



**Emergency Access Advisory Committee (EAAC)
Working Group 7
Recommendations on Timeline Alignment**

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Executive Summary

This report focuses on Timeline Alignment issues related to migration to a national Internet protocol-enabled emergency services network specifically to provide equivalent accessibility for individuals with disabilities. Sections in the body of this report address: the rate of adoption, migration dependences, liability issues, transition, contingency, criteria for readiness and the timing of requirements.

Themes

- Equivalent Access
- Direct Access
- Availability of Networks
- Availability of Equipment
- Adequate Funding
- The necessity of liability protection
- Consideration for types of disabilities
- PSAP Readiness
- Alignment of Suppliers and Providers

1 Scope of Working Group 7 – Timeline Alignment

1. *Migration Dependencies/Triggers/Sequence of Transition steps*
2. *EAAC Provision: Actions needed for the migration to a national Internet protocol-enabled network to achieve reliable, interoperable communication that will ensure access to 9-1-1 emergency services by individuals with disabilities.*

2 User Needs and Constraints

1. A national Internet protocol-enabled network that enables reliable, interoperable communication ensuring access to 9-1-1 emergency services by individuals with disabilities.
2. An understanding of the migration dependencies and triggers.
3. An understanding of the Sequence of Transition steps.

3 Recommendations

3.1 Recommendation P1.3: NG9-1-1 Rate of Adoption:

NG9-1-1 will be adopted over time with PSAPs migrating to NG9-1-1 at different times and it will be many years before the last PSAP migrates to NG9-1-1. The EAAC recommends that the FCC requirements for all NG9-1-1 capabilities implemented for individuals without disabilities also be implemented for individuals with disabilities, and that individuals with disabilities should be able to access 9-1-1 emergency services from any point in the United States to obtain accessible, reliable, interoperable emergency services using the same technique/number to call, regardless of whether the local PSAP is NG9-1-1 yet or not.

Rationale:

Any plan must allow for the fact that some PSAPs will be NG9-1-1 while others are not NG9-1-1 yet the system should still allow users to contact 9-1-1 from any point in the United States and get the same quality of service as individuals without disabilities. The PSAPs will move to NG9-1-1 over a long period of time yet consumers will have no way to know what types of PSAPs are at any point in the country that they may be traveling through. So the system must not require that all PSAPs change at once, and it must not require that callers have any idea what type of PSAP they are calling or that is local to them.

Recent activities have accelerated this process:

- On December 6th, 2012, the nation's four largest wireless carriers – AT&T, Verizon, Sprint, T-Mobile - agreed to accelerate the availability of text-to-911, with major deployments expected in 2013 and a commitment to nationwide availability by May 15, 2014.
- On December 12th, 2012, the FCC proposed rules to bring Americans the ability to send text messages to 911 more rapidly and uniformly, and to inform consumers about the availability and appropriate use of text-to-911.

These announcements have spurred increased activity on the part of service providers for a variety of technical solutions to allow text messages to be transmitted to 911 Public Safety Answering Points (PSAPs). They will also enable notification to the public, if text messaging to 911 is not successful. It should be understood however, that whether text messages are received by PSAPs using current infrastructure or an updated NG911 infrastructure, the receipt and processing of text messages by PSAPs will require technical and/or operational accommodations by the PSAPs – and will require resources and time to complete them.

Sources:

1. <http://www.fcc.gov/document/text-911-further-notice-proposed-rulemaking> (12-149a)
2. <http://www.fcc.gov/document/chairman-genachowski-announces-commitments-accelerate-text-911>

Notes:

1. The call may need to be routed to an NG9-1-1 PSAP if local PSAP cannot handle the type of call from that user.
2. All types of calls may not be available in all areas of the country if the networks cannot handle that type of call in that geographic location.

3.2 Recommendation P1.5: NG9-1-1 Migration Dependencies:

The EAAC recommends that FCC recognize in the disability access requirements that consumer access to NG9-1-1 depends on the availability of new equipment, equipment upgrades, or updates to originating service provider networks. Also, access to NG9-1-1 requires advanced communications service provider networks, hardware and software capabilities, the deployment of emergency services networks (ESInet) for PSAPs to support NG9-1-1 capabilities necessary for access by disabled consumers. These changes will occur in phases and should include the provisions for direct access by individuals with disabilities that parallels access by those without disabilities. Funding mechanisms need to be developed so this migration allows equal and direct access. Federal, State, and Local oversight responsibility for the migration to NG9-1-1 is a significant dependency.

Rationale:

Any plan must allow for the fact that there will be a roll-out period as PSAPs gradually become NG9-1-1 ready. Currently, users have indirect access to 9-1-1 via TRS Relay, and the goal is to see this changed to direct access to NG9-1-1. During this roll-out period, PSAPs will make the necessary technical and operational accommodations to receive and process text messages. This process will require time and resources to support their completion.

Sources:

1. CSRIC II Working Group 4B Report: <http://www.fcc.gov/encyclopedia/communications-security-reliability-and-interoperability-council-ii> --- WG4B Report is posted on this Web page
2. CSRIC III Working Group 1 Report December 2011: <http://www.fcc.gov/encyclopedia/communications-security-reliability-and-interoperability-council-iii> --- WG1 Report is posted under “Final Reports” in this Web page.
3. 47 C.F.R. 20.18(j) <http://www.gpo.gov/fdsys/pkg/CFR-2010-title47-vol2/pdf/CFR-2010-title47-vol2-sec20-18.pdf>
4. FCC Public Notice, *Wireless Telecommunications Bureau Establishes a New Docket for the Filing of E911 Richardson Certifications by Wireless Carriers* (March 14, 2003) <http://apps.fcc.gov/ecfs/document/view?id=6514683374>
5. FCC, *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Order on Reconsideration, CC Docket No. 94-102 (Nov. 26, 2002) <http://apps.fcc.gov/ecfs/document/view?id=6513401660>
6. FCC, *Revision of the Commission’s Rules To Ensure Compatibility with Enhanced 911 Emergency Calling System*, CC Docket No. 94-102, Order, rel. Oct. 10, 2001 (*City of Richardson*) <http://apps.fcc.gov/ecfs/document/view?id=6512773948>.
7. FCC, *Revision of the Commission’s Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, RM-8143, Second Memorandum Opinion and Order, 14 FCC Red 20850, 20859-80 (1999) (paras. 19-74) (*E911 Second Memorandum Opinion and Order*) <http://apps.fcc.gov/ecfs/comment/view?id=5006111368>.
8. FCC, *Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 18676 (1996) (*E911 First Report and Order*) <http://apps.fcc.gov/ecfs/comment/view?id=166879>

Notes:

3.3 Recommendation P1.6: Liability:

The timely deployment of NG9-1-1 service itself is an essential step toward the availability of accessible emergency communications. To ensure that entities have the regulatory certainty to expeditiously deploy new techniques and technologies, the EAAC recommends that the FCC conduct a comprehensive review of federal and state liability laws and regulations to ensure adequate protections are available for any entity that participates in the NG9-1-1 system, including telecommunications and advanced communications service providers, originating service providers, manufacturers, developers, emergency service network providers, third party service providers (e.g., relay providers), and PSAPs.

Rationale:

Recent 9-1-1 service expansion was later accompanied by the liability protections of the Wireless Communications and Public Safety Act of 1999 (cellular/PCS) and the NET 911 Act of 2008 (interconnected VoIP and other data/text-based services). While The Middle Class Tax Relief and Job Creation Act of 2012 closed some liability questions, the FCC should specifically address the issue pursuant to the EAAC recommendation. The existing protections remain subject to the patchwork of state laws and regulations and the vagaries of tort litigation. The Commission should

proceed with a review of federal and state liability laws and regulations and address this issue in the report to Congress on recommended legislative action mandated by the Middle Class Tax Relief and Job Creation Act¹. Liability protection also needs to extend to address bona fide system users/callers, which may not be adequately addressed under state “Good Samaritan” laws.

As a resource to states, the National 911 Program released a document entitled, “*Guidelines for State NG911 Legislative Language*” in November of 2012. This document contains a section addressing liability issues and can be used to conduct an assessment of current laws and provide ideas to consider for 9-1-1 legislation adoption that fosters progress toward a statutory environment that facilitates the full deployment of NG9-1-1.

Sources:

1. Middle Class Tax Relief and Job Creation Act – <http://www.thomas.gov/cgi-bin/query/z?c112:H.R.3630>:
2. “Guidelines for State NG911 Legislative Language.” <http://www.nhtsa.gov/staticfiles/nti/pdf/811688.pdf>
3. FCC “Legal and Regulatory Framework for Next Generation 911 Services”, http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0227/DOC-319165A2.pdf

Notes:

3.4 Recommendation P1.10: NG9-1-1 Transition:

The EAAC recommends the FCC consider all accessibility aspects in the transition from legacy 9-1-1 to NG9-1-1.

- Hearing – text
- Sight – voice
- Multiple – (deaf blind)
- Cognitive
- Physical and dexterity
-

Rationale:

In Section 4.5.1 of the CSRIC Working Group 4B report, the Individuals with Disabilities Education Act (IDEA), is cited. This act defines 13 categories of disability: (Autism, Deaf blindness, Deafness, Emotional disturbance, Hearing impairment, Intellectual disability, Multiple disabilities, Orthopedic impairment, Other health impairment, Specific learning disability, Speech or language impairment, Traumatic brain injury, Visual impairment, including blindness. In addition to persons with disabilities as defined by IDEA, the following groups of persons are also addressed in this report: (Elderly, Persons speaking traditional verbal languages (i.e., Chinese,

¹ <http://www.thomas.gov/cgi-bin/query/z?c112:H.R.3630>:

English, French, Spanish, Native American languages, etc.). This information should be used to determine solutions for direct and equivalent access for affected groups of individuals with disabilities.

Sources:

1. CSRIC II Working Group 4B Report: <http://www.fcc.gov/encyclopedia/communications-security-reliability-and-interoperability-council-ii> --- WG4B Report is posted on this Web page

Notes:

4.5 Improving Access to 9-1-1²

This section discusses the 9-1-1 access challenges faced by people with disabilities as well as non-English speakers, which must be addressed in the NG9-1-1 transition environment.

4.5.1 Review of People with Access Challenges (People with Disabilities/Non-English Speaking)

It is important to attempt to identify those specific groups within the general population of the United States whose needs might be better served in future 9-1-1 systems by taking into consideration achievable specific system capabilities that would aid in the provision of 9-1-1 service to all individuals that might access the system.

The Individuals with Disabilities Education Act (IDEA)³ defines 13 categories of disability:

- Autism
- Deafblindness
- Deafness
- Emotional disturbance
- Hearing impairment
- Intellectual disability
- Multiple disabilities
- Orthopedic impairment
- Other health impairment
- Specific learning disability
- Speech or language impairment
- Traumatic brain injury
- Visual impairment, including blindness.

In addition to persons with disabilities as defined by IDEA, the following groups of persons are also addressed in this report:

- Elderly
- Persons speaking traditional verbal languages (i.e., Chinese, English, French, Spanish, Native American languages, etc.).

The two lists combined result in 15 access categories that have been reviewed by the Access Subgroup in an effort to identify achievable modifications that would improve access to the 9-1-1 system. Reporting statistics for this area is challenging with differences in definitions and data gathering.

² <http://transition.fcc.gov/pshs/docs/csric/CSRIC-WG4B-Final-Report.pdf>

³ <http://idea.ed.gov/explore/view/p/%2Croot%2Cstatute%2C>

Census statistics state: “There are 54.4 million Americans who have disabilities, and 35 million Americans who have a severe disability. For those aged 15 and older, this includes 7.8 million who have difficulty seeing the words in ordinary newsprint; 7.8 million who have difficulty hearing a typical conversation; 2.5 million who have difficulty having their speech understood; 27.4 million who have lower body limitations; 19 million with upper body limitations; and 16.1 million with cognitive, mental and emotional functioning disabilities.” (3/2005 Census Report at 6-7)⁴

The National Institute on Deafness and Other Communication Disorders (NIDCD) reports –
”Approximately 17 percent (36 million) of American adults report some degree of hearing loss.”⁵

Approximately 38 million Americans (12.4 percent of the total population) are over the age of 65 years (United States Census Bureau, 2008) and represent a population that frequently faces many of the same limitations as people with disabilities. By 2030, the population over 65 will double to 70 million or 20 percent of the total U.S. population.⁶

Based on a 2007 U.S. Census American Community Survey Report, approximately 24.5 million people (8.7 percent of the population) reported their ability to speak English as below – “very well” (i.e., “well”, “not well”, or “not at all”) and were thought to need English assistance in some situations. The report also notes, “Languages spoken at home are not evenly distributed throughout the nation.”⁷ Language Line Services notes in its LanguageTrak report that there have been significant increases in demand for “less common languages.” As an example, —...in [the] First quarter of 2010, the demand for Nepali support increased by more than 300 percent for Language Line Services customers based in the Chicago metro area.”³⁰

3.5 Recommendation P6.3: Timeline Contingency:

The EAAC recommends that NG9-1-1 implementation timelines for product manufacturers, service providers, telecommunication and advanced communication service providers are aligned with the deployment of NG9-1-1 PSAPS geographically. Further detail on this will be provided as part of a planned migration report to be developed in 2012.

Rationale:

⁴ A Giant Leap & A Big Deal: Delivering on the Promise of Equal Access to Broadband for People with Disabilities—OBI Working Paper Series No. 2, Federal Communications Commission by Elizabeth E. Lyle, Policy Advisor, Omnibus Broadband Initiative. Available at: [http://download.broadband.gov/plan/fcc-omnibus-broadband-initiative-\(obi\)-working-report-giant-leap-big-deal-delivering-promise-of-equal-access-to-broadband-for-people-with-disabilities.pdf](http://download.broadband.gov/plan/fcc-omnibus-broadband-initiative-(obi)-working-report-giant-leap-big-deal-delivering-promise-of-equal-access-to-broadband-for-people-with-disabilities.pdf)

⁵ <http://www.nidcd.nih.gov/health/statistics/quick.htm>

⁶ Wireless Emergency Communications Summary of Initial Findings, October 2006–September 2009, Rehabilitation Engineering Research Center on Wireless Technologies. Available at: <http://www.wirelessrerc.org/about-us/projects/development-projects/WEC%20Summary%20Rpt%20FINAL%20for%20SOT%202009.doc>

⁷ <http://www.census.gov/population/www/socdemo/language/ACS-12.pdf>

While interim solutions have been proposed and will be implemented to allow text message 911 calls to be delivered and processed to PSAPs using current technology, the full deployment of text to 911 is dependent upon both the service providers and the PSAPs being fully capable of sending, receiving and processing text 911 calls using digital, Internet Protocol (IP)-based infrastructure. In the PSAP, this infrastructure is commonly referred to as Next Generation (NG) 911. The implementation of NG911 nationwide is dependent upon numerous factors, and will occur incrementally.

During 2011, the National 911 Program collected data on the progress of state and local 911 systems, in deploying components of an NG911 system. While the program cannot compel submission, data was submitted by a total of 28 states, and a report presenting the aggregate of these data was released in late 2012. This report entitled, “*The 2011 National 911 Progress Report*” shows the progress for the 28 participating states and its potential in gauging the progress of the nation in implementing NG911. Reports such as this one could serve as useful sources of information regarding national progress in deploying NG911.

Sources:

1. NASNA
2. “The 2011 National 911 Progress Report.” <http://911.gov/pdf/National911ProgressReport2011.pdf>.

Notes:

3.6 Recommendation P6.4: NG9-1-1 Criteria for Readiness:

The EAAC recommends that the FCC work with the DOJ to establish criteria for accepting NG9-1-1 calls from individuals with disabilities as part of its overall criteria for establishing PSAP Readiness at the Regional or State Level to accept NG9-1-1 calls.

Rationale

The CSRIC II Working Group 4B report (p.139) states “Unless there is a commitment to a federal funding source, the transition to NG9-1-1 will be funded in accordance with unique state/local needs based on distinctive state/local variables, including current revenue, network scope/scale, accredited standards for originating emergency services IP and PSAP networks, state level plan, federal strategy or model for NG9-1-1, and mandates that may arise from either the FCC or the DOJ. It is the Funding Subgroup’s expectation, therefore, that the findings and conclusions of this section of the report, coupled with the findings of the Technology, Operations, and Access Subgroups, will point directly to multiple models of funding for the transition to NG9-1-1.”

The National 911 Program, in response to a recommendation made by the FCC’s Communication Security, Reliability and Interoperability Council II, Working Group 4B, recently undertook a project that procured the services of an organization to provide specific expertise in economics, and apply that expertise to develop models for funding and oversight of 911 systems that could be applied at local, and/or State levels of government. In addition to using its economic expertise, the contractor will be expected to utilize stakeholder input and guidance from a steering committee (“Blue Ribbon Panel” (BRP)) to help inform its analysis. This project will be completed by Spring of 2014 and will hopefully provide useful options for funding and oversight of state and local 911 systems of the future.

Sources:

1. CSRIC III Working Group 1 Report December 2011:
<http://www.fcc.gov/encyclopedia/communications-security-reliability-and-interoperability-council-iii> -- WG1 Report is posted under “Final Reports” in this Web page.

Notes:

“Deliver additional data and services. Once the IP network transport is established to IP PSAPs additional protocols can be deployed that enable a wide range of information sources and collaboration based services.”⁸⁹

- Should the EAAC7 subcommittee recommend the DOJ require for text handling capabilities be implemented as part of any NG9-1-1 deployment which occurs after XX date, and give existing deployments XX months to provide this NG capability? The CSRIC III WG1 SG1 seems to recommend that “additional data & services”, those other than voice, “can” be deployed. This section doesn’t say “shall” or “should”.

“Although the alignment of IP Multimedia Subsystem (IMS) with i3 is expected to be completed relatively soon, we request that you include the misalignment as a gap until the alignment is finalized.”¹⁰

This may need to be represented on our “Wireless Readiness” timeline.

“Following is a brief list of governance related responsibilities, activities and authorities essential to the full implementation of NG9-1-1.”

NG9-1-1 Awareness and Accessibility

Examined and address the impact NG9-1-1 deployment has on the elderly, deaf and hard of hearing, disabled, and non-English speaking populations, as well as the appropriate public use of NG9-1-1 services and capabilities.¹¹

We recommend the FCC support the development of standards for any new alternative technologies, (ex., one-button emergency call initiation with location and basic caller information), which are promising modes of communication for this group of citizens who are Deaf, hard of hearing, Deaf/Blind, speech impaired, or other, which do not use a computer or have ever gone on-line.

⁸ <http://transition.fcc.gov/bureaus/pshs/advisory/csric3/CSRICWG1SG12ReportFINAL.pdf> -- pg 77.

⁹ <http://transition.fcc.gov/bureaus/pshs/advisory/csric3/CSRIC-III-WG1-Subgroup-Final-Report.pdf> -- pg 44.

¹⁰ <http://transition.fcc.gov/bureaus/pshs/advisory/csric3/CSRIC-III-WG1-Subgroup-Final-Report.pdf> - pg 6.

¹¹ <http://transition.fcc.gov/bureaus/pshs/advisory/csric3/CSRICWG1SG12ReportFINAL.pdf> - pg 42.

“Note: Safeguards will be needed to minimize the risk of unintentional 911 calls, which has been a problem for one-button 911 dialing systems and which can frustrate PSAPs’ emergency response efforts.”

3.7 Recommendation T6.1: Timing of Requirements:

The requirements recommended by the EAAC above should be timed so they are available when the NG9-1-1 services begin to come online – but should not be required to be in place much in advance of beginning the NG9-1-1 service roll-out.

Rationale:

It is important to note that an NG9-1-1 rollout may not immediately support text delivery to PSAP call takers, for instance. Though an interim text-to-911 solution may be in place, the initial phase of an NG9-1-1 rollout might first support call originations from wireless callers only, and have no capability for text. Integration of NG9-1-1 text handling elements, like CPE, may follow the initial implementation of NG9-1-1. However, an interim text-to-911 solution may initially exist alongside an NG9-1-1 system and integrate at a later date. Also, NG9-1-1 service standards continue to evolve. If the roll-out of pre-standardized elements for access to 9-1-1 is required too far in advance of finalized standards, there are compatibility risks.

In response to the need for an end-to-end list of technical NG911 standards, the Communication Security, Reliability and Interoperability Council II’s Working Group 1 undertook a task to identify ongoing work related to Next Generation (NG) NG9-1-1 network architecture standards development; identify any gaps in existing or developmental standards work and classify the importance and urgency of resolving those gaps. This gap analysis and prioritization of gaps was completed in March of 2012. Subsequent to the release of the CSRIC II WG 1 report, the National 911 Program has undertaken a project to update the activities of the standards development organizations (SDOs) as listed in the report, and will make their ongoing updates publicly available as they are completed.

Sources:

1. NENA Excel Spreadsheet of Early NG911 Adopters: http://www.nena.org/?NG911_StateActivity
2. National 911 Program – 2009 Report to Congress – related to assumptions: <http://www.911.gov/911-issues/funding.html> -- link is at the bottom of this Web page.
3. US DOT NG911 Initiative – Final Analysis of Cost, Value & Risk: <http://www.its.dot.gov/ng911/index.htm>
4. CSRIC II WORKING GROUP 1 Subgroups 1 Report. March, 2012. <http://www.fcc.gov/encyclopedia/communications-security-reliability-and-interoperability-council-iii>. Last accessed February 25 2013.

Notes:

4 Issues

1. The actual milestones and timelines cannot be determined until the completion of the other 6 working group reports.

5 Conclusion

1. A uniform timeline can be created which describes the milestones, dependencies, estimated duration, and expected completion related to the transition to an IP based Next Generation 9-1-1 system after completion of the other 6 working group reports.
2. The timeline will identify the critical path to providing direct and equivalent access to groups of individuals with disabilities

Appendix A: Glossary

Look at ATIS/TIA and NENA glossaries for definitions we think we need -- for consistency with these related efforts.

Revision History

| Date | Version | Description |
|----------|---------|--|
| 11/20/12 | 0.01 | Initial document post review of the presentation format on 10/29/12. |
| 02/07/13 | .1 | Document for final review by subcommittee 7 |
| 03/06/13 | .2 | Document for review by EAAC full committee |
| 5/28/13 | 1.0 | Edit made based on feedback from EAAC, and for removal of highlighting. |
| 6/14/13 | 1.0 | Approved Report, removed watermarks, changed date, indicated “approved report” |