

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

In the Matter of)	
)	
Improving 911 Reliability)	PS Docket No. 13-75
)	
Reliability and Continuity of Communications Networks, Including Broadband Technologies)	PS Docket No. 11-60
)	

**MOTION FOR CLARIFICATION OR, IN THE ALTERNATIVE,
PETITION FOR PARTIAL RECONSIDERATION**

Intrado, Inc., on behalf of itself and its affiliate, Intrado Communications Inc. (collectively referred to as “Intrado”), hereby respectfully submits this Motion for Clarification or, in the alternative, Petition for Partial Reconsideration of the *Report and Order* in the above-captioned proceeding (“Order”).¹

I. INTRODUCTION

The Commission adopted the Order to improve the reliability and resiliency of 911 communications networks. The Order adopts a new reliability rule, 47 CFR § 12.4, et seq., that requires Covered 911 Service Providers (“Providers”)² to take reasonable measures to provide reliable 911 service with respect to three elements: circuit auditing, central-office backup power,

¹ *In Re Improving 911 Reliability*, Report and Order, FCC 13-158 (rel. Dec. 12, 2013)(“Order”).

² 47 C.F.R. §12.4(a)(4) defines a Covered 911 Service Provider as:

“(i) an entity that (A) provides 911, E911, or NG911 capabilities such as call routing, automatic location information (ALI), automatic number identification (ANI), or the functional equivalent of those capabilities, directly to a public safety answering point (PSAP), statewide default answering point, or appropriate local emergency authority as defined in sections 64.3000(b) and 20.3; and/or, (B) operates one or more central offices that directly serve a PSAP. For purposes of this section, a central office directly serves a PSAP if it hosts a selective router or ALI/ANI database, provides equivalent NG911 capabilities, or is the last service-provider facility through which a 911 trunk or administrative line passes before connecting to a PSAP.

(ii) The term ‘Covered 911 Service Provider’ shall not include any entity that: (A) constitutes a PSAP or governmental authority to the extent that it provides 911 capabilities; or (B) offers the capability to originate 911 calls where another service provider delivers those calls and associated number or location information to the appropriate PSAP.”

and diverse network monitoring.³ In order to provide the Commission with information to assess the reliability of 911 service, Providers must certify annually that they satisfied each of these elements in one of two ways – either by: (i) implementing industry best practices adopted by the Commission for each element; or (ii) taking, “alternative measures that are reasonably sufficient to ensure reliable 911 service.”⁴

The industry best practices adopted by the Order for circuit auditing require Providers to conduct Diversity Audits,⁵ Tag⁶ Critical 911 Circuits,⁷ and eliminate all single points of failure in Critical 911 Circuits.⁸ Based on the text of the Order, it appears that the Commission intended to permit Providers either to implement these best practices or take reasonable alternative measures with respect to the circuit auditing and network monitoring elements, just as Providers may do for backup power. Providers that elect to adopt reasonable alternative measures would be required to explain how those measures promote reliable 911 service.

However, as described below, certain provisions of the rule appear inconsistent with the Order because they might be read to prohibit Providers from taking reasonable alternative

³ 47 C.F.R. § 12.4(b),

⁴ *Order* at ¶1.

⁵ A Diversity Audit is “a periodic analysis of the geographic routing of network components to determine whether they are Physically Diverse. Diversity Audits may be performed through manual or automated means, or through a review of paper or electronic records, as long as they reflect whether Critical 911 Circuits are Physically Diverse.” 47 C.F.R. §12.4(a)(6).

⁶ Tagging is “an inventory management process whereby Critical 911 Circuits are labeled in circuit inventory databases to make it less likely that circuit rearrangements will compromise diversity. A Covered 911 Service Provider may use any system it wishes to tag circuits so long as it tracks where Critical 911 Circuits are Physically Diverse and identifies changes that would compromise such diversity.” 47 C.F.R. §12.4(a)(11).

⁷ 47 C.F.R. §12.4(a)(5) defines Critical 911 Circuits as “911 facilities that originate at a selective router or its functional equivalent and terminate in the central office that serves the PSAP(s) to which the selective router or its functional equivalent delivers 911 calls, including all equipment in the serving central office necessary for the delivery of 911 calls to PSAP(s). Critical 911 Circuits also include ALI and ANI facilities that originate at the ALI or ANI database and terminate in the central office that serves the PSAP(s) to which the ALI or ANI databases deliver 911 caller information, including all equipment in the serving central office necessary for the delivery of such information to the PSAP.”

⁸ 47 C.F.R. §12(c)(1).

measures in lieu of auditing and tagging Critical 911 Circuits or auditing Monitoring Links.⁹ In order to eliminate confusion in implementing and enforcing the rule, Intrado requests that the Commission clarify that Providers may take reasonable alternative measures to meet the Commission's standards in lieu of implementing *any* of the best practices adopted by the Order. This would include confirming that Providers may take reasonable alternative measures instead of conducting Diversity Audits, Tagging Critical 911 Circuits, or auditing Monitoring Links.¹⁰

Intrado applauds the Commission's focus on ensuring the reliability and resiliency of 911 networks. Intrado focused on these laudable goals in designing its network for the nation's first deployments of NG911 and maintaining a highly diverse and redundant network as it serves NG911 customers in multiple states. Intrado's commitment to reliability is underscored by the company's long and active participation in developing CSRIC (and NRIC) Best Practices. Intrado fully supports maintaining a high bar when it comes to 911 network reliability and resiliency. With this filing, Intrado does not seek to reduce or weaken the Commission's reliability standards. Rather, Intrado seeks confirmation that Providers have flexibility to employ unconventional but reliable network designs and technologies to achieve and even exceed these standards. As discussed below, a narrow interpretation of the rules could require Providers to focus on form over substance and divert resources away from implementing innovative alternative measures that improve network reliability to focus on complying with a "one-size-fits-all" certification obligation.

⁹ Monitoring Links are "facilities that collect and transmit network monitoring data to a NOC or other location for monitoring and analyzing network status and performance." 47 C.F.R. §12.4(a)(7).

¹⁰ Consistent with the text of the rule, Providers would be required to explain why any element of the rule does not apply to its network.

II. REQUEST FOR CLARIFICATION

The overarching goal of the Order was to ensure that Providers, “take reasonable measures to ensure 911 circuit diversity, availability of backup power at central offices that directly serve PSAPs, and diversity of network Monitoring Links.”¹¹ The Commission recognized that ensuring reliability was not a one-size-fits-all proposition. Therefore, Providers may achieve reliability through adopting the stated best practices or implementing reasonable alternative measures in lieu of those best practices. If a Provider elects to implement reasonable alternative measures, the Commission required there to be, “a reasonable basis for such decisions, coupled with appropriate steps to compensate for any increased risk of failure. Thus, where service providers employ alternative measures in lieu of best practices, they should be able to explain why those measures are appropriate and reflect reasonable measures to provide reliable 911 service.”¹²

The Order confirms that the certification process was intended to be equally as flexible. Certifications are required so that the Commission may obtain “important information” on the reliability of 911 services nationwide.¹³ The Commission did not intend the certification process to be prescriptive, but adopted a certification mechanism that provides “Covered 911 Service Providers with flexibility and a means of demonstrating that they are taking reasonable measures to ensure the reliability of their 911 service.”¹⁴

¹¹ Order at ¶45.

¹² *Id.* at ¶46. In particular, the Commission noted that, “reasonable measures may vary to some degree by location, service provider, and technology.” *Id.* at ¶ 45.

¹³ *Id.* at ¶47.

¹⁴ *Id.*

Subsection 12.4 (b) of the new rules sets forth the Commission's ultimate requirement with respect to 911 reliability and reflects the flexible approach the Commission espoused in the Order.¹⁵ This subsection states:

Provision of Reliable 911 Service. All Covered 911 Service Providers shall take reasonable measures to provide reliable 911 service with respect to circuit diversity, central-office backup power, and diverse network monitoring. Performance of the elements of the Certification set forth in subsections (c)(1)(i), (c)(2)(1), and (c)(3)(i) below shall be deemed to satisfy the requirements of this subsection (b). *If a Covered 911 Service Provider cannot certify that it has performed a given element, the Commission may determine that such provider nevertheless satisfies the requirements of this subsection (b) based upon a showing in accordance with subsection (c) that it is taking alternative measures with respect to that element that are reasonably sufficient to mitigate the risk of failure, or that one or more certification elements are not applicable to its network.*¹⁶

Subsections (c)(1), (c)(2), and (c)(3) of Rule 12.4 address each of the three main elements of the reliability rule: circuit diversity, central-office backup power and diverse network monitoring, respectively. However, for circuit auditing and network monitoring, subsections (c)(1) and (c)(3) appear to identify the obligations of Providers more narrowly. For example, the circuit auditing rule reads:

(1) *Circuit Auditing.*

(i) A Covered 911 Service Provider shall certify whether it has, within the past year:

(A) Conducted Diversity Audits of Critical 911 Circuits or equivalent data paths to any PSAP served;

(B) Tagged such Critical 911 Circuits to reduce the probability of inadvertent loss of diversity in the period between audits; and

(C) Eliminated all single points of failure in Critical 911 Circuits or equivalent data paths serving each PSAP.

¹⁵ 47 C.F.R. § 12.4(b).

¹⁶ *Id* (emphasis added).

(ii) *If a Covered 911 Service Provider does not conform with the elements in subsection (c)(1)(i)(C) above with respect to the 911 service provided to one or more PSAPs, it must certify with respect to each such PSAP:*

(A) Whether it has taken alternative measures to mitigate the risk of Critical 911 Circuits that are not Physically Diverse or is taking steps to remediate any issues that it has identified with respect to 911 service to the PSAP, in which case it shall provide a brief explanation of such alternative measures or such remediation steps, the date by which it anticipates such remediation will be completed, and why it believes those measures are reasonably sufficient to mitigate such risk; or

(B) Whether it believes that one or more of the requirements of this subsection are not applicable to its network, in which case it shall provide a brief explanation of why it believes any such requirement does not apply.¹⁷

In light of the reference in the above-quoted text, the rule could be interpreted as limiting the ability of a Provider to explain whether it has taken alternative measures or whether the rule is inapplicable to the Provider only as to one portion of this element – the requirement to “eliminate all single points of failure in Critical 911 Circuits or equivalent data paths serving each PSAP...”¹⁸ Such a narrow reading of this language would appear to conflict with subsection (b), which allows a showing of alternative measures taken with regard to any “given element,” including (c)(1)(i)(A) and (c)(1)(i)(B). This ambiguity should be resolved consistent with the Commission’s intent.

Intrado requests clarification that rule 12.4(c) permits Providers to demonstrate that they have adopted alternative network designs and operations that, from a reliability perspective, are equal to or surpass the assurances of reliability afforded by a blanket certification from a Provider confirming it has audited and tagged its links and circuits.

¹⁷ 47 C.F.R. § 12.4(c) (*emphasis added*). The network monitoring rule appears to similarly constrain the ability of Providers to implement alternative measures with respect to auditing Monitoring Links. *See*, 47 C.F.R. §12.4(c)(3).

¹⁸ *See, Order at fn 111* (Providers must audit and tag all Critical 911 Circuits but may take alternative measures in lieu of eliminating single points of failure). *See also, Order at ¶80*, “...all Covered 911 Service Providers must conduct annual audits of the physical diversity of their critical 911 circuits and tag those circuits to prevent rearrangement, but they may take a range of corrective measures most appropriate for their networks and PSAP customers.”

This reading is consistent with the Commission’s goal of promoting 911 network reliability through a flexible approach that is not “overly prescriptive” and that “encourages innovation.”¹⁹ In adopting these rules, the Commission sought to,

maximize flexibility and account for differences in network architectures without sacrificing 911 service reliability. Accordingly, service providers may certify annually that they have implemented certain industry-backed ‘best practices’ that we adopt herein, or that they have taken alternative measures reasonably sufficient in light of the provider’s particular facts and circumstances to ensure reliable 911 service so long as they briefly describe such measures and provide supporting documentation to the Commission.²⁰

This clarification of the reliability rule still accomplishes the Commission’s stated goal of improving the reliability and resiliency of the 911 communications network. Providers must still focus on 911 service reliability in accordance with the Order, but would be free to do so in a flexible way that accounts for unique differences between networks, service providers, or technology.²¹ The Commission would maintain oversight because Providers would still be required to disclose to the agency what steps were taken to accomplish these reliability goals. This flexible approach to certification was promoted by several parties in this proceeding.²²

Based on a recent meeting with Commission staff, Intrado understands this flexible reading of the rule is consistent with the agency’s intent. At this meeting, Intrado discussed the

¹⁹ “The approach we adopt today is not ‘heavy-handed’ or overly prescriptive, but rather flexible and designed to encourage innovation. It allows service providers to certify compliance either with specific best practices based on standards already established through industry consensus, or with reasonable alternatives shown to be appropriate in their circumstances.” *Order* at ¶30.

²⁰ *Id.* at ¶3.

²¹ *See, Id.* at ¶68. “...we recognize that a ‘one-size-fits-all’ approach may be infeasible and that, for a variety of reasons, service providers may opt to achieve a reasonable level of 911 reliability through other means than those specifically stated in existing best practices. The certification approach we adopt is more flexible than uniform standards and will allow service providers to implement best practices in the manner most appropriate for their networks and service areas.”

²² *See, ex., Ex Parte filing of Verizon* PS Docket No. 13-75 (Dec. 5, 2013)(the certification program should give a Provider flexibility to certify that it is conforming to a specific practice; or if it is not conforming, what alternative actions, if any, the provider is undertaking). *See also, Ex Parte filing of US Telecom* PS Docket No. 13-75 (Nov. 26, 2013)(industry representatives emphasized the importance of flexibility in order to best design their networks to ensure the reliability of 9-1-1 services).

rule's ambiguity with respect to how the company configures its NG911 network, how its network differs from legacy 911 service provider networks, and, therefore, why clarity of the rule is particularly important.²³ Intrado understood the Staff to have confirmed the intent of the rule is to allow Providers the flexibility to take alternative measures with respect to auditing, tagging, and eliminating all single points of failure in their Critical 911 Circuits and in lieu of auditing network Monitoring Links.²⁴

III. ALTERNATIVE PETITION FOR PARTIAL RECONSIDERATION

In the event the Commission concludes that the current rules cannot be interpreted to give Providers the flexibility to demonstrate alternative measures to ensure reliability in lieu of auditing and tagging Critical 911 Circuits or auditing network Monitoring Links, Intrado respectfully requests the agency treat this filing as a Petition for Partial Reconsideration under Section 1.429 of the agency's rules.²⁵ In such event, Intrado urges the Commission to reconsider its reliability rule to permit a Provider that cannot certify it has audited, tagged, or eliminated all single points of failure or audited network Monitoring Links to demonstrate it has taken alternative measures with respect to each of those elements.

As Intrado explained in an earlier filing in this proceeding,

in contrast to legacy ILEC providers that own and control the transport facilities over which 911 calls and data are transported, Intrado procures transport services for the delivery of 911 calls and for ALI/ANI from third party transport providers. In designing its network and procuring third-party transport services, Intrado places the highest priority on circuit diversity, and the majority of its network is implemented through diverse physical links. Whenever possible, that diversity is obtained by procuring diverse paths through separate carriers.²⁶

²³ See, *Ex Parte filing of Intrado Inc.* PS Docket No. 13-75 (Feb. 11, 2014).

²⁴ *Id.*

²⁵ 47 C.F.R. §1.429.

²⁶ See, *Ex Parte filing of Intrado Inc.* PS Docket No. 13-75 (Aug. 1, 2013).

Intrado has designed its network and operations in a manner that should exceed the Commission's expectations regarding 911 network reliability, but it would be exceedingly difficult and may not be possible in all cases for the company to audit and tag all of its Critical 911 Circuits or audit its Monitoring Links as those functions are defined in the Commission's rules. Auditing and tagging are concepts derived from the traditional 911 architecture of the ILECs, where the ILEC 911 service provider presumably controls the physical path of the circuit from the selective router to the serving wire center and knows whether it is diverse at any given moment. By contrast, Intrado's NG911 network disperses critical functions into geographically diverse and redundant locations and uses dual paths and different network providers to transmit its Critical 911 Circuits. The network was designed in this manner to create reliability and resiliency.

Two issues may prevent Intrado from being able to pinpoint the exact path of its circuits at a given time, thereby preventing Intrado from being able to certify that it has audited and tagged all Critical 911 Circuits. First, the underlying carriers could conflate their respective physical paths so that they are combined on one of their networks or on the network of a third-party carrier for one or more segments. Intrado may not know whether this occurred after it orders the circuits and Intrado has no way of ensuring that the underlying provider informs Intrado if such conflation occurs. In addition, a significant portion of Intrado's facilities rely on multiprotocol label switching ("MPLS") technology, which does not permit the underlying provider – let alone Intrado – to track its circuit path at any given moment.

When Intrado places its Critical 911 Circuits on the networks of other carriers, those circuits are not the underlying carriers' Critical 911 Circuits. As such, the reliability rule does

not require the underlying carrier to audit or tag those circuits on its own behalf.²⁷ Based upon Intrado's experience with its network providers, it is unlikely that these carriers would enter into commercial agreements to ensure diversity."²⁸

In reality, because Intrado engineers a geographically redundant and diverse network, its network can identify blockage due to lack of diversity and attempt to contemporaneously reroute the traffic to a clear path via other segments of its leased network. The resilient and reliable design of its network has been proved. As detailed in *Urgent Communications*, a trade publication for the 911 industry, "on August 28, 2011 – amid the chaos, devastation and destruction of Hurricane Irene – Vermont's 911 emergency communications service stood steadfast with help from its next-generation 911 emergency services network deployed by Intrado."²⁹ Hurricane Irene caused the worst flood in 84 years, knocked out a 911 emergency communications center, washed out more than 200 roads, and isolated 13 towns.³⁰ "Despite these problems Vermont's residents were able to reach 911 during this time, thanks to the Intrado enhanced call-routing system and ESInet implemented just two months prior to the storm."³¹

Intrado has demonstrated that its 911 network is reliable – the overarching goal of the Order. In the Order, the Commission voiced its preference to adopt an approach to promoting 911 network reliability that "is not 'heavy-handed' or overly prescriptive, but rather flexible and designed to encourage innovation." Thus, if the Commission does not clarify its intent (as described in the preceding section), it should revise its certification requirement to ensure that

²⁷ The Order requires parties providing 911 service directly to a PSAP over leased facilities to conduct the audit (as opposed to placing this obligation on the facilities lessor). *Order* at ¶90.

²⁸ *See, Ex Parte filing of Intrado Inc.* PS Docket No. 13-75 (Feb. 11, 2014).

²⁹ Next-gen 911 System from Intrado helps Vermont weather Hurricane Irene, *Urgent Communications* (Jun. 17, 2013), available at: <http://urgentcomm.com/blog/next-gen-911-system-intrado-helps-vermont-weather-hurricane-irene> (last visited Feb. 18, 2014).

³⁰ *Id.*

³¹ *Id.*

Providers can adopt reasonable alternative measures in lieu of auditing, tagging, and eliminating single points of failure with respect to each Critical 911 Circuit and auditing network Monitoring Links. This more flexible interpretation of the rule will promote innovation while achieving the Commission's goal of strengthening 911 networks.

In light of these considerations, as an alternative to providing clarification, Intrado urges the Commission to reconsider the certification requirement of its reliability rule and permit Providers to take reasonable alternative measures in lieu of auditing, tagging, and eliminating all single points of failure in Critical 911 Circuits and auditing network Monitoring Links.

IV. CONCLUSION

Intrado respectfully requests the Commission to confirm that Section 12.4 (b) of the agency's rules permits Covered 911 Service Providers to take reasonable alternative measures with respect to auditing, tagging, and eliminating single points of failure with respect to Critical 911 Circuits and auditing network Monitoring Links. In the alternative, Intrado respectfully requests the Commission reconsider the Report and Order and amend Subsections 12.4 (c)(1) and (3) to provide flexibility to enable Providers to take reasonable alternative measures in lieu of auditing, tagging, and eliminating single points of failure with respect to Critical 911 Circuits and auditing network Monitoring Links.

Respectfully Submitted,
INTRADO, INC.

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