

INTRODUCTION

The objective of the deliverable D2.2 is to complete and refine the EMYNOS framework architecture described in D2.1. In fact, it is a revised edition of the initial specification document (D2.1), incorporating all the necessary specification updates which were considered necessary after the first round of the implementation and testing phase (Deliverable D3.1), also aligning with technological advances in the global emergency services support in the internet.

The second chapter summarizes the main changes and improvements with respect to the previous EMYNOS framework architecture (D2.1)

The third chapter deals with requirements classification and refinements. The EMYNOS requirements were also discussed in D2.3 (a previous deliverable), but to ease their accessibility to the readers, they have been classified based on various criteria including their relevance to the PSAP, citizens, and mobile operators or VoIP providers. Some additional requirements have also been identified while working on the different blocks of the architecture.

The fourth chapter discusses the communication part in the EMYNOS framework; the core functionalities that are needed to establish services and applications related to extended eCall, solutions for persons with disabilities, and warnings. A high-level architecture is proposed where issues such as location information encoding and retrieval, emergency calls identification and routing, emergency calls presentation on the PSAP side, and exchanged data privacy are addressed. A particular focus is on the IETF and W3C standards that were specified to address these issues. The chapter also includes a section describing the elements of the EENA long-term vision of NG112 and the European Commission mandate M493 relevant to the EMYNOS framework.

The fifth chapter describes the EMYNOS vision for the extended eCall. This includes integration of additional sensor information into the transmitted data and the inclusion of new application areas like powered two wheelers and monitoring of cargo and individuals. These extensions are made possible by the introduction of SIP and allow the PSAP a more detailed overview of the emergency. These extensions must also be considered in relation to privacy and other standards.

The sixth chapter deals with the use of social media for emergency services. It analyses how social media can be effectively employed by a PSAP and describes which functions for social media data analysis will be implemented as well as how the results will be presented.

The seventh chapter explains how to include the solutions being developed to the requirements of people with special needs. Disability profiles of blind and low vision users, deaf and hard of hearing users, speech impaired users and motor disabled users are discussed. Native API proposed for Assistive Technology solutions is presented. Moreover, the chapter defines additional data that may be sent in the background to PSAP, containing information about the caller's disability and communication skills. Support with the use of symbol communication to individuals not able to speak or write is also described.

The eighth chapter discusses the EMYNOS virtual reliability and failover where various solutions such as IVRs, warning messages, and satellite communication are used in case the emergency system is not reachable.

The ninth chapter provides an overview of security in the context of IP based emergency services and discusses the EMYNOS vision to deal with false and hoax calls.

The tenth chapter presents the warning system. The Turksat warning application, the Fraunhofer FOKUS KATWARN applications and the APIs that will be used are explained. This chapter also discusses the improvement of warning systems by supporting not just text but other media types and communication means.

The eleventh chapter provides some scenarios that can be demonstrated using the technologies being developed within EMYNOS.

Finally, an appendix with more details related to previous chapters is included.

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