions as an ordinary part of conducting their business operations and maintenance- even for service disruptions far too small to trigger a requirement to report. Telecommunications providers through internal network operation center personnel already file Notifications and Reports, typically an online form less than three pages in length based on data routinely collected and monitored by this same personnel. The form is designed to allow small entities to input information without the need for specialized professional, although the telecommunication providers may choose to hire consultants or engineers to conduct technical aspects, or an attorney to review compliance with applicable rules. Therefore, we believe the only burden associated with the reporting requirements contained here will be the time required to complete any additional Notifications and Reports following the proposed changes. In this IRFA, we therefore seek comment on the types of burdens telecommunications providers will face in complying with the proposed requirements. Entities, especially small businesses and small entities, more generally, are encouraged to comment and quantify the costs and benefits of the proposed reporting requirements.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

16. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.³⁸

17. The proposed reporting requirements are minimally necessary to assure that we receive adequate information to perform our statutory responsibilities with respect to the reliability of telecommunications and their infrastructures. Also, we believe that the magnitude of the outages needed to trigger the reporting requirements are sufficiently high as to make it unlikely that small businesses would be impacted significantly by the proposed rules, and will, in fact, in many instances find their burden decreased by the newly proposed reporting thresholds. The Commission considered other

³⁶ EC0751SSSZ4, *Information: Subject Series – Establishment and Firm Size: Receipts Size of Firms for the United States: 2007 Economic Census*, U.S. CENSUS BUREAU, http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ4&prodType=table (last visited Mar. 27, 2015).

³⁷ *Id.* The remaining 14 firms had annual receipts of \$25 million or more. *Id.*

³⁸ See 5 U.S.C. § 603(c).

possible proposals and now seeks comment on the proposed reporting thresholds and the analysis presented.

1. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rule

18. None.

APPENDIX E

Final Regulatory Certification

Final Regulatory Certification. The Regulatory Flexibility Act of 1980, as amended (RFA)³⁹ requires that a regulatory flexibility analysis be prepared for rulemaking proceedings, unless the agency certifies that "the rule will not have a significant economic impact on a substantial number of small entities."⁴⁰ The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁴¹ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁴² A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁴³

The *Second Report and Order* and *Order on Reconsideration* adopt the following rules:

- The *Second Report and Order* declines to adopt a proposal to expand the range of airports classified as "special offices and facilities" for purposes of outage reporting under Part 4.
- The *Order and Reconsideration* codifies in Section 4.11 the Commission's longstanding policy of allowing providers to withdraw outage report filings under appropriate circumstances.

The first of these involves a determination not to adopt a substantive rule, while the second merely codifies an existing policy. We thus certify that neither of these rules will have a significant economic impact on a substantial number of small entities.

³⁹ The RFA, *see* § 5 U.S.C. S 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

⁴⁰ 5 U.S.C. § 605(b).

⁴¹ 5 U.S.C. § 601(6).

⁴² 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in Small Business Act, 15 U.S.C. S § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

⁴³ Small Business Act, § 15 U.S.C. S 632.