

D22.3 Interoperability Syntax

Interface Specification Language

PUBLIC SUMMARY ONLY

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1 Public Summary

This document defines an interface specification language that allows mass transportation security information systems to communicate and exchange data in a distinct and understandable way in order to achieve interoperability between the systems.

The definition of interoperability as stated in the Free Software Users' Association (AFUL) Interoperability working group is: *"Interoperability is the capacity for a product or an information system, whose interfaces are completely known, to work and communicate with other products or information systems, existing or coming, without any access or implementation restrictions"*.

In this definition, the notion of interface is fundamental. The interoperability between systems is only possible if the interfaces have been fully, precisely and clearly defined previously. An interface allows several actors or systems to interact. These interactions can take many forms like data exchanges. The interfaces are in this case made of common structures and data types understandable by every system involved in the interaction.

Interoperability requires that communications comply with conventions. These conventions have requirements. If the convention is well specified and the communicating systems comply with the convention requirements, seamless communication between these systems is achieved. That is the role of a technical interface description language (IDL). One should note that if the systems evolve, they will still be able to communicate if the evolutions comply with the convention requirements.

Interface description languages are used to describe interfaces independently from a language or a system. Interface description languages allow the definition of interfaces which can be used by tools to automatically generate interfaces specific to a given language.

With the variety and heterogeneity of systems in mass transportation security, technologies managing the interoperability need to be open and free of licensing constraints. In the following sections, the different existing middleware approaches in the information technology world will be listed. The different existing middleware technologies and specifications will then be presented, like CORBA, SOA, SCA, SOAML, etc. One should note that this document focuses on open standards and technologies.

This document will also present a dedicated technical interface description language and data definition language in order to satisfy the needs of interoperability of the SECUR-ED partners. A graphical representation of each concept of the interface description language will also be provided.

- End of Document -

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