Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 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 CENTURYLINK

I. CENTURYLINK SUPPORTS THE COMMISSION TEXT-TO-911 OBJECTIVES BUT BELIEVES INTERCONNECTED TEXT PROVIDERS WILL NEED LONGER THAN END OF YEAR 2014 TO ACHIEVE THE OBJECTIVE.

CenturyLink appreciates the Commission's ongoing commitment to bringing text-to-911 functionality to the public through "a technologically-neutral approach that provides platform-independent norms for all stakeholders."[1] While understanding the seriousness of the matter, CenturyLink believes that the Commission's Policy Statement regarding text-to-911 creates considerable challenges for interconnected text providers[2] (such as CenturyLink is considering to be) that are over and above those that can be anticipated from the Commission's extension of its text-to-911 requirements to a larger base of CMRS providers.

As the Commission notes, interconnected text providers may have "unique technical

[1] *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications; Framework for Next Generation 911 Deployment*, Policy Statement and Second Further Notice of Proposed Rulemaking, FCC 14-6, PS Docket Nos. 11-153 and 10-255, rel. Jan. 31, 2014 ¶ 15; 79 Fed. Reg. 10807 (Feb. 26, 2014); 79 Fed. Reg. 12442 (Mar. 5, 2014) (*2013 Second Further Notice*).

[2] The Commission defines such providers as providers whose "applications use IP-based protocols to deliver text messages to a service provider and the service provider then delivers the text messages to destinations identified by a telephone number, using either IP-based or [Short Message Service] SMS protocols." *Id.* n. 9 (citation omitted).

complexities . . . in implementing text-to-911."[3] As a consequence, CenturyLink is not certain that the Commission's proposed December 31, 2014 implementation date to have such functionality in place is achievable for all text providers, particularly interconnected text providers. We therefore urge the Commission to provide for an alternative timeline (extending at least into the middle of 2015) or to be open to waiver requests of any end-of-the-year deployment date mandates. Even if some interconnected text providers are able to meet an end-of-2014 deadline to implement a text-to-911 functionality, it is not clear that all could. Those providers who are not also Over The Top (OTT) providers[4] may face additional technical and implementation challenges.

II. CENTURYLINK HAS TENTATIVE PLANS TO BECOME AN INTERCONNECTED TEXT PROVIDER IN THE NEXT 12 MONTHS.

CenturyLink is planning on becoming an interconnected text provider later in 2014 or early 2015. We intend to offer a texting service as part of an enhanced consumer VoIP product. Any time a consumer of ours is "online through our VoIP service," she would be able to text to either another CenturyLink VoIP customer or to a wireless telephone number anywhere in the world. And such texting would be able to be accomplished through a multitude of devices -- any device that would have a browser and an Internet connection[5] that would allow access to CenturyLink's VoIP platform (*e.g.*, smartphones, tablets, laptops).

CenturyLink's VoIP-associated text messages would be in SIP protocols. The text message could be delivered to other CenturyLink VoIP customers using this protocol without

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[3] *Id.* ¶ 20.

[4] *See* definition at n. 14 ("'Over-the-top' generally refers to applications that operate on Internet protocol (IP)-based mobile data networks and that consumers can typically install on data-capable mobile devices.").

[5] Essentially CenturyLink customers will be able to text from our VoIP platform from anywhere they can find an Internet connection (*e.g.*, WiFi, wired Internet, wireless data, and so on).

conversion. However, we need some mechanism to get the VoIP text message converted to an SMS message protocol when the target of the text is a wireless telephone number. We have partnered with a text-processing vendor who will be able to process both types of texts (a Service Message Center (SMC)). The vendor will take a CenturyLink SIP-based text message, convert it to an SMS format when necessary, and then deliver it to the right wireless carrier with respect to the texted-to mobile number (and process the reverse transaction).

As an operational matter, for this type of texting service, neither CenturyLink nor our vendor needs to know the location of the person who is sending the text. The content of the text message is location agnostic, beyond the necessity of getting to the right wireless carrier.[6] Obviously, this is not true with respect to text-to-911 situations. It is probable that some kind of coarse or precise location information is necessary for the text to be meaningful with respect to the location of the emergency or for the right PSAP to be identified and contacted. But even if CenturyLink were able to create a text-to-911 functionality, it would not deliver even coarse location information, but rather registered subscriber location information.[7]

The type of service offering that CenturyLink contemplates does not fit within any of the

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[6] Interconnected texting may make some limited use of location functionality built into a particular device, but it does not necessarily do so. As the Commission notes, some OTT text "applications already obtain the user's location for non-emergency purposes." And some may even include "GPS-based location information with the text content" to educate the routing of the text. *2013 Second Further Notice* ¶ 33. While many of the devices that customers may use will have some kind of geographic-locator capability (to "follow me" to the store, or to find friends, or to locate the closest retail outlet of my interest), all of these capabilities can (and likely will) vary in terms of design and utility regarding 911 location needs, and some may even be proprietary. *See id.* ¶ 22, referencing the VON Coalition Comments, filed herein Mar. 11, 2013, at 10.

[7] As the VoIP service provider, CenturyLink would know the "registered location" address of our subscriber. That address will have been provided to us in line with Commission rules. 47 C.F.R. § 9.3. And the subscriber will be responsible for changing that address when he changes location to a different physical space. This clearly presents challenges for customers "on the move," who may access CenturyLink's VoIP service through a device outside their primary or most-used location; still it remains the subscriber's responsibility to meet that challenge.

architectures proposed by the *2013 Second Further Notice* in terms of text-to-911 delivery. To the best of CenturyLink's knowledge, there currently exists no industry standard relating to the type of interconnected text offering we contemplate. And, our current texting partner is not intending to support a text-to-911 application.[8] It has advised CenturyLink that we should look elsewhere for a provider that could assist us in creating the ability to forward a text-to-911 message to an appropriate PSAP in the context of our VoIP texting service.

Consequently, CenturyLink has approached a different vendor with a history of working successfully with CMRS providers to implement a text-to-911 capability. Those conversations are at the very early stages. Not even a prototype architecture has been defined; and no cost information has yet been exchanged. Both will be critical to CenturyLink's determination whether to proceed.

While it is *possible* that the vendor's potential solution could be priced appropriately and be able to be deployed in a matter of months, CenturyLink doubts (based on routine experiences with vendors) that such would be the case. Moreover, there is no certainty that the cost of creating the ability to do even a rudimentary text-to-911 capability could be absorbed in the product price and still be a VoIP offering attractive to our customers.[9] In that case, CenturyLink

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[8] While CenturyLink is unable to process text-to-911 messages at this time, CenturyLink will be able to provide the "bounce back" capability the Commission ordered in 2013. *See Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications*, Report and Order, 28 FCC Rcd 7556 (2013) (*Bounce-Back Order*).

[9] CenturyLink expects that such costs would include up-front development costs, including modifications to our VoIP platforms and links to interconnect with a text-to-911 partner. At this time, we cannot confirm the relevancy or accuracy of the Commission's COCOMO II cost estimate (approximately $4,500 per provider per platform (*2013 Second Further Notice, id.* ¶ 35)). It is too early in CenturyLink's investigation for us to reasonably predict what our implementation costs might be. We would likely also incur per-month, per-subscriber costs (similar to that associated with VoIP 911 voice calling) that we would be expected to pay our texting-911 partner. *Id.* ¶ 34 citing to the VON Coalition Comments at 12 (referencing this cost-model). And, as the *2013 Second Further Notice* indicates, customer outreach efforts would

would have to look at deploying our consumer VoIP product without texting functionality at all. We want to avoid this outcome because we believe the failure to integrate a texting functionality into our product diminishes its overall value to our potential customers.

III. THE LOCATION INFORMATION THAT CENTURYLINK WOULD PASS IN A TEXT-TO-911 CONTEXT THROUGH OUR VOIP OFFERING WOULD BE REGISTERED-SUBSCRIBER ADDRESS INFORMATION.

Even assuming CenturyLink could create a text-to-911 functionality at a reasonable cost to market, the location information that would be delivered to the texted party (the PSAP) would not even be coarse location information, as the Commission uses that term (*i.e.*, location to a cell cite).[10] Rather, because a CenturyLink customer would be texting to 911 while in a VoIP "session," the information that would be sent to the 911-texting partner would be the registered location address supplied (and updated) by the subscriber. By way of example, and assuming that text-to-911 was "activated" by various texting providers: If Mary takes her tablet to the mall and is surfing the web at a WiFi spot, never having entered into a CenturyLink VoIP session, and she texts to 911, that texting transaction would be accomplished through some other texting service provider or OTT application.[11] But if Mary has initiated a CenturyLink VoIP communication session and is in that application, a text-to-911 would be processed by CenturyLink and its texting partner. Since the only location information CenturyLink has as an inherent part of its VoIP service is Mary's registered location, that is the location information

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generate costs as well (*see id.* ¶ 36).

[10] The Commission has stated that a "critical factor" in the successful implementation of a text-to-911 functionality by interconnected text providers is the identification and deployment of "a technical solution that will support 'coarse' location of application users so that . . . texts can be routed to the correct PSAP." *Id.* ¶ 23 (footnote omitted). And the long-term goal is "to ensure that interconnected text messages to 911 have more accurate location information" to route to PSAPs. *Id.* ¶ 43, *and see id.* ¶ 42. This may mean "using the location application programming interface (API) in the mobile device" *Id.* ¶ 43, *and see* n. 6, above.

[11] If we eliminate the assumption that text-to-911 functionality was operational, Mary would get a bounce-back message and would likely attempt the text through her phone.

that would be delivered to the PSAP. *If* Mary had updated her location to that of the mall (assuming she even knew the address), and 20 minutes of time had gone by to allow for the change-of-address information to be processed, then the address of the mall would be provided -- likely the actual location of the emergency.

But subscribers may not be as diligent as they are expected to be in terms of updating their registered location. Should Mary neglect to update that address when she utilizes the VoIP service in a nomadic mode (*e.g.*, through a mobile device at a different location), the location information provided to the texting partner will be incorrect, resulting in the text being sent to possibly the wrong PSAP, something CenturyLink predicts would not be unusual.

IV. IT MAY BE IN THE PUBLIC INTEREST TO FORBEAR FROM REQUIRING VOIP PROVIDERS WHO ALSO PROVIDE TEXTING TO ACTIVATE A TEXT-TO-911 FUNCTIONALITY AT THIS TIME; OR BE OPEN TO WAIVER REQUESTS.

As outline above, CenturyLink would not be able to provide coarse or precise location information when it rolls out its texting service, because its VoIP servers know only the customer's registered location. Unless that location was actually the customer's precise physical location (which could be the case), there would be a disconnect between the two.

CenturyLink believes that the amount of time one of our customers would be traveling about with a mobile device, accessing the Internet (often through WiFi), might be often; yet the amount of time they would be in an active VoIP session during their travels would be limited. Accordingly, it is not clear to CenturyLink that pursuing a text-to-911 functionality through a VoIP service offering makes sense or serves the public interest at this time. It is highly likely that in this situation, any text-to-911 would be directed to a wrong PSAP.

It may serve the public interest better for the Commission to exclude at least some VoIP offerings that incorporate texting functionalities generally from its text-to-911 mandate, at least

until such time that the technical capability to provide coarse location information (or even more accurate information) is developed. The record demonstrates that there is work ongoing in this area. While an individual would not be able to text-to-911 if the Commission were to exclude such providers from such obligation, a bounce-back message would be delivered to the individual advising them that a text-to-911 could not be accomplished. In CenturyLink's opinion, this would be a better public-interest outcome than potentially (maybe likely) sending information to a wrong PSAP, utilizing their valuable time and resources pursuing an uneventful response. And it is probable that a text-to-911 from the device itself, if using a WiFi connection, would work and pass more accurate information.

Alternatively, the Commission should consider granting a waiver to interconnected text providers (or at least a subset of them, such as VoIP-texting providers) of a text-to-911 mandate until such time as further headway is made on the technology and standards fronts in terms of location-information delivery. Particularly in the case of VoIP providers offering texting services, an argument can be made that the VoIP offering is "designed primarily for purposes other than"[12] providing texting (an ancillary feature, at best). As such, a waiver would be warranted.[13]

Despite the fact that the current interconnected texting landscape is likely varied based on service providers, platforms and technologies, CenturyLink agrees with the VON Coalition that the challenges are not "'necessarily insurmountable'" but "'will require significant cooperation

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[12] *See Second Further Notice* ¶ 56 (discussing the issue of waivers in the event text-to-911 mandates are established and comparing the Commission authority, under the Communications and Video Accessibility Act (CVAA), to grant waivers of the accessibility requirements when in the judgment of the Commission the feature, function or device was not designed primarily for the purposes of accessing advanced communications).

[13] In the event the Commission does not provide some kind of relief, service providers will remain free, of course, to seek individual waivers based on specific circumstances.

across a broad set of entities….'"[14] This kind of predicate collaboration is just beginning and it could be years before a working text-to-911 functionality will be available across the various interconnected text and OTT providers with the kind of robust and useful location information the Commission aspires to. CenturyLink is confident, though, that through the collaborative efforts of the communications and equipment industries, ubiquitous text-to-911 will become a reality.

Respectfully submitted,

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[14] *Second Further Notice* ¶ 22 (*and see* ¶ 15 regarding the need for high-level functional standards among multi-stakeholder group); Comments of CenturyLink at 9, filed Mar. 31, 2014 in GN Docket No. 14-25, *FCC Seeks Public Comment on Process Reform* ("CenturyLink agrees…that 'multi-stakeholder approaches have proven especially effective…' and that 'the most successful multi-stakeholder groups tend to be those which…seek to set standards and best practices["] (citation omitted)); *Second Further Notice* ¶ 22 quoting from VON Coalition Comments at 10 (referencing the need for global standards-setting initiatives since implementing reliable location features in connection with emergency services is an international issue).