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REACH112's position on NOVES – Non-Voice Emergency Services

This document summarises the position of the REACH112 project on the NOVES proposals that were presented during an conference call in December 2010.

1. General remarks about NOVES

REACH112 welcomes the NOVES proposals and the efforts by 3GPP to enable citizens to communicate the PSAPs using additional media. However, REACH112 believes that NOVES should renamed since voice should not be excluded from emergency conversations when possible. NOVES shall consider the idea of "other than voice only emergency services" in its title. The scope of NOVES and the devices concerned should also be clarified i.e. does it concern only mobile devices using mobile telephony networks? What are the implications for an iPad or a laptop connected to a 3GPP network? In REACH112's view, NOVES' service does not cover all the Internet communication cases (such as defined by ECRIT) but only the 3GPP architecture cases.

2. Service aspects

1. Accessibility
   - 1.1. A mechanism is needed to enable NOVES in a NOVES capable device

2. Location Services
   - 2.1. Position information is expected to be required by regulation and based on OMA SUPL

     REACH112 comment: the position should be as accurate as possible considering the capabilities of the device and network. The location information should be provided instantly (with the call set up) to the PSAPs in a standardized fashion. Updates on the location information should be available. Reference to OMA SUPL shall be removed. The location information shall be based on international standards.

3. Service mode
   - 3.1. A NOVES capable device will require a SIM

     REACH112 comment: It should be noted that emergency calls are still possible without SIM cards in many European and other countries. Thus the need for a SIM shall be further explained. This is also related to the device that will be used in NOVES.

   - 3.2. Authentication of the device will be required

     REACH112 comment: Calling line identification is also needed. CLIRO (Call Line Identification Restriction Override) shall be available to prevent callers from "hiding".

4. Charging
   - 4.1. NOVES is expected to be free of charge (although records are kept for audit purposes)

     REACH112 comment: Remove "is expected to". NOVES shall be free of charge like any communications with emergency services.

5. Reliability
   - 5.1. NOVES will not be a store and forward service (like SMS)

6. Prioritization
   - 6.1. NOVES will have usually higher priority than non-emergency communications

     REACH112 comment: "NOVES will have higher priority than non-emergency communications" (delete "usually"). REACH112's position is that all emergency communications have to be prioritised over other communications in order to guarantee quick and reliable access to the PSAPs.

   - 6.2. 3GPP Multimedia Priority Service may be relevant

7. Security
   - 7.1. Location information is protected from user alteration

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REACH112 comment: Citizens shall not have the possibility to turn off or hide the location information provision (e.g., turn off the GPS function).

7.2. Authenticity of user provided media (e.g., a picture of an emergency scene) is not guaranteed by the device or originating network

8. Routing
   8.1. Routing to the most appropriate PSAP by the originating network or emergency service network
   REACH112 comment: Call routing should be based on the caller's geolocation (among other factors), as established in Section 2.1. This should be the case for a very large majority of emergency calls, but in some specific cases there might be a need to proceed differently (see 9. Roaming). There should also be a way to use the communication preferences of the caller if he/she had registered them in their terminal. It includes media required in both directions as well as language used for communication. This could give indication to the called PSAP if a translation/relay service needs to be inserted in the conversation.

   8.2. A mechanism for service specific routing (e.g., Police, fire, ambulance) is needed

9. Roaming
   9.1. If NOVES is available in a visited network then the user should be notified
   9.2. In a visited network the media would be routed to a PSAP in the visited country, not the home country
   REACH112 comment: Based on the REACH112 project experience (www.reach112.eu), it should be noted that citizens with disabilities (e.g., deaf and hard of hearing) may only be served appropriately in their home country. For instance, a Swedish deaf citizen might only be served appropriately if a Swedish Sign Language relay service can communicate with both the citizen and a Swedish speaking PSAP operator. In this case, the call could be routed to the home country and the emergency information passed from the Swedish PSAP to the PSAP responsible on the visited country. REACH112 believes that these cases should enable specific routing scheme but only in specific cases. The default routing scheme in roaming situations for the large majority of citizens should still remain that emergency calls are routed to the responsible PSAP in the visited country.

10. Handover
   10.1. A handover between radio access technologies may result in a loss of degradation of NOVES (e.g a handover from 4G to 2G may result in loss of video) but voice should always be available
   REACH112 comment: REACH112 agrees with this statement and supports the fact that voice shall always be available when citizens can communicate with voice. The possibility to have a fallback on text and audio or text only should be considered. Location shall also be available.

11. PSAP boundaries
   11.1. If the NOVES device moves across a PSAP boundary, all media should be routed to the PSAP that was appropriate at the beginning of the session
   REACH112 comment: REACH112 believes that "provided the session is not interrupted" should be added to this statement.

12. Multi media
   12.1. All media should be attributable to the same NOVES device

13. Call back
   13.1. Call back by the PSAP should be possible, ideally with the same media as originally used, but always by voice
   REACH112 comment: REACH112 agrees with this statement, but adds that voice would not be possible with deaf and hard of hearing citizens. REACH112 thus believes that PSAPs should always be able to call back using the original media. Call-back shall include the same extra services, such as relay services, that were included in the original call.

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14. Load impact
    14.1. High call volume management techniques can be used (e.g., call clipping, recorded message in PSAP or originating network)
    14.2. There is currently no requirement for a NOVES inactive mode

REACH112 comment: PSAPs should be able to interrupt the communication.

3. Use Cases

1. Text message to emergency services and position updates

2. Multimedia Telephony communication to PSAP with Real Time Text

   REACH112 comment: Location information shall always be sent to the PSAP.

3. Emergency communication to PSAP with the addition of media

4. Delayed transmission of media of an emergency situation associated with voice communications to a PSAP

5. Transmission of media in a non-voice interaction with a PSAP

6. Communication with PSAP when voice is inappropriate

   REACH112 comment: PSAPs should also be able to prevent the citizen's device to make alerts (visible/ audible). For instance, in case of a hostage situation, the PSAP shall have the means to make sure that the citizen's phone will not ring.

7. Red button service
   REACH112 comment: REACH112 believes that there should be a mechanism to prevent accidental emergency calls using the "red button". It should be noted that this topic has been intensively discuss during the discussions on the pan-European eCall.

8. Texting application communication to emergency services with one-way Real Time Text

   REACH112 comment: PSAPs should also be able to prevent the citizen's device to make alerts (visible/ audible). For instance, in case of a hostage situation, the PSAP shall have the means to make sure that the citizen's phone will not ring.

9. PSAP adding media to a text-initiated emergency call

   REACH112 comment: PSAP should also be able to add media in case of a "voice-initiated emergency call". For instance, video should be used when relevant for PSAPs e.g., when the emergency situation is not well described and when the PSAPs believes that video could improve the intervention. PSAPs should have the possibility and the responsibility for activating the video stream, unless there are specific needs for the callers in the context of a particular set-up (e.g., a sign-language user that is recognised as such by the PSAP network).

10. Multimedia Telephony communication mainly in sign language to emergency services (3 way video call)

    REACH112 comment: This use case often requires an external sign relay service to be added to the call, either by user action, by user profile evaluation or by PSAP action. It may be valuable to describe other use cases with relay services and other supporting services (language interpreters, experts etc.)

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About REACH112:

REACH112 (REsponding to All Citizens needing Help) is a three-year project partially funded by the European Commission under the ICT PSP programme. It gathers 20 partners from all over Europe, including user organisations and major global telecommunications companies. In five countries, it will deploy a new communication solution to allow people to communicate in video, voice and text simultaneously, with special focus on people with disabilities. The project will offer access to relay services to help connecting users with different abilities to others and will also provide access to the emergency services. Ultimately, the service will benefit all citizens.

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