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

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

COMMENTS OF COMCAST CORPORATION

Comcast Corporation ("Comcast") hereby submits these comments in response to the Notice of Proposed Rulemaking released by the Federal Communications Commission ("FCC" or "Commission") in the above-captioned proceedings.[1]

I. INTRODUCTION AND SUMMARY

Since the outage reporting rules first were established in 2004, certain of the Commission's requirements have become outdated, particularly as network technology and design have evolved over time. These changes have resulted in outage reports that do not provide useful information, including those documenting relatively minor outages. Accordingly, in updating its rules, the Commission should adopt targeted reforms that "improve the quality and usefulness of the outage data the Commission receives."[2]

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1 *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*, Notice of Proposed Rulemaking, Second Report and Order and Order on Reconsideration, 30 FCC Rcd 3206 (2015) ("NPRM" or "Notice").

2 *Id*. ¶ 6.

In particular, and for the reasons discussed more fully herein, the Commission should:

- Adopt specific, unambiguous standards for determining whether a "significant degradation" of service to a public safety answering point ("PSAP") has occurred and must be reported;

- Modify the threshold for major transport facility outages to reflect the change from legacy technologies to fiber optic facilities, such as by adopting a bandwidth-based threshold; and

- Ensure that the method it uses to determine what constitutes a special office or facility does not inadvertently extend to facilities beyond "major military installations, key government facilities, nuclear power plants, and [certain airports defined by the] FAA's National Plan of Integrated Airports Systems."[3]

II. THE COMMISSION SHOULD ADOPT CLEAR, WORKABLE STANDARDS FOR DETERMINING WHETHER AN OUTAGE REPORT IS REQUIRED DUE TO A "SIGNIFICANT DEGRADATION" OF SERVICE TO A PSAP

The Commission seeks comment on whether to clarify that outage reports are required for any malfunction or issue that "significantly degrades or prevents 911 calls from being completed . . . regardless of whether the PSAP is rendered completely unable to receive 911 calls."[4] Comcast agrees that the Commission should designate as reportable events any "failure or degradation that prevents hundreds or even thousands of 911 calls from completing," even if "some 911 calls continue[ ] to reach the PSAP throughout the event."[5]

In doing so, however, the Commission should adopt rules that clearly spell out the types of "degradation" or "impairment" of 911 calls that are reportable and should limit reporting obligations to incidents that actually affect adversely the processing of a 911 call. Specifically, in any instance involving an event that satisfies the 30 minutes/900,000 user minutes threshold, the Commission should require reporting when: (1) there is not automatic rerouting of 911 calls

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3 47 C.F.R. § 4.5(b).

4 NPRM ¶ 12.

5 *Id*. ¶ 9.

on a comparable secondary route after an outage on a primary line; (2) as a result of an outage, calls to 911 are completed, but are degraded, such as when there is a loss of audio; or (3) as a result of an outage, a provider is forced to send 911 calls over a ten-digit overflow route that does not offer the same core functionalities as the primary route. For purposes of this last requirement, "core functionalities" should be defined as the provision of automatic location information ("ALI") and automatic number identification ("ANI") data.

In other words, reporting should be required only when a service outage that meets the 30 minutes/900,000 user minutes threshold actually impacts the handling or completion of emergency calls. This standard will avoid unnecessary reporting and better focus the Commission's data gathering on events that have a meaningful real-world impact.

In Comcast's case, for example, when a primary route experiences an outage, emergency calls generally are transmitted automatically via a secondary route that offers the same functionalities and can handle the same number of 911 calls as the primary route. If this reroute occurs, the Commission should make clear that no outage report is required, as 911 calls continue to be completed, the calls are not "degraded" in any way, and consumers are not adversely affected. In contrast, the Commission should confirm that an outage report is required when *both* the primary and secondary routes experience an outage that meets the reporting threshold and calls are transmitted via a tertiary route that lacks the same core functionalities. In that circumstance, the "real world" impact test is met, because even though 911 calls from Comcast's network are sent via the back-up route in a manner that ensures they are handled appropriately and are transmitted to the correct PSAP, ALI and ANI are not automatically provided to the PSAP. The loss of ALI and ANI information represents a "degradation" in the 911 calling capability and is thus appropriately reported. Clarifying that this is the correct

definition of a reportable 911 service degradation or failure would provide a sensible, workable solution that is "consistent with the intent of the Part 4 outage reporting process," *viz.* collecting information on "service disruptions that could affect homeland security, public health or safety, and the economic well-being of our Nation."[6]

Conversely, the Commission should not adopt its proposal to base the outage reporting obligation on a calculation that service providers cannot perform. The Commission has proposed to require providers to "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."[7] As an initial matter, tying an outage reporting obligation to this vague and confusing "lost capacity" standard, without more precise guidance from the Commission, could result in different providers reporting on vastly different types of outages. As the Commission notes, ensuring consistent reporting pursuant to this type of calculation would require the adoption of yet another set of standards to define what constitutes "lost capacity."[8]

More importantly, service providers do not have the capability to determine some of the variables needed to perform the calculation. For example, the Commission asks whether the percentage of lost capacity should be "equivalent to the percentage of trunks serving a PSAP that have been disabled" and whether a "loss of communications" could be deemed to occur only

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6 *Id.* ¶¶ 9, 11.

7 *Id.* ¶ 12.

8 *Id.* (seeking comment on various alternatives for how a provider would "determine the need to report an outage that results only in a partial 'loss of communications' to a PSAP" and how to calculate the "percentage of lost capacity").

when a certain percentage of the trunks serving a PSAP (*e.g.*, 80%) are disabled.[9] This type of standard is impractical for two reasons. First, such a trigger bears no relationship to an end user's ability to place a 911 call successfully, which should be the focus of any outage reporting requirements. Second, the providers that would be subject to such an outage reporting requirement simply have no way to determine the percentage of trunks serving a PSAP that may be disabled by a service disruption, because most providers do not deliver traffic directly to the PSAP.

III. THE COMMISSION SHOULD MODIFY THE METRIC AND THRESHOLD FOR MAJOR TRANSPORT FACILITY OUTAGES

As the Commission notes, the current standard for reporting "failures of communications infrastructure components having significant traffic-carrying capacity" is based on Digital Signal 3 ("DS3") circuits.[10] When this requirement was adopted in 2004, DS3 circuits were "the common denominator used throughout the communications industry as a measure of capacity."[11] Today, however, ever-increasing bandwidth requirements for major transport facilities have shifted such traffic from TDM-based DS3s to higher-capacity IP-based circuits. Comcast, therefore, agrees that using DS3s as the metric for determining the major transport facility outage threshold no longer is appropriate.

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9 *Id.*

10 *Id.* ¶ 19.

11 *New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830, ¶ 128 (2004). Notably, even shortly after this requirement was adopted, Qwest urged the Commission to increase the threshold, arguing that "a DS3 level outage below an OCn level outage rarely would implicate a material network failure." Petition for Reconsideration of Qwest Corporation and Qwest Communications Corporation, ET Docket No. 04-35, at 6 (Jan. 3, 2005).

For the short term, defining the outage reporting threshold in terms of the impact on the quantity of "OC3 circuits or other circuits or aggregations of circuits that provide equal or greater capacity" and increasing the reporting threshold from 450 OC3 minutes to 667 OC3 minutes may prove to be reasonable adjustments to the current standard.[12] Even these changes, however, are likely to become obsolete after only a few years and, consequently, once again lead to the current situation where "an increasing proportion of the outages reported under . . . [the] standard are minor disruptions unlikely to have a significant impact on communications or jeopardize public safety" and the FCC is inundated "with information that may not be sufficiently useful to justify the attendant reporting burden."[13]

Comcast recognizes that the Commission traditionally has adopted a reporting threshold that "match[es] the 900,000 user minutes threshold put in place for voice-grade services," on the basis that doing so advances technological neutrality.[14] Today, however, data traffic is the primary driver of increased bandwidth needs for transport services, and this trend likely will persist over time. Because voice traffic will continue to become an ever-smaller component of total bandwidth consumption, retaining equivalence with voice-based standards ultimately will make little sense. The Commission, thus, should consider the adoption of a bandwidth-based standard, such as a 1GB outage that lasts for at least 30 minutes, that can be adjusted over time to reflect changes in technology and network architecture. Such a standard would be consistent not only with the Commission's objective of revising the "reporting threshold to account for changes in how networks are scaled and designed," but also with its dual goals of "reduc[ing] reporting

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12 NPRM ¶¶ 21-22.

13 *Id*. ¶ 19.

14 *Id.* ¶ 22.

burdens while preserving the Commission's ability to obtain critical information about communications reliability."[15]

IV. ONLY FACILITIES THAT FALL WITHIN THE FCC'S EXISTING DEFINITION SHOULD BE CLASSIFIED AS "SPECIAL OFFICES AND FACILITIES"

The Commission's existing rules define "special offices and facilities" to include "major military installations, key government facilities, nuclear power plants, and [certain airports defined by the] FAA's National Plan of Integrated Airports Systems."[16] The Commission previously relied on National Communications System ("NCS") member agencies to provide guidance regarding the specific facilities that should be included in the "major military installations" and "key government facilities" categories. Because the NCS has been dissolved, the Commission now seeks alternative approaches to identifying "special offices and facilities."[17]

As an initial matter, "special offices and facilities" should continue to include the nuclear power plants and airports that fall within section 4.5(b) pursuant to existing protocols, which were not affected by the dissolution of NCS. In defining what constitutes a "major military installation" or "key government facility," the Commission should avoid adopting a definition or other threshold that would expand the number or types of facilities subject to the outage reporting requirements. Such an expansion could both inundate the Commission with reports that would not prove useful and overburden providers.

For example, the Commission's proposal to define "special offices and facilities" to include facilities that either are enrolled in or eligible for the Telecommunications Service

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15 *Id.* ¶¶ 19, 22.

16 47 C.F.R. § 4.5(b).

17 NPRM ¶ 38.

Priority ("TSP") program is overly broad.[18] Simply including all facilities that are enrolled in TSP would itself increase the number of facilities covered by the definition by the thousands. Going any further than this would be particularly burdensome: providers simply have no way of reliably tracking the entities that *may be eligible* for the TSP program. And contrary to the Commission's expressed belief that adopting its proposal would not "have an appreciable cost impact," requiring providers to develop complicated new tracking systems to try to identify such entities would impose significant costs.[19]

Moreover, the Commission should include only those TSP participants that constitute "major military installations" or "key government facilities" as "special offices and facilities." For the most part, such entities will be those enrolled in TSP priority Level 1 or Level 2. Extending the definition to all entities that are enrolled in the TSP program, irrespective of priority level, would flood the Commission with reports related to outages that do not actually impact a "special office or facility." Although such offices and facilities unquestionably are important and should be part of the TSP program, reporting outages that affect such facilities, rather than "major military installations" or "key government facilities," risks obfuscating truly critical outages.

V. CONCLUSION

For the foregoing reasons, the Commission should update its outage reporting rules in a manner that results in workable standards, such as by adopting clear metrics for defining a reportable "significant degradation" of service to a PSAP or a reportable major transport facility outage. In carrying out these updates, however, the Commission should be careful not to adopt

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18 *Id.* ¶ 39.

19 *Id.* ¶ 40.

unnecessarily broad proposals that would not only prove burdensome to providers, but also would not result in useful outage information, such as its proposal to define special offices and facilities by reference to TSP program eligibility.

Respectfully submitted,

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