



February 3, 2012

By electronic filing:

Marlene Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: Notice of *Ex Parte* Meeting – Facilitating the Deployment of Text-to-911 and Other Next Generation Applications, PS Docket No. 11-153 and Framework for Next Generation 911 Deployment, PS Docket No. 10-255

Dear Ms. Dortch:

At the request of Commission staff, on February 1, 2012 Steve Edwards, Brian Rosen, and I on behalf of Neustar met with David Furth, Jerry Stanshine, Erika Olsen, Patrick Donovan, David Siehl, Tom Beers of the Public Safety and Homeland Security Bureau; Karen Strauss and Cheryl King of the Consumer and Governmental Bureau; Henning Schulzrine of the Office of Strategic Planning; John Healy of the Office Engineering and Technology and Sean Lev of the Office of the General Counsel to discuss the interim text-to-911 proposal that Neustar demonstrated to Chairman Genachowski on September 16, 2012.<sup>1</sup>

Neustar explained, as it did in its comments in this proceeding,<sup>2</sup> that Neustar's method allows 911 text messages to be routed to the correct PSAP and allows the PSAPs to obtain accurate location information. Neustar's approach involves the user sending a normal SMS text message to 911. The 911 bound text message is routed to a Neustar SMS gateway which queries the network to retrieve the serving cell ID. The gateway then uses the serving cell ID in a manner identical to 911 wireless call routing to enable sending the text to the correct PSAP. Neustar then converts the message into a text telephone ("TTY") protocol and sends the message as a TTY audio call to the PSAP over the VoIP Positioning Center (VPC) and Emergency Services Gateway (ESGW) system presently used by VoIP carriers. The PSAP receives an audio call from the Selective Router just as it would a normal TTY call, and receives the message over its standard TTY equipment. The PSAP call taker is able to have a two way message exchange with the texter. The PSAP is able to query the ALI system for location, which, if initiated early in the

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<sup>1</sup> See Letter to Marlene Dortch, Secretary, Federal Communications Commission, from Scott Blake Harris, Executive Vice President, Neustar, Inc., Re: Notice of *Ex Parte* – Framework for Next Generation 911 Deployment, PS Docket 10-255, September 16, 2011.

<sup>2</sup> See Neustar Comments, 3-5.

session, will return a cell based (“Phase I”) location but later in the call will return the actual caller (“Phase II”) location, using the same mechanisms used to determine the caller’s location for a voice call. In Neustar’s demonstration for the Chairman, we texted from three different handsets via the AT&T, Verizon and Sprint networks to the District of Columbia and Loudoun County PSAPs. Neustar has also tested with the Tarrant County, TX PSAP. In these tests, commercial SMS gateways and commercial location services were used.

Regarding location, Neustar reiterated that some wireless networks do not have the ability to query for the serving cell/sector for callers that are not in a voice 9-1-1 call and would need to be upgraded with this capability for the Neustar solution to be able to accurately route text messages. Neustar also explained that some wireless operators use network based location determination mechanisms that depend on the handset being in a voice call to receive enough measurement data to determine the location of the caller accurately. Such networks could not be expected to respond with high resolution location information for texters.

Neustar believes that its approach can be deployed relatively quickly and relatively inexpensively across the United States. Although not a perfect solution, this solution also provides a starting point for a staggered progression to more advanced messaging capabilities on a locality by locality basis. In response to a question, Neustar assured Commission staff that its gateway could allow an upgraded PSAP to receive text directly via i3 compatible signaling. Neustar acknowledged that its proposal needs more testing and reiterated its willingness to participate in trials of its approach with any interested carriers. Neustar also agreed to set up a demonstration for the Commission staff. Neustar explained that it is considering multiple options for offering its approach to carriers if the proposal proves out through testing, and, if granted its pending patent, will consider licensing that patent to other providers on reasonable and non-discriminatory terms.

In the course of the meeting, there was discussion of the ability to maintain the fidelity of TTY signaling over a VoIP network both for the Neustar SMS gateway and for normal consumer use of TTY on VoIP networks. In particular, there was discussion about packet loss, echo cancellation and recording tone. Neustar stated that its testing indicates that these issues can be minimized or eliminated by using good network engineering practices, although all forms of TTY would be enhanced by support of RFC4103 in gateways between a TTY and a PSAP. In addition, there was discussion of the half duplex nature of TTY and the garbling that can occur if the texter and the PSAP call taker send messages over the top of one another.<sup>3</sup> Neustar explained that its gateway addresses this by sending the appropriate signal (GA for go ahead) at the end of the texter’s message and by holding additional messages until GA is sent by the PSAP call taker. Neustar acknowledged, however, that the human factor in handling TTY messages is significant and additional training of PSAP personnel will be required so that they handle such messages appropriately.

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<sup>3</sup> This issue was also raised in the ATIS INES Report. See *ATIS Interim Non-Voice Emergency Services (INES) Report and Recommendations*, December 12, 2011 at 5.

Neustar was asked whether a text-to-voice/voice-to-text solution could work to which we responded that we did not believe such a system would be sufficiently reliable, particularly in the voice-to-text solution. In response to another question about the advisability of having a human interpreter between the gateway and the PSAP would be preferable to TTY, Neustar expressed its view that the most experience we have in this regard is within the deaf and hard of hearing communities and they would prefer direct connection to PSAPs rather than having the intervention of a relay operator.

In response to a question from staff, Neustar again suggested that having ATIS and/or 3GPP produce a standard to align IMS with the NENA/IETF interface was very important but, while not optimal, existing IMS standards together with existing NENA/IETF standards were sufficient for vendors to begin producing products that would allow IMS networks to send 9-1-1 calls to i3 compliant ESInets.

Neustar appreciates the opportunity to meet with Commission staff and looks forward to continuing to work with the Commission, industry and the public safety community as we strive to resolve these important issues.

Please do not hesitate to contact me if you have any questions regarding this submission.

Sincerely,

/s/

Aaron Goldberger  
Associate General Counsel

cc: David Furth  
Jerry Stanshine  
Erika Olsen  
Patrick Donovan  
David Siehl  
Tom Beers  
Karen Strauss  
Cheryl King  
Henning Schulzrine  
Sean Lev  
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