

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

In the Matter of)	
)	
Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications)	PS Docket No. 11-153
)	
Framework for Next Generation 911 Deployment)	PS Docket No. 10-255

COMMENTS OF THE VOICE ON THE NET COALITION

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TABLE OF CONTENTS

	<u>Page</u>
I. THE COMMISSION DOES NOT HAVE AUTHORITY TO ISSUE THE PROPOSED REGULATIONS ON OVER-THE-TOP TEXT MESSAGING APPLICATIONS	2
A. CVAA	2
1. EAAC Recommendations by Themselves Cannot Provide Authority for Commission Actions.....	2
2. The Cited EAAC Recommendations Do Not Justify the Proposed Regulations ..	3
3. The CVAA does not authorize imposition of a text to 911 obligation on OTT applications because such an obligation would not be achievable	4
1. Title III.....	6
B. Ancillary Authority.....	8
II. THE IMPLEMENTATION OF ANY MANDATE WOULD BE IMPRACTICAL AND UNNECESSARILY CONFUSE CUSTOMERS	9
A. Without access to accurate location information, OTT texts cannot be routed to the appropriate PSAP.....	9
B. Even if location information were available, it is not practical or reasonable to require OTT applications to rely on a third party gateway.....	11
C. The proposal to include OTT applications would increase consumer confusion.	13
D. Text-to-911 requirements should not be imposed without liability protection.	14

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SUMMARY AND BACKGROUND

The Voice on the Net Coalition (“VON”) hereby submits these comments in response to the issues raised in the Commission’s *Further Notice of Proposed Rulemaking* (“FNPRM”) in the above-referenced matter.¹ VON opposes any mandate that over-the-top text message providers provide an interim text-to-911 capability before the establishment of a next generation 911 system. Such a mandate would be outside the Commission’s jurisdiction, be impossible to fulfill reliably with current limitations on technology, and increase customer confusion. If the FCC acts prior to the implementation of a NG911 network, it would be far less costly and more effective for the Commission to limit its focus to text-to-911 solutions offered by Commercial Mobile Radio Service (“CMRS”) providers. A number of CMRS providers have voluntarily committed to provide text-to-911, and they have more ready and

¹ The Voice on the Net Coalition works to advance regulatory policies that enable Americans to take advantage of the promise and potential of IP-enabled communications. See www.von.org for more information about VON. VON filed comments on January 29 and reply comments on February 8 regarding the Commission’s proposal to mandate the provision of a bounce-back message, supporting the position that, if a mandate were to be issued, the only practical and safe approach would be to alert users that the application does not support text to 911 and that the users should take an alternative approach to reaching 911.

reliable options for successful communication with current Public Safety Access Point (“PSAP”) technology, both for users with disabilities and the general public.

I. THE COMMISSION DOES NOT HAVE AUTHORITY TO ISSUE THE PROPOSED REGULATIONS ON OVER-THE-TOP TEXT MESSAGING APPLICATIONS

In asking whether it has authority to impose text-to-911 rules on providers of over-the-top text messaging applications, the Commission suggests as possible sources of jurisdiction the Communications and Video Accessibility Act of 2010 (“CVAA”), Title III of the Communications Act, and its “ancillary authority.” *FNPRM*, paras. 168-172. As discussed below, none of these suggested sources gives the Commission authority to issue the proposed regulations on such providers and their applications.

A. CVAA

Section 106 of the CVAA, 47 C.F.R. Section 615c(g), confers two distinct grants of rulemaking authority on the Commission: (i) to “implement the recommendations” of the Emergency Access Advisory Committee (“EAAC”), and (ii) to promulgate “any other regulations, technical standards, protocols, and procedures as are necessary to achieve reliable, interoperable communication that ensures access by individuals with disabilities to *an Internet protocol-enabled emergency network . . .*”² Neither of these provisions can be the basis for the proposed Commission action as a matter of statutory interpretation and constitutional principle.

1. EAAC Recommendations by Themselves Cannot Provide Authority for Commission Actions

The mission of the EAAC, the goal of the CVAA, and the statute’s grant of authority to the Commission, are all aimed at achieving the next-generation “Internet protocol-enabled network.” Until the next generation IP-enabled network comes into issue, Section 615c does not

² 47 U.S.C. § 615c(g) (emphasis added).

give the Commission any new authority. The measures proposed in the *Further Notice* are *not* aimed at achieving the next-generation 911 network. Instead, these regulations apply solely to the existing public switched network and the legacy 911 network. This gap between the Commission's authority to promote emergency services in a future IP-network and the rules it proposes to adopt in the context of the legacy public switched network highlights the core flaw in any use of the EACC's recommendations to justify Commission jurisdiction here.

As the D.C. Circuit concluded in the important *Broadcast Flag* case:

The [Commission's] position in this case amounts to the bare suggestion that it possesses plenary authority to act within a given area simply because Congress has endowed it with some authority to act in that area. We categorically reject that suggestion. Agencies owe their capacity to act to the delegation of authority from Congress. . . . The FCC, like other federal agencies, literally has no power to act . . . unless and until Congress confers power upon it.³

There also would be a larger constitutional problem with any use of the EAAC's recommendations to expand the Commission's authority. Reliance on the EAAC's recommendations for authority to adopt rules related to the current network would pass constitutional muster only if the recommendations gave direction to the Commission on how it should exercise authority that Congress already has granted to the Commission. Anything else would violate the separation of powers and non-delegation doctrine. Thus, if authority is to be found for interim 911 regulations over entities not otherwise subject to Commission regulation, it must lie elsewhere.

2. The Cited EAAC Recommendations Do Not Justify the Proposed Regulations

The two specific EAAC recommendations cited by the Commission also fail to justify the proposed over-the-top text-message regulations. EACC Recommendation P4.1 (Interim Text

³ *Am. Library Ass'n*, 406 F.3d at 698 (internal quotation marks and citations omitted).

Access) refers to “PSAPs, mobile device manufacturers, carriers, and networks,” but not to providers of over-the-top text message applications.⁴ The other recommendation T1.2 (Interim Mobile Text Solution) does mention the utility of expanding the scope of any approach beyond SMS, but it does not specifically recommend including OTT text messaging, and, as discussed above, any such EAAC recommendation, without a grant of further authority to the Commission, would not be sufficient to give the Commission authority it does not otherwise have.⁵

3. The CVAA does not authorize imposition of a text to 911 obligation on OTT applications because such an obligation would not be achievable

⁴ EAAC recommendation P4.1, “Interim Text Access,” states:

The EAAC recommends that until aforementioned future consumer requirements can be implemented, and fully deployed as part of NG9-1-1’s transition completion, PSAP’s, mobile device manufacturers, carriers and networks should implement an achievable interim method for text-based messaging to 9-1-1. Support of this functionality must take into account the capabilities and limitations of second, third, and fourth generation wireless networks and the fact that it must work on all of them. Such capability may depend on updates to PSAP networks and potentially also to originating service provider networks depending on the approach chosen.

Emergency Access Advisory Committee, Report and Recommendations 26 (2012), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-312161A1.doc.

⁵ Recommendation T1.2 (Interim Mobile Text Solution) states:

[t]he EAAC recommends that the FCC work with Department of Justice, industry, academia, consumer groups and public safety entities to develop an interim solution that can be rapidly deployed to provide nationwide access to 9-1-1 services through industry standards-based mobile text communications solution(s) to provide critical coverage for this important constituency during the transition to NG9-1-1.

Id. at 28. In the discussion of recommendation T1.2, the EAAC refers to OTT text applications, as follows:

the solution [to text-to-911] cannot be only SMS since pagers and some other phones (e.g., BlackBerry, and iPhone) have applications people use for daily text communication that do not use SMS as their transport protocol but use email or other protocols (e.g., BlackBerry Messenger, iMessage) to communicate with similar phones and with the SMS features on other people’s phones.

Id. at 29, n.4. The EAAC also makes reference to BlackBerry messenger elsewhere in its discussion.

Id. at 30, Rationale 2(d).

The CVAA’s accessibility requirements are limited to those obligations that are “achievable,” i.e., those that can be accomplished with reasonable effort or expense.⁶ To ascertain whether an obligation is achievable, the CVAA states that the Commission should consider:

- (1) The nature and cost of the steps needed to meet the requirements of this section with respect to the specific equipment or service in question.
- (2) The technical and economic impact on the operation of the manufacturer or provider and on the operation of the specific equipment or service in question, including on the development and deployment of new communications technologies.
- (3) The type of operations of the manufacturer or provider.
- (4) The extent to which the service provider or manufacturer in question offers accessible services or equipment containing varying degrees of functionality and features, and offered at differing price points.⁷

In assessing whether a text to 911 obligation is achievable for OTT applications, the technical challenges surrounding location of the application (described below) would result in a finding that the obligation is not achievable today. As discussed further below in Section II, it simply is not technically feasible to accurately locate and properly route an OTT text to 911 today.⁸ Moreover, the economic impact of engaging a third party to route OTT applications to the appropriate PSAP (assuming the appropriate PSAP could be determined for an OTT application) would be particularly significant for small application developers providing free or low-cost

⁶ 47 U.S.C. §617(g).

⁷ *Id.*

⁸ The Commission has indicated that industry-wide practices are relevant for purposes of ascertaining achievability. See *CVAA Report and Order and Notice of Proposed Rulemaking*, 27 FCC Rcd 12204, ¶ 135 (2012) (“[I]f an accessibility feature has been implemented for competing products or services, we find that such implementation may serve as evidence that implementation of the accessibility feature is achievable. To ignore such evidence would deprive the Commission of a key element of determining whether achievability is possible.”). Yet, the Commission has not identified a single OTT application that offers text-to-911 with the features that consumers have come to expect in the context of voice services. Indeed, with respect to *CMRS providers*, the Commission acknowledges that “significant changes and upgrades” would be “overly burdensome” for *CMRS providers* to provide text-to-911 location services in accordance with the Commission’s Phase II E911 location accuracy rules. See *FNPRM* ¶ 123.

applications. The “nature and cost of the steps needed” to locate an OTT application and then route that call to the TDM-based 911 network via third party gateways simply cannot be sustained under the CVAA. Not only is it outside the scope of the CVAA’s mandate to enable access to an IP-enabled emergency network, but it also fails Congress’ achievability test established in the CVAA.

1. Title III

The Commission must moor all regulations issued pursuant to Title III to a distinct grant of authority within the statute.⁹ The *FNPRM* sets forward several possible Title III anchors, but none applies to over-the-top providers and applications. Several of the cited sources reach only Commission spectrum licensees:

- 47 U.S.C. § 303(b) authorizes the Commission to “[p]rescribe the nature of the service to be rendered by each class of licensed stations and each station within any class.”
- 47 U.S.C. § 303(g) states that the Commission shall “encourage the larger and more effective use of radio in the public interest.”
- 47 U.S.C. § 307 authorizes the Commission to grant station licenses.
- 47 U.S.C. § 309(j)(3) directs the Commission in the context of competitive bidding for wireless licenses to encourage “(A) the development and rapid deployment of new technologies, products, and service for the benefit of the public . . . without administrative or judicial delays . . . [and] (D) efficient and intensive use of the electromagnetic spectrum.”
- 47 U.S.C. § 316(a) authorizes the Commission to modify existing licenses to impose new license conditions if, in the judgment of the Commission, such action will promote the public interest, convenience and necessity.

With respect to 47 U.S.C. § 301, which the Commission also cites as potentially supporting its attempt to reach OTT applications, the provision merely states that “[i]t is the purpose of this [Act], among other things, to maintain the control of the United States over all the channels of radio transmission; and to provide for the use of such channels, but not the

⁹ *Cellco Partnership v. FCC*, 700 F.3d 534, 542 (D.C. Cir. 2012).

ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority.” As a pure policy statement, this provision does not provide any additional authority.¹⁰

Finally, the Commission cites 47 U.S.C. § 303(r), which states that the Commission may “prescribe such restrictions and conditions, not inconsistent with law, as may be necessary to carry out the provisions of this [Act].” This provision is too general and non-substantive to offer, by itself, the requisite rulemaking authority.

Title III confers “broad authority to manage spectrum.”¹¹ However, consistent with the Supreme Court’s guidance that Title III does not “confer an unlimited power,” none of these provisions authorizes the Commission to directly regulate over-the-top applications that are offered without an associated Title III radio license.¹²

In the *FNPRM*, the Commission also asks whether it has “authority to impose regulations on CMRS providers that indirectly affect third-party providers.”¹³ More specifically, it asks “does the Commission have authority to require CMRS providers to take steps to prevent the use of certain third-party applications that do not support text-to-911?”¹⁴ There would be serious legal and policy problems with this approach. First, it would represent a dramatic expansion of Commission power without an established limiting principle. The logic of such an expansion, for example, would permit the Commission to regulate mobile banking, health applications, the price that carriers charge music download companies, or other areas far outside of its core

¹⁰ See *Comcast*, 600 F.3d at 652-55.

¹¹ *Cellco*, 700 F.3d at 542 (quoting *Data Roaming Order*, 26 FCC Rcd at 5440 at ¶ 62).

¹² *NBC*, 319 U.S. at 216.

¹³ *Further Notice* ¶ 171.

¹⁴ *Id.*

domain. There is simply no statutory basis upon which the Commission can justify such a broad expansion of its authority.¹⁵

As a policy matter, encouraging CMRS providers to censor applications would directly contradict the values animating the *Open Internet Order* as well as other Commission and Government efforts to ensure that wireless service providers do not unduly restrict the applications to which users have access. The Commission implicitly acknowledges this tension in the *FNPRM* when it asks whether the “indirect” Title III approach would “be consistent with the Commission’s open platform requirements for the 700 MHz C Block and other agency precedent[.]”¹⁶ The answer to that question is “No.”

B. Ancillary Authority

For the Commission to have ancillary authority, there must be a specific statutory provision providing general authority, to which the proposed regulation is truly ancillary.¹⁷ Here, however, Congress did not direct the Commission to make over-the-top applications interoperable with the legacy 911 network. Instead, it directed the Commission to work towards a next generation IP-enabled 911 network and, when that day arrives, to implement 911 solutions. So to claim ancillary authority to adopt rules pursuant to the CVAA on the legacy 911 network would run directly counter to Congressional intent.

¹⁵ Moreover, in contrast to the proposal here, the “indirect” regulations the Commission imposed under the CVAA to improve accessibility were grounded in a specific statutory mandate and represented the narrowest regulatory approach to resolving the tension between, on the one hand, statutory references to the accessibility of software and, on the other hand, statutory authority granted only to regulate the manufacturers of “equipment” and not software makers. *See Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010, Report and Order and Further Notice of Proposed Rulemaking*, CG Dkt. No. 10-213, WT Dkt. No. 96-168, CG Dkt. No. 10-145, 26 FCC Red 14557 (2011) ¶¶ 52-80.

¹⁶ *Further Notice* ¶ 171.

¹⁷ *See Comcast*, 600 F.3d at 654-61.

Moreover, the Commission’s reasoning would establish it as the potential regulator of many software applications, because in the future many applications will have voice or text messaging capabilities. The courts have looked askance at the Commission’s assertion of ancillary authority over entities never before regulated unless the claim is especially well-grounded. As the D.C. Circuit held in the *Broadcast Flag* case, for example, because there was no statutory foundation for the broadcast flag rules, “consequently the rules are ancillary to nothing.”¹⁸

II. THE IMPLEMENTATION OF ANY MANDATE WOULD BE IMPRACTICAL AND UNNECESSARILY CONFUSE CUSTOMERS

A. Without access to accurate location information, OTT texts cannot be routed to the appropriate PSAP.

As mentioned above in Section I.A.3, an equally problematic and fundamental problem with any mandate for over-the-top text messaging to 911 is the technical difficulties providers have in identifying and transmitting the location of their users and the appropriate PSAP. The problem is well-known and not easily solved. To locate users of wireless services with a reasonable level of confidence, there must be the ability to identify the location of the access point from which the user’s device is communicating. Although GPS may enable the device itself to calculate its location without any assist from the network infrastructure, GPS alone has limitations indoors and in dense urban areas that make it insufficient for locating a user in emergency situations. As such, while it is and will continue to be a critical component of location solutions, GPS alone cannot be a substitute for the location information available from the network access points. Unfortunately, in contrast to CMRS carriers, OTT applications and their providers do not today have access to or control over reliable wireless network location

¹⁸ *Am. Library Ass’n*, 406 F.3d at 692.

information. Over-the-top applications are provided by entities typically unaffiliated with the operator of the network upon which they are being transmitted, can be used across any type of broadband-enabled device on any network, and can be used in nearly any place and in any terrain in the world. All of this means that the location challenges, which have proven quite significant in the wireless carrier context, are even more complex in the context of over-the-top applications.

Today's commercial location-based services do not rely on location information provided by the underlying network provider on which the application (for which location information is needed) is riding. Rather, commercial location-based services traditionally have relied on location data obtained through the manual geo-mapping of Wi-Fi routers and other access points to a GPS location. This is often done by driving a vehicle through cities, towns, neighborhoods, etc. that records MAC addresses of Wi-Fi routers that can be seen at a given GPS location or via crowdsourcing capabilities that enable the collection of data about cell site locations and/or other access points. The GPS location associated with the viewed MAC addresses and/or cell site information is then associated with GPS of the vehicle being driven or the mobile handset through which the crowdsourcing occurs. This provides a useful set of tools for providing general location information when searching for a restaurant, but it has significant limitations for use as a location tool in an emergency situation, particularly since the location information cannot be validated and audited over time. The information is collected and used on strictly a best efforts basis. For instance, router locations registered in the database cannot be verified with the entity controlling the router/access point. Moreover, recorded Wi-Fi routers can be moved when owners re-locate, perhaps to a completely different city. Also, the database cannot verify MAC addresses, which also can be changed.

These are not necessarily insurmountable challenges – and VON members already are participating in industry working groups such as ETSI’s M493 to find avenues to attempt to overcome them – but they will require significant cooperation across a broad set of entities (e.g., providers of WiFi access, wireless services, OTT application developers, emergency services vendors and providers) and standardized global approaches. Commission intervention at this time would short-circuit the necessary industry collaboration.

As VON noted in its earlier comments, the option of relying on the handset’s native SMS dialer (discussed in the *FNPRM* at para. 96) appears to be technically feasible, as long as the FCC limits the requirement, as proposed by Apple, to text applications that are in use (i) on a CMRS network (as the FCC proposes in its draft rules at 20.18(n)(6)(b)) and (ii) on a device that “determines the user’s location using a technology that meets the enhanced 911 requirements set forth in Section 20.18(h) of the Commission’s rules.” *FNPRM*, para. 87. While more time is needed to determine the appropriateness of this solution, from both a technical and legal perspective, this approach may be the most expedient because it relies on the carrier’s underlying SMS-to-911 infrastructure. The value of doing so is that it (1) is already a part of the existing 911 system; (2) can determine the cell site from which the text originated so the text is routed appropriately; (3) is compatible with the existing TDM/PSAP capabilities of the 911 network; and, (4) will be in place on the four nationwide carriers by June 2014.

B. Even if location information were available, it is not practical or reasonable to require OTT applications to rely on a third party gateway.

As VON noted in its earlier comments, the Commission should not impose any obligations that would require OTT applications to communicate with a third-party gateway. While the EAAC Text-to-911 report includes a basic description of the architecture that might support an OTT text-to-911 gateway, detailed technical specifications for the gateway still need

to be developed and, once developed, implemented and tested by the parties who would be interoperating with those gateways. It will be important for the appropriate standards and technical bodies to guide the development of this architecture. Until the work on the specifications is complete, it is difficult to assess the time that would be required to then implement and test the architecture from end-to-end. However, these specifications will be of little use until, as noted above, there is an industry-agreed upon solution for reliably locating the user originating the text to 911. Without reliable location information, the gateway would have no way of knowing to which PSAP it should route an OTT text. This critical mechanism does not yet exist and would have to be developed and standardized as well.

Resolving these third party gateway technical challenges would not only take time, but once resolved, would impose significant costs on providers of software applications – many of which are small businesses offering innovative IP-based capabilities at little or no cost to consumers. The introduction of third-party gateways and vendors (and, thus ongoing payments to and coordination with those vendors) into the application provider’s service – something that would be necessary only if providers were required to try to bootstrap the legacy TDM 911 system onto Next Generation IP services – introduces complexities and points of possible failure, as well as costs the developer did not anticipate. VON understands that many third-party vendors typically charge monthly per-subscriber fees (regardless of whether or how many subscribers ever use the application to try to reach 911), in addition to upfront set-up costs. Such per-subscriber costs, or even per-transaction costs, could quickly tip an otherwise successful business model on its head as the costs approach the revenues (if any) made by the application provider. If the FCC were to take this approach, it would stifle innovation and limit the growth of applications that consumers have come to expect and enjoy. It also bears mentioning that

many of these IP-enabled applications are designed for a global market. It is not clear that all potentially impacted software developers will be aware of this new regulatory obligation.¹⁹

C. The proposal to include OTT applications would increase consumer confusion.

The potential for consumer confusion from regulation in this area is manifest. As discussed above, VON endorses keeping the scope of any new obligations as narrow as possible. Any line drawing among the various types of OTT texting applications would likely confuse consumers. There are potentially hundreds of texting applications that consumers use every day, including one-way applications and applications that rely on all users to have downloaded the same texting software. Another distinction depends on the device that is used: The FCC appropriately proposes that the new rules would apply only to the extent the interconnected text application is used on certain devices – “mobile devices” – and in certain circumstances – when used on a “CMRS network” (see proposed rule (6)(b)). The result, however, would be a requirement that may apply to an application only when it is on a smartphone or tablet when the device is on a mobile operator’s 3G or 4G network, but not when it is on a smartphone or tablet that is connected only to an 802.11 network. Thus, the consumer who successfully reached 911 on Monday via an interconnected text application on her phone while connected to a carrier network, would fail to reach 911 on Tuesday using the same application on the same device when connected to a WiFi hotspot. Similarly, a consumer who reached 911 via a text application on her smartphone may not be able to reach 911 using that very same application on her Internet-

¹⁹ In its Reply Comments on the Commission’s bounce-back message proposal, NENA recognized that reaching OTT applications may have unique technical challenges that will reach application developers who may not even be aware the Commission is considering regulating their software. NENA Reply Comments at 3 (“NENA...cautions that the lack of *any* participation in this docket by [interconnected text] providers may indicate a need for further consideration of the unique technical considerations (and resulting timeframes) applicable to such applications.”).

connected computer or television.²⁰ These points highlight the importance of the FCC limiting any obligations on IP services to the next generation 911 scenarios, and not pulling these services into legacy 911 solutions.

D. Text-to-911 requirements should not be imposed without liability protection.

Lastly, the FCC should take no steps to impose text-to-911 requirements on OTT messaging applications without ensuring that those offerings have the same liability protections provided to carriers that provide voice 911 calling services today. This is particularly important given that the OTT text-to-911 obligation would be imposed on an entity – the application developer/service provider – that has no ability to control or ensure the accuracy of the location information upon which routing decisions will be made. The application provider must rely on location information provided by a third party (whether the underlying network operator or a provider of commercial location services). In light of this and the other numerous technical limitations and complexities described above, the Commission should take steps to ensure liability protection is available to the entities upon which it seeks to impose this new regulatory requirement.

²⁰ In addition, some of the top VoIP providers provide mobile texting applications for their customers to use in conjunction with services tied to their landline phone. The inability to determine which device originated the text message further exacerbates the technical challenges and consumer confusion that would result if text to 911 services were expanded.

CONCLUSION

The VON Coalition urges the Commission not to adopt any new obligations at this time on interconnected text applications to provide texts to current generation 911.

Respectfully submitted,

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