Before the

Federal Communications Commission

Washington, DC 20054

In the Matter of	)	
	)	
IP-Enabled Services	)	WC Docket No. 04-36
	)	
Implementation of Sections 255 and 251(a)(2) of The Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities	)	WT Docket No. 96-198
	)	
Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities	)	CG Docket No. 03-123
	)	
The Use of N11 Codes and Other Abbreviated Dialing Arrangements	)	CC Docket No. 92-105

COMMENTS OF AT&T, INC.

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AT&T Inc. ("AT&T"), on behalf of its telephone companies, files these Comments on the technical, operational, and other issues that prevent traditional telecommunications relay service ("TRS") providers from automatically and immediately transferring 711-dialed emergency calls that originate on interconnected voice over internet protocol ("VoIP") networks to an appropriate Public Safety Answering Point ("PSAP").

INTRODUCTION

On April 1, 2009, the Commission extended the waiver granted to traditional TRS providers of their obligation to automatically and immediately route emergency 711-dialed calls

received from an interconnected VoIP service provider to an appropriate PSAP.[1] The Commission based its decision on the continued significant operational and technical challenges encountered by traditional TRS providers in reliably identifying the physical location of a VoIP caller making a 711 emergency call.[2] The Commission also sought comments on the specific challenges that prevent TRS providers from reliably identifying a VoIP caller's location, including responses to the following inquiries:

- Specific steps that remain for traditional TRS providers to consistently route interconnected VoIP-originated 711 emergency calls to the appropriate PSAP;
- An estimate of the costs and timeframe associated with each step;
- The total number of interconnected VoIP-originated 711 calls that are processed annually by each provider; and
- The proportion of interconnected VoIP-originated 711 calls processed annually by each provider that are of an emergency nature.[3]

AT&T submits that the inability of TRS providers to reliably identify the location of a VoIP caller is a direct result of the unreliability of the telephone number as an indicator of geographic location[4] and TRS providers' lack of access to registered location information. While the unreliability of the telephone number will not change, facilitating TRS providers' access to the registered location information of VoIP users would, in theory, solve the problem. This statement is deceptively simple, as the challenges associated with developing a technical

[1] IP-Enabled Services; Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities; Telecommunications Relay Services and Speech-to-Speech Services for Individuals With Hearing and Speech Disabilities; The Use of N11 Codes and Other Abbreviated Dialing Arrangements, WC Docket No. 04-36, WT Docket No. 96-198, CG Docket No. 03-123 & CC Docket No. 92-105, Order, 74 Fed. Reg. 20892 (rel. Apr. 1, 2009) (the "90-day Waiver Order).

[2] Id. at ¶11.

[3] Id. at ¶13-14.

[4]For VoIP callers, the telephone number is an unreliable indicator of the caller's geographic location because VoIP providers have assigned "non-geographically relevant" telephone numbers or offered "nomadic" VoIP services.

solution to obtain registered location information are substantial, requiring more than minimal resources and cooperation from VoIP providers and third parties who administer registered location databases. The sheer number of VoIP providers, the likelihood that not all entities will actively cooperate, and the lack of a clear mandate requiring VoIP providers and third part registered location database administrators to disclose registered location information they consider confidential make such an effort a daunting task. A similar level of cooperation could also be needed to assist TRS providers in identifying VoIP calls to which any technical solution is applied.

In light of these challenges, the Commission should examine the data it gathers in this proceeding and evaluate whether the substantial time and monetary resources required to reliably identify the location of a VoIP caller are justified. AT&T's data demonstrates that few emergency calls are made via 711 and the proportion of those that originate from VoIP callers borders on non-existent.

DISCUSSION

In June 2007, the Commission extended its Part 64 TRS rules to VoIP providers, including the obligations to offer 711 abbreviated dialing and route 711 calls to the appropriate TRS center.[5] Soon after, the Commission acknowledged the existence of obstacles to the ability of VoIP providers to route calls to the appropriate TRS center. VoIP providers had assigned non-geographically relevant telephone numbers—numbers with no relationship to the location of the user—to many customers and offered calling services that could be used anywhere in the

[5] *IP-Enabled Services; Implementation of Sec. 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; the Use of N11 Codes and Other Abbreviated Dialing Arrangements*, WC Docket No. 04-36, WT Docket No. 96-198, CG Docket No. 03-123 & CC Docket No. 92-105, Report and Order, 22 FCC Rcd 1275 (June 15, 2007).

United States. Consequently, when VoIP customers called 711, their VoIP provider could not reliably determine the physical location of the caller to confirm the TRS center that should receive the call.

This same problem plagued TRS providers receiving 711 calls from VoIP customers. Without the ability to identify the caller's location using the telephone number, TRS providers could not route emergency 711 calls originating from VoIP callers to the geographically appropriate PSAP.[6] In recognition of this hurdle, the Commission granted TRS providers a series of waivers of their obligation to comply with Rule 64.604(a)(4), as it relates to emergency calls from VoIP users with non-geographically relevant numbers. The current waiver is set to expire on June 29, 2009.[7]

Although VoIP providers have apparently met their obligation to route 711 calls to the appropriate TRS relay center, the situation has not changed for TRS providers, which continue to receive no reliable location information from VoIP providers and otherwise have no means to obtain that information. To comply with the obligation in Rule 64.604(a)(4) to automatically and immediately route emergency calls via 711 to the appropriate PSAP, the TRS provider must accomplish the following three tasks if the call originates from a VoIP user:

- Identify the call as a VoIP call;
- Determine the geographic location of the VoIP caller; and
- Identify the appropriate PSAP to route the call.

[6] See 47 C.F.R. §64.604(a)(4).

[7] 90-Day Waiver Order, ¶11.

As AT&T has implemented a system to identify the appropriate PSAP to route emergency calls, these comments will focus on the obstacles to identifying the call as a VoIP caller and determining the geographic location of the VoIP caller.

Identifying the Call as a VoIP Call

When a non-VoIP TTY user makes an emergency call via 711, the communications assistant ("CA") at the relay center where the call is routed uses the caller's telephone number to determine the location of the caller and the geographically appropriate PSAP to which the call should be routed. This process cannot be used when the caller is a VoIP customer, as the VoIP caller's telephone number is not a reliable indicator of the caller's location. Instead, CA's currently ask the VoIP caller about their location.

However, this process works only if TRS providers know that the 711 emergency call originates from a VoIP customer. Until recently, TRS providers had no way to identify VoIP calls. Recently, AT&T (and possibly other TRS providers) has implemented a process whereby dedicated toll free numbers are given to a VoIP provider to route all 711 calls. Hence, all calls received by AT&T's relay centers from those toll free numbers originate exclusively from VoIP customers.

TTY calls received into AT&T's relay centers via 711 from VoIP providers who have not received dedicated toll free numbers are transmitted over a standard toll free number and are indistinguishable from 711 calls originating on the public switched telephone network.[8] AT&T

[8] AT&T has indirectly engaged in outreach to VoIP providers through a large registered location database administrator, but has received no further requests for dedicated toll free numbers.

(and presumably other TRS providers) cannot recognize VoIP calls in this situation.[9] Thus, these unidentified VoIP calls are routed based on the caller's telephone number.

As yet, no solution other than a dedicated toll free number has been proposed that would allow TRS providers to identify a VoIP call. Yet, the dedicated toll free number solution is itself problematic, as it requires every traditional TRS provider to provide dedicated toll free numbers to every VoIP provider. Not only is this inefficient, but it is impractical and unrealistic. There are dozens of VoIP providers in the United States and, with a competitive landscape that fosters the introduction of new products and services, new VoIP providers will enter the marketplace and others will leave the marketplace, undermining the management of any process to engage all VoIP providers. Further, while some VoIP providers are cooperative and will engage in discussions to route all of their 711 calls through a dedicated toll free number, the sheer number of VoIP providers guarantees that many will have other priorities.

Absent another mechanism to identify VoIP calls, for the foregoing reasons it is unlikely that AT&T or any other TRS provider will be able to reliably identify all VoIP calls as originating from a VoIP provider. For calls that are not identified as VoIP calls, TRS providers cannot insure they will route the call to the appropriate PSAP through application of a manual system or an as yet undeveloped technical system to automatically determine the registered location of the VoIP caller.

Providers are Unable to Determine the Geographic Location of the VoIP Caller

Even for those VoIP calls that TRS providers can identify because they are routed over a dedicated toll free number, TRS providers remain unable to reliably identify the geographic

[9]An internet search reveals the existence of dozens of VoIP providers throughout the United States. Thus, it is likely that AT&T's relay centers receive VoIP originated calls via 711 that AT&T cannot identify as VoIP calls, some of which could be emergency calls. AT&T remains willing to provide toll free numbers to route 711 calls to VoIP providers that request such a number.

location of the caller via an automatic process. VoIP providers' use of "non-geographically relevant" telephone numbers and "nomadic" VoIP services results in a telephone number that may not correspond with the location of the VoIP caller. Thus, TRS providers cannot use the telephone number to determine the location of the VoIP caller.

For the routing of 911 calls, VoIP providers determine the location of their customers by capturing their registered location.[10] VoIP providers maintain registered location information in databases administered by the VoIP provider themselves or by third parties administrators. Regardless, this information does not get to TRS providers to facilitate the routing of VoIP-originated 711 emergency calls to the appropriate PSAP.

TRS providers might access registered location information by either (1) transmission of registered location information by VoIP providers to TRS providers with the automatic number information ("ANI"), or (2) a data dip into the databases of VoIP providers and third parties that administer registered location databases for each VoIP- originated 711 emergency call. Yet each option presents significant challenges.

VoIP Provider Transmits Registered Location Information with 711 Call

As mentioned above, when a VoIP provider transmits a 711 call made in an emergency to a TRS provider, it does not transmit registered location information. There are many reasons why VoIP providers do not transmit that information. When a VoIP customer dials 711, the VoIP provider does not know if the call is an emergency call. Therefore, VoIP providers would have to transmit registered location information for every 711 call to insure that it is transmitted for emergency calls.

[10] 47 C.F.R. §9.5(d).

VoIP providers also are justifiably reluctant to release the location information of their customers without a clear mandate to do so. Further, such transmission of registered location information would require development of a common industry protocol or format, which would be difficult to develop and implement with the substantial number of VoIP providers in the United States. The costs to VoIP providers and TRS providers of developing and implementing such a system could be significant, although it is impossible to calculate the possible costs without more information.

TRS Provider Dip into Registered Location Databases

TRS providers could also obtain registered location information for each emergency call received from a VoIP customer by communicating with every registered location database upon receipt of the call. Obtaining such a consensus would require a substantial level of cooperation between TRS providers, third party registered location database administrators, and VoIP providers that maintain their own registered location database. The sheer number of VoIP providers and the need for all the parties to negotiate and enter into contracts even before implementing a solution makes this an arduous task. Further, third party registered location database administrators and VoIP providers protect the confidentiality of this information and are not likely to freely disclose the information to AT&T or any other TRS provider without a legal requirement to do so.

Even if all interested parties come together for the purpose of solving the problem of VoIP caller location, a common query system is needed to facilitate the search for registered location. TRS providers receiving a 711 call from a VoIP customer would initiate a query to every third party registered location database administrator and every VoIP provider maintaining its own registered location database. Because CA's do not know a 711 call is an emergency call

until they speak to the caller, the CA would have to initiate the query while speaking with the customer. Querying multiple databases in this manner will take time, even with advanced data communications, all while the customer waits for help for their emergency.

These types of enhancements carry significant costs and delays. Due to the myriad of factors, including the unpredictable degree of cooperation TRS providers might experience from VoIP providers, third party registered location database administrators, and other TRS providers, any calculation of costs and timing to implement is speculative, at best, and cannot be reliably calculated. Nevertheless, AT&T estimates that such individualized interfaces, with architecture, design, code, test, and deployment, would take approximately 12-24 weeks and $75,000-$150,000 per connection. Based upon these estimates, AT&T could incur $600,000 over 1-2 years adopting a system that reliably determines the registered location of only some VoIP customers—those who obtain service from VoIP providers that contract with third party registered location database administrators.

Even more modest costs are significant when applied across the TRS industry as a whole. And, the prospect that some of all of these costs are compensable from the interstate TRS fund should give the Commission pause as to whether the costs are justified by the few emergency calls to 711 made via TTY by VoIP users.

The Minimal Number of Emergency Calls Via 711

AT&T's inability to identify all VoIP calls makes it impossible to respond to the Commission's inquiries as to the number of VoIP originated 711 calls received by AT&T and the number of these calls that are emergency in nature. Yet, other data from AT&T relay centers in Pennsylvania and Virginia demonstrate that the costs associated with creating a system whereby TRS providers can reliably identify a VoIP call and the location of the caller in an

emergency are not justified by the frequency with which TRS users dial 711 in an emergency. From April 1, 2008 through March 31, 2009, AT&T's pertinent 711 call data reveal that emergency calls via 711 comprise a mere .003% of the total 711 calls received at those relay centers. Based on this data, for every 100,000 TTY calls to 711, only three are emergency calls.

Since at least 2001, the Commission and TRS providers have educated persons with speech or hearing disabilities to dial 911, not 711, in an emergency. AT&T's data suggests that this educational effort has borne fruit. Further, 711 emergency calls from VoIP users would comprise an even smaller subset of the overall number of 711 emergency calls, if there are any at all. VoIP users tend to be more technologically savvy than typical TTY users. Consequently, VoIP customers are more likely to utilize internet-based relay services rather than TTY and benefit from the educational efforts of the Commission and TRS providers to dial 911, not 711, in an emergency. This position is supported by the calling patterns of AT&T VoIP customers, which demonstrate that AT&T VoIP customers completed only 18 TTY calls to 711 in the last year, none of which were emergency calls.

Over the last few years, persons with hearing and speech disabilities have migrated from TTY to Internet-based TRS services, such as VRS.[11] This trend is likely to continue, with fewer and fewer consumers using TTY. Thus, the need to identify the location of VoIP callers, which currently affects a very small percentage of TRS users, will affect a decreasing proportion of TTY calls as each day passes.

[11] *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Public Notice and Notice of Proposed Rulemaking, ¶11, 74 Fed. Reg. 23859 (rel. May 14, 2009).

SUMMARY

AT&T's comments demonstrate that the technical and operational hurdles to implementing a system to obtain geographic location information of VoIP users on 711 emergency calls are substantial and will result in significant costs to all parties who work to implement a solution. In contrast, the number of persons who would benefit from overcoming the hurdles is few and becoming fewer with each day.

The Commission may waive a rule for good cause.[12] AT&T submits that the disproportionate impact of Rule 64.604(a)(4) as it applies to VoIP originated 711 calls justifies granting TRS providers an indefinite waiver of such application of the rule. The few VoIP users who dial 711 in an emergency demonstrate that the hearing and speech disabled community is not likely to be harmed by such as waiver. For 711 emergency calls that TRS providers can identify as originating from a VoIP user, TRS providers could continue to manually obtain location information from the VoIP caller and route the call to the appropriate PSAP based upon that information. Where TRS providers cannot identify a 711 emergency call as originating from a VoIP user or the user does not provide location information verbally, TRS providers would continue to route the cal based upon the user's telephone number.

[12] *See* 47 C.F.R. §1.3.

For the foregoing reasons, AT&T respectfully requests that the Commission consider this submission.

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