

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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

**COMMENTS OF SPRINT CORPORATION**

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**I. INTRODUCTION AND SUMMARY**

Sprint Corporation (“Sprint”) hereby submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) Notice of Proposed Rulemaking (“NPRM”) seeking comment on amendments to Part 4 and proposals regarding a new Part 4 of the Commission’s rules.<sup>1</sup> The Commission’s existing Part 4 rules establish reporting criteria for communications outages that meet specified thresholds. Sprint supports the Commission’s goal of ensuring the reliability and resiliency of the Nation’s communications system, and of strengthening the Nation’s 9-1-1 system. Sprint has played an active role in industry efforts to improve 9-1-1 communications and, along with other nationwide wireless carriers, has entered into a voluntary commitment<sup>2</sup> to provide text-to-911 service and signed onto the Roadmap for

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<sup>1</sup> *Amendments to Part 4 of the Commission’s Rules Concerning Disruptions to Communications, New Part 4 of the Commission’s Rules Concerning Disruptions to Communications, PS Docket No. 15-80 and ET Docket No. 04-35, Notice of Proposed Rulemaking, Second Report and Order and Order on Reconsideration* (Rel. March 30, 2015) (“NPRM”).

<sup>2</sup> See Letter from Terry Hall, APCO International, Barbara Jaeger, NENA, Charles W. McKee, Sprint, Robert W. Quinn, Jr., AT&T, Kathleen O’Brien Ham, T-Mobile USA, and Kathleen Grillo, Verizon, to Julius Genachowski, Chairman, Federal Communications Commission, and Commissioners McDowell, Clyburn, Rosenworcel and Pai; PS Docket No. 11-153, PS Docket No. 10-255 (Dec. 6, 2012) (the “Voluntary Commitment”).

Improving E911 Location Accuracy.<sup>3</sup> Nevertheless, Sprint is concerned that the potential impact of a number of the proposals outlined in the NPRM have not been fully evaluated and could result in significant additional regulatory burdens for wireless carriers at a time when wireless carriers are already facing a number of new regulatory requirements. Some of the Commission's proposals, such as the requirement to report on partial outages associated with PSAP infrastructure, are not technically feasible for carriers. In addition, it is not clear that several of the Commission's proposed changes would produce more accurate reporting regarding actual outages, since the proposed changes are directed at tracking other types of occurrences that do not always result in an outage, including service impairments and congestion on networks during mass calling events. The Commission should refrain from taking action that would result in increased regulatory burdens for carriers associated with Part 4 of the rules without producing a clearly defined benefit. With respect to sharing outage information, the Commission should not allow access to NORS data without ensuring that stringent safeguards are in place to protect this information.

## **II. DISCUSSION**

### **A. Call Failures**

The Commission proposes revising Section 4.5(e)(1) of its rules, "... 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

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<sup>3</sup> See Letter, John Wright, APCO International, Charles W. McKee, Sprint, Joan Marsh, AT&T Services, Inc., Kathleen O'Brien Ham, T-Mobile USA, Christy Williams, NENA-The 9-1-1 Association, Kathleen Grillo, Verizon, to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket No. 07-114 (filed Nov. 18, 2014) ("Roadmap Cover Letter"), Attachment A, "Roadmap for Improving E911 Location Accuracy" ("Roadmap").

PSAP is rendered completely unable to receive 911 calls.”<sup>4</sup> The Commission should refrain from adopting this requirement. CMRS providers do not have visibility into PSAP facilities on the PSAP side of the point of demarcation, so CMRS providers would not be able to report on whether a PSAP is experiencing an issue that significantly degrades or prevents 9-1-1 calls from being completed. CMRS providers do not have real-time call path information associated with PSAP operations. In addition, CMRS providers do not have a methodology that would inform them of partial outage events. While CMRS providers may be alerted of an outage on their networks through their own network monitoring tools or from their vendors, CMRS providers do not have monitoring tools that would signal an issue associated with other networks or PSAP operations.

The Commission proposes to amend its rules to require the reporting of wireless call failures that result from radio access networks (“RAN”) overloading.<sup>5</sup> The Commission seeks comment on the appropriate reporting metric and asks if it should be based on the percentage of calls failed.<sup>6</sup> The Commission also seeks comment on the costs, burdens and benefits of requiring providers to report on call failures in wireless RANs.<sup>7</sup> The Commission should refrain from adopting new reporting requirements for wireless call failures from RAN overloading. Such a requirement would increase carrier data collection and reporting efforts without producing a clearly defined benefit.

The Commission’s primary concern seems to be call failures related to mass calling events.<sup>8</sup> Carriers design networks with normal usage patterns in mind and engineer capacity to

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<sup>4</sup> NPRM at par. 12.

<sup>5</sup> *Id.* at par. 14.

<sup>6</sup> *Id.* at par. 16.

<sup>7</sup> *Id.* at par. 17.

<sup>8</sup> *Id.* at par. 15.

support real-time call volumes. Carriers are continually monitoring their networks for call blocks and drops related to capacity constraints and add capacity where needed. For special events where capacity concerns are anticipated, carriers deploy specialized solutions, such as cells on wheels (“COWs”), to augment capacity. Mass calling events are irregular, unpredictable, and typically short-lived. As a result, by the time carriers reported on such an event, the event is likely to have ended. In addition, because RAN congestion is sporadic and is often attributed to a one-time occurrence that is unlikely to be repeated, the information reported is not likely to be useful. In sum, there is little correlation between capacity constraints during mass calling events and the overall reliability and resiliency of the network.

It is unclear what benefits reporting call failures due to RAN congestion would bring about. Carriers have every motivation in the highly competitive wireless marketplace to ensure their networks have adequate coverage and capacity to meet consumer demands. In areas where coverage or capacity is limited, a carrier may be constrained by a number of other factors including spectrum resources, availability of prospective sites, or obtaining local facility siting approvals. Reporting on call failures due to RAN congestion will not change these realities.

It is also unclear from the NPRM how the Commission would define a “failed” call attributed to congestion. There are a number of factors that the Commission would need to take into account when considering how this should be defined. For example, a blocked call resulting from a capacity issue may appear to the end-user as a long set-up time rather than as a failed call.

To the extent the Commission is concerned about 9-1-1 services specifically, existing Commission rules already ensure that an emergency call will be handled by the network with the strongest signal when service from the consumer’s preferred carrier is unavailable. Notably, 9-1-1 services are subject to constraints on the PSAP’s side over which CMRS providers have no

control. PSAPs have a limited number of trunks and available call-takers, so in a mass calling event a wireless carrier's network is just one part of an equation that involves multiple entities. Carrier 9-1-1 facilities are limited to the number of circuits allowed by the PSAP and its 9-1-1 service provider and are generally based upon the number of inbound lines within the PSAP network, on the other side of the wireless carrier's demarcation point. As was discussed in the CSRIC III Working Group 10 Final Report on 9-1-1 Prioritization, 80% of PSAPs have only 1 -5 call taker positions.<sup>9</sup>

As the Commission is reviewing its Part 4 rules and considering ways to improve outage reporting, we urge the Commission to consider revising the rules to address inconsistencies in the reporting timeframes for different types of providers. In particular, the Commission should consider modifying the reporting timeframes for cable, wireline and wireless providers to make them consistent with those of interconnected Voice over Internet Protocol ("VoIP") providers. This would mean that the deadline for notifications, other than those for outages to 9-1-1 special facilities, would be extended from 120 minutes to 24 hours and the deadline for notification for outages to 9-1-1 special facilities would be extended from 120 minutes to 240 minutes. Taking this action would make automation easier and would result in more accurate reporting because carriers would have additional time to evaluate whether a reportable outage has actually occurred. It would also create a consistent timeframe for all carriers instead of having two separate reporting timeframes based on technology classification. The Commission should also eliminate the requirement for some, but not all, carriers to file Initial Communications Outage Reports within 72-hours of discovering an outage and should, instead,

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<sup>9</sup> CSRIC III Working Group 10, Final Report, 9-1-1 Prioritization (February 13, 2013) ("CSRIC III WG 10 Final Report") Section 6, Pg. 14, "Small PSAPS". *See also* CSRIC III WG 10 Final Report, Section 4.1.1, Pg. 8, which explains, "Since PSAPs staffing is normally engineered based on average call volume, they limit the incoming trunks at the PSAP to match the staffing levels."

require all carriers to file Final Communications Outage Reports only, consistent with the requirements in place for interconnected VoIP providers. This would simplify the reporting process for all carriers and would allow carriers to focus on resolving the outage instead of spending time filing initial reports.

### **B. Major Transport Facility Outages**

The Commission proposes to define the reporting threshold for transport facility outages in terms of impact on higher capacity circuits and specifically proposes to define the threshold in terms of “OC3 minutes.”<sup>10</sup> The Commission should adopt this proposal. Defining the threshold in terms of OC3 minutes is more likely to accurately reflect outages that impact a significant number of subscribers. This proposal should decrease reporting associated with minor outages.

The Commission proposes shortening the time reporting threshold associated with a simplex event from 5 days to 48 hours.<sup>11</sup> The Commission should refrain from adopting this proposed change. It is not clear that this change will result in any clear benefit other than to increase the number of reports filed. These events are not true outages but instead indicate a loss of redundancy. In terms of the impact on reporting, Sprint has not reported on a simplex event in five years. If the Commission’s proposed rules had been in effect in 2014, however, approximately 134 additional reports would have been required. This proposed change would significantly increase reporting obligations without providing accurate data on outages.

### **C. Wireless Outage Reporting Metrics**

The Commission also proposes adopting “a more standardized, technology neutral method” for wireless carriers to use when calculating the number of users “potentially affected” by a wireless network outage in order to ensure carriers are using a consistent calculation

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<sup>10</sup> NPRM at par. 21.

<sup>11</sup> *Id.* at par. 24.

method.<sup>12</sup> The Commission is proposing two potential approaches.<sup>13</sup> While it is understandable the Commission would like to see more consistency with regard to these metrics, the Commission must recognize that different carrier networks are designed differently and, as a result, the method and location on the network from which the data is collected is likely to be different. Working toward a consistent methodology may present challenges.

Under the first proposal the Commission discusses for calculating wireless reporting metrics, "... 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..."<sup>14</sup> Factors such as cell site coverage overlap, roaming, and changing traffic volumes may add to the complexity of attempting to report using this proposed method.

Under the second proposed approach, a wireless provider could use its Visitor Location Register ("VLR") to determine the number of users that were being served at each affected cell site when the outage commenced.<sup>15</sup> There are several problems with this proposed approach. Use of the VLR is expected sunset with CDMA technology and will not be supported with Voice over LTE ("VoLTE") technology. Even if the VLR were utilized, it would not indicate the number of users affected. VLR data does not provide real-time information on users. Only the users that may have been in the area within a given timeframe would be shown. This would not give an accurate picture of an outage condition and the number of users affected.

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<sup>12</sup> *Id.* at par. 31-32.

<sup>13</sup> *Id.* at par. 33.

<sup>14</sup> NPRM at par. 33.

<sup>15</sup> *Id.*

The Commission also proposes requiring outage reporting based solely on the geographical scope of an outage.<sup>16</sup> This requirement would be separate and in addition to the Commission's other proposed requirements. The Commission should refrain from adopting such a requirement. The Commission asks whether providers should be required to report any outage that disrupts service above a specified percentage (*e.g.*, 5 percent) of a provider's advertised coverage area or at some other more granular level (*e.g.*, at the State, county, or zip code).<sup>17</sup> Basing reports on geographical impact only would expand carrier's reporting obligations and could trigger the need for carriers to develop and deploy additional automation tools and monitoring mechanisms that may not exist in the current environment, particularly if more granular reporting at the county or zip code level, is required. Requiring reporting on a geographic level would increase reporting obligations without necessarily providing meaningful data on outages that impact a significant number of people. Based on the Commission's proposals, reports could be required for outages that impact a very small number of people. The reported information may not be an accurate reflection on whether the geographic area is in fact experiencing a true outage since consumers may still have access to service via roaming. Notably, the Network Outage Reporting System ("NORS") and Disaster Information Reporting System ("DIRS") systems already contain a geographic component for those outages that meet the reporting threshold.

In its Petition for Reconsideration filed in 2005, Sprint proposed that wireless carriers be permitted to divide the capacity of the MSC as defined in the rules by the number of subtending

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<sup>16</sup> *Id.* at par. 34.

<sup>17</sup> *Id.*

PSAPs.<sup>18</sup> In the NPRM, the Commission seeks comment on an alternative proposal. Specifically, the Commission proposes “... that capacity be allocated to each PSAP in reasonable proportion to its size in terms of number of users served.”<sup>19</sup> Sprint continues to believe the original proposal outlined in Sprint’s Petition will allow carriers to capture a more accurate number of potential end user minutes affected by an outage. The Commission’s alternative proposal would add increased complexity and is unlikely to produce a more accurate picture of the user minutes impacted by the outage.

#### **D. Special Offices and Facilities**

The Commission seeks comment on its proposal to classify as “special offices and facilities” those facilities either enrolled in or eligible for the Telecommunications Service Priority (“TSP”) program.<sup>20</sup> The Commission should not extend the definition to facilities that are eligible for, but are not enrolled in, the TSP program. Extending the definition to eligible facilities would introduce ambiguity and could put service providers in the difficult position of attempting to evaluate whether facilities might be eligible. Extending the definition of “special offices and facilities” to those enrolled in the TSP program would also add an unnecessary level of complexity and could significantly expand the scope of facilities deemed to be “special offices and facilities.” For this reason, the Commission should carefully consider taking this action.

The Commission proposes clarifying the circumstances that trigger outage reporting for outages potentially affecting airport communications.<sup>21</sup> The Commission seeks comment “... on amending the definition of “special offices and facilities” to exclude all airports other than those

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<sup>18</sup> Sprint Petition for Reconsideration, ET Docket No. 04-35 (Jan. 3, 2005) (“Sprint Petition”), at 3.

<sup>19</sup> NPRM at par. 37.

<sup>20</sup> *Id.* at par. 39.

<sup>21</sup> NPRM at par. 43.

designated “primary commercial service” airports in the NPIAS.”<sup>22</sup> The Commission also proposes clarifying which types of communications must be jeopardized for an outage to be considered to “potentially affect” an airport.<sup>23</sup> In its Petition for Reconsideration Sprint urged the Commission to clarify that only disruptions in communications being carried over critical infrastructure should be considered to “potentially affect” an airport, and Sprint continues to support this approach.<sup>24</sup> Without this clarification, carriers could be expected to report on outages associated with non-critical infrastructure, such as communications lines serving retail stores located on the airport's premises. According to the Commission, “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.”<sup>25</sup> By issuing the proposed clarifications, the Commission could reduce unnecessary reporting.

The Commission asks whether it should exempt wireless providers from requirements to report outages potentially affecting “special offices and facilities,” as Petitioners have requested.<sup>26</sup> Sprint supports limiting reporting associated with special offices and facilities for wireless carriers. As is the case with airports, the communications infrastructure serving other special offices and facilities remain primarily “landline based.” Unless a wireless carrier provided a dedicated access line to a special office or facility, it would have no way of knowing whether one of its phones was being used by personnel at such office or facility. Accordingly,

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<sup>22</sup> *Id.* at par. 43.

<sup>23</sup> *Id.* at par. 44.

<sup>24</sup> Sprint Petition at 5.

<sup>25</sup> NPRM at par. 44.

<sup>26</sup> *Id.* at par. 47.

Sprint recommends that the Commission retain the airport exemption granted wireless carriers and expand this exemption to include all special offices and facilities.

#### **E. Part 4 Information Sharing**

The Commission seeks comment on its proposal to grant states read-only access to the portions of the NORS database that pertain to outages in their states.<sup>27</sup> The Commission proposes that, in order to receive direct access to NORS, a state would be required to certify that it will keep the data confidential and that it has in place confidentiality protections at least equivalent to those outlined in the federal Freedom of Information Act (“FOIA”).<sup>28</sup> Sprint shares many of the concerns expressed by commenters that filed in response to the Public Safety and Homeland Security Bureau’s 2010 Public Notice seeking comment on a Petition filed by the California Public Utility Commission (“PUC”), which in part concerned the PUC’s request for access to NORS data.<sup>29</sup> First and foremost, there are national security concerns associated with protecting the sensitive data reported via the NORS database.<sup>30</sup> The detailed outage information submitted by carriers could be used by terrorists or others seeking to intentionally disrupt communications. Expanding the scope of entities that have access to this data would increase the risk of disclosure and make it more difficult to identify the source of a breach. There are also competitive concerns that would be impacted by any unauthorized access to reported outage data.

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<sup>27</sup> *Id.* at par. 51.

<sup>28</sup> NPRM at par. 51.

<sup>29</sup> 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 (2010) (“CPUC Public Notice”).

<sup>30</sup> See Comments of AT&T, Docket No. 04-35, filed March 4, 2010, Pg. 3-5; Comments of CTIA, Docket No. 04-35, filed March 4, 2010, Pg. 2-3; Comments of the United States Telecom Association, Docket No. 04-35, filed March 4, 2010, Pg. 2.

The Commission should not allow access to NORS data without ensuring that stringent safeguards are in place to protect this information. Sprint would support requiring that states certify they will keep NORS data confidential and that they have confidentiality protections in place. The Commission should consider whether FOIA is the appropriate benchmark for this certification or whether other certification language should be used to ensure this data is given the highest level of protection from disclosure.

The Commission should also implement many of the safeguards that have been discussed by other commenters in ET Docket No. 04-35. The Commission should require that personnel charged with obtaining the information be required to have security training, and the identity of these individuals should be supplied to the FCC. In addition, at a minimum, states should be required to report breaches of the confidentiality of information obtained from NORS and the Commission should consider whether a penalty would also be appropriate in the event of a breach. Sprint would support the proposal that states be granted access to NORS data only on the condition that such access would replace any separate outage reporting required under state law. In other words, as a condition of receiving access to NORS information, states should agree to accept the Commission's reporting thresholds and metrics and agree that they will not create different, specialized metrics that would require separate and additional reporting.

Sprint would support a requirement that when outage information is provided to state public officials or state public utility commissions, 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. The Commission should consider limiting the number of state entities that have access to the data during a single outage event. In addition, Sprint believes states' use of NORS data should be restricted to activities relating to its "traditional role of protecting public health and safety," such

as using the data to coordinate with federal departments or to assist carriers in prioritizing sites to get back online.

The Commission proposes entertaining requests from federal agencies other than the Department of Homeland Security (“DHS”) for access to NORS data, and proposes acting upon such requests on a case-by-case basis.<sup>31</sup> The Commission should refrain from adopting the proposal to consider requests from other federal partners to have their own direct access to the NORS database. Telecommunications companies already coordinate with the DHS National Coordinating Center for Communications (“NCC”) to release additional information to requesting federal agencies, and Sprint supports continuing to take this approach with respect to such requests.

The Commission also seeks comment regarding information sharing with the NCC.<sup>32</sup> Sprint supports the current level of access to outage data collected in NORS by the DHS NCC, which coordinates efforts to protect, restore, and reconstitute communications during times of crisis. The NCC interfaces directly with industry members representing individual companies on an event driven basis when additional information is requested.

#### **F. Costs and Benefits**

The Commission estimates that overall the proposed changes to the Part 4 Rules will result in the filing of a total of 339 additional reports industry-wide per year, which it estimates will cost an additional \$54,240.<sup>33</sup> The Commission states that it believes the estimated cost impact to be *de minimis*, given the breadth of industry sectors impacted, and states it believes the costs will be significantly outweighed by the public interest benefits.<sup>34</sup> The Commission should

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<sup>31</sup> NPRM at par. 54.

<sup>32</sup> *Id.* at par. 55.

<sup>33</sup> *Id.* at par. 8

<sup>34</sup> *Id.*

consider that the proposed changes to the reporting requirements may trigger the need for carriers to put in place additional automation, tools, and monitoring mechanisms that may not exist in the current environment. The costs associated with developing and deploying technology solutions to comply with the Commission's proposed changes to the rules are difficult to estimate without further information regarding the specific requirements, but Sprint is concerned these costs may not be reflected in the Commission's estimates regarding the costs associated with additional or new reporting requirements.

### **III. CONCLUSION**

The Commission should carefully consider the potential regulatory burdens associated with its proposed Part 4 rule changes before taking further action. Several of the Commission's proposals would increase regulatory burdens for carriers without providing a clear public interest benefit, and the Commission should refrain from adopting these proposals. To the extent the Commission moves forward with proposals to share NORS data, it should adopt stringent safeguards to protect this sensitive information.

Respectfully submitted,

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