

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	i
INTRODUCTION	1
I. USTA Does not Support the Imposition of New Regulatory Burdens on LECs	1
II. The FCC Must Weigh Proposals to Increase Regulatory Requirements Against the Burdens such Measures will Impose	2
DISCUSSION	3
I. The Need for Reporting	3
A. Protecting Homeland Security is a Laudable Goal, but Perceived Benefits to Homeland Security Must be Balanced Against Real Costs Imposed on LECs. . .	3
B. The FCC Overstates the Link Between Mandatory Reporting of Service Disruptions and the Development of NRIC Best Practices.	4
II. Consistent Reporting	6
A. The FCC Should Determine the Magnitude of an Outage Based on the In-Service Access Lines Recorded in a Carrier’s Host or Host Remote Cluster at the Time of an Outage.....	6
B. Requiring Reporting of Smaller-Scale Service Disruptions Would Impose an Unfair Reporting Burden on Carriers.....	8
C. The Proposed Common Metric Would Unfairly Burden Carriers.....	9
D. Requiring Reports to be Filed for Service Disruptions Affecting all Airports is Excessive.....	12
E. Changing the Current Rule to Require Reporting of any Outage of 30 Minutes or More That Potentially Affects the Ability to Originate, Complete, or Terminate 911 Calls will Unduly Burden Carriers.	13
F. A Separate Reporting Criteria for Fires is Unnecessary.....	14
G. The FCC’s Desire for Rapid Reporting of Service Disruptions Should not Take Precedence Over the Carrier’s Need to Restore Service as Quickly as Possible.	14

H. USTA Members Routinely Review Industry Best Practices Regarding Diversity and Redundancy of Their Networks; Therefore, Mandating That They do so for Final Outage Reports is Unnecessary.	16
III. Reporting Requirements for Wireline Carriers.....	16
A. Using Assigned Telephone Numbers to Determine the Impact of Outages is Unworkable.....	16
B. USTA Urges the FCC to Retain its Existing Requirements for Reporting IXC and LEC Tandem Outages Because the Proposed Metric is Impractical to Use in a Tandem Outage.	18
C. Multiplying Historical Blocked-Call Data will Overstate the Number of Calls Actually Blocked.....	20
IV. Major Infrastructure Failures.....	21
A. The Burdens Caused by Requiring Carriers to Report on Outages Affecting Special Services far Outweigh any Constructive Purposes the FCC Might Have for Special Services Information.....	21
B. USTA Favors Basing Outage-Reporting Criteria for Failures Involving Significant Traffic-Carrying Capacity on the Number of DS3 Minutes Affected, but Suggests an Alternative to the FCC’s Proposed Reporting Threshold.....	22
C. USTA Proposes an Alternative to the Threshold Reporting Criteria for SS7 Messages Proposed by the FCC.....	23
V. USTA Opposes Public Disclosure of Critical Infrastructure Information....	24
CONCLUSION	25

SUMMARY

USTA agrees with the FCC that service outage reporting can help to protect homeland security, but proposals to increase regulatory reporting requirements should not impose undue financial and administrative burdens on the LEC industry or expose sensitive critical infrastructure information to misuse. USTA does not agree with the FCC that implementing more service disruption reporting requirements will lead to the creation and implementation of additional best practices. The development of best practices has been the result of voluntary participation in the process, and creation and implementation of new best practices will continue without increased regulation.

Consistent reporting is a reasonable goal, but the new common metric and many of the proposed requirements would cause an explosion in the number of reportable incidents. For example, many of USTA's medium-size members estimate that they would experience at least a 30 percent increase in reporting under the proposed rules. USTA's larger members estimate even more dramatic increases in reporting. Furthermore, the FCC's desire for rapid reporting of service disruptions is not more important than carriers' need to restore service as quickly as possible and should not take precedence over it.

A number of the proposed requirements are impractical or will skew data. For example, the new common metric would, in many cases, lead to reports overstating the number of users potentially affected by outages. The proposal to multiply blocked-call data by three would overstate the number of blocked calls and skew data. The proposed

metric for reporting IXC and LEC tandem outages is impractical because carriers cannot easily calculate an assigned telephone number metric for a tandem.

While all communications providers want to avoid infrastructure failures, many of the FCC's proposals to try to avoid these failures are overly burdensome or need revision. For example, requiring the reporting of outages that affect special services is especially unrealistic because the resources required to report special services outages are enormous. In addition, requiring providers to highlight their customers' vulnerabilities to the public will jeopardize the customer-provider relationship. Requiring reporting based on failure involving significant traffic-carrying capacity on the number of DS3 minutes affected is acceptable, but the FCC bases its proposed reporting threshold on outdated data. USTA favors implementing threshold reporting criteria for SS7 messages, but, suggests an alternative to the FCC's proposed reporting threshold.

Finally, the FCC must help communications providers guard against public disclosure of their critical infrastructure information. Public access to outage information could make communications networks vulnerable to attack. USTA urges the FCC to establish stringent protections for sensitive information on service disruptions.

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

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

**COMMENTS OF
THE UNITED STATES TELECOM ASSOCIATION**

The United States Telecom Association (“USTA”),¹ submits these comments on the Notice of Proposed Rulemaking (NPRM)² released by the Federal Communications Commission (FCC or Commission) on February 23, 2004, regarding new part four rules regarding disruptions to communications.

INTRODUCTION

I. USTA Does not Support the Imposition of New Regulatory Burdens on LECs.

In the wake of the September 11, 2001, tragedy, the FCC has adopted the goal of minimizing disruptions in communications that affect homeland security. Local exchange carriers (LECs) have been required to report service disruptions to the FCC for over a decade. The FCC believes that its reporting requirements have helped LECs successfully identify the causes of service disruptions in telephone networks, which has,

¹ USTA is the Nation’s oldest trade organization for the local exchange carrier industry. USTA’s carrier members provide a full array of voice, data and video services over wireline and wireless networks.

² *New Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Notice of Proposed Rulemaking, (Rel. Feb. 23, 2004).

in turn, led to the development of “best practices” for LECs and manufacturers to follow in order to reduce the occurrence and length of network outages. The FCC now proposes to extend its service disruption reporting requirements to wireless, satellite, cable providers, and other communications providers. It proposes to streamline reporting requirements by adopting a common metric and requiring electronic filing of outage reports. While USTA applauds the FCC’s efforts to improve the reliability of our nation’s communications infrastructure, it generally does not support the imposition of new regulatory burdens on LECs. The FCC, itself, acknowledges that the existing reporting requirements “have been successful in permitting the causes of certain types of disruptions in telephone networks to be identified and corrected.”³ Therefore, the FCC should allow LECs to use existing reporting systems rather than imposing new regulatory requirements on them.

II. The FCC Must Weigh Proposals to Increase Regulatory Requirements Against the Burdens such Measures will Impose.

Because of the critical role that LECs play in the nation's communications infrastructure, USTA member companies place an extremely high value on the reliability of their service and on minimizing service disruptions. Of their own accord, USTA member companies incorporate redundancy into their state-of-the-art networks to ensure that residential and business customers enjoy uninterrupted service of the highest quality. They have helped to develop industry best practices to increase network reliability. They strongly believe in supporting a highly reliable critical infrastructure capable of providing consumers with emergency services in times of national emergency, local disaster, and

³ NPRM at ¶ 6.

public health crises. Nonetheless, USTA members believe that while ensuring the continued reliability of USTA member networks is of utmost importance, any proposals to increase reporting requirements must be balanced against the economic and administrative burdens that such measures may impose on them. The FCC must carefully consider whether its proposed outage reporting requirements will generate useful new information about outages involving wireline legacy equipment or whether the dollars and other resources required for LECs to revamp their current reporting methods to comply with new requirements would be better spent preventing these outages.

DISCUSSION

I. The Need for Reporting

A. Protecting Homeland Security is a Laudable Goal, but Perceived Benefits to Homeland Security Must be Balanced Against Real Costs Imposed on LECs.

Citing what it sees as a need for accurate information on service disruptions that could affect homeland security, public health and safety, and the economic stability of our nation, the FCC proposes to expand service disruption reporting requirements currently applied to wireline communications providers and to apply those expanded requirements to wireless, satellite, and other communications providers. USTA does not necessarily oppose the imposition of reporting requirements on non-wireline communications providers who currently do not have to report service outages, but it cautions against imposing additional requirements on wireline providers who have diligently reported outages for well over a decade. The FCC must carefully balance the imagined benefits to homeland security against real costs and administrative burdens that new reporting requirements will impose on LECs and other communications providers.

Broadening service outage reporting requirements should not put an undue financial burden on the communications industry or expose sensitive critical infrastructure information to misuse. Preventing disruptions to the nation's critical infrastructure is not the responsibility solely of communications providers. While there should always be alternative means of communications available during times of crisis and service outage reporting requirements within reason, communications providers should not have to bear the burden for reporting disruptions for private and public businesses who fail to plan adequately for emergency relief and disaster recovery.

B. The FCC Overstates the Link Between Mandatory Reporting of Service Disruptions and the Development of NRIC Best Practices.

The FCC believes that its adoption of outage reporting requirements in 1992 led to the public-private partnership in which the telephone industry and manufacturers have voluntarily worked together to develop best practices that telephone companies have been encouraged – but not required – to adopt. The FCC wants other communications providers to adopt this self-improvement model.

USTA contends that the FCC overstates the connection between mandated outage reports and the development of Network Reliability and Interoperability Council (NRIC) best practices. For well over a decade, LECs have been required to report service disruptions under Part 63.100 of Title 47. Service disruption reports have been used by the FCC to analyze wireline vulnerabilities, and this analysis has assisted the NRIC in developing industry best practices and advising the Commission on appropriate actions. Over 700 NRIC best practices have been developed with the help of dedicated industry volunteers. The FCC believes that the creation of these best practices would not have

been successful had service disruption reporting not been mandatory. USTA disagrees. USTA estimates that less than five percent of existing best practices can be attributed to information gleaned from FCC outage reports. In fact, nearly all best practices have been based on companies' historic technical-support information and experiences and from proactively addressing infrastructure vulnerabilities since September 11, 2001.

The creation of best practices begins with industry partners willing to share data beyond that which they are required to share and to use for the good of the nation. With the proper security and non-disclosure agreements in place to protect them against unintended use of their data, LECs will continue to voluntarily participate in the process and to provide information beyond what they are statutorily required to provide, such as information regarding equipment types and services. Without such security, LECs would be much less likely to share information beyond that required by the mandatory reporting requirements. Best practices can be created, enhanced, and implemented without further outage reporting regulation.

In its desire to encourage the development of new best practices, the FCC must be careful not to mandate these practices. Before implementing best practices, a company must understand the impact of the practice on its system and network architectures, operational models, and processes and perform a complex cost analysis. As FCC Chairman Michael Powell notes, best practices are not meant to be rigid standards or regulations because not all best practices are applicable for each carrier or in all situations:

The diversity of our industry does not lend itself to the indiscriminate application of a monolithic set of Best Practices dictated from your

regulator. Rather, NRIC Best Practices are most rapidly and most effectively applied by leaving specific implementation decisions to individual firms. When each company uses its own technical and operational judgment to determine where and when to deploy NRIC Best Practices, network reliability and security are improved, I believe, at least cost.⁴

Furthermore, mandating compliance with best practices would likely stifle corporate participation in NRIC and industry cooperation and discussion among experts, having a profound chilling effect on the best practice process. Rather than mandating best practices, the FCC should undertake a comprehensive awareness program to educate telecommunications service providers and vendors about the benefits of NRIC best practices.

II. Consistent Reporting

A. The FCC Should Determine the Magnitude of an Outage Based on the In-Service Access Lines Recorded in a Carrier's Host or Host Remote Cluster at the Time of an Outage.

Section 63.100 (c) of the current FCC rules requires filing of an outage report when 30,000 customers are affected for 30 minutes or more. Section 63.100(a)(2) defines a "customer" as "a user purchasing telecommunications services from a common carrier."⁵ The FCC is concerned that using the criterion of 30,000 customers has led to under-reporting of outages because some carriers have counted each large commercial or governmental entity suffering a service disruption as a single "customer" even though these entities may have thousands of telephone lines. According to the FCC, "reporting thresholds were meant to require the reporting of outages that could potentially affect

⁴ FCC Chairman Michael K. Powell, Remarks at NRIC VI meeting (Sept. 15, 2003).

⁵ NPRM at ¶ 20.

significant numbers of end users, that is, people, regardless of whether they may be viewed, collectively, to be part of a single commercial or governmental customer.”⁶ In response, the FCC proposes to use the word “user” rather than “customer” to address the problem posed by a single customer, such as the U.S. government or General Motors, having hundreds of thousands of “users” and only one affected “customer.”

USTA believes that the FCC should determine the magnitude of an outage based on the in-service access lines recorded in a carrier’s host or host-remote cluster at the time of an outage. In-service line counts are readily available, normally documented in databases, and continue to be the best and most equitable method of calculating user impact, especially because there is no way for service providers to ascertain how many individual users in a large government or General Motors building may be potentially affected by an outage.

A large commercial or governmental entity is likely to use a private branch exchange (PBX), which is essentially a private telephone company central office that operates within a business and can be supplied by any number of third-parties. Without controlling the premises on which a large entity operates, a LEC has no way to know how many exchanges the entity has. To determine the day-to-day number of translated blocks of numbers during an outage would require a league of translators to identify the current day quantity of routed or translated numbers. In addition, these PBXs can exist by the hundreds or thousands depending on the size of the city. In some large urban areas, multiple switches may provide service to the same PBX system for diversity. Although

⁶ *Id.*

such a switch might never be affected by a single office failure, it would nonetheless have to be counted for purposes of the outage report.

The implications of requiring the reporting of outages that could potentially affect individual customers, regardless of whether they may be viewed, collectively, to be part of a single commercial or governmental customer are too far-reaching. For example, if a large company that operated only from 9:00 a.m. to 5:00 p.m. weekdays and had its own PBX system and block of 10,000 numbers suffered an outage on a Saturday evening at 10:00, when the building was largely unoccupied, the number of users potentially affected by the outage would be much lower than the number that would have to be reported.

In addition to overstating the number of users potentially affected by an outage, the FCC's proposed new reporting metric is likely to result in a dramatic expansion in the number of reportable incidents for all communications providers. The new requirements will greatly increase reporting burdens on all wireline carriers, regardless of their location or size. USTA's medium-size carriers estimate that they will face at least a 30 percent increase in reporting. USTA's largest members estimate even more dramatic increases in the number of reports they will have to file under the new rules.

B. Requiring Reporting of Smaller-Scale Service Disruptions Would Impose an Unfair Reporting Burden on Carriers.

A second issue of concern to the FCC is that outages that last for several hours or days but that affect slightly fewer than 30,000 customers are not required to be reported. The FCC implies that outages affecting fewer than 30,000 customers are not given the same attention as those affecting 30,000 or more even if the outages last for long periods,

stating in the NPRM, “29,999 or fewer customers could be without service for decades without triggering the need to file an outage report.”⁷

That any provider would allow 29,999 fewer customers to be without service for decades is, of course, absurd. Presumably, the FCC exaggerated to emphasize its desire to be informed about extended outages of a smaller scale than currently required to be reported. This desire, however, could lead to an unfair reporting burden on larger carriers. The national average for an outage duration affecting 30,000 or more access lines is 3.75 hours, or 225 minutes. Under the FCC’s proposed common metric, which requires reporting of any outage lasting 30 or more minutes, an outage of average duration affecting only 4,000 users would result in an FCC reportable incident. This would disproportionately affect carriers in larger, urban areas, because those are the carriers with 4,000 or more access lines.

C. The Proposed Common Metric Would Unfairly Burden Carriers.

To alleviate its concerns, the FCC proposes to base reporting requirements on the number of user-minutes potentially affected by an outage rather than the number of customers potentially affected. The proposed metric focuses on the number of people who would have been affected by the outage if they had attempted to make or receive telephone calls during the outage, regardless of whether they, in fact, actually did so. User-minutes would be defined as the outage duration in minutes multiplied by the number of end-users potentially affected by an outage. An outage report would have to be

⁷ NPRM at ¶ 21.

filed whenever the duration of an outage was at least 30 minutes and the outage potentially affected at least 900,000 user minutes.

As noted above, while the proposed metric of 900,000 user minutes might appear to be equitable, it, in fact, affects larger carriers inequitably. Alternatively, a metric that measures customer impact can be used to avoid burdening larger carriers with an inequitable reporting requirement. USTA proposes two feasible metrics for measuring customer impact. First, for carriers that have the ability to use blocked call counts or historic traffic data, the FCC should use the interexchange carrier (IXC) and LEC blocked-call measurement. That is, for any outage lasting at least 30 minutes and affecting a survivable element (*i.e.*, host and remote switches), carriers would have to report when real-time traffic data showed 90,000 or more blocked calls or historic traffic data showed 30,000 or more blocked calls. Alternatively, carriers who do not have the ability to use blocked-call data would use the following metric to calculate when outage becomes reportable:

- (1) the outage duration must be at least 30 minutes and affect a survivable element (*i.e.*, host and remote switches); and
- (2) the number of access lines affected must equal or exceed 30,000; or
- (3) the duration of the outage must exceed six (6) hours, regardless of the number of access lines affected, and affect a survivable element.

Furthermore, in order to qualify as an outage, the failure must be associated with the failure of a network element (*i.e.* switch, transport, power) and that feeder cables or non-intelligent elements be exempt.

Wireline service providers have developed methods and procedures over the last decade to quickly identify when they must report service disruptions. To change the metric would require them to completely retool their systems and re-train their employees. Smaller wireline carriers, in particular, would be forced to spend capital to implement additional support-system capability and would incur increased operational expenses in order to hire additional personnel to facilitate reporting. Many small and rural carriers already struggle to meet the FCC's current 120-minute deadline for filing initial outage reports in the rare instance that an outage lasting more than 30 minutes affects a "special facility" such as a major airport. Currently, most rural LECs do not otherwise face the 120-minute reporting requirement because they serve fewer than 50,000 customers. Nonetheless, the proposed user-minute common metric would force rural LECs to focus emergency resources on report-generation rather than service-restoration if an outage were to affect just 5,000 customers for three hours, for example. Rural LECs with limited resources should not be put in a position that further strains their limited resources and jeopardizes their ability to respond to their customers as quickly as possible.

Finally, USTA submits that there should be a central repository for all outage reports. Because each state has different reporting requirements, the reporting process is cumbersome. Simplifying the process so that communications providers could submit reports to a central repository, rather than filing multiple reports with both federal and state regulatory agencies, would relieve some of the burdens imposed by the new rules.

States could be permitted to access reports from the repository in order to continue to make use of outage information.

D. Requiring Reports to be Filed for Service Disruptions Affecting all Airports is Excessive.

Section 63.100(c) of the current rules requires the reporting of outages of at least 30 minutes that potentially affect special offices and facilities, which, according to FCC rules, include major airports, military installations, government facilities, and nuclear power plants.⁸ The FCC proposes to change this requirement to make it applicable to all airports, not just major airports.

Requiring outage reports affecting “all airports” is excessive. The U.S. has approximately 1,987 passenger airports alone. With cargo and general aviation airports, the number is well over 2,000.⁹ USTA proposes that communications disruptions affecting the nation’s busiest 136 prime-hub airports, as listed on the Federal Aviation Administration’s website¹⁰ be reported. Reports should be required for those outages deemed “air traffic impacting,” as described in the recommendation made in the NRIC VI Focus Group 2 Report. According to this report, an outage is “air traffic impacting” when it involves the loss of greater than 50 percent of telecommunication services at a critical air-traffic-control facility¹¹ and affects the ability of the air traffic facility to control air traffic, as determined by the FAA air-traffic supervisor at the air-traffic-

⁸ 47 C.F.R. § 63.100(a)(3).

⁹ See <http://www.faa.gov/arp/planning/stats/#apttype>. General aviation airports comprise the largest single group of airports in the United States’ airport system.

¹⁰ See <http://www.faa.gov/arp/planning/stats/2002/CY02CommSerBoard.xls>.

¹¹ Air-traffic control facilities include airports, terminal radar approach control, air traffic control towers, or an FAA air-route-traffic-control center.

systems command center. This may include loss of critical telecommunications services that transmit radar data, flight-plan data or controller-to-pilot and controller-to-controller voice.¹²

E. Changing the Current Rule to Require Reporting of any Outage of 30 Minutes or More That Potentially Affects the Ability to Originate, Complete, or Terminate 911 Calls will Unduly Burden Carriers.

In addition, current rules base reporting requirements for potentially affected 911 services on the length of the outage, the number of lines potentially affected, and other factors. The FCC proposes to revise the rules to require the reporting of all communications outages of at least 30 minutes that potentially affect the ability to originate, complete, or terminate 911 calls, including the delivery of all associated name, identification, and location data.

Currently, outages affecting fewer than 30,000 customers that interfere with their ability to terminate 911 calls require reporting only if the outages exceed 24 hours. Changing the current rule to require reporting of any outage of 30 minutes or more that potentially affects the ability to originate, complete, or terminate 911 calls will put an undue burden on carriers. USTA proposes instead to require reporting of public safety access point outages affecting fewer than 30,000 users caused by a failure in the providers' network where no reroute was available, if the outage lasts over six hours. The impairment of associated name-identification information (ANI) and associated location-identification information (ALI) does not impair an end user's ability to make 911 calls or

¹² See http://www.nric.org/fg/charter_vi/fg2/FG_2_Final_Report_ver_120103.doc at 45.

maintain a channel of communications and, therefore, should not be classified as an outage.

F. A Separate Reporting Criteria for Fires is Unnecessary.

Section 63.100(d) includes a separate reporting requirement for outages affecting 1,000 or more service lines for 30 minutes or more caused by fires. Only a few outages have been reported pursuant to this rule, and, therefore, the FCC proposes to eliminate it. USTA agrees with the FCC that a separate reporting criteria for fires is an unnecessary complication for reporting carriers that does not provide any significant benefit to the FCC or the public and supports elimination of rule 63.100(d).

G. The FCC's Desire for Rapid Reporting of Service Disruptions Should not Take Precedence Over the Carrier's Need to Restore Service as Quickly as Possible.

The FCC believes that its proposals to simplify filing requirements and require filings to be made electronically will make it so easy for communications providers to file initial disruption reports that they should be required to do so within 120 minutes of discovering a reportable outage. Final outage reports would be due within 30 days of the initial report.

USTA disagrees with this proposal and advocates instead a three-phased approach to reporting. The stages of outage reporting would allow carriers the following amounts to time to file reports:

- (1) 120 minutes to send notice of an outage by telephone or electronically (not under a signed affidavit);
- (2) 72 hours to submit the initial report (not under a signed affidavit); and
- (3) 30 days to submit the final report under a signed affidavit.

The FCC's desire for rapid reporting of outages should not take precedence over the carrier's need to restore service as quickly as possible. The FCC's proposal to require notice of all outages within 120 minutes would undermine carriers' ability to focus on restoring outages as they occur. The 72-hour window in which to provide an initial outage report would allow carriers the opportunity to have their technical experts review the report for accuracy. Carriers' technical experts should not be diverted from attempting to restore service to analyze outage reports. If the proposed reporting times are implemented, current technical review and approval processes within companies that have been in place for well over the past decade will likely cease, and the value of the subsequent outage reports likely will be diminished.

If the FCC permits communications providers only three days in which to submit initial reports, it must afford them the opportunity to withdraw initial reports upon receipt of final reports or guarantee that initial reports will be deleted from FCC databases upon receipt of final reports. With only 72 hours in which to complete an initial report, carriers will face changing circumstances and information and need the ability to modify or enhance initial report information. If carriers are not assured that they will be permitted to modify or enhance their reports, they will often likely be late in meeting the FCC's reporting deadlines. Furthermore, if the FCC requires the person who files the report to be accountable for its accuracy in the initial stage of filing, this will certainly have an affect on the ability to file a report in a timely manner.

The FCC also seeks comment on whether it should require the filing of initial outage notices over the Internet within a period even shorter than the 120 minutes

proposed because the Internet and dial-up modems allow such a rapid response time. What the FCC seems to be forgetting is that human beings will still be involved in producing these reports. A person must research the cause of an outage and manually enter a report into a computer at the same time the carrier is focused on restoring service. Two hours is barely enough time to do this, so even less time would make the task all but impossible.

H. USTA Members Routinely Review Industry Best Practices Regarding Diversity and Redundancy of Their Networks; Therefore, Mandating That They do so for Final Outage Reports is Unnecessary.

The FCC proposes that final disruption reports be modified to include a statement as to whether the outage was at least partially caused because the network did not follow engineering standards for full diversity, or redundancy and a statement of all of the causes of the outage, as opposed to just the root cause, as currently required.

USTA members routinely review industry best practices regarding diversity and redundancy of their networks; therefore, mandating that they do so for final outage reports is unnecessary. Responding to requests for such information would require resources equal to those required to complete the final report. If the FCC were permitted to gather supplemental data without warning, it could run up carriers' investigative costs for non-outage related reasons dramatically.

III. Reporting Requirements for Wireline Carriers

A. Using Assigned Telephone Numbers to Determine the Impact of Outages is Unworkable.

For voice telephony, the FCC proposes to define the number of end users as the number of "assigned telephone numbers," by which it means the sum of "assigned

numbers” and “administrative numbers” as defined in Section 52.15(f)(i) and (iii) of the Commission's Rules.¹³ Assigned numbers are defined as “numbers working in the public switched telephone network under an agreement such as a contract or tariff at the request of specific end users or customers for their use, or numbers not yet working but having a customer service order pending.”¹⁴ Administrative numbers are “numbers used by telecommunications carriers to perform internal administrative or operational functions necessary to maintain reasonable quality of service standards.”¹⁵ The FCC believes that the combination of these two numbers will provide a better assessment of the actual number of users that are potentially affected by the communications disruption, as distinguished from the number of “customers” that may be potentially affected.¹⁶

USTA agrees with moving away from a metric based on the number of “customers” affected. It does not agree, however, with basing the impact of an outage on the number of assigned telephone numbers because LECs have no way of knowing how many numbers a customer is using. LECs can measure only the number of lines and trunks that they deliver to a customer’s premises. More specifically, the number of assigned numbers does not correlate with the number of customers or access lines. It is common for a single access line serving multiple functions to have as many as three telephone numbers. In addition, IXCs and other service providers sell and assign toll-free numbers (8XX) on residential and business lines without involvement of the local service provider. Finally, telephone numbers are not always assigned and activated by the local

¹³ 47 C.F.R. § 52.15(f)(i), (iii).

¹⁴ *Id.* at § 52.15(f)(iii).

¹⁵ *Id.* at § 52.15(f)(i).

¹⁶ *See* NPRM at ¶¶ 20-23.

service provider. A large business or governmental entity with a PBX, for example, is commonly assigned a group of 100 to 10,000 telephone numbers.

B. USTA Urges the FCC to Retain its Existing Requirements for Reporting IXC and LEC Tandem Outages Because the Proposed Metric is Impractical to Use in a Tandem Outage.

Under section 63.100(g) of the FCC's rules, for the tandem facilities of IXCs or LECs, carriers must, if technically possible, use real-time blocked calls to determine whether criteria for reporting an outage have been reached. Carriers must report IXC and LEC tandem outages where more than 90,000 calls are blocked during a period of 30 or more minutes for purposes of complying with the 30,000 potentially affected customers threshold.¹⁷ The FCC proposes to modify the rule by replacing the "customer" metric with the "assigned telephone number-minute" metric. The FCC also notes that the term "blocked calls" is not clearly defined in Section 63.100 and that some companies count only originating calls that are blocked, while other companies count both originating and terminating blocked calls. To eliminate this ambiguity and permit the Commission to gain an understanding of the full impact of each outage, as well as to promote consistent reporting by all carriers, the FCC proposes that all blocked calls, regardless of whether they are "originating" or "terminating"¹⁸ calls, be counted in determining compliance with the outage reporting threshold criteria.

¹⁷ 47 C.F.R. § 63.100(g).

¹⁸ See Telecordia GR-517-CORE, *LSSGR: Traffic Capacity and Environment*, Figure 6-1 "Customer Call Flow." "Originating" and "terminating" traffic is traffic between access lines and an end office. "Incoming" and "outgoing" traffic is trunk traffic between switches. End offices and tandem switches have incoming and outgoing calls. End offices have originating and terminating calls, but pure tandem switches do not.

USTA urges the FCC to retain its existing requirements for reporting tandem outages pursuant to which carriers report IXC and LEC tandem outages where more than 90,000 calls are blocked during a period of 30 or more minutes for purposes of complying with the 30,000 potentially affected customers threshold. In addition, USTA urges the FCC not to replace the customer metric with an assigned telephone number minute metric because assigned number metrics are impractical to use in a tandem outage. While carriers may be able to determine the time of an outage, they would find it extremely difficult to calculate an assigned telephone metric for a tandem. Depending on the class of office involved, there may not be any physical lines in the tandem. Also, there is no way to accurately estimate the number of “users” served by a tandem office. For example, if a tandem is affected, and there are hundreds of companies sending traffic to and from the tandem, a carrier would have to contact each of these companies and ask them to provide an estimate of the number of “users” affected. A further hurdle to complying with the FCC’s proposed method of reporting tandem outages is that it may not be possible to see blockages the same way each time, and a combination of methods would have to be used to calculate the number blocked calls. Also, many of USTA’s smaller members do not even have systems or processes to determine similar traffic patterns from the same day of the week and same time of day for blocked calls.

Therefore, the FCC should refer to “incoming” and “outgoing” traffic, rather than “originating” and “terminating” traffic in its discussion of tandems.

C. Multiplying Historical Blocked-Call Data will Overstate the Number of Calls Actually Blocked.

The FCC proposes to allow the use of historical data for those outages in which the failure of service prevents the counting of blocked calls in either the “originating” or “terminating”¹⁹ direction or in both directions. The FCC proposes a multiplier of three times the actual number of carried calls for the same day of the week and the same time of day to be used as a surrogate for the number of blocked calls that cannot be measured directly.²⁰ The FCC clarifies that blocked calls are a running measurement made for the total duration of the outage. That is, an outage that blocks only 50,000 calls in the first 30 minutes may nevertheless reach the 90,000 blocked-call threshold criterion if the outage lasts, for example, for one hour. In relatively rare cases, the FCC says, it may be possible to obtain the number of originating blocked calls only, or the number of terminating blocked calls only, but not both. For these cases, the FCC proposes to require that the historic traffic data be doubled to compensate for the missing data, unless the carrier certifies that only one direction of the call set-up was affected by the outage.

USTA disagrees with the FCC’s proposal to multiply historical traffic data by three in reports where blocked calls cannot be measured directly. There is no reason to multiply the historical data because that data would be certified as using similar traffic patterns from the same day of the week and same time of day. Furthermore, there is no

¹⁹ See n.16 *supra*. The FCC incorrectly uses the terms “originating” and “terminating,” which are terms that apply to traffic for end offices.

²⁰ See *In the Matter of Amendment of Part 63 of the Commission's Rules to Provide for Notification by Common Carriers of Service Disruptions*, CC Docket No. 91-273, *Second Report and Order*, 9 FCC Rcd 3911, 3914 at ¶ 14 (1994). The proposed multiplicand of three is based on the total number of times that an average subscriber would attempt to redial a number after first not being able to complete a telephone call.

reason to overstate the number of calls blocked. Even if, as the FCC assumes, a caller repeatedly tried to place a call upon receiving a busy signal, there would be only one completed call – not three – had the outage not occurred. Similarly, in the rare case in which the FCC may obtain the number of incoming or outgoing blocked calls, but not both, doubling the blocked-call count for tandem offices would skew the data because any call is tracked in incoming and outgoing measurements only if the call is successful. In other words, if an incoming call is blocked, there would not be a resultant switched call to generate a blocked outgoing call. If real-time data is unavailable, then using historical data for missing incoming or outgoing measurements would be more accurate.

IV. Major Infrastructure Failures

A. The Burdens Caused by Requiring Carriers to Report on Outages Affecting Special Services far Outweigh any Constructive Purposes the FCC Might Have for Special Services Information.

The FCC states that the outage reports it has received over the past ten years have provided significant insight into some of the major problems affecting circuit-switched voice communications. It cites the outage report Verizon submitted for September 11, 2001- which states, among other things, how many dial tone lines and DS0 data circuits were out of service - as providing a glimpse into the other uses of our nation's communications infrastructure. According to the FCC, the ratio of more than ten times as many DS0 equivalent services using the infrastructure as dial tone lines is not unusual in a major metropolitan area. Most of these DS0 circuits are used to carry what are often referred to as "special services." Based on Verizon's report, the FCC proposes to collect information on communications outages that affect special services.

The FCC's proposal is unrealistic. The resources required to report on outages of special services are enormous. The level of detail in Verizon's September 11 outage report was unusual and likely took Verizon's experts many weeks to put together. Engineering records are only a starting point for such reports, and it is doubtful that anyone could develop tools and systems that would allow such research to be performed within 120 minutes.

While there may be rare instances such as September 11 in which a large number of customers' transport equipment does not have protection or facility diversity, in which many special services could be reported on collectively, the majority of failures are limited to single customer locations. The FCC's proposal would require disclosure of confidential information on special services and allow it to become public information. The provider-customer relationship will be jeopardized if providers are required to release information highlighting their customers' vulnerabilities for the public. The FCC should not attempt to require providers to intrude into their customers' private businesses to assist the FCC with information gathering.

B. USTA Favors Basing Outage-Reporting Criteria for Failures Involving Significant Traffic-Carrying Capacity on the Number of DS3s Affected, but Suggests an Alternative to the FCC's Proposed Reporting Threshold.

The FCC proposes to base outage-reporting criteria for failures of communications infrastructure components having significant traffic-carrying capacity on the number of DS3 minutes affected by the outage because DS3s are the common denominator used throughout the communications industry as a measure of capacity.

Specifically, the FCC proposes to require the reporting of all outages of at least 30 minutes duration that potentially affect at least 1,350 DS3s.

While USTA is not opposed to the idea of basing outage-reporting criteria for failures involving significant traffic-carrying capacity on the number of DS3s affected, it is opposed to basing the reporting threshold on outdated data. The FCC arrived at its 1,350 threshold by relying on data from 1994. At that time, the predominate traffic on DS3s was interoffice trunking. Today, the predominate traffic on DS3s is data. Rather than the 1,350 user-minute threshold, USTA advocates that the reporting threshold be set at 48²¹ or more working DS3s out of service for 30 or more continuous minutes within the communications infrastructure that did not switch to protect. Fewer than 48 DS3s but more than 24 DS3s out of service for six hours or more would be reportable. Fewer than 24 DS3s would not have to be reported.

C. USTA Proposes an Alternative to the Threshold Reporting Criteria for SS7 Messages Proposed by the FCC.

Signaling System Seven (SS7) systems provide information to process and terminate virtually any domestic or international telephone call, regardless of whether the call is wireless, wireline, local, long distance, or dial-up telephone modem access to an Internet service provider. Current FCC rules do not require outage reporting by those companies that do not provide service directly to end users. In addition, even for companies currently subject to outage reporting requirements, threshold-reporting criteria are not based on blocked or lost SS7 messages. In response, the FCC proposes to require

²¹ See NPRM at n.104. The figure of 45 DS3s proposed by the FCC is based on an outdated proposal made by Pacific Telesis in 1994. A threshold of 48 DS3s would be a more common denomination of capacity than 45 DS3s.

all providers of SS7 service (or its equivalent) to report disruptions of at least 30 minutes duration for which the number of blocked or lost integrated-services-digital-network-user-part messages (or the equivalent) is at least 90,000.

USTA favors implementing threshold reporting criteria for SS7 messages but does not favor the threshold proposed by the FCC. Instead, USTA proposes that the following reporting thresholds be used:

- (1) If SS7 signaling is within a service provider's network, and the service provider is responsible for maintenance of SS7 links at both end points, then the threshold should be the same as the FCC's current rules for IXC and LEC tandem switches, *i.e.*, for any outage lasting at least 30 minutes and affecting a survivable element (*i.e.*, host and remote switches), carriers would have to report when real-time data showed 90,000 or more blocked calls or historic data showed 30,000 or more blocked calls.
- (2) If a third-party is the provider of SS7 signaling, the third-party provider must file reports with the FCC when its customers notify it that they have met or exceeded the IXC and LEC tandem reporting threshold in their networks.

V. USTA Opposes Public Disclosure of Critical Infrastructure Information

Historically, outage reports from wireline carriers have been available to the public. The FCC seeks comment on whether this policy should be applied, in whole or in part, to outage reports that will be filed by wireless, wireline, satellite, or cable providers. Under the FCC's proposed rule, initial outage reports will be required to be submitted electronically, but the FCC does not indicate what measures it will take to protect electronically submitted data, how it will back-up this data, or what it will do in the event it loses an electronically-filed report.

Critical infrastructure information is that “information not customarily in the public domain and related to the security of critical infrastructure²² or protected systems.”²³ USTA’s members are gravely concerned about releasing critical infrastructure information to federal agencies, such as the FCC, that might be required to release the information to members of the public under the Freedom of Information Act.²⁴ Furthermore, requiring reports to be submitted electronically, as the FCC has proposed, raises additional security concerns. Public access to outage information could be misused or make communications networks vulnerable to attack. The FCC must find ways to protect critical infrastructure information contained in reports of service disruptions from public disclosure.

CONCLUSION

For the foregoing reasons, USTA urges the FCC to implement any new reporting metrics with a view to maximizing the value of information obtained in such reports while minimizing the expense to LECs and other communications providers in terms of time and money spent producing the reports and the risks to national security that could be caused by dissemination of the reports.

²² See 6 C.F.R. § 29.2. Section 2 of the Homeland Security Act of 2002 defines “critical infrastructure” as the “systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters.”

²³ 6 C.F.R. § 29.2(i).

²⁴ 5 U.S.C. § 552.

Respectfully submitted,

UNITED STATES TELECOM ASSOCIATION

By: 

James W. Olson
Indra Sehdev Chalk
Michael T. McMEnamin
Robin E. Tuttle

Its Attorneys

1401 H Street, NW, Suite 600
Washington, D.C. 20005
(202) 326-7300

May 25, 2004

CERTIFICATE OF SERVICE

I, Meena Joshi, do certify that on May 25, 2004, the aforementioned Comments of The United States Telecom Association were electronically filed with the Commission through its Electronic Comment Filing System and were electronically mailed to the following:

Les Smith
Federal Communications Commission
Room 1-CA804
445 12th Street, S.W.
Washington, DC 20554
Leslie.Smith@fcc.gov

Kristy L. LaLonde
OMB Desk Officer
Room 10234 NEOB
725 17th Street, N.W.
Washington, DC 20503
LaLonde@omb.eop.gov

Qualex International
Portals II
445 12th Street, SW
CY-B402
Washington, DC 20554
qualexint@aol.com

By: _____/s/_____

Meena Joshi