

EAAC SC 5 Report

Identifying gaps in NENA i3

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Background

- EAAC report and recommendations of 2011 were made at the time when NENA i3 version 1 already had been released
- In making recommendations EAAC looked at functional requirements, not at what technical standards already support

Identification of gaps in i3

- This made it likely that NENA i3 has some gaps with respect to implementing EAAC recommendations
- **This is not a criticism of NENA i3:** The specification represents a tremendous accomplishment with respect to accessible NG9-1-1
- Most of the identified gaps are in areas that will need further specification, as well as clarifications to ensure that accessibility works as intended

Workgroup

- Due to circumstances beyond the co-chairs control, time to get this work coordinated was in short supply.
- This document is a collection of items that were discussed via e-mail, and makes no claim to be comprehensive, or 100% correct.
- The items should be taken as a checklist for further investigation by appropriate standards bodies and NENA. Some may be resolved in NENA i3 version 2.

Identified gaps - Overview

- Involving interpreting, communication assistance and other services in a call
- Handling of multimedia calls
- Text-based conversations
- Interoperability of voice calls
- TTY calls
- Legacy PSAPs
- Other

Involving interpreting/communication assistance

- User terminals may not be able to set up 3-way call with interpreter and PSAP using SIP REFER, if call originates as a relay call during transition to NG9-1-1
- Automatic invocation of MCLS in advance of connecting to PSAP is not specified
- The large number of possible calls flows in NENA i3 with respect to pulling in assistance for callers with disabilities should be boiled down to the essentials and specified, so they become easily testable

Multimedia call setup

- Handling of additional media beyond audio in bridged calls needs further specification, including H.264/AVC, RTP profiles
- Will XMPP be included? If so: Calls originating via XMPP need more detailed specification, including Multi User Chat (needed for MCLS), and XMPP-based RTT

Multimedia call setup (cont'd)

- Maximum timeout for text sessions is too short: 2-3 minutes poses problems especially for users with motor disabilities, but also for normal call flows
- Simultaneous handling of voice, video, and text in same call is not specified: this risks the media taking different call paths and getting compromised

Multimedia call setup (cont'd)

- Callback details need more specification: How are media beyond audio, and invocation of MCLS handled during a callback?
- Fast update requests during call to repair deteriorating video calls

Real-time text flow

- Real-time text flow: default transmission intervals for all parties need to be specified to ensure updates in a timely manner
- Selecting and starting text communication on PSAP side via SDP both during negotiation and reinvites needs to be specified: telecommunicators will likely not have the technical knowledge to decide among TTY in-band, TTY transcoded to RTT, RFC4103, MSRP messaging, SIP messaging in dialogue, SIP messaging out of dialogue

TTYs

- Specifications on how to avoid technical limitations of TTYs in NG9-1-1 are needed
- Specification on interaction of inband TTY via audio with bridging and call transfers is needed

Legacy PSAPs

- DOJ just filed comment stating that legacy PSAP must accept text communications via TTY calls
- In general: how do legacy PSAPs interface with components of multimedia calls that are needed for accessibility?

Legacy PSAPs (cont'd)

- How far can legacy PSAPs support modern text+voice functionality on call originator side via conversion to TTY + voice?
- If these scenarios are specified, do they extend to mainstream callers w/o disabilities as well?
- Silent call procedures do not play well with modern forms of text communication – needs update in specs and procedures

Other

- User experience and education during transition to NG9-1-1
- SIP message and MSRP lack test specification
- Consistent test interface requirements
- Repetition interval of the test procedure may create heavier load than anticipated, as many devices are turned on/off every day

Next steps?

- Next steps for getting the report out of draft and submitting it?
- Accepting a change request by Richard Ray to quote DOJ statement in Section 3.3 on next slide:

- “PSAPs must accept a call from a person with a hearing or speech disability that originates as an SMS call, but reaches the PSAP as a TTY call. However, a title II entity’s obligation under § 35.161(a) to communicate using a TTY or equally effective telecommunications system is not contingent on how the call originates [...]”
- “The Department also recognizes that some PSAPs have upgraded their emergency telephone systems to incorporate an Internet Protocol (IP) system. As such, some of these PSAPs may choose to use the upgraded IP system (or stand-alone IP-ready working station) to accept SMS-originated calls, but must still answer TTY-originated calls using a TTY. If title II entities choose to accept SMS calls from individuals with disabilities through an IP system, the Department would consider that as using an equally effective telecommunications system; thus, such entities would be in compliance with §35.161(a).”