

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

In re)
)
Public Safety and Homeland Security Bureau) ET Docket No. 04-35
Seeks Comment on Whether the Commission’s)
Rules Concerning Disruptions to) WC Docket No. 05-271
Communications Should Apply to Broadband)
Internet Service Providers and Interconnected) GN Docket Nos. 09-47, 09-51, 09-137
Voice Over Internet Protocol Service Providers)

COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®

CTIA – The Wireless Association® (“CTIA”)¹ hereby submits comments in response to the Public Safety and Homeland Security Bureau’s (“Bureau”) Public Notice (“Notice”) seeking information on whether – and how – the Commission should expand outage² reporting to interconnected Voice over Internet Protocol (“VoIP”) providers and broadband Internet Service Providers (“ISPs”) (together, “broadband service providers”).³ CTIA applauds the Bureau’s

¹ CTIA – The Wireless Association® is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the organization covers Commercial Mobile Radio Service (“CMRS”) providers and manufacturers, including cellular, Advanced Wireless Service, 700 MHz, broadband PCS, and ESMR, as well as providers and manufacturers of wireless data services and products.

² Consistent with the Notice, the terms “outage” and “disruption” are treated as synonymous and used interchangeably.

³ *Public Safety and Homeland Security Bureau Seeks Comment on Whether the Commission’s Rules Concerning Disruptions to Communications Should Apply to Broadband Internet Service Providers and Interconnected Voice Over Internet Protocol Service Providers*, Public Notice, ET Docket No. 04-35, WC Docket No. 05-271, GN Docket Nos. 09-47, 09-51, 09-137, at 1 (July 2, 2010)(“Notice”). The Commission’s current rules regarding reporting of disruptions to communications services are limited to voice and paging communications over wireline, wireless, cable and satellite communications services. See 47 C.F.R. §§ 4.1-4.13. In 1992, the Commission established network outage reporting requirements for wireline providers. *Notification by Common Carriers of Service Disruptions*, Report and Order, 7 FCC Rcd 2010

open-minded approach to developing a reporting process for broadband disruptions and provides the following recommendations for developing broadband outage reporting standards that address broadband system vulnerabilities and prevent future disruptions. *First*, CTIA recommends that the FCC work closely with the Network Reliability Steering Committee (“NRSC”) on a voluntary trial to develop best practices for reporting VoIP and broadband ISP disruptions. The development of metrics and reporting guidelines that could inform useful broadband outage reporting data could result from this effort. *Second*, during the pendency of a trial, the Bureau – as well as the Commission – should not adopt any mandatory reporting requirements. Given the unique attributes of broadband service – and the infancy of this proceeding – adopting reporting requirements in the near-term would be premature. *Third*, any reporting standards – whether voluntary or mandatory – should consist exclusively of objective, numerical triggers. *Fourth*, any data submitted to the FCC must remain confidential, and if the FCC shares outage data with requesting agencies, it must implement effective safeguards. Taken together, these four recommendations provide an effective roadmap for developing a broadband disruption reporting system that meets the needs of all interested parties.

I. BROADBAND DISRUPTION REPORTING IS FUNDAMENTALLY DIFFERENT FROM CURRENT REPORTING REQUIREMENTS.

Tracking broadband communications disruptions – and learning how to prevent future disruptions – is of paramount importance for CTIA, its members, and their customers. As the Commission recognizes, “every sector of our Nation’s economy, including the financial market, operations of most enterprises, and all levels of government, rely on broadband and IP for

(1992). In 2004, the Commission extended these reporting requirements to providers of wireless and satellite communications. *New Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, Report and Order, 19 FCC Rcd 16830 (2004). The Commission uses the outage information submitted pursuant to Part 4 of its rules to, *inter alia*, attempt to address communication system vulnerabilities and help prevent future disruptions.

communications.”⁴ As such, the wireless industry is committed to cooperating with the FCC as it develops a record and ultimately implements any policies that best address this issue.

At the outset, all parties must recognize that broadband outage reporting will require unique standards that differ from Part 4 reporting requirements, given the technical differences in broadband communications and traditional communications. The Bureau already acknowledges these differences.⁵ In the wireless context, most current networks, based on CDMA, GSM and iDEN air interfaces, are circuit-switched in nature. This means that voice and data traffic on these networks utilize a connection that is set up between the handset and the end communication point. This connection is not shared and must be maintained to complete the communications. In contrast, next generation wireless standards, such as WiMAX and LTE, are based on packet-switching. Packet-switching does not rely on a specific path for data transfer. Instead, the data is separated into small pieces called packets and sent over many paths across the network. These differences in technology necessitate changes in how service outages can be calculated or determined.⁶ Under circuit-switched networking, one may more readily determine when an outage occurs (a break in the connection) versus the packet-based networking where disruptions along one or more parts of the communications path do not interrupt data flow, and

⁴ Notice at 1.

⁵ Notice at 3 (“We are aware that networks providing high-speed Internet access experience different failure modes than traditional TDM-based communications networks.”).

⁶ In the packet architectures used for data, events which adversely impact broadband services may happen outside of portion of the network owned and operated by the wireless service provider. As a result, wireless service providers may face limitations on their ability to quantify the impact of the outages that happen outside of their own network or to speculate on possible causes that differ from reporting on outages in circuit switched networks..

packets are successfully delivered. As such, CTIA would note that the current Part 4 reporting requirements for wireless networks cannot be applied to wireless broadband networking.⁷

II. THE COMMISSION SHOULD WORK WITH THE NRSC TO DEVELOP A TRIAL AND NOT ADOPT ANY MANDATORY BROADBAND DISRUPTION REPORTING REQUIREMENTS AT THIS TIME.

Given the infancy of this proceeding – as well as the need for broadband reporting standards distinct from Part 4 requirements – CTIA recommends the FCC work closely with the NRSC on a voluntary trial to develop best practices for reporting VoIP and broadband ISP disruptions.⁸ As the Commission is aware, NRSC has been closely involved in communications disruption reporting issues for years. Through its consensus-based and open processes – as well as its reliance on technical expertise from various levels – the NRSC develops and updates voluntary standards and best practices that represent the best thinking of the industry and regulators. Here, the FCC could work collaboratively with the experts in the NRSC. Ultimately, the Commission could leverage the lessons learned to finalize its policies on broadband disruption reporting – regardless of whether the Commission opts for a voluntary or mandatory reporting process.

Neither the Bureau nor the Commission should adopt mandatory reporting requirements. Given the unique attributes of broadband service – and the infancy of this proceeding – adopting reporting requirements in the near-term would be premature. Even the Bureau acknowledges the

⁷ We note, however, that under the current outage reporting requirements, carriers must report on DS-3 outages that carry voice traffic. High capacity DS-3 connections usually carry a mix of voice and data traffic, so the Commission is currently receiving outage data on significant data outages. We encourage the Commission to evaluate the information that it currently collects, as it considers the need to adopt additional reporting requirements for broadband data outages and the associated Paper Reduction Act burdens.

⁸ NRSC was formed to monitor network reliability utilizing major outage reports per CC Docket No. 91-273. See ATIS: About the NRSC, <http://www.atis.org/nrsc/nrscinfo.asp> (last visited August 2, 2010).

infancy of this proceeding and the need for information to focus and inform subsequent steps by the agency. Before the Commission releases an NPRM – and certainly before adopting any final rules – the Commission should wait for the initiation and conclusion of a trial so that a record may be developed to report and analyze the results.

III. ANY STANDARDS SHOULD BE FIRMLY GROUNDED IN OBJECTIVE INDICATORS.

The Notice poses two major questions. *First*, what constitutes a “disruption” in the context of broadband-related services? *Second*, how much disruption must occur to trigger a reporting obligation (*i.e.*, what is a “reasonable reporting threshold”)? For both questions, CTIA strongly believes that any reporting process must rely on objective indicators. CTIA recognizes, however, that – unlike the case for traditional circuit-switched services – it is difficult to design objective indicators for reporting broadband-related service disruptions. Although CTIA has not determined what these indicators should be, CTIA has confidence that a trial will yield data that informs the development of effective, objective indicators.

This objective approach is particularly important if the Commission makes reporting for broadband services mandatory and thus subject to enforcement. Under the existing mandatory regime, carriers attempt to make best efforts to adhere to vague reporting requirements. CTIA understands, however, that the Commission has penalized certain carriers for their misinterpretations of ambiguities within the Part 4 rules, despite good faith efforts by these carriers to comply. With the complexity of IP-based services, CTIA fears that adhering to a mandatory reporting regime will be even more difficult, and objective standards even more important.

Broadband reporting should not be triggered by the subjective reactions of individual end users. To this end, the Commission should not “alter its view of a reportable outage to include

events that result in significant degradations to performance as perceived by end-users.”⁹ Nor should the standard be something as subjective as the loss of “generally useful connectivity.”¹⁰ This subjective approach would be too prone to unclear requirements and enforcement and not provide the industry with certainty or verifiable methods to determine whether an outage was reportable or not. At bottom, the Commission should adopt policies that foster efficient network management and operation, rather than unclear requirements – or requirements triggered by end user input – that saddle carriers with onerous data collection and ambiguous reporting obligations that stymie infrastructure build-out and protection.

IV. ANY DATA SUBMITTED TO THE FCC MUST REMAIN CONFIDENTIAL, AND IF THE FCC SHARES OUTAGE DATA WITH REQUESTING AGENCIES, IT MUST IMPLEMENT EFFECTIVE SAFEGUARDS.

Any outage information submitted by interconnected VoIP service providers and broadband ISPs should be treated as presumptively confidential just as it is for entities currently subject to outage reporting rules.¹¹ Further, the data should remain confidential, whether submitted voluntarily or involuntarily. Anything less threatens the nation’s security. Broadband outage reports might provide details – including the direct and root outage causes, a description

⁹ Notice at 3.

¹⁰ The Commission asks: “If the Commission were to determine significant performance degradations to be outages that should be reported by broadband ISPs, how should the Commission define a significant degradation so as to trigger the reporting requirement? For example, would a threshold for Internet service based on “generally useful connectivity” be an appropriate construct?” Notice at 3.

¹¹ The Commission asks: “Should the outage information submitted by interconnected VoIP service providers and broadband ISPs be treated as presumptively confidential just as it is for those currently subject to the rules?” The Commission also notes that it “shares the outage information it currently receives with the U.S. Department of Homeland Security, albeit on a confidential basis. If the Commission collects outage information from interconnected VoIP service providers and broadband ISPs, should it follow a similar approach? Should it share the information with other Federal agencies? Should it share the information with state governmental agencies?” Notice at 5.

of the equipment involved, which telecommunications services were affected, how many customers were affected, how long it took to restore service, and how the restoration was affected – that terrorists or others could use to intentionally disrupt future communications.

If the FCC nevertheless finds it appropriate to share outage data with requesting federal or state agencies, the FCC must implement effective, meaningful safeguards designed to protect that data and mitigate the risks of unauthorized disclosures. These protections should include, at a minimum:

- Disclosing to service providers which parties access their confidential reports;
- Requiring notification to the FCC and then the service providers in the event of a data breach;
- Providing audit tools to identify data breaches and their sources; and
- Terminating access to parties that are unable to protect sensitive reports from disclosure.

With respect to potentially sharing the information with state agencies, the FCC should conduct an even closer examination of the risks. The more parties that are granted access to a confidential database, the less “confidential” it inherently becomes. Sharing data with additional parties geometrically increases the risk of disclosure and makes it more difficult to identify the source of breaches. Further, sharing data with states is particularly problematic because certain state sunshine and open records laws might require state agencies to make outage data publicly-available. Accordingly, if the FCC ultimately empowers states to access this data – regardless of whether it is submitted voluntarily or pursuant to FCC rules – the FCC should require each state entity requesting access to evaluate and report on any sunshine or public access laws that may put confidential reports at risk of disclosure, as well as laws that will protect the data. If the FCC or state agency concludes that a risk of public disclosure exists, then the Commission should not provide the data to the state.

V. CONCLUSION

For the foregoing reasons, CTIA urges the Bureau to consider initiating a trial with the NRSC on broadband outage reporting before it releases an NPRM. Given the inherent differences in wireless broadband networking technology, Part 4 outage reporting requirements must be modified and adapted to the technical realities associated with next generation wireless networks. Additionally, the Commission should leverage lessons learned and work with industry to establish consistent, objective triggers for reporting. Regardless of whether broadband outage reporting is voluntary or mandatory, all data must remain confidential and out of the hands of entities that would use this information to jeopardize the nation's security.

Respectfully submitted,

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