EMYNOS Newsletter #5
February 2018

The Next Generation Emergency Communications (EMYNOS) project[1] is funded by the European Commission/H2020 under the grant agreement No 653762. It aims at developing a Next Generation platform for enabling European citizens to make IP based emergency calls (to police, ambulance, and fire brigade). This platform intersects the NG112 architecture, described in the NG112 LTD[2] document, and implements the related functionalities according to the project consortium needs and requirements. Accurate location is one of the main topics the EMYNOS project has been investigating.

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[1] www.emynos.eu

[2] www.eena.org/ressource/static/files/eena_ng112_ltd_v1-0_final.pdf

1. Foreword

After three years of progress and efforts towards building, testing and implementing Next-Generation emergency communication technologies, the EMYNOS project is coming to an end.

Since November 2017, EMYNOS has been presented and tested in the course of hackathons, workshops, pilots and testing sessions all over Europe. The purpose of this newsletter is therefore to offer an overview of what happened, what was tested and what were the outcomes of these events.

On behalf of the EMYNOS consortium, we sincerely hope you enjoy reading this issue! The EMYNOS project may be ending but the journey towards the full implementation of Next Generation emergency services technology is only beginning. Therefore, we invite those involved in Next Generation emergency communications to visit our Open Source Page to follow up on the project's latest results and achievements.

The EMYNOS Consortium

2. EMYNOS Workshop & Hackathon in Madrid

On November 27, 2017, the second workshop on Next-Generation Emergency Communications organized by the EMYNOS project successfully took place at the headquarters of the Spanish National Police in Madrid. The event gathered more than 60 stakeholders from the research, industry and end-user communities, including organizations working in 112 emergency services.

This workshop focused on presenting the EMYNOS project ESInet, particularly, in terms of architecture specification and implementation regarding total conversation, WebRTC based emergency calls, accurate location for emergency calls, and solutions for persons with disabilities. In addition to the presentations from the EMYNOS partners, the event also featured key talks from the Madrid 112 centre and the NEXES project, followed by a roundtable session where the main speakers answered to the audience's questions and discussed the future of emergency communications.

The EMYHACK, the hackathon that took place in parallel to the workshop, was a collaborative event between the EMYNOS consortium and other stakeholders concerned with the evolution and deployment of Next Generation emergency services. More specifically, the hackathon aimed at:

- Giving an overview of the EMYNOS testbed/ESInet and how it can be used

- Enabling interoperability tests between software components and products that are compliant to the EENA NG112 LTD document and the NENA i3 architecture

- Enabling NG112 and NG911 products manufacturers to test their products and solutions against legacy systems

- Supporting the development of innovative solutions for current and future emergency services challenges

The use-cases shown during the hackathon included:

- Testing location configuration, audio, video, WebRTC, Real Time Text over VoIP networks and IMS

- Testing emergency related sensor data transmission and the use of haptic devices.

- Testing NG emergency calls towards legacy PSAPs

Various organizations and projects attended the hackathon including HUAWEI, ITTI, The Swedish Police as well as the NEXES and ELASTESTS Projects.

The workshop was collocated with the 17th PSCE Conference, where an overview of EMYNOS was further presented by Yacine Rebahi on November 29th. The EMYNOS presentation generated numerous questions in the audience illustrating the widespread interest in the project development and achievements. The PSCE Conference gathered more than 90 international stakeholders in Public Safety Communications.

An overview video of the workshop in available [here.](#)

3. EMYNOS testing sessions in Poland

The aim of Harpo's pilot was to evaluate the EMYNOS user experience in relation to the specific needs of persons with disabilities and to demonstrate the system prototype in operational environment.

Harpo presented the EMYNOS project and provided individual training for pilot participants – persons with disabilities and their caregivers. Each participant received the project information sheet with project details, its objectives and purpose of participating in the pilot. Among persons with special needs there were users with visual impairment, motor disabled persons and persons not able to speak, write or read (Augmentative and Alternative Communication users). Each user participated in individual meetings, most of which were held at users' homes (21 end users participated in the requirements collection stage and 19 end users participated in trials as 2 end users had to withdraw from the project due to their health condition). The communication method and scenarios to be trained on and tested by a given user were individually adapted to user's needs and capabilities
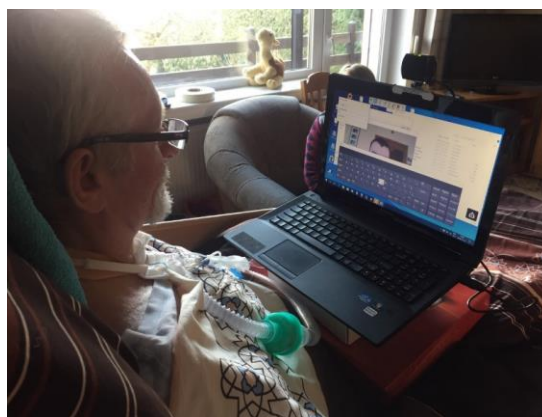

4. EMYNOS Pilot in Turkey

The EMYNOS project has underlined the effective use of satellite infrastructure for emergency communications. Accordingly, as part of the Turkish pilots, EMYNOS developed and demonstrated an initial fail-over use case scenario, when all other communication networks were assumed to be not operational. Based upon this scenario, a cross-country emergency call using VSAT (Very-small-

aperture terminal) has been established between TURKSAT and TEIC. Furthermore, a second scenario for public warning system over satellite, thanks to which end users that are using satellite to receive TV transmission can receive warning message over satellite, has been achieved. A third scenario for warning acknowledgment system over mobile-government applications as a warning system extension has also complemented these innovative scenarios. All these three scenarios have been publicly demonstrated on the 23.11.2017, in Ankara Yildirim Beyazit University (AYBU), as the project pilot showcase.
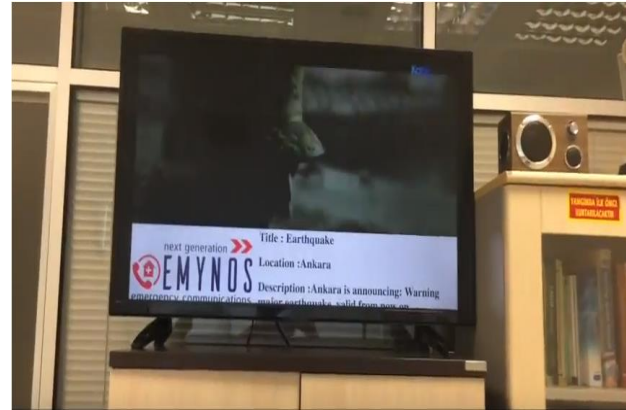
60-70 participants attended the demonstration delivered as a special session in ICEBEG2017 (and its parallel conference SOSBILKO2017). Among these, 30-40 people were academicians from universities from Turkey and abroad, 10-15 from different departments of government agencies, and the remaining ones were students. Some of the participants were academics and government officials working in related field. Many others were potential end-users or key people that could connect us with them.

The feedbacks for the public demo were mostly positive and encouraging. For instance, the potential end-users have found the system 'easy to use', as noted by them in the completed surveys. The academicians were eager to learn more on the project results (personal communications and observations). The students called the events 'a must see' by everyone in the university (from the feedbacks for the AYBU course on managing information systems projects).

Three videos were made by TURKSAT out of this pilot and are available here.

5. EMYNOS Pilot in Austria

The EMYNOS pilot took place in Graz, Austria, at the premises of the Austrian Red Cross- Regional branch Steiermark, on December 20, 2017. The event gathered representatives from different sectors, ranging from end users to members of the telecommunication´s industry, among others.

During the pilot, the different use cases were presented, allowing the participants to know the multiple applications developed by EMYNOS. At the end of the demonstration, a discussion was developed between the participants the EMYNOS partners, allowing receive feedback about the future of Next Generation emergency communications. The distribution of questionnaires allowed EMYNOS partners to collect further useful feedback from attendees.

The pilot demonstrated application of Next Generation emergency services technology as well as their integration with the current emergency call centers' systems. This event particularly showed IP based emergency calls, with various features such as audio, video, Real-Time Text, accurate location and sensor data, integrated and tested with the current (legacy) system of the Austrian Red Cross.

An overview video of the Pilot in Graz is available here.

# 6. EMYNOS Final demonstration in Romania

The EMYNOS final demonstration took place on January 31st in Bucharest, Romania with the support of the Romanian Special Telecommunications Service (STS). After two years of progress and promising results illustrated in the course of various demonstrations and testing activities conducted in Poland, Turkey and Austria, the EMYNOS system, embodying Next-Generation emergency communications services, was successfully integrated with the legacy Emergency System managed by STS.

Next Generation emergency communication components such as rich media communication support for persons with disabilities and improved caller location were tested through a wide variety of uses cases and scenarios including:

- Pure NG112 calls with caller location, audio, video, real time text, and sensor data

- Emergency calls from assistive technologies and haptic devices

- Emergency calls over satellite

- NG112 calls towards emergency legacy systems

The demonstration involved more than 35 external participants from Public Authorities, actors of emergency communications services, and representatives of the National Deaf Association from Romania.

The results generated as part of EMYNOS are expected to become a starting point for further activities in the context of research, development, integration and testing of Next-Generation emergency services. In addition, the outcomes of the project should become an incentive to regulators and end-users to respectively enforce the necessary policies and speed up the deployment of such services.
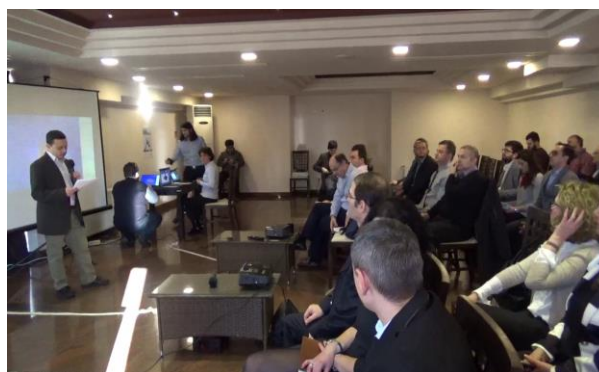
An overview video of the event is available here.

The EMYNOS Consortium

The EMYNOS framework has been implemented by partners with complementary expertise (telecom/satellite operators, VoIP provider, eCall testers, end users), which together formed the chain for the provision of emergency services and which delivered the EMYNOS demonstrator that was validated in operational environment.

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