

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

In the Matters of

IP-ENABLED SERVICES

E911 REQUIREMENTS FOR IP-ENABLED
SERVICE PROVIDERS

WC Docket No. 04-36

WC Docket No. 05-196

REPLY COMMENTS OF YAHOO! INC.

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TABLE OF CONTENTS

INTRODUCTION AND SUMMARY	1
I. THE COMMISSION SHOULD NOT EXPAND THE E911 REQUIREMENTS TO ADDITIONAL ONE-WAY OR HOMEMADE TWO-WAY VOIP SERVICES.....	2
A. “ONE-WAY” VOIP SERVICES DO NOT REPLACE TRADITIONAL LOCAL SERVICE.....	3
B. HOMEMADE TWO-WAY SERVICES CANNOT PRACTICALLY BE SUBJECT TO E911 REQUIREMENTS.....	4
II. THE COMMISSION SHOULD NOT IMPOSE A JUNE 2006 ALI DEADLINE.	6
III. THE COMMISSION’S E911 MANDATES MUST RECOGNIZE EXISTING OBSTACLES TO NATIONWIDE E911 ACCESS.....	8
IV. THE COMMISSION SHOULD NOT NOW IMPOSE ADDITIONAL E911 REQUIREMENTS.....	10
CONCLUSION.....	12

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Introduction and Summary

Yahoo! Inc. (“Yahoo!”) is the world’s foremost Internet brand and its most popular Internet destination. Yahoo! is also a longstanding leader in Instant Messaging (IM), and has for years offered IP-to-IP voice calling to its millions of IM customers. With its recent acquisition of Dialpad, Yahoo! is now poised to expand its customers’ choices by offering additional services, including IP-to-PSTN calling and, as a separate product, PSTN-to-IP calling.

As a provider of IP voice services, Yahoo! is deeply committed to its customers’ well-being. Yahoo! therefore supports the Commission’s efforts to ensure that VoIP customers enjoy both the safety and security that comes with 911 service, and welcomes this opportunity to work with the Commission to further refine VoIP E911 regulation.

Yahoo! believes the Commission has properly concluded that IP voice services that replace traditional local voice service should be subject to E911 requirements – and that services which do not replace traditional local voice service should not. This approach is principled, understandable and protects the public. The Commission should

continue to adhere to this principle by recognizing that VoIP services that offer one-way connections to the PSTN do not replace traditional local voice service, even if combined by consumers into a homemade two-way product, and therefore need not provide E911 access. Adopting any other approach would risk denying consumers the considerable benefit of these IP voice services without improving public safety.

Yahoo! likewise supports the Commission's efforts to encourage the prompt development of automatic location technology for VoIP services. The Commission can best meet this goal – and avoid the risk of mandating a flawed technical approach – by declining to impose specific deadlines and allowing industry to work (with Commission support) towards the best solution or solutions.

As it moves forward, the Commission must recognize the absence of nationwide E911 solutions and the attendant risk that rural consumers will be denied access to VoIP services. The Commission should foster nationwide deployment of VoIP services by considering those proposals in the record that would enable VoIP service providers to more quickly provide service to all consumers.

Finally, the Commission should refrain from imposing additional regulatory requirements while industry continues its efforts to comply with the challenging and critically important rules the Commission has already adopted.

I. The Commission Should Not Expand the E911 Requirements to Additional One-Way or Homemade Two-Way VoIP Services.

The Commission's *Order* correctly mandated E911 obligations only for “interconnected VoIP” services.¹ That decision should not now be disturbed. The

¹ *IP-Enabled Services and E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245 (2005) (“*VoIP E911 Order*,” “*Order*,” or “*VoIP E911 NPRM*”).

Commission’s approach guarantees public safety by ensuring that consumers receive the 911 and E911 services they reasonably expect when using services that “function . . . like a ‘regular telephone service.’” The Commission should continue to adhere to this principle, applying 911 and E911 obligations only to those “service[s] that enable[] a customer to do everything (or nearly everything) the customer could do using an analog telephone.”²

A. “One-Way” VoIP Services Do Not Replace Traditional Local Service.

As other commenters have suggested,³ the Commission should decline to extend its E911 requirements to “one-way” VoIP services – services that can either originate calls to or terminate calls from the PSTN, but not both.⁴ These services simply do not function as replacements for traditional local phone service.

One-way VoIP services allow customers, such as travelers with laptops or Americans living abroad, to place or receive low-cost long distance and international calls. In order to place and receive all calls, however, these customers must maintain their existing local telephone or CMRS connections. Thus, these consumers already have reliable and efficient 911 access, and the Commission need not mandate duplicative access through one-way VoIP services.

Since they are not replacements for local phone service, consumers do not expect one-way services to provide E911 access. Indeed, consumers are unlikely even to think

² *Id.* ¶¶ 23-25.

³ *See, e.g.*, AT&T Comments at 8-10, SBC Comments at 4-6; United Online Comments at 3-7; Information Technology Industry Counsel (ITI) Comments at 3-5; Skype Comments at 4-10, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

⁴ *VoIP E911 NPRM* ¶ 58.

of using one-way services to connect to public safety agencies. The typical one-way IP-to-PSTN service is a PC-based “softphone” – a PC with a broadband connection and headset (or speakers and a microphone). In order to use a one-way service, the consumer typically must boot up the PC, connect to the Internet, open a software program supplied by the service provider, enter a user ID and password into the program, and then dial the PSTN number using the software interface. Faced with an emergency, a consumer is simply going to skip the PC and use a wireline or wireless phone to dial 911.⁵

Other constraints of one-way VoIP services also make it most unlikely any consumer would expect traditional 911 access from such services. Because there is no call-back PSTN number associated with IP-to-PSTN services, a consumer using this type of one-way service will simply not expect the same 911 capability available using two-way services.⁶ Similarly, a consumer that uses a PSTN-to-IP service – a service that assigns a PSTN phone number to a VoIP user to enable the VoIP user to be called by PSTN users– will not expect to be able to call out to *any* PSTN number, including 911. As a result, consumers will turn naturally to two-way services in cases of emergency.

B. Homemade Two -Way Services Cannot Practically be Subject to E911 Requirements.

While Yahoo! supports many of the *Order’s* initial conclusions, it believes the tentative conclusion to apply E911 obligations when a user has combined two separately marketed and separately provided one-way services is both unworkable and potentially

⁵ Even if the Commission ultimately concludes that the existing *Order* should be expanded to apply to one-way services that consumers are likely to combine with other one-way services, it should create an exception for IP-to-PSTN (or PSTN-to-IP) “softphones.”

⁶ If the Commission nevertheless concludes that IP-to-PSTN services are properly subject to the Commission’s E911 rules, the Commission should enable users of these services to receive comparable 911 service by requiring PSTN networks to recognize Yahoo! and other user IDs.

dangerous – in that it would introduce uncertainty and confusion into otherwise clear E911 obligations. As ITI noted, there is no way for service providers to know whether a third-party customer that purchases an IP-to-PSTN service from one provider has also purchased (or will purchase in the future) a PSTN-to-IP service from another provider.⁷ It would be impossible for a provider to anticipate these combinations in order to provide E911 service, and introducing such uncertainty into the system does not provide a compensating benefit. The few consumers interested in such *ad hoc* combinations will be sufficiently sophisticated to understand the limits of their homemade service and to have other more obvious ways to reach emergency services.

Even where a customer combines the one-way services of a single company, it will be enormously difficult to provide E911 service. Very few customers use PSTN-to-IP services, and only a scant handful seem to combine them with the much more popular IP-to-PSTN services.⁸ However, as a result of the mobility of VoIP services, imposing E911 requirements on consumer combined one-way services will amount to a requirement that companies offering one-way VoIP services provide nationwide E911 access in order to serve this scant handful of customers. Faced with such an expansive obligation, many providers will simply decline to offer these services.⁹ Because one-way

⁷ See ITI Comments at 4-5.

⁸ According to Skype's website, of the 53 million people registered to use Skype, less than 3 million are premium users, including users of one-way services, and, presumably, only a fraction of these combine these premium services. See *Skype Opens Marketplace for Voice Services* (Sept. 8, 2005), available at http://skype.com/company/news/2005/skype_voiceservices.html.

⁹ Further, one-way VoIP services and their associated billing systems have not been designed to support combined services. For example, IP-to-PSTN services are typically prepaid services, while PSTN-to-IP services are purchased on a monthly subscription basis. This disparate provisioning means that a customer could be a customer of both services for only brief periods as, for example, the customer exhausts its IP-to-PSTN prepaid account or takes months off from its inbound service. It would be

services, even when combined, are unlikely to replace traditional local voice service, imposing E911 requirements on consumer combined services will merely drive these services out of the market without any corresponding public safety benefit.

Finally, the Commission should refrain from expanding the scope of the existing *Order* to include narrowband VoIP services. As other commenters noted, a consumer using a narrowband connection has – by definition – access to a PSTN connection with full 911 capabilities.¹⁰ The VoIP-specific 911 capability would be redundant, imposing a burden on VoIP providers with no corresponding public safety benefit.

II. The Commission Should Not Impose a June 2006 ALI Deadline.

Turning to issues of implementation, the Commission seeks comment on what role it should play in encouraging the development of techniques for automatically identifying the geographic location of users of portable VoIP services and questions whether it should “require all terminal adapters or other equipment used in the provision of interconnected VoIP service sold as of June 1, 2006 to be capable of providing location information automatically.”¹¹ Yahoo! urges the Commission not to impose any fixed deadline for implementation of automatic location information (ALI) obligations. It is critically important that the Commission and industry avoid rushing into faulty solutions to the ALI problem. As the record in this proceeding demonstrates, however, there is no current solution to this problem, and a June 2006 deadline for automatic geographic sensing capabilities is unworkable.

difficult for a provider to monitor these shifts in customer use in order to provide E911 access when both services are active.

¹⁰ See Skype Comments at 24.

¹¹ *VoIP E911 NPRM* ¶ 57.

Broadband service providers,¹² VoIP service providers,¹³ and device manufacturers¹⁴ all agree that no one can say today which technology (or mix of technologies) is appropriate for providing automatic location information.¹⁵ Indeed, it is clear from the comments that the parties themselves hold divergent views about which nascent technologies are problematic and which hold the most promise.¹⁶ And a number of commenters point out that there may be no one-size-fits-all E911 solution given the multiplicity of VoIP services and uses.¹⁷ There *is* consensus, however, that while industry-led efforts to evaluate these technologies are making progress, more time is required for the best solution(s) to emerge. Imposing a June 2006 deadline could serve to derail ongoing efforts to assess the benefits and drawbacks of the competing approaches, and could well lead to forced adoption of an inferior solution. Yahoo! thus joins the

¹² *See, e.g.*, Time Warner Comments at 8-10; Verizon Comments at 3-4; Qwest Comments at 5-7; SBC Comments at 6-10; BellSouth Comments at 4-6, United States Telecom Association Comments (USTA) at 4-6, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

¹³ *See, e.g.*, Vonage Comments at 7-11; United Online Comments at 9-11; Skype Comments at 10-21, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

¹⁴ *See, e.g.*, Motorola Comments at 2-3; Cisco Systems Comments at 10; ITI Comments at 5-9, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

¹⁵ While NENA stresses that it is “extremely important to expedite solutions . . . for the automatic location of IP-enabled 9-1-1 callers,” with respect to the Commission’s suggested June 2006 date for automatic location capability, NENA defers to “IP service providers and interested manufactures [as the parties] best able to say whether this method and deadline are feasible.” NENA comments at 5, 7, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

¹⁶ *See, e.g.*, USTA Comments at 6 (referring to GPS as “imperfect,” but “probably the best technology available at this time”); Verizon Comments at 4 (finding that GPS is “unsuitable presently” and that “[s]mart jack solutions have many unknowns.”); Cisco Comments at 5 (calling “wireline access point inventory” the “most promising automatic geographic location sensing approach for wireline VoIP services”).

¹⁷ *See, e.g.*, BellSouth Comments at 4-5; Cisco Comments at 2-4.

chorus of commenters urging the Commission to defer to these industry proceedings and refrain from imposing a premature regulatory mandate.

The Commission could, however, facilitate development of ALI solutions by establishing and overseeing an open working group or committee charged with finding the best way to automatically locate mobile and nomadic VoIP users.¹⁸ Yahoo! would be happy to contribute its considerable expertise to any such effort.

Finally, in fostering industry solutions, the Commission should be careful to avoid specific technology mandates that could constrain the sale of multipurpose devices, such as headsets or PCs, simply because they can be used with VoIP applications. Instead, the Commission should make clear that these general-purpose devices will not be subject to VoIP-specific regulatory burdens.¹⁹

III. The Commission's E911 Mandates Must Recognize Existing Obstacles to Nationwide E911 Access.

Service providers seeking to offer nationwide VoIP products face substantial obstacles. In many rural areas, network and economic realities have discouraged or prevented vendors from deploying E911 solutions. The problem is exemplified by the current absence of any single provider that can offer E911 access across the country. As a result, providers that seek to offer a nationwide VoIP service may be forced to deny service to consumers in certain areas.

The Commission's approach to E911 regulation should reflect the current geographic challenges to ubiquitous deployment of VoIP E911 services and, thereby,

¹⁸ See ITI Comments at 6.

¹⁹ As it did in the Order, the Commission should simply impose any regulatory obligations on the service provider – leaving it up to the service provider to come up with the software or hardware solution that best meets those obligations.

help foster nationwide access to VoIP services. As the Commission has already recognized, VoIP providers cannot provide E911 service in areas that are not served by the wireline E911 network.²⁰ VoIP providers will also have difficulty offering E911 service in areas that are served by selective routers but in which there are relatively few customers. Rural areas, in particular, are likely to be denied access to innovative VoIP services as a result of these constraints, and may be further harmed by being off-limits to users of mobile and nomadic VoIP.

The Commission can foster ubiquitous access to VoIP and E911 services in a number of ways. The Commission should, as suggested by NENA and the VON Coalition, permit alternative means of providing E911 service under certain narrow circumstances.²¹ As suggested by Vonage, the Commission should encourage development of an open architecture E911 system using IP-enabled Network Access Points to enable connections between all voice providers and the existing E911 network.²² Finally, the Commission should work to expedite the transition to a next generation I3 system as advocated by NENA, the VON Coalition, and others.²³ Finally, until nationwide E911 access is feasible, the Commission's regulation of VoIP E911 should recognize the obstacles to ubiquitous E911 service, and take a flexible regulatory approach in those areas where deployment may be hampered.

²⁰ 47 C.F.R. § 9.5.

²¹ See Joint Petition for Clarification of the National Emergency Number Association and the Voice on the Net (VON) Coalition at 6-8, WC Dockets No. 04-36 & 05-196 (filed July 25, 2005).

²² Vonage Comments at 2-7.

²³ See *Key elements for providing 911 service to VoIP users, as agreed upon by the National Emergency Number Association and members of the VoIP industry* (12/1/2003), available at http://www.von.org/usr_files/VON%20NENA%20911%20Agreement.pdf; Global IP Alliance Comments, WC Dockets No. 04-36 & 05-196 (filed August 15, 2005).

IV. The Commission Should Not Now Impose Additional E911 Requirements.

In its NPRM, the Commission poses a wide range of additional questions concerning the appropriate reach of its VoIP E911 regulations. Yahoo! addresses a number of those questions briefly below. As a general matter, in light of the ambitious and critical goals of the already-adopted E911 requirements, the Commission should allow industry an opportunity focus on these mandates before imposing additional E911 obligations.

Performance Standards: The Commission should not place performance standards for updating registered location information on VoIP service providers, simply because VoIP service providers cannot control many of the elements necessary to promptly update this information. It would be both arbitrary and counterproductive to impose liability for the timeliness of location updates on VoIP providers where they must rely on PSAPs and other third parties to complete the update process.²⁴ Moreover, imposition of performance standards could hamper introduction of new products and drive third party vendors offering elements of VoIP E911 services out of the market.²⁵

Wireless VoIP: While wireless VoIP services – services that use VoIP over Wi-Fi and WiMAX broadband connections – may bear superficial resemblance to CMRS, their significant differences warrant separate regulatory treatment. Wi-Fi devices operate only over short ranges, and use the same frequencies and are subject to the same power limits as cordless phones. They do not duplicate the characteristics of CMRS and should

²⁴ PSAPs generally have limited resources, and these limits affect their ability to promptly implement location updates from service providers. Increasing PSAP funding, consequently, would be one of the most effective ways to reduce location update turnaround time.

²⁵ See Time Warner Comments at 10-11.

not be subject to CMRS rules. Likewise, because WiMAX is a nascent service supporting, at most, a handful of VoIP devices, it would be premature to impose the substantial body of CMRS 911 regulation on WiMAX VoIP.

Notice & Reporting Requirements: Yahoo! joins the numerous other commenters that have counseled against imposition of additional notice and reporting requirements at this time.²⁶ The Commission's newly adopted notice requirements require sufficiently detailed disclosure to inform and protect consumers. Moreover, these detailed requirements are already challenging to implement. Imposing additional regulatory burdens as providers strive to meet the Commission's initial requirements could needlessly impair compliance with the requirements that are already in place.

For similar reasons, the Commission should not now adopt additional reporting obligations concerning VoIP providers' implementation of the Commission's E911 rules or development of ALI. Furthermore, and as discussed above,²⁷ the Commission can monitor progress in these areas by facilitating industry efforts to develop automatic location information technology. Such involvement would render any reporting requirements superfluous.

Privacy: The Commission should not now mandate particular consumer privacy protections for VoIP providers. VoIP providers have substantial incentives to protect their customers' privacy, and many do so while providing consumers with additional abilities to control the use of their personal information. The Commission should continue to allow providers and the market to take the lead in this area.

²⁶ See, e.g., AT&T Comments at 5-8; Verizon Comments at 5-6; USTA Comments at 8-9; Time Warner Comments at 10-12.

²⁷ See *supra* at 8.

Conclusion

Yahoo! supports the Commission's efforts to protect consumers of VoIP services by ensuring that they have access to emergency services. The Commission should not, however, expand the scope of its E911 rules to cover one-way services, whether used alone or in a homemade combination, as these services simply do not take the place of local voice service and thus are not expected by consumers to have E911 capabilities. Likewise, the Commission should not risk the forced adoption of inferior technical solutions by imposing a fixed deadline for automatic location sensing technology. As it moves forward with its efforts, the Commission should recognize the geographic constraints faced by VoIP providers, and work to ensure that consumers nationwide, including consumers in underserved areas, receive access to VoIP services. Finally, the Commission should not impose additional regulatory requirements on VoIP providers while they work to implement the Commission's ambitious E911 rules.

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