

D22.2 Interoperability Notation

Project-wide common functional interface specification language with templates and guidelines for use case notation, interface description and system definitions.

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1 Public summary

This Deliverable D22.2 extends the interoperability concept of Deliverable D22.1, by offering a specific notation for interoperability in the domain of public transport security. Within SECUR-ED this notation will enable later Sub-Projects to describe their components and systems in a consistent format.

This common interface specification language should help to avoid misunderstandings in the communication between the partners and activities of SECUR-ED. It is intended to be used for the specification in the different WPs for the capacities, the demonstration activities and for the transfer of solutions to satellite cities. By using the interoperability objects and building blocks of Deliverable D22.1, the notation offers capabilities for further annotation of the interoperability objects modelled, hence enabling collaboration and interpretation of this model on various stages.

Based on UML the notation language offers the possibility for structured modelling of the system-of-systems architecture. The notation must provide capabilities to express organisational settings as well as technical infrastructures. Further requirements are flexibility, ease of use and the definition of a common understanding concerning basis structures and principles of modelled infrastructure. To fulfil these requirements, the notation must do both, maintain flexibility and define basic rules to enable participants to understand models designed by other participants.

UML is a modelling language used in requirements and software engineering that fulfils the requirement of being flexible and offering several possibilities in granularity and ways of modelling a certain aspect. For those readers who are not familiar with the relevant UML-concepts a short introduction is provided.

In this deliverable we transfer the SECUR-ED Interoperability Concept defined in D22.1 to a graphical UML representation and introduce a set of rules and key concepts to standardise modelling for the public transport and security domains, while offering the flexibility for the usage of further unmentioned UML-concepts. Furthermore we provide guidelines for annotating the interoperability objects as well as an integrated example on how to use the notation based on scenarios from Milano.

The notation is an important step towards achieving interoperability. However, general key elements will be further elaborated in tasks 22.3 Interoperability Syntax and 22.4 Interoperability Semantics.

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