Before The

FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Facilitating 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
	)	

REPLY COMMENTS OF TELECOMMUNICATIONS FOR THE DEAF AND HARD OF HEARING, INC.; DEAF AND HARD OF HEARING CONSUMER ADVOCACY NETWORK; ASSOCIATION OF LATE-DEAFENED ADULTS, INC.; DEAF SENIORS OF AMERICA; NATIONAL ASSOCIATION OF THE DEAF; HEARING LOSS ASSOCIATION OF AMERICA; CEREBRAL PALSY AND DEAF ORGANIZATION; COMMUNICATION SERVICE FOR THE DEAF; AND CALIFORNIA COALITION OF AGENCIES SERVING THE DEAF AND HARD OF HEARING

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I. Introduction

Telecommunications for the Deaf and Hard of Hearing, Inc. ("TDI"), Deaf and Hard of Hearing Consumer Advocacy Network ("DHHCAN"), Association of Late-Deafened Adults, Inc. ("ALDA"), Deaf Seniors of America ("DSA"); National Association of the Deaf ("NAD"), Hearing Loss Association of America ("HLAA"), Cerebral Palsy and Deaf Organization ("CPADO"), Communication Service for the Deaf ("CSD"), and the California Coalition of Agencies Serving the Deaf and Hard of Hearing ("CCASDHH") (collectively, the "Consumer Groups") respectfully submit these comments in the above-captioned proceedings. The Consumer Groups fully support the Commission's efforts to accelerate the deployment of Next Generation 911 ("NG911") technology, and to implement an interim text-to-911 solution to

ensure that all Americans, including those with disabilities, have access to fundamental public safety resources.

The Consumer Groups wholeheartedly agree with Chairman Genachowski's assertion that "the capability of our emergency response communications has not kept pace with commercial innovation – *has not kept pace with what ordinary people now do every day with communications devices,*" such that "[t]he shift to NG911 can't be about if, but about when and how."[1] Deaf and hard of hearing people need equal access to the emergency communications system and should be able to use the communications devices that they use every day in order to communicate with the emergency response system. To achieve these ends, the Consumer Groups urge the Commission to require implementation of direct SMS text-to-911 as an interim NG911 solution.[2] Although direct SMS text-to-911 has some shortcomings, SMS is the only text format that is supported throughout the country and on nearly all phones, including low cost phones that are readily affordable by all users.[3] Moreover, Neustar, Intrado, Rave Mobility Safety ("Rave"), Telecommunications Systems, Inc. ("TCS") and others are developing and testing SMS text-to-911 solutions that remedy many of the shortcomings of SMS as an interim

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[1] Press Release, *FCC Chairman Genachowski Announces Five-Step Action Plan to Improve the Deployment of Next Generation 9-1-1* (Aug. 10, 2011).

[2] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of L.R. Kimball, at 9 (Dec. 12, 2011) ("Kimball Comments") ("Kimball thinks a regulatory approach is necessary, just as it was for wireless E911.").

[3] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, *Consumer and Other Stakeholder Response to the "Accompanying Statement of the Industry Members of the EAAC,"* at 6 (Dec. 23, 2011); *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Reply Comments of Wireless RERC, at 4 (Jan. 10, 2012) ("Wireless RERC strongly supports the incorporation of text messaging (SMS)"); *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of the Rehabilitation Engineering Research Center on Telecommunications Access, at 4 (Dec. 12, 2011) ("RERC Comments") ("SMS will need to be part of any interim mobile text solution that would not leave out portions of the deaf community who need access to 911 either where they live or as they travel.").

solution before NG911 deployment.[4] The Consumer Groups appreciate this opportunity to provide the perspective of the deaf, late deafened, deaf-blind, and hard of hearing communities regarding implementation of interim text-to-911 solutions, including direct SMS text-to-911, educational outreach, and other measures needed to accelerate and smooth the transition to multi-media NG911 systems.

II. Use of IP Relay for 911 Is Already Required Under Commission Rules and Is Not An Adequate Interim Text-to-911 Solution

The Alliance for Telecommunications Industry Solutions ("ATIS") and others advocate use of IP Relay over all other possible interim solutions for communications using text-to-911 including the use of direct SMS, and SMS using either a national or regional relay centers.[5] IP Relay is not a new text-to-911 solution.[6] Rather, implementation of IP Relay to support calls to 911 is already required by existing Commission rules.[7] Moreover, IP Relay despite being in

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[4] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of Neustar, Inc., at 2-5 (Dec. 12, 2011) ("Neustar Comments").

[5] *Ex Parte* Presentation of ATIS to FCC Staff, at 1 (Dec. 20, 2012); *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of the Telecommunications Industry Association ("TIA"), at 5-6 (Dec. 12, 2011) ("TIA Comments"); *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of T-Mobile USA, Inc., at 3, 10, 13-14 (Dec. 12, 2011) ("Comments of T-Mobile"); *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of ATIS, at 5-7 (Dec. 12, 2011) ("ATIS Comments").

[6] ATIS Comments, Appendix 1, ATIS Interim Non-Voice Emergency Services ("INES") Report and Recommendations, at 29 (Dec. 12, 2011) ("ATIS INES Report") ("In and IP Relay call, the relay operator communications with the person with a hearing or speech disability via text and the person without the hearing or speech disability via voice. A person with disabilities must pre-register with the IP Relay service and be assigned a ten digit telephone number that the outside world dials to contact the user through IP Relay . . . A call from the user goes from the caller's compute, or other web-enabled device (mobile device), to the IP Relay Center via the Internet. The IP Relay Center is usually accessed via a Web page using an application").

[7] *Ex Parte* Presentation of ATIS to FCC Staff, at 10 (Dec. 20, 2012) ("FCC already requires IP Relay to handle 9-1-1 calls."); Comments of T-Mobile, at 14; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, E911 Requirements for IP-Enabled Service Providers*, 23 FCC Rcd. 11591, 11620, at ¶ 82 (2008); 47 C.F.R. § 64.605(b)(2) ("VRS or IP Relay providers must transmit all 911 calls, as well as ANI, the caller's Registered Location, the name of the VRS or IP Relay provider, and the CA's identification number for each call, to the PSAP, designated statewide default answering point, or appropriate local emergency authority that serves the caller's Registered Location and that has been designated for telecommunications carriers pursuant to § 64.3001"); *Telecommunications Relay Services and Speech-to-Speech*

existence for years, has not been widely embraced by the deaf and hard of hearing community because of its deficiencies, and has proven to be unsuitable for the majority of deaf and hard of hearing consumers.[8] Deaf and hard of hearing consumers have found IP Relay unsuitable because of the relatively long length of time it takes reach a relay operator and then get to the correct PSAP, the fact that the call will generally arrive on a non-emergency line, and other factors.[9]

In reaching its decision to promote existing IP Relay as an interim text-to-911 solution until deployment of full NG911 is completed, ATIS and many industry participants were driven by their own arbitrary assertion that the interim solution must be implemented no later than June 30, 2012.[10] For example, in the ATIS INES Report, ATIS concedes that "other options are available that are perceived to provide a solution *with better, more direct emergency text communications*, and more effective transition capabilities," however, ATIS dismisses these alternative solutions, including direct SMS, in large measure because they "would require longer

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Services for Individuals with Hearing and Speech Disabilities, E911 Requirements for IP-Enabled Service Providers, 24 FCC Rcd. 791 (2008).

[8] *See, e.g., Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of the King County E911 Program, at 3 (Dec. 12, 2011) ("King County Comments") ("Solutions to assist individuals with hearing or speech disabilities with accessing 911 should be a high priority . . . They cannot directly contact 911 with these devices. They must rely on video or *IP relay services, which have proven to be cumbersome and time-consuming* for communications with PSAPs, thereby causing delays in the delivery of emergency services.") (emphasis added).

[9] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of the Hearing Speech and Deafness Center, at 1-2 (Dec. 12, 2011) ("Often it would take average 4 or 5 minutes to connect to 9-1-1 agencies" for calls using IP Relay services); *Statement of Eve Hill Senior Counselor to the Assistant Attorney General for Civil Rights,* Department of Justice, Before the Senate Committee on Health, Education, Labor & Pensions, at 13 (Feb. 7, 2012) ("In most IP-based video- or text-relay services, the CA receives the call from the person originating the call, places the call to the PSAP, and then relays the conversation between the caller and the PSAP. *This process can result in harmful delays in reporting emergencies* or in requesting emergency assistance for individuals with disabilities.") (emphasis added).

[10] *See, e.g.*, ATIS Comments, at 5-7 ("the Incubator ultimately selected on solution - IP Relay - identified as the best solution from a technical perspective for interim emergency communications *within the June 2012 target timeframe*.") (emphasis added); *Ex Parte* Presentation of ATIS to FCC Staff, at 5 (Dec. 20, 2012); ATIS INES Report, at 1.

than June 30th, 2012 to prepare and implement nationally."[11] The June 30th, 2012 deadline appears to be an arbitrary creation of ATIS and other industry participants that slants ATIS' analysis in favor of IP Relay over direct SMS text-to-911, and other potential interim text-to-911 solutions. The National Emergency Number Association ("NENA") shares the Consumer Groups' concern "that the Incubator's self-imposed deadline for implementation of a recommended solution, June 2012, may have *skewed the results* of this otherwise highly beneficial effort."[12]

While the Consumer Groups underscore that they favor rapid deployment of an interim text-to-911 solution as rapidly as feasible, the Commission must strike a careful balance between the need to deploy *some* text-to-911 solution quickly, and the need to deploy a solution that provides direct communications, uses widely available handsets, including low cost handsets, and will be accepted and widely utilized by the deaf and hard of hearing community.[13]

T-Mobile USA, Inc. argues that the Commission "should not divert it or stakeholder's attention in pursing short-term interim SMS-to-911 solutions," that may "only last for a few years until carriers deploy IMS-based solutions."[14] Unfortunately, T-Mobile and others may be overly optimistic as to when full NG911 solutions will be available. Any so-called "interim" NG911 solution may well remain in place for an extended period of time in light of past experience with industry deployment of new 911 solutions and the often limited funds available

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[11] ATIS Comments, at 5; ATIS INES Report, at 1.

[12] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of NENA, at 3 (Dec. 12, 2011) ("NENA Comments") (emphasis added).

[13] NENA Comments, at 2 ("speed of deployment, standing alone, however, cannot ensure acceptable outcomes for the safety of the public."); RERC Comments, at 4 ("It is imperative that the FCC take action to ensure that some form of mobile text communication is available to individuals who are deaf between now and the time that the NG911 system can provide the long-term mobile text to 911 solution.").

[14] Comments of T-Mobile, at 2, 10-12.

to upgrade Public Safety Answering Points ("PSAPs").[15] NENA, for example, estimates that given the extant constraints "any short-term deployable technology will likely need to continue in use *for nearly ten years*."[16] While the Consumer Groups hope that is not the case, an arbitrary deadline of June, 2012 - a mere four months from now - should not drive the selection of an interim text-to-911 solution as the "interim" solution may be in place for an extended period in many areas of the country.

Despite their forceful advocacy for designating existing IP Relay as the interim NG911 solution, ATIS and industry participants recognize many of the limitations of IP Relay as an interim NG911 solution having noted that:

> (1) Automatic location is not possible with IP Relay. Therefore, users and communications assistants ("CAs") must spend time verifying the registered location or determining the location of the emergency before the 9-1-1 call can be routed to a PSAP. (2) *Advocates for Individuals with disabilities report that IP Relay is used only by a subset of users for routine communications, due in part to the cost of smartphones* that primarily support the required functionality. Greater user adoption of IP Relay for daily communications would improve familiarity with this approach, making its use in emergency situations easier and more natural. (3) Some users reported that the performance of IP Relay CAs in handling emergencies is lower than their performance handling daily communications. A review of CA training and qualifications could address this concern. (4) Emergency call processing *is inherently slower through a relay*/third party than methods that deliver the initial emergency call from the caller directly to the 9-1-1 system and the PSAP. (Typically, a relay-based solution *may require minutes rather than seconds*.).[17]

ATIS and industry participants acknowledge that IP Relay "is inherently slower" than many other methods of communicating to 911 systems and requires "minutes rather than

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[15] EAAC Report, at 19 ("NG9-1-1 will be adopted over time with different PSAPs migrating to NG9-1-1 at different times and it will be many years before the last PSAP migrates to NG9-1-1.").

[16] NENA Comments, at 2.

[17] ATIS Comments, at 7; *see, also, Ex Parte* Presentation of ATIS to FCC Staff, at 10 (Dec. 20, 2012) (emphasis added).

seconds."[18] Thus, although an IP Relay solution could be deployed quickly, it would likely significantly increase response times compared to other methods of communicating with 911.[19] In fact, the experience of deaf and hard of hearing persons demonstrates that the delays associated with IP Relay are unacceptable.[20] Deaf and hard of hearing people report that they have experienced delays of eight minutes or more due to the CA's difficulties in identifying the proper PSAP and other reasons.[21] Likewise, NENA asserts that IP Relay text "would likely result in significant increases to call length and round-trip lag time" for 911, whereas direct SMS would yield "lower average session lengths and round-trip lag time."[22] The ATIS INES Report identifies other deficiencies of IP Relay as a 911 solution including the fact that it "[d]oes not support one national number" for 911; the "handset must support at least one protocol in common with the IP Relay Service; and the "text communication session is not recognized as an emergency session by the handset or the network, and thus does not receive priority treatment as an emergency call."[23]

Further, use of IP Relay as an interim 911 solution would be expensive for many deaf and hard of hearing persons and would require them to purchase new smart phone hardware and data

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[18] ATIS Comments, at 7, 30 ("The IP Relay Center to PSAP call is not a 9-1-1 call and may take several minutes to establish, especially if user is in a different location than the pre-registered location.").

[19] NENA Comments, at 2.

[20] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of Krystallo Tziallila, at 1-2 (Dec. 14, 2011) ("If you had an emergency, how can you possibly think that calling through a relay and waiting forever for the rely to connect to 9-1-1 is acceptable? Are you willing to risk the lives of your family and children for this . . .") ("Tzialliala Comments").

[21] Tzialliala Comments, at 1-2; *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of William Ennis, at 1 (Dec. 12, 2011) ("From the time I was connected to [the] interpreter until I spoke with a local 911 operator it took 8 minutes").

[22] NENA Comments, at 4-5.

[23] ATIS INES Report, at 30-31.

plans that they cannot afford.[24] In general, to use IP Relay to place emergency calls, deaf and hard of hearing people must obtain a smart-phone with a data plan and often enter into a two-year contract, which is an economic burden for many.[25] Short Message Service ("SMS") on the other hand, is widely available on older handsets as well as newer phones.[26] Even ATIS recognizes this advantage of SMS technologies stating that: "SMS is widely available on mobile devices," and "[p]otentially provides all callers a text option."[27]

TIA proclaims that the INES "cast its net very wide in analyzing possible interim text-based solutions, finally settling on IP Relay after much discussion, [and] *consultation with the disability community*."[28] ATIS similarly notes that it "[c]onsulted with consumer advocates and incorporated their feedback."[29] While the Consumer Groups acknowledge they participated in two meetings with ATIS, these meetings occurred relatively late in the process rather than at the outset. Moreover, the Consumer Groups strongly opposed the adoption of IP Relay and other relay type services as the interim NG911 solution in their meetings with ATIS.[30] The recommendations of the ATIS INES Report do not reflect the views of the Consumer Groups

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[24] ATIS Comments, at 7 ("Advocates for Individuals with disabilities report that IP Relay is used only by a subset of users for routine communications, due in part to the cost of smartphones that primarily support the required functionality.").

[25] Wall Street Journal, *AT&T Stuck Behind Verizon: In Race to Win New Contract Customers, AT&T Falls Short* (Jan. 27, 2012) (AT&T "added 717,000 customers with lucrative two-year contracts in the fourth quarter."); EAAC, Report on Emergency Calling for Persons with Disabilities Survey Review and Analysis 2011, at Questions 11, July 21, 2011 ("EAAC Survey"). .

[26] Some newer phones such as Blackberrys do not use SMS as their transport protocol. EAAC Report and Recommendations, at 29 (Jan. 26, 2012) ("EAAC Report").

[27] *Ex Parte* Presentation of ATIS to FCC Staff, at 12 (Dec. 20, 2012); Kimball Comments, at 4 ("SMS has such a high level of penetration in the public market that to ignore it does a disservice to the public and their safety.").

[28] *See, e.g.*, TIA Comments, at 6 (emphasis added).

[29] ATIS INES Report, at 8, 10; *Ex Parte* Presentation of ATIS to FCC Staff, at 7 (Dec. 20, 2012) (noting discussions with consumer advocate organizations on July 7, 2011 and October 13, 2011.).

[30] ATIS Meeting, Tr. at 5 (Oct. 13, 2011)

and the vast majority of deaf and hard of hearing people. In fact, ATIS acknowledges as much in a recent *ex parte* noting that "SMS technologies are the preference of Advocates."[31]

III. Deaf and Hard of Hearing People Need a Direct Text-to-911 Solution that Permits Them to Use the Same Devices That They Use in Routine Communications For Emergency Communications

The EAAC's survey demonstrates that deaf, deaf-blind, late deafened, and hard of hearing people prefer 911 solutions that establish direct communications and do not involve relay because of the delays inherent in the use of relay and the need for direct communications. The EAAC's survey of people with disabilities reported that 77.1% of respondents thought it very important to communicate *directly* with a PSAP instead of through a relay service and 15% said it was somewhat important to have this capability.[32] Thus, 92% consider direct access to the PSAP to be important. The EAAC's recommendations appear to embrace this preference stating: "[a]nother key policy group recommendation is that consumers be able to call 9-1-1 *directly*."[33]

There is considerable support in the deaf, deaf-blind, late deafened, and hard of hearing community and among people with speech disabilities for the use of text to contact 911 and the use of SMS in particular because most people are familiar with SMS technology. The EAAC Survey found that: 48.1% of respondents stated that they would prefer to use text messaging to contact 911, and 31.6% would like to use voice, video and text together indicating that 79.7% would prefer to use text.[34] Moreover, 45.1% indicated they would like to use SMS over other

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[31] *Ex Parte* Presentation of ATIS to FCC Staff, at 12 (Dec. 20, 2012).

[32] EAAC Survey, at 29.

[33] EAAC Report, at 30 (emphasis added).

[34] EAAC Survey, at 22.

solutions.[35] Some 95% of respondents to the EAAC Survey stated it was important to be able to use *the same device* to call 911 that they use in their daily communications.[36] Likewise, a "key finding of the EAAC is that individual[s] with disabilities should be able to call 9-1-1 using the same means they use for everyday telecommunications."[37] As the EAAC observed: "[u]sers need to use familiar technologies and methods, such as text/ audio/ video communication, when calling in an emergency and therefore both want and need to be able to access NG9-1-1 from the *same devices they will use every day*."[38]

The need to use the same device in a similar manner as used in regular communications when in an emergency situation is not a mere matter of consumer preference.[39] To the contrary, studies of human behavior in emergency situations have established that people rely on their training (*i.e.*, normal behavior or reinforced behaviors) in high stress emergencies and are prone to making critical errors when operating beyond the boundaries of these normal behaviors. For example, investigators have concluded that an Airbus 330 aircraft (Air France Flight 447) stalled and plummeted into the Atlantic Ocean with the loss of 228 lives largely because of human error

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[35] EAAC Survey, at 23; EAAC Report, at 29 ("Consumers believe that [SMS] is an important part of the mobile text solution").

[36] EAAC Survey, at 30; RERC Comments, at 10. In our initial Comments, the Consumer Groups supported the deployment of Real Time Text ("RTT") at some point in the future. However, at present direct SMS text-to-911 is the preferred short term solution in part because RTT requires a special application and fails the criteria that consumers be able to use the methods they use for their daily communications to contact 911. *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of the Consumer Groups, at Section IV (Dec. 12, 2011).

[37] EAAC Report, at 19, 30 ("Call from Daily Devices: The EAAC recommends the FCC promulgate rules that individuals with disabilities be able to contact NG9-1-1 using the same devices that they (individuals with disabilities) use for daily communication . . . Based on user survey carried out by the EAAC, users overwhelmingly want to be able to call PSAPs using the same technologies they use daily and know how to use reliably (just as all other citizens can)").

[38] EAAC Report, at 19 (emphasis added).

[39] EAAC Report, at 19 ("If not used everyday the particular network segments and devices to be used to call PSAPs are not likely to work when the NG9-1-1 call is made. An emergency call should not be the way that problems or lack of interoperability in the network between a particular user or location and the PSAP are identified.").

and the temporary loss of air speed indicators.[40] Based upon analysis of the recovered black boxes, investigators concluded that these human errors occurred in part because the co-pilots were not trained for the failure of airspeed indicators at high altitude and responded to the situation in a manner more consistent with their training at low altitude but "totally ill-suited to the situation."[41] Analysts explained the disaster in part by noting that "[i]ntense psychological stress tends to shut down the part of the brain responsible for innovative, creative, thought" and "[i]nstead, we tend to revert to the familiar and well-rehearsed."[42] Thus, using the same technology in an emergency as used in daily communications is a matter of public safety as well as overwhelming consumer preference. SMS fills these critical requirements as many deaf and hard of hearing people already have a wireless device that supports SMS; they are familiar with the technology, and many use SMS on a daily basis.[43]

IV. The Consumer Groups Urge the Commission to Require Implementation of Direct SMS for an Interim text-to-911 Solution

The Commission requested comment on how it should encourage the development of interim text-to-911 capabilities before the long-term NG911 solution is available.[44] In the NPRM, the Commission examines the use of SMS[45] as an interim solution, and concludes "that PSAPs, providers, and vendors *should have the option to implement SMS-to-911* as a short-term

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[40] Jeff Wise, Popular Mechanics, *What Really Happened Aboard Air France 447*.

[41] *Id.*

[42] *Id.*

[43] APCO Comments, at 2.

[44] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, at ¶¶ 88-89 (Sept. 22, 2011) ("NPRM").

[45] NPRM, at ¶ 28 ("In SMS-based systems, the caller uses a mobile phone to send a short text message to the destination, which is typically either another mobile phone or an Internet-connected receiver. SMS messages are usually limited to 160 characters . . . .").

alternative."[46] As discussed above, ATIS and many industry participants oppose this view.[47] The Consumer Groups and a host of others support the Commission's view that PSAPs and stakeholders should have the option to implement direct SMS-to-911.[48] Moreover, the Consumer Groups recommend that the Commission go further than it suggested in the NPRM and require the implementation of direct SMS text-to-911 as an interim solution. Deployment of direct SMS text-to-911 is already happening in some areas of the country and should be accelerated.

Although direct SMS text-to-911 has some shortcomings, SMS is the only text format that is supported throughout the country and on nearly all phones, including low cost phones that are readily affordable by nearly all consumers.[49] Importantly, Neustar, Intrado, Rave, TCS and others are developing and testing SMS text-to-911 solutions that remedy many of the perceived shortcomings of the use of SMS as an interim solution.[50] Finally, the experience of other nations with direct SMS text-to-911 establishes that use of SMS to contact 911 is feasible and highly

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[46] NPRM, at ¶¶ 5, 34, 49, 53-54, 80, 82 (emphasis added).

[47] *See, e.g.*, ATIS Comments, at 14-16; *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of CTIA, at 7-10 (Dec. 12, 2011) ("CTIA Comments"); Reply Comments of T-Mobile USA, Inc. PS Docket No. 10-255, at 1 (March 14, 2011).

[48] *See, e.g.*, NENA Comments, at 18; *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of GreatCall, Inc., at 3 (Dec. 12, 2011) ("GreatCall Comments") ("GreatCall agrees with the Commission's view that there are benefits to implementing a short-term SMS-to-911 alternative. GreatCall believes that . . . the proposed short-term solution addresses these use cases, and that the benefits outweigh the costs. Specifically, GreatCall's position is that a short term SMS-to-911 implementation would provide valuable and needed services to constituents today").

[49] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, *Consumer and Other Stakeholder Response to the "Accompanying Statement of the Industry Members of the EAAC*," at 6 (Dec. 23, 2011) ("Consumer Response to Statement of Industry"); Ex Parte Notice of Intrado, at 1 (Jan. 19, 2012) ("IP Relay is not available to many users because the phones on which the application runs are limited and because, in addition to the cost of the phones, users must purchase plans.").

[50] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of Neustar, Inc., at 2-5 (Dec. 12, 2011) ("Neustar Comments").

beneficial. As the EAAC Survey and Report have found, deaf, deaf-blind, late deafened, hard of hearing, and other persons are familiar with SMS technology, prefer direct communications, and "need to be able to access NG9-1-1 from the same devices they will use every day."[51] Direct SMS text-to-911 fulfils these criteria.

The Association of Public-Safety Communications Officials International, Inc. ("APCO"), which describes itself as "the nation's oldest and largest public safety communications organization,"[52] and others support implementation of direct SMS text-to-911 in the short term for use by people with disabilities and in other special circumstances such as the silent call scenario. APCO observes that "Text-to-9-1-1 is an *especially important capability for persons with disabilities* and for the rare situations where voice communications are blocked or because a caller is unable to speak due to injury, danger, or other unusual factors."[53] APCO points out that although SMS has some inherent deficiencies as a long term solution, SMS "*is already available in virtually every cell phone* and, therefore, is in all probability the most expedient path to provide that near-term capability."[54] As the Commission noted in the NPRM "*[a]lmost all existing mobile phones support SMS*."[55] Even ATIS, which opposes use of SMS as an interim 911 solution, recognizes that SMS is widely used for daily communications, is

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[51] EAAC Report, at 19; Neustar Comments, at 6 ("It is difficult for users to remember to invoke a special app, and even more difficult to use an unfamiliar user interface when they need help").

[52] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of the Association of Public-Safety Communications Officials-International, Inc., at 1 (Dec. 12, 2011) ("APCO Comments") ("Most APCO members are state or local government employees who manage and operate communications systems -- including Public Safety Answering Points (PSAPs), dispatch centers, radio networks, and information technology -- for law enforcement, fire, emergency medical, forestry conservation, highway maintenance, disaster relief, and other public safety agencies.").

[53] APCO Comments, at 1-2 (emphasis added) ("The FCC should encourage short-term solutions such as SMS for the limited circumstances of serving persons with disabilities and other special situations.").

[54] APCO Comments, at 2 (emphasis added).

[55] NPRM, at ¶ 28 (emphasis added).

available on a wide variety of handsets, and has other advantages.[56] APCO noted that SMS "is recognized as a fairly reliable and commonly used method of non-verbal communication in our society."[57] APCO participated in the ATIS INES process and is fully aware of the shortcomings of SMS. Nonetheless, APCO recommends that "PSAPs, providers and vendors should have the option to implement SMS-to-9-1-1 as a short term alternative."[58] NENA refrains from endorsing any particular solution at this time, however, NENA also notes some of the advantages of direct SMS text-to-911 including:

> The prevailing consumer text mode in the United States is SMS, a non-application-based text messaging platform. In addition to being the most widely-available platform, SMS is also the most interoperable, working between nearly every device on every network in the United States. SMS is also a significant revenue source for carriers, making it an unlikely proposition that carriers would suddenly abandon SMS in favor of generalized application-based text messaging solutions.[59]

The Consumer Groups join APCO, Neustar, Intrado, RERC and others in endorsing the advantages of SMS text-to-911 and urge the Commission to require implementation of direct SMS text-to-911 as the interim text-to-911 solution.[60]

V. Successful Deployment and Testing of SMS Text-to-911 Has Demonstrated the Viability of SMS as an Interim NG911 Solution

The experience of Sweden, Iceland and other countries, as well as several communities in the United States, establishes that it is technically feasible today to use SMS to supplement voice-based 911, and demonstrates that the use of SMS to contact emergency services has provided substantial benefits to people with disabilities such that the benefits of SMS outweigh

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[56] ATIS INES Report, at 2.

[57] APCO Comments, at 5.

[58] APCO Comments, at 10 ("This is taking place now and should be allowed to continue.").

[59] NENA Comments, at 5.

[60] *See, e.g.*, RERC Comments, at 4; APCO Comments, at 2, 5, 10; *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of Intrado, Inc., at 10-11 (Dec. 12, 2011) ("Intrado Comments").

the costs of implementation. In Sweden, for example, SMS has been used by people who are deaf, hard of hearing and people with speech disabilities since 2006 to make actual emergency calls with "positive" results.[61]

SMS text-to-911 trials in the United States have also been successful, and have recently been conducted in: Black Hawk County, Iowa; Durham, North Carolina; and Harris County, Texas.[62] For example, the implementation of SMS text-to-911 has proven highly beneficial to both deaf and hearing people in Black Hawk County, Iowa. In Iowa, the Director of the Black Hawk County Center reports that over the past two years, SMS text calls were seamlessly received through the Black Hawk County 9-1-1 phone system," and to date, the County has "not experienced any delayed or dropped messages."[63] Further, the County Director noted that the SMS text-to-911 "system required nominal training and it was one of the easiest upgrades we have experienced at our center."[64] The Black County implementation has been so successful that it is now accepting text messages from any user of the same wireless carrier in the state and effectively acting as a regional center for PSAPs in Iowa.[65]

Direct SMS text-to-911 offers many other benefits including potentially improved reliability of communications in the event of a disaster. In past disasters, such as hurricanes, earthquakes, and floods, wire line and mobile networks have become overloaded, making it

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[61] European Emergency Number Association, *SMS 112 in Sweden*, at 4 (Feb. 11, 2010) ("Experiences with the SMS 112 service have been positive."); NRPRM, at ¶ 46.

[62] NPRM, at ¶¶ 42-45; City of Durham Press Release, *Durham 911 Center Launches Texting Trial* (Aug. 4, 2011).

[63] *Facilitating the Deployment of Test-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment*, PS Dockets Nos. 11-153, 10-255, Comments of Intrado, Inc., at Attachment E, Letter of Judy Flores, at 2-3 (Dec. 12, 2011) ("Black Hawk County Letter").

[64] Black Hawk County Letter, at 2-3 (Dec. 12, 2011); London Daily Mail Online, *Now you can text 911: Virginia Tech massacre exposed dire need for service after victim's SMS messages 'went nowhere*' (Aug. 14, 2011) ("It really wasn't difficult. Our phone vendor had to do some upgrades on our software.").

[65] Intrado Comments, at 10-11.

impossible to place a 911 voice call.[66] In the short term, enabling direct SMS text-to-911 is beneficial because text messaging consumes far less bandwidth than a voice call and may use different spectrum resources or traffic channels. Thus, people in disaster areas or faced with a terrorist attack may still be able to send SMS text to 911 even if they cannot place a voice call.[67]

Deployment of direct SMS-to-911 is particularly beneficial to people who are deaf, deaf-blind, late deafened, hard of hearing, or have speech disabilities, but has also proven beneficial to the hearing public in the silent call scenario. In Iowa, for example, the SMS text-to-911 system has been successfully used in a situation where a woman used SMS text-to-911 to quietly alert police that her ex-boyfriend had broken into her home while she remained hidden in the house. Had she used a traditional voice call to alert police, the boyfriend would have heard her voice and discovered her location in the house before help could arrive, which would have compromised her safety.[68] As demonstrated by this situation, deployment of SMS-to-911 capability is highly beneficial to the general public in the so-called "silent call" scenario (*i.e.*, in situations where the caller needs to contact the PSAP silently or surreptitiously because placing a voice call could put the caller in danger) and should be facilitated by the Commission. The director of the Black Hawk County 911 center has reported that some of the text messages received by the 911 center "were from children or domestic-abuse victims," and they have had "some calls that could have gone bad if the person couldn't text 911."[69]

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[66] *See, e.g.*, Comments of NENA, at 17 (noting that three wireless networks were unable to process certain voice calls during the East Coast Earthquake of 2011, while SMS communications were not affected.).

[67] NPRM, at ¶ 41; Neustar Comments, at 12 ("One of the potential benefits of text-to-911 is that it may relieve network congestion in a major emergency situation, particularly since text messages require less bandwidth than voice calls."); APCO Comments, at 6 ("During several recent natural disasters, data communications such as SMS remained viable when voice connectivity was not.").

[68] Jimmy Issac, *Longview's 911 System Purchase Keeps Texting Capability* (July 17, 2011); NPRM, at ¶ 37 ("Commonly cited examples of the silent call scenario include burglaries, home invasions, kidnappings, and hostage situations where a crime is in progress and the caller does not want to attract the perpetrator's attention.").

[69] Jerome Burdi, *911 system to go digital in Palm Beach County*, Sun Sentinel, (Feb. 17, 2011).

Many people, especially young people, already expect that direct SMS text-to-911 will enable them to contact responders during an emergency. For example, during the tragic shootings at Virginia Polytechnic Institute and State University (Virginia Tech) in April 2007, many students attempted to send text messages to 911 to obtain emergency assistance while remaining silent and in hiding from the assailant who was going from classroom to classroom and shooting people.[70] Thus, in addition to providing crucial emergency assistance to hearing persons in the silent call scenario, deployment of direct SMS-to-911 will "fulfill customer expectations that text-to-911 should work or already works."[71]

VI. Industry Is Developing and Testing New Technology That Further Improves the Capabilities of Direct SMS-to-911 Solutions

The Comments of Neustar, Intrado, Rave, TCS and others, as well as actual field deployment and testing in the U.S. and abroad, demonstrate that direct SMS text-to-911 is a viable interim text-to-911 solution that can be rapidly deployed. Although the Consumer Groups do not endorse any particular supplier's SMS solution at this time, the Consumer Groups observe that Neustar appears to have an existing and capable direct SMS text-to-911 solution that involves converting SMS text into a TTY message for routing to the appropriate PSAP that can be deployed at relatively low cost because it largely uses existing technology and systems.[72] The

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[70] London Daily Mail Online, *Now you can text 911: Virginia Tech massacre exposed dire need for service after victim's SMS messages 'went nowhere*' (Aug. 14, 2011) ("Those kids in the library were texting 911, and the calls went absolutely nowhere."); NENA Comments, at 12 ("NENA is aware of numerous reported incidents when consumers attempted to text 9-1-1, to no avail" including the incident at Virginia Tech.).

[71] Neustar Comments, at iii, 8 ("Consumers, especially younger, technology aggressive consumers, expect their devices and services to work as well for emergency communications as they do for communications to their friends."); NPRM, at ¶ 72; RERC Comments, at 9-10 (Users must be able to use the communications methods they use everyday to call 911, otherwise there are risks that: (1) Users may not remember in the stress of the emergency that they have the rarely-used or never-used before app installed"; (2) "Users may not be able to figure out an unfamiliar user interface in the app when they are stressed."); King County Comments, at 4 ("The press recently interviewed people in Seattle about whether they thought they could send a text to 911. *The majority of people responded that they did think the capability of texting 911 exists today*.") (emphasis added).

[72] Neustar Comments, at iii. This solution was demonstrated to Chairman Genachowski and members of the Commission's staff on September 16, 2011. *Id*., at 4; *See, also,* Great Call Comments, at 3

Neustar solution appears to use an SMS to TTY gateway and could be useful as an interim solution at PSAPs until they have upgraded to IP-based solutions.

Neustar's technical approach appears to overcome many of the shortcomings of SMS that are seized upon by ATIS and other industry opponents of SMS including providing "accurate routing of text messages to the correct PSAP and accurate location information sent to PSAPs."[73] As described by Neustar, its approach begins with the user sending a normal SMS text message:

> The [SMS] text message is [then] routed to a Neustar SMS gateway where a query to a network element retrieves the serving cell ID, which the gateway then uses in a manner identical to 911 wireless call routing to enable routing text to the correct PSAP. Neustar then converts the message into a text telephone ("TTY")[74] protocol and sends the message as a TTY audio call to the PSAP over the same 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 session, will return a cell based location[75] but in most cases will return the actual caller location if tried later in the session, using the same mechanisms used to determine the caller's location for a voice call.[76]

Neustar has conducted successful demonstrations of this technology with several relatively large PSAPs "without encountering any difficulties."[77] Neustar believes deployment of this solution would be relatively low cost as "[t]elecommunications carriers would only need to make small investments in providing cell ID query mechanisms where they are not already deployed for

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("GreatCall agrees with Kimball that there are technically feasible methods of mitigating SMS technical limitations. However, the advantage of using SMS is its universal availability and immediate implementation benefits.").

[73] Neustar Comments, at 3.

[74] A TTY "is a text device that employs graphic communication in the transmission of coded signals through a wire or radio communication system." NPRM, at ¶ 26, n.23.

[75] Wireless networks that use network based location determination may not be able to accurately locate a texting user's location initially because such mechanisms may depend on an actual call being in progress to get enough measurement data from the network. Neustar believes that this is an inherent problem for any system that uses network based location rather than handset based GPS. Neustar Comments, at 4.

[76] Neustar Comments, at 3-4 (emphasis added).

[77] Neustar Comments, at 4.

itinerate use, and PSAPs should be able to handle text-to-911 using their existing TTY equipment."[78] Thus, one key advantage of Neustar's proposed solution is that is appears to require minimal upgrades to the equipment and software fielded by the approximately 6,200 PSAPs nationwide, which greatly reduces deployment costs, although some additional training of operators would be required.

Moreover, other suppliers are also developing, deploying and testing new technologies that appear to offer significant promise including Intrado, Rave, and TCS. For example, Intrado maintains that using its technology, it is feasible today to deploy a " reliable SMS text-to-911 solution . . . [that] provides connectivity *directly* from the handset to PSAPs with voice equivalent PSAP call handling and processing capability."[79] Intrado maintains that this would require "few adjustments to wireless carrier and PSAP operations."[80] The second stage solution discussed in Intrado's Comments overcomes many of the disadvantages cited by ATIS and others in opposition to the use of SMS text-to-911.[81] For example, Intrado maintains that the "delays that are possible due to store and forward functionality of an SMS network are easily overcome by the use of the 911 Message Center, which enhances the network with capability to manage 911 messages as they proceed from the cell tower to a text selective router and ultimately to the PSAP call taker."[82] Intrado states that the functionality of the 911 Message Center "can be obtained by adapting existing" Short Message Service Centers or using a third

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[78] Neustar Comments, at 4.

[79] Intrado Comments, at 6.

[80] Intrado Comments, at 6.

[81] The Consumer Groups strongly oppose Intrado's that as a first stage along an evolutionary path toward NG911 capabilities, persons with disabilities use "SMS text to a 911 relay center." Intrado Comments, at i, 3.

[82] Intrado Comments, at 7-8. In the Intrado design a "911 Message Center, . . . is the functionality at the Short Message Service Center (SMSC) that manages 911 text messages and coordinates traffic with the TPC and the Text Selective Router (TSR) (the latter of which is part of the PSAP deployment)."

party hosted solution.[83] Intrado has tested its 911 Message Center using test text messages sent over the SMS networks of four wireless carriers. Intrado found that 90% of the messages were delivered within 3 to 4 seconds and the median latency for SMS text-to-911 was 2 to 4 seconds.[84] Thus, new SMS designs appear to have a marked advantage over systems that use relay where delays are often measured in minutes, not seconds.[85] Intrado also maintains that "[n]o additional technical standards need to be developed" for deployment of its system and it "utilizes existing location based standards."[86] Intrado's "network protocol is SIP based and can evolve to that specified in the NENA i3 architecture."[87]

TCS claims that its solution "enables accurate location information delivery to the PSAP simultaneously with the SMS to 9-1-1 message."[88] TCS states that: "By combining existing location technologies with existing SMS protocol capabilities, every wireless network should be able to provide a resilient and highly reliable SMS to 9-1-1 environment that presents end-to-end control of the message flow, as well as Phase I (cell site/sector) or Phase II (precise) location information equal to their wireless voice capabilities."[89] Rave claims it has deployed a "call-then-text" solution at dozens of PSAPs across twenty states that "provides call takers with the ability to communicate via 2-way SMS with 9-1-1 callers in the event the[y] deem it necessary (*e.g.* caller has pre-subscribed as deaf or hard of hearing, or a silent witness scenario is

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[83] Intrado Comments, at 8.

[84] Intrado Comments, at 8, Appendix C.

[85] APCO Comments, at 9 ("Interim solutions that involve third party RELAY services introduce additional latency into the call handling process.").

[86] Intrado Comments, at 10.

[87] Intrado Comments, at 13.

[88] TCS Comments, at 1, 11.

[89] TCS Comments, at 11.

identified)."[90] Thus, while the Consumer Groups are not willing to endorse a particular vendor's SMS solution at this time, the work of Intrado, TCS, Rave, Neutstar and others indicates that deployment of SMS for text-to-911 is technically feasible and practical.

ATIS estimates that the "[i]nitial implementation of the long-term MMES[91] [for NG911] is not anticipated for *at least three or four years* and, even after MMES starts to become available, it will only be available in certain service areas and/or may not provide full multimedia services for some time."[92] People with disabilities and those without disabilities who find themselves in the silent call scenario should not be forced to wait that long for a text-to-911 solution. Even this estimate of three to four years may be overly optimistic.[93] The National Emergency Number Association ("NENA") is of the view that any "Text-to-911 solutions that are deployed in the short term will likely be required to remain *in place for up to ten years in some parts of the country*."[94]

Given the deployment of full NG911 will likely occur in a "patchwork fashion," it is important that an interim text-to-911 solution be deployed on a near ubiquitous basis as we progress toward full deployment of NG911.[95] Accordingly, the Consumer Groups believe that the Commission must set firm but fair deadlines by which carriers are required to support direct SMS text-to-911. The deployment of an interim text-to-911 solutions could be phased based

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[90] Rave Comments, at 1.

[91] Multimedia Emergency Services ("MMES") is an industry effort to standardize a SIP/IMS-based solution for deliver of text-to-911, video, photos, pre-recorded audio and other media. ATIS Comments, at n.3.

[92] ATIS Comments, at 9.

[93] Neustar Comments, at 2 ("The transition to NG911 is not going to be rapid, will not be geographically simultaneous and, within a geographic area, will occur at different rates for each carrier serving that area.").

[94] NENA Comments, at 2.

[95] Neustar Comments, at 2 ("Rather than waiting for full deployment of NG911 or, in the alternative, attempting to turn on NG911 as it becomes available by region and by carrier, it could be very beneficial to have an interim solution that can deliver the most sought after NG911 capability – text-to-911 – nationwide within a short time and with relatively little investment on the part carriers and public safety agencies.").

upon PSAP readiness. While the Consumer Groups do not endorse any specific technical solution at this time, we note that for IP-enabled PSAPs one possible interim solution may be to require that PSAPs have an SMS to IP gateway in place which would likely be more efficient and reliable than a TTY-based solution. On the other hand, for PSAPs that are not IP-enabled, the Commission could mandate that they implement a different solution such as an SMS to TTY gateway. In any event, the Commission should require implementation of a direct SMS text-to-911 solution in the near term.

The Consumer Groups underscore that they are not willing to endorse a particular vendor's SMS solution at this time as we do not have complete information regarding the competing solutions, and the vendors are in a better position to discuss the merits of their approach. However, there is broad agreement in the deaf, deaf-blind, late deafened, and hard of hearing communities that the interim, SMS-based, text-to-911 solution should meet specific minimum functional requirements including the following capabilities:

- Provide direct access to 911;
- Permit the end user to initiate first contact with 911 by sending an SMS text (*i.e.*, Do not require the end user to make a voice call);
- Accomplish routing of the SMS session to the appropriate PSAP within a reasonable time (*i.e.*, seconds, not minutes);
- Provide nationwide access to 911 through the three digit code of 9-1-1;[96]
- Once an end user texts the code 9-1-1, there must be an immediate reply (by an SMS gateway or other mechanism) that informs the user whether or not the emergency system has received the SMS text message and has begun process the message;
- Reasonable turn-around times (*e.g.*, Assume the end user sends an SMS message, the PSAP responds with an SMS message, and the end user responds again. How

[96] The Consumer Groups recognize that there may be some phones that do not support texting to a three digit code. For these phones, it must be possible to text to a six digit code instead (Use of 9-1-1-9-1-1 is desirable because it is relatively easy to remember). However, use of the six digit code should merely be a fallback for older-generation phones. The Commission should establish a time line for phasing out phones that are unable to text to the three digit code.

long a time period is acceptable for the PSAP and the end user to wait to receive each other's messages?); and

- The interim direct SMS text-to-911 solution should be available to the general public (*i.e.*, pre-registration of end users is not mandatory);

In sum, the Consumer Groups believe that the Commission must set firm but fair deadlines by which carriers are required to support these minimum functions in a direct SMS text-to-911 system.

VII. An Education Program Must be Implemented in Support of Deployment of the Interim Text-to-911 Solution

In the NPRM, the Commission concludes that given "the significant risk of consumer uncertainty and confusion [as NG911 is deployed], there are clear benefits to be gained from providing the public with accurate and up-to-date information about the availability or non-availability of NG911 applications in their home communities and in other locations where they may travel."[97] The Commission seeks comment "on the types of educational programs that should be created to abate and prevent consumer confusion as text-to-911 services are deployed in the short term."[98]

The Consumer Groups agree with the majority of Commenters that voiced a view that the Commission must play an active role in educating consumers and especially deaf, deaf-blind, late deafened, hard of hearing people, and people with speech disabilities about implementation, use, capabilities, and limitations of NG911 solutions and interim solutions.[99] The Consumer Groups maintain that a national public information campaign is needed to facilitate the transition

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[97] NPRM, at ¶ 106.

[98] NPRM, at ¶ 107.

[99] *See, e.g.*, ATIS Comments, at ii (Dec. 12, 2011) ("The Commission should also have an active role in educating consumers on the ongoing efforts of the industry to deploy NG9-1-1 services, including multimedia 9-1-1 applications."); APCO Comments, at 4 ("With regard to any interim 9-1-1 text solution, the public must be advised that accurate 9-1-1 location information with generally NOT be available. The public must also be advised that NG9-1-1 solutions may not be uniformly available in all regions."); NENA Comments, at 20 ("NENA believes the Commission has demonstrated itself to be a tremendous resource in the design and execution of successful public education campaigns, most recently with the highly successful Digital Television Transition.").

to NG911 and an interim text-to-911 solution as was required during the transition to wireless E911.[100]

Service providers, manufacturers, the Consumer Groups, and federal and state entities must collaborate to ensure the public is aware of the new capabilities and limitations of NG911 solutions and to manage public expectations. The Commission could facilitate this collaboration by "providing states, regions, and localities with template materials such as canned video, audio, and print materials" as suggested by NENA,[101] that could be modified to reflect local conditions. As part of any education campaign relating to NG911 and interim text-to-911 solutions, the Commission should require carriers to distribute information on contacting 911 via text and other media at the time new devices are purchased and in periodic billing inserts.[102] Billing inserts and other materials will be particularly successful if they are done in conjunction with an overarching, national media effort lead by the Commission that educates the public on the interim text-to-911 solutions and ultimately on the deployment and capabilities of NG911.[103] The national campaign should focus on high level issues while local entities focus on limitations and advancements in their specific areas.[104] The Commission should work with APCO, NENA, the League of Cities, municipalities and others to develop materials and best practices for educating the public on NG911 and interim text-to-911 solutions.

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[100] Comments of Kimball, at 16.

[101] NENA Comments, at 20.

[102] Comments of Kimball, at 17.

[103] APCO Comments, at 17-18.

[104] APCO Comments, at 18 ("Limitations on capabilities that are related to specific products or specific calling devices should be disclosed by the provider.").

VIII. Conclusion

For the foregoing reasons, the Consumer Groups urge the Commission to require direct access to text-to-911 services using SMS as an interim solution. People who are deaf, late-deafened, deaf-blind, hard of hearing, and people with speech disabilities need to be able to call the most appropriate 911 center in any mode of communication, with their preferred means of technology and to be understood effectively by the dispatcher. In light of the popularity and ubiquity of SMS, the Consumer Groups recommend the adoption of regulations requiring implementation of SMS-to-911 in the short term as an interim solution along the path to full NG911 deployment.

Respectfully submitted,

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