5G Safety - Phase 2 Experimental development, sub-phase ER.3

Final validation report

Result ER.3 of activity T.4.3. Validation of the demonstrator

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1. Abstract

This abstract summarizes the document ER.3: Final validation report, which is the result of activity T.4.3: Validation of the demonstrator. The task is an integral part of the implementation of activities within the second phase of experimental development and includes the validation of demonstration scenarios in accordance with the outcomes of the task T4.1: Demonstration scenarios and test environment specifications.

The ER.3 report presents the results of the validation of the demonstrator scenarios and the underlying building blocks. Validation took place in two ways: as (1) technical validation and (2) as feedback-based validation involving various stakeholders. The technical validation addressed the fulfillment of key performance indicators (KPIs) of individual building blocks of the system, thus confirming the technical feasibility of designed and developed functionalities. Stakeholder validation addressed the suitability of the identified stakeholder requirements and the possibility of applying the final results in practice.
The definition of scenarios was based on ER.1: "Description of the demonstration scenario and test environment specifications," which classifies the ten identified scenarios as technical, applied, or both, while also defining the key performance indicators (KPIs) needed for validation. In the first step of the technical validation, all ten scenarios were checked from the point of view of the KPIs, with eight scenarios fully meeting the predefined KPIs and two meeting a large majority. The unmet technical KPIs were related only to the implementation constraints and not to the technical feasibility itself. With a high percentage of compliance with the predefined KPIs (91%), we confirmed the suitability of the initial hypotheses and the technical feasibility of the prototypes.

For the purposes of stakeholder validation, in preparation for demonstration and validation events, we found that certain low-level technical scenarios defined in ER.1 are not suitable for stakeholder validation, as they contain implicit or hidden processes that are difficult for final stakeholders to comprehend, and at the same time making the feedback regarding practical applicability less relevant. Consequently we used the baseline scenarios for technical validation (Scenarios 1-10) to define a new set of demonstration scenarios (Scenarios A-H and J), which we specifically adapted for live presentation to different stakeholder groups. As part of several events, we presented scenarios A-J to interested stakeholder groups as well as project supporters, and gathered their feedback and opinions. Stakeholder feedback focuses on the benefits of scenarios in PPDR operational practice as well as for end-users, while highlighting potential implementation difficulties (needed changes in organizational and operational processes, legislation, signal coverage, relevant user skills, etc.) and also assessing the possible timeframe for practical implementation.

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