

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of )  
 )  
The Proposed Extension of Part 4 of the ) PS Docket No. 11-82  
Commission's Rules Regarding Outage Reporting to )  
Interconnected Voice Over Internet Protocol Service )  
Providers and Broadband Internet Service Providers )

**COMMENTS OF THE VOICE ON THE NET COALITION**

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August 8, 2011

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The Voice on the Net Coalition (VON Coalition)<sup>1</sup> hereby submits these comments in response to the Commission's Notice of Proposed Rulemaking (NPRM) concerning the proposed extension of network outage reporting requirements to interconnected Voice over Internet Protocol (VoIP) service providers.<sup>2</sup> The VON Coalition opposes extending outage reporting requirements to VoIP providers; however, if rules are adopted, the Commission should focus on service availability and not metrics that are otherwise not applied to telecommunications service providers.

**SUMMARY AND INTRODUCTION**

Adoption of the proposed rules is unlikely to achieve the stated goals that information collected from any filings would be used (i) to monitor infrastructure and (ii) to share best practices among VoIP providers. This is because, for many VoIP providers, infrastructure and VoIP are not inherently linked. Furthermore, there are many types of VoIP, including hosted VoIP, premise-based VoIP and VoIP services

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<sup>1</sup> The VON Coalition works to advance regulatory policies that enable Americans to take advantage of the promise and potential of VoIP. VON Coalition members are developing and delivering voice innovations over the Internet. VON Coalition members include AT&T, Broadvox, BT, Google, iBasis, Microsoft, Nextiva, Skype, T-Mobile, Vonage and Yahoo.

<sup>2</sup> See Notice of Proposed Rulemaking, PS Docket No. 11-82, FCC 11-74 (rel. May 13, 2011); published in 76 Fed. Reg. No. 111, at 33686 (June 9, 2011) (hereinafter NPRM).

available through cloud-based applications. As a result, the information collection may be of limited utility.

In addition, the highly competitive marketplace for IVoIP provides ample incentive to improve service without imposing new regulatory burdens. There is no demonstrated reason or need for the Commission to require outage reports from IVoIP providers. Thus, the proposed requirement is also inconsistent with President Obama's direction to the federal agencies to eliminate unnecessary government regulation.<sup>3</sup>

If the Commission chooses to impose outage reporting requirements on IVoIP providers, the proposed rules should be revised substantially. In particular, the rules must explicitly state that IVoIP providers are only responsible for reporting outages under the provider's control, as opposed to those outages attributable to third parties, including failures by the end user's broadband Internet service provider. The rules also should focus on total unavailability of the service and not temporary and limited degradations in service. In addition, the deadlines for filing reports should be lengthened to allow service providers the time needed to diagnose and fix the problem prior to reporting. Finally, the reports should be for informational purposes only, not potentially subjecting providers to enforcement action, and shared only with the Department of Homeland Security.

## **BACKGROUND**

The Commission first implemented outage reporting requirements in 1992 for wireline telephone networks,<sup>4</sup> before extending those requirements to wireless, cable, and

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<sup>3</sup> See President Barack Obama, *Toward a 21<sup>st</sup>-Century Regulatory System*, WALL ST. J. (Jan. 18, 2011), available at <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>.

<sup>4</sup> Report and Order, 7 FCC Rcd 2010 (1992).

satellite communications in 2004.<sup>5</sup> The regulations require service providers to provide the Commission with timely initial and final reports of outages exceeding a certain number of user-minutes.<sup>6</sup> The Commission uses these reports to address overall communications system vulnerabilities in order to help prevent future outages, and to recommend new policies to address any persistent problems.<sup>7</sup> In the past, these reports have been used to identify complex and subtle issues such as cable damage.<sup>8</sup>

As part of the National Broadband Plan, the Commission recommended expanding Part 4 outage requirements to IVoIP and broadband ISPs to improve the Commission’s “understanding of network operations.”<sup>9</sup> The Commission now proposes to extend these rules to IVoIP. The Commission notes that the information collected from outage reporting can help providers prevent future outages and develop best practices.<sup>10</sup> To bolster its support for the rules, the Commission lists three outages – each of which occurred more than a year ago, as examples of some increasing problem that needs to be addressed.<sup>11</sup>

## **DISCUSSION**

### **I. THE FCC SHOULD NOT REQUIRE OUTAGE REPORTING BY IVOIP PROVIDERS.**

The Commission has traditionally required outage reports on the grounds that outage reports provide shared knowledge that allows for industry best-practices, provide

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<sup>5</sup> Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830 (2004).

<sup>6</sup> 47 CFR §§ 4.9, 4.11.

<sup>7</sup> NPRM, at ¶ 15.

<sup>8</sup> Id. at ¶ 16, fn. 32.

<sup>9</sup> Omnibus Broadband Initiative, Connecting America: The National Broadband Plan (Recommendation 16.6, Mar. 2010) (NBP).

<sup>10</sup> NPRM, ¶ 11.

<sup>11</sup> Id. at ¶ 3.

useful information about infrastructure failures, and allow the Commission to police inadequate service. An outage reporting requirement for IVoIP, however, would not allow the Commission to achieve these traditional objectives.

**A. The Commission Will Be Unable to Use Reporting to Share Best-Practices Because IVoIP Has No Standard Infrastructure.**

Unlike wireline or wireless network providers, most IVoIP companies do not have common types of infrastructure. IVoIP providers' services may be premise-based, facilities-based, over-the-top, hosted, or cloud-based. Each requires different relationships with the end user customer concerning ownership and responsibility for equipment and underlying service connections. In addition, IVoIP providers use different service platforms, software, and hardware – and changes to this technology are happening daily. IVoIP typically operates over a broadband connection, sometimes chosen by the end user customer. A wireline telephone company, a wireless company, the electric company, a cable company, or the IVoIP provider itself may provide this broadband connection.<sup>12</sup> Accordingly, the lack of a common infrastructure raises questions about whether the data acquired would be useful to the Commission or the IVoIP industry. IVoIP providers would require specific details about the broadband connection, service platform, software and hardware, to know whether the Commission-provided information is relevant to the IVoIP providers' operations.

Collecting outage reporting data from IVoIP providers also would not provide a rapid and complete view of service disruptions. In the NPRM, the Commission provides the example of evaluating outages resulting from Hurricane Katrina to determine the areas of infrastructure collapse. Tracking ISP outages may help with this goal; however,

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<sup>12</sup> See FCC, VOICE OVER THE INTERNET PROTOCOL: FCC CONSUMER FACTS 2, available at <http://transition.fcc.gov/cgb/consumerfacts/voip.pdf>.

collecting information on basic IVoIP outages could potentially confuse the identification of infrastructure collapse. Due to the variation of the technology used by IVoIP providers, some types of IVoIP could operate in areas with some infrastructure failure while others may not.<sup>13</sup> For example, an IVoIP provider operating over a battery-powered laptop and satellite broadband connection may not fail at the same time as the same IVoIP provider operating over a cable modem. In addition, a single IVoIP provider can experience service failures without a related infrastructure collapse where the failure is a result of software problems.<sup>14</sup>

**B. FCC Rules Are Unnecessary Because IVoIP Providers Are Already Highly Motivated to Self Improve by Market Incentives.**

The Commission also speculates that outage reporting and regular analysis of the cause of outages by the Commission would provide significant benefits and encourage IVoIP providers to improve quality of service. But vigorous competition within the IVoIP market already motivates providers to ensure high-quality and reliable service. The Commission recently reported that 19% of local telephone connections are now IVoIP subscriptions, for a total of almost 29 million IVoIP subscriptions in the United States, served by more than 500 US-based service providers.<sup>15</sup> VoIP also has emerged as a major mode of communications in international marketplaces; Skype, for example, is by far the largest and fastest-growing provider of international voice communications

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<sup>13</sup> See *Get Free VoIP: A Comparison of Your 10 Best Options*, VOIP-SOL.COM (June 8, 2008), <http://www.voip-sol.com/get-free-voip-a-comparison-of-your-best-options/>.

<sup>14</sup> Lars Rabbe, *CIO Update: Post-Mortem on the Skype Outage*, SKYPE- THE BIG BLOG (Dec. 29, 2010), [http://blogs.skype.com/en/2010/12/cio\\_update.html?cm\\_mmc=PXBL|0700\\_B6-\\_-downtime-20101229](http://blogs.skype.com/en/2010/12/cio_update.html?cm_mmc=PXBL|0700_B6-_-downtime-20101229).

<sup>15</sup> FCC, Local Telephone Competition: Status as of June 30, 2010 at 2-3, available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2011/db0321/DOC-305297A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db0321/DOC-305297A1.pdf)

worldwide.<sup>16</sup> And the marketplace is characterized by a large amount of competition: one online source identified more than 1,400 international VoIP service providers, many of which could likely offer services in the United States given the ubiquity of the technology.<sup>17</sup> These providers compete with each other and with non-VoIP providers to increase choices for consumers, compel innovation and differentiation, and reduce the overall price of communications.<sup>18</sup>

Many IVoIP providers do not require customer commitments, so customers can flee from bad service and easily switch providers. With an Internet-savvy client-base and a multitude of websites providing a forum for VoIP service comparison, an unreliable provider also faces a mass of negative online reviews that could send potential customers away. Because of this buyer-friendly market and the importance of service quality, particularly for enterprise customers, many IVoIP providers voluntarily have taken cooperative improvement measures without Commission intervention. VoIP providers already have every incentive to communicate with customers when the rare VoIP-centric outage occurs. When Skype experienced an outage in late 2010, the company provided customers with up-to-date information over the company twitter account and blog,<sup>19</sup> and

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<sup>16</sup> See TELEGEOGRAPHY, TELEGEOGRAPHY REPORT: EXECUTIVE SUMMARY 7 (2010), available at [http://www.telegeography.com/page\\_attachments/products/website/research-services/telegeography-report-database/0002/1994/TeleGeo\\_exec\\_sum.pdf](http://www.telegeography.com/page_attachments/products/website/research-services/telegeography-report-database/0002/1994/TeleGeo_exec_sum.pdf).

<sup>17</sup> VoIP, MYVOIPPROVIDER.COM, <http://www.myvoipprovider.com/index.php?option=content&task=view&id=92>

<sup>18</sup> See TELEGEOGRAPHY, TELEGEOGRAPHY REPORT: EXECUTIVE SUMMARY 7-8 (2010), available at [http://www.telegeography.com/page\\_attachments/products/website/research-services/telegeography-report-database/0002/1994/TeleGeo\\_exec\\_sum.pdf](http://www.telegeography.com/page_attachments/products/website/research-services/telegeography-report-database/0002/1994/TeleGeo_exec_sum.pdf)

<sup>19</sup> Tony Bates, *A Further Update on Skype Downtime*, SKYPE- THE BIG BLOG (Dec. 23, 2010), [http://blogs.skype.com/en/2010/12/update\\_on\\_downtime\\_from\\_ceo.html](http://blogs.skype.com/en/2010/12/update_on_downtime_from_ceo.html).



then provided a full post-mortem of the event.<sup>20</sup> Additional outage reporting to the FCC would have provided no benefits to consumers or expedited the time to fix the problem.

Imposing outage reporting requirements on IVoIP providers also is difficult to reconcile with previous commitments from the government to protect small businesses and encourage innovation in Internet services. President Obama stated in January that he is “directing federal agencies to do more to account for—and reduce—the burdens regulations may place on small businesses. Small firms drive growth and create most new jobs in this country. [The government] need[s] to make sure nothing stands in their way.”<sup>21</sup> Congress wrote that “the policy of the United States [is] to preserve the ... competitive free market ... for the Internet... unfettered by Federal or State regulation,”<sup>22</sup> while the Commission stated that it would only “impos[e] regulations on IVoIP when necessary.”<sup>23</sup> Imposing additional reporting requirements on small businesses – which include many IVoIP providers – adds operational costs and diverts resources from network investment and innovation; moreover, enforcement actions could drive these small VoIP companies from the marketplace.

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<sup>20</sup> Lars Rabbe, *CIO Update: Post- Mortem on the Skype Outage*, SKYPE- THE BIG BLOG (Dec. 29, 2010), [http://blogs.skype.com/en/2010/12/cio\\_update.html?cm\\_mmc=PXBL|0700\\_B6-\\_downtime-20101229](http://blogs.skype.com/en/2010/12/cio_update.html?cm_mmc=PXBL|0700_B6-_downtime-20101229).

<sup>21</sup> President Barack Obama, *Toward a 21<sup>st</sup>-Century Regulatory System*, THE WALL ST. J. (Jan. 18, 2011), available at <http://online.wsj.com/article/SB10001424052748703396604576088272112103698.html>. In an Executive Order issued in July 2011, President Obama asked administrative agencies, to the extent permitted by law, to make decisions only after “consideration of their costs and benefits (both quantitative and qualitative).” Found at <http://www.whitehouse.gov/the-press-office/2011/07/11/executive-order-regulation-and-independent-regulatory-agencies>.

<sup>22</sup> 47 U.S.C. § 230(b)(1) & (2).

<sup>23</sup> See FCC, VOICE OVER THE INTERNET PROTOCOL: FCC CONSUMER FACTS 2, available at <http://transition.fcc.gov/cgb/consumerfacts/voip.pdf>.

## **II. THE PROPOSED REGULATION IS TOO BROAD**

If the Commission chooses to impose outage reporting requirements on IVoIP providers, the criteria for reporting outages should be more limited than the criteria listed in the proposed rule and consistent with the rules for other communications service providers. Specifically, the rules should require that the outage originate from equipment owned or controlled by the IVoIP provider, and the reports should be required for unavailability only. The Commission also should lengthen reporting times to allow small IVoIP providers a sufficient window in which to troubleshoot the problem and report the information without creating distractions from or delays to the provider's ability to solve the problem.

### **A. IVoIP Providers Should Not Be Required to Report Outages of Facilities "Otherwise Utilize[d]"**

The proposed regulation requires that IVoIP providers report outages occurring on any major facility that is "otherwise utilize[d]" by the IVoIP provider.<sup>24</sup> This term should be defined narrowly to avoid placing an unreasonable burden on IVoIP providers. In particular, IVoIP providers should not be expected to report outages from unaffiliated broadband providers that may impact their voice services. The IVoIP provider does not control the ISP, electrical company, or any other required utilities and may not even be aware of their outages. Even if the IVoIP provider is aware of outages from unaffiliated third parties, it might not be aware of how many of the IVoIP customers in the affected service territory use the ISP or other utility experiencing an outage; the reason for the outage; or what steps the affected company may be taking to fix the problem. In

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<sup>24</sup> NPRM, Appendix A, Proposed Rule § 4.9(g).

addition, the ISP may be required to also file an outage report with the Commission, resulting in redundant filing requirements.<sup>25</sup>

**B. The Rule Should be Limited to Availability and Not Require Reporting Related to Packet Loss, Latency, and Jitter**

The Commission has proposed for the first time to expand reporting requirements to IVoIP providers to include standards related to packet loss, latency, and jitter – which are measures of service quality and not service availability.<sup>26</sup> For all other communications services, however, reporting is limited to total unavailability. The proposed outage reporting standards for IVoIP providers are difficult to measure because the underlying broadband provider, rather than the IVoIP providers, could cause the degradation.

In particular, for an over-the-top service designed to work on the public Internet and wireline broadband transmission facilities outside of the IVoIP provider's control, the proposed packet loss, latency, and jitter standards are too low. Some VoIP providers could essentially be in a permanent state of outage under the Commission's proposed standards. For example, packet loss would need to be in the 5-7% range for it to degrade service to the point at which it would seriously impair VoIP service, rather than the proposed 1% standard. The 1% packet loss standard is the equivalent of one letter dropped in three minutes of conversation; hardly an outage. Similarly, latency would have to be in the range of 250-300 ms rather than the 100 ms proposed standard to seriously impair the service. Finally, a more appropriate jitter measurement would be 100 ms and not the proposed standard of 4 ms. These standards also would need to

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<sup>25</sup> The proposed rule requires ISPs to report outages separately. Id. § 4.9(h)

<sup>26</sup> Id. at § 4.9.

reflect IVoIP provided over satellite or wireless broadband connections that might experience higher latency and jitter measurements.

**C. The Reporting Times and Requirements Proposed Are Unreasonably Burdensome and May Result in Longer Outages**

The proposed regulation requires that the IVoIP provider send the Commission a Notification within two hours of discovering the reportable outage.<sup>27</sup> Unfortunately, the Notification requires a large amount of information that, contrary to Commission belief,<sup>28</sup> cannot be automated. For example, the notification system requires the provider to know the geographic location of the outage and a description of the problem.<sup>29</sup> With a decentralized system operating over the Internet, the extent of an outage may be difficult to determine and impossible to localize.

The existing outage reporting notification system was built for an industry where a failure would originate from infrastructure collapse, making it possible to determine the location and cause quickly.<sup>30</sup> But determining the cause of an IVoIP failure requires engineers and programmers to determine from where the problem originates, and the failure may be limited to types of software instead of a physical location. Determining the information necessary for a Notification could require a tremendous effort, beyond what most companies are capable of in two hours, if it is even possible to determine the information required in the report. The proposed rule would require critical personnel to spend time chasing data instead of fixing the outage.

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<sup>27</sup> Id. at ¶ 61.

<sup>28</sup> Id. at ¶ 62.

<sup>29</sup> See FCC, NETWORK OUTAGE REPORTING SYSTEM: USER MANUAL VERSION 6 at 9 (Apr. 2009), available at [http://transition.fcc.gov/pshs/outage/nors\\_manual.pdf](http://transition.fcc.gov/pshs/outage/nors_manual.pdf).

<sup>30</sup> NPRM, at ¶¶ 10-12.

The Notification and Initial and Final Reports should not include information that cannot be readily obtained due to the nature of IVoIP. In addition to eliminating non-VoIP reporting criteria, the reports should be due no earlier than five days after the IVoIP provider discovers the outage. This should allow even small providers enough time to prioritize diagnosing and fixing the problem without worrying about collecting information for the Commission.

In addition, the procedures for outage reporting must focus on gathering information, not imposing punitive measures on providers.<sup>31</sup> The Commission should not impose fines or forfeitures on IVoIP providers that miss filing deadlines. Instead, the Commission should inform violators of their filing requirements and accept filing of the reports after the initial deadlines have passed. The information, if useful an hour or days after the outage, should be similarly useful weeks or months after the arbitrary filing deadline. Money spent by IVoIP providers responding to NALs, paying fines, or responding to other enforcement activities could be better spent on upgrading technology to improve service quality or lower prices. Punitive measures are contrary to the intent of the reporting requirements. The Commission has repeatedly stated that the goal of these requirements is gathering information to monitor and improve services. Imposing penalties and liability for noncompliance does not comport with this intent. Instead, the Commission should use the reporting requirements as intended, to gather data.

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<sup>31</sup> It goes without saying that all outage reporting information filed by IVoIP providers with the FCC or shared with other federal agencies should be kept confidential, without need for the IVoIP provider to make such request. Only industry-aggregated information should be shared with other service providers. NPRM, at ¶ 66.

## CONCLUSION

For the foregoing reasons, the VON Coalition respectfully requests that the Commission decline to extend outage reporting requirements to IVoIP providers. If the Commission deems it necessary to move forward, the proposed rules should be modified to require IVoIP providers to report only complete outages within the provider's control. The reporting criteria and timing also must be altered to account for the greater complexity of IVoIP and the resources of small IVoIP providers, allowing additional time for reports and no financial penalties for missing deadlines.

Respectfully submitted,

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