

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

To: The Commission

**PETITION FOR LIMITED RECONSIDERATION OF
SYNIVERSE TECHNOLOGIES, INC.**

Pursuant to Section 1.429 of the Commission's rules, Syniverse Technologies, Inc. ("Syniverse")¹ hereby requests limited reconsideration of the *Report and Order* adopted in the above-referenced proceeding.² For the reasons discussed below, the outage reporting requirements adopted for third party SS7 providers based on blocked or lost calls will be difficult if not impossible to meet,³ while use of lost MTP messages as a surrogate for blocked or lost calls would not provide the Commission with meaningful outage information.

Syniverse therefore requests that, on reconsideration, the Commission modify Section 4.9(e) of its rules to eliminate all outage reporting requirements on SS7 network service providers except the requirement to report instances where Syniverse's carrier customers become isolated from a signaling perspective, *i.e.*, when one of Syniverse's STPs is isolated from another

¹ Syniverse is a global supplier of interoperability solutions to more than 300 telecommunications operators throughout North America, Latin America, Asia-Pacific and Europe. Syniverse's offerings include SS7 signaling services, intelligent network services, database services, fraud and carrier access billing solutions, and other service bureau applications. Syniverse filed comments responding to the Notice of Proposed Rulemaking in this proceeding, expressly commenting on the issues presented on reconsideration and therefore has clear standing to request the instant review by the agency.

² *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*, FCC 04-188 (rel. Aug. 19, 2004) ("R&O").

³ See new Section 4.9(e), 47 C.F.R. Section 4.9(e); R&O at p. 96.

STP for at least 30 minutes duration. Syniverse strongly believes that an SS7 outage reporting requirement based on an isolation metric accomplishes the Commission's stated outage reporting goals yet will be most practical for SS7 providers to implement.

In the *Notice of Proposed Rulemaking* in this proceeding, the Commission proposed for the first time to require third party providers of network services like SS7 networks to comply with any disruption reporting requirements that might be adopted to the same extent as would be required of the communications provider if it were directly providing the voice or data communications or maintaining the system.⁴ In response to those proposals, many commenters, including Syniverse, objected, noting that third party service providers are not well positioned to identify actual carrier outages that may result from the loss of their underlying networks, thus creating potential inconsistencies in the reported data.⁵ While Syniverse and others recognized their obligation to cooperate with their carrier customers in providing the data necessary for the carriers to report, Syniverse argued that the Commission should rely on contractual service level obligations between the third party providers and their carrier customers to achieve the level of information desired. At the very least, Syniverse urged that any reporting obligations that might be imposed directly on third party service providers at least should be consistent with the third party providers' ability to obtain and report meaningful data.⁶ Many parties had similar

⁴ *In the Matter of New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, *Notice of Proposed Rulemaking*, 19 FCC Rcd 3373, 3397-98 (2004) ("*Notice*").

⁵ See Syniverse Comments at 4-5.

⁶ *Id.*

concerns,⁷ although some carriers did agree with the proposal to impose some level of direct reporting requirements on third party providers.⁸

In the *R&O*, the Commission chose to adopt its proposal, and for the first time impose reporting requirements on providers like Syniverse that do not provide service directly to end users.⁹ While recognizing the importance of contractual relationships between the carriers and their third party outsourced providers, the Commission nevertheless found that “[t]he outage reporting requirements we are adopting serve not only the general, long-term interests of network reliability and security, and potential resultant improvements in customer service, but also the overarching need to obtain rapidly and accurately outage data that could serve the vital interests of homeland security. Our proposal better serves those vital interests and we therefore adopt it.”¹⁰

Turning to the specific criteria that would be imposed on providers of SS7 networks, the Commission recognized that the proposed criteria would be totally new to third party providers and to some degree a significant new approach even for those SS7 companies currently subject to outage reporting requirements (the carriers who own and operate their own SS7 networks), none of whom previously have been subject to threshold reporting criteria based on blocked or lost SS7 messages.¹¹ The Commission found that third-party SS7 providers should have to report an outage if the outage is big enough so that one or more affected carriers would also have to report; it concluded that having both the third party SS7 providers report as well as the affected

⁷ See, e.g., Comments of VeriSign, Inc. at 2-4; Staff of the Kansas Corp. Comm’n at 4; Ericsson Inc at 2-5.

⁸ See, e.g., Comments of BellSouth Corp. at 25; AT&T Corp. at 23-24.

⁹ *R&O* at ¶81.

¹⁰ *Id.*

communications service providers will help it to understand underlying vulnerabilities in these interconnected signaling networks.¹² Notwithstanding the concerns voiced by third party providers like Verisign and Syniverse about their ability to determine meaningful data on “lost calls” or “lost MTPs,” the Commission adopted new Section 4.9(e) creating significant threshold criteria for the reporting of outages by SS7 providers.¹³

Syniverse does *not* seek reconsideration of the Commission’s decision to include third party providers of SS7 network services within the scope of the new Part 4 rules. Rather, Syniverse seeks reconsideration of those elements of the reporting requirements that are overly burdensome and without any significant improvement in the information available to the Commission to determine when a network outage exists that is affecting the availability of telecommunications services to the public. Syniverse respectfully submits that the Commission failed to take into account the unique status of third party signaling providers when adopting this specific SS7 outage reporting requirement.

The newly adopted reporting requirements can be broken down into reporting based on blocked or lost calls (using historic load data), lost MTP messages (also using historic load data), and isolation of STPs. Specifically, because of the role of a third party SS7 provider in the network hierarchy for a carrier, Syniverse cannot reasonably utilize any of the criteria set forth in the new rule that relate to lost or blocked calls or lost or blocked MTP messages, either actual or

¹¹ *R&O* at ¶144.

¹² *Id.* at ¶148.

¹³ Specifically, Section 4.9 requires outage reporting under the following circumstances: (1) an outage of at least 30 minutes consisting of 90,000 blocked calls based on real-time traffic data or 30,000 lost calls based on historic carried loads, (2) if the number of blocked calls cannot be directly estimated, then SS7 providers are to use 500,000 real-time lost MTP messages as a surrogate for 90,000 real-time blocked calls, or 167,000 lost MTP messages on an historical basis as a surrogate for 30,000 lost calls based on historic carried loads, and (3) whenever a pair of STPs

based on reasonable historical data. As a third party provider of SS7 services, as distinguished from a communications carrier, requiring Syniverse to report outages based on blocked or lost calls or lost MTP messages puts Syniverse in the unenviable position of being unable to comply with the reporting requirements or being unable to guarantee the accuracy and thus the usefulness of the data it would need to collect and use to report an outage. In either case, the requirement will not serve any useful purpose in furthering the Commission's stated goal to "to understand underlying vulnerabilities in these interconnected signaling networks."¹⁴ Instead, SS7 providers like Syniverse can and should be reporting outages when their STPs become isolated from interconnected STPs for a minimum period (as set forth in the rules, thirty minutes).

I. SYNIVERSE CANNOT ORDINARILY DETERMINE WHETHER A CALL HAS BEEN BLOCKED OR LOST, AND USING MTP MESSAGES AS A SURROGATE WOULD NOT PROVIDE THE FCC WITH MEANINGFUL INFORMATION.

As a major interoperability solutions provider, Syniverse appreciates the need for prompt and accurate reporting of outages by communications carriers.¹⁵ However, despite its willingness to contribute to the reporting process, there are a number of reasons why it would be very difficult, if not impossible, for Syniverse to report on the number of blocked calls as required under newly adopted Section 4.9(e).

Simply stated, Syniverse does not have the means to report blocked calls as required under Section 4.9(e). In contrast to its carrier customers, Syniverse has a much more limited view of network failures outside of its SS7 facilities. As a third party provider of SS7 service, Syniverse does not own, does not control, and has no monitoring capabilities with respect to, its

serving any communications provider becomes isolated from a pair of interconnected STPs that serve any other communications provider, for at least 30 minutes.

¹⁴ R&O at ¶148.

carrier customer switches. Indeed, in most instances, carriers have redundant facilities used to complete calls in the event that the Syniverse SS7 network is unavailable, so the fact that Syniverse is unable to provide SS7 capabilities will not typically translate into “blocked calls.” Syniverse does not generate network traffic, does not have any relationship with the carriers’ customers, and thus cannot control or identify the call originations. Because there is no direct relationship between the use of Syniverse’s third party SS7 network and blocked calling, it follows that Syniverse cannot independently ascertain whether a call has been blocked and thus whether the threshold for filing an outage report based on the number of blocked calls has been reached. Furthermore, if a carrier is experiencing an outage for which there is no indication on the SS7 signaling network, then, as a hub carrier serving multiple carriers, Syniverse cannot readily distinguish which carrier is experiencing the outage. For these reasons, Syniverse simply would lack the information necessary, despite its best efforts, to comply with the SS7 outage reporting requirements specific to blocked calls.¹⁶

Indeed, Section 4.9(e) explicitly acknowledges that SS7 providers may not have the means to directly estimate the number of blocked calls. Thus, as an alternative, the rule requires SS7 providers to use “500,000 real-time lost MTP messages as a surrogate for 90,000 real-time blocked calls, or 167,000 lost MTP messages on a historical basis as a surrogate for 30,000 lost calls based on historic carried loads.” The surrogate amount of MTP messages contained in the rule is an estimate derived from lost ISUP messages.¹⁷

Syniverse certainly agrees that since there are many different types of signaling services

¹⁵ See Syniverse Comments at 3-4.

¹⁶ As a general matter, outage reports must include a statement of all causes (direct, root, and contributory factors). *R&O* at ¶76 and App. C pp. 102-103. Carriers thus have every incentive to identify causes attributable to third party service providers.

¹⁷ *Id.* at ¶149 n.418.

traversing the same signaling links, it would be very difficult to distinguish ISUP-specific messaging. At the same time, however, MTPs can include messages other than ISUPs that are unrelated to detecting the likelihood of “lost” calls. As a consequence, outage reports triggered by the surrogate amounts of lost MTP messages are not necessarily going to correspond to actual blocked or lost calls and thus requiring reporting on this basis would not be a useful aid for analyzing actual network outages. Further, because carriers may make alternate routing decisions without Syniverse’s knowledge, Syniverse would be unable to confirm whether changes that it may identify in MTP messages traveling across signaling links are truly associated with an outage. Again, requiring reporting in such events would not serve the Commission’s desire to be better informed about the vulnerabilities of the underlying networks, but would simply result in regular “false positive” reporting.

Section 4.9(e) does permit the use of historical load data in cases where third party providers cannot directly estimate the number of lost calls. Again, this type of reporting is not presently accomplished by third party SS7 providers to the degree of detail necessary to identify only call-related messaging. Moreover, it is simply not relevant for Syniverse to use such data when, for example, a mass call event (*e.g.* resulting from an “American Idol” program) or other anomalies existed on a network during a particular reporting period that would skew the data. Because Syniverse is not a carrier, and has no relationship to the end customer, Syniverse lacks the vision into the network necessary to know if there actually has been a reportable outage as opposed to an explainable anomaly. Much like identifying blocked calls, Syniverse would not have the information required to make an accurate determination to report an outage based on historic load data. The carriers’ singular ability to access information concerning its switches and call originations, combined with the coordination of Syniverse, will enable the carriers to

fully report on an outage without a concurrent need for the FCC to obtain blocked or lost calls or MTP messages information from Syniverse and other third party SS7 providers.

It is because third party signaling providers lack the necessary knowledge and control of the switches and call originations of its carrier customers that the service agreements between these parties typically contain specific provisions for coordination in the event of network outages. Although the Commission in the *R&O* recognized the existence of such industry-standard service agreements with respect to outages and restoration efforts,¹⁸ it was unwilling to rely on such relationships, rejecting Syniverse's concerns that coordination with its carrier customers is necessary in order for Syniverse to make the determinations necessary for meeting the reporting requirements.¹⁹ As explained in Syniverse's comments, however, to the extent that a carrier outsources its SS7 needs to a third party provider like Syniverse, the parties' negotiated agreement already incorporates procedures for promptly identifying and addressing outages.²⁰ Accordingly, it is inconsistent with the nature of such service agreements to require third party signaling providers to independently determine benchmark reporting levels without the coordination of their carrier customers.²¹

Furthermore, as a result of these negotiated agreements, the carriers are best positioned to fully and accurately report instances when SS7 facilities are involved with the occurrence of reportable blocked or lost calls. In the event of an outage, Syniverse and its carrier customer(s)

¹⁸ *R&O* at ¶81.

¹⁹ Syniverse notes that the *R&O* also cited to unfounded concerns that the Commission not "countenance any delay that could result from these coordination efforts or from any emerging contractual disputes among the parties with respect to their service agreements." *Id.* at ¶81. Syniverse submits that there is no basis in the record for the Commission to have any such concerns, nor would Syniverse expect to encounter any such delays or disputes with its customers.

²⁰ Syniverse Comments at 2-4.

would coordinate efforts, pursuant to the terms of their negotiated agreement, to exchange information and quickly resolve the problem.

II. A REPORTING REQUIREMENT BASED SOLELY ON ISOLATION OF STPS PROPERLY REFLECTS THE UNIQUE STATUS OF THIRD PARTY SIGNALING PROVIDERS AND WILL RESULT IN OUTAGE INFORMATION APPROPRIATE FOR SS7 NETWORKS.

By contrast to the other reporting criteria adopted in the *R&O*, Syniverse can readily comply with that portion of Section 4.9(e) that requires SS7 providers to report “whenever a pair of STPs serving any communications provider becomes isolated from a pair of interconnected STPs that serve any other communications providers, for at least 30 minutes duration.” The outage criteria identified for isolated STP nodes could be applied to adjacent signaling end points as well. The occurrence of either type of isolation is indicative of an inability of carriers to transfer voice or data traffic outside of their own networks, and is thus readily detected by third party signaling providers. Use of these criteria also would more adequately identify issues such as network diversity and reliability to the Commission.²²

Accordingly, requiring outage reporting for SS7 providers based only on isolated STPs and signaling end points is appropriate given the unique posture of third party signaling providers vis-à-vis their carrier customers, and yet still provides helpful information for the Commission. Syniverse would be able to report such an event without adversely impacting its equally important function to work with its carrier customers to identify and address any problems. As Syniverse reports an isolation, the carrier can independently either confirm that a reportable

²¹ *Id.*

²² In fact, a recent analysis conducted by Syniverse of SS7 network performance during 2004 revealed that of the total number of outages that would be reportable under the current criteria, only 16% would have been reportable events under the lost MTP messages guidelines. Thus, outage reporting based on isolations would result in much more comprehensive reporting to the Commission.

