

D32.2 Integrated "model type" solution for train protection solution

PUBLIC SUMMARY ONLY (PS)

Reference SCR-WP32-D-NIC-007

Note: this document reports only the Public Summary of a non-public document. The full document identification is noted here below for information.

Full document identification	
Related SP / WP	SP3 / WP32
Related Deliverable	-
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Reference	SCR-WP32-D-NIC-007
Dissemination Level	PU
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This document is issued in the frame and for the purpose of SECUR-ED project. This project has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 261605.

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Status:	Issued			



1 Public summary

Over the last few years, onboard security in public transport has greatly evolved. It is now becoming more and more IP-based and integrated to the ground, thus allowing communication between ground and onboard without noticeable differences. The idea is to make accessible the onboard systems/sensors information to the ground control center (OCC), in order for the OCC operators to be aware in real-time of what is going on, where, and react accordingly. This implies of course continuity and preserved quality for the communication; whenever this is not the case (most of the time with legacy railway systems, tunnels, etc.), data needs to be stored and sent as soon as communication is recovered, but onboard staff needs to remain aware of the onboard situation and key data must be permanently recorded to allow post-event forensic investigations.

On these premises, SECUR-ED proposes an onboard architecture which is both stand-alone, remaining operational in case of communication failure with the wayside, and fully integrated to the wayside architecture. For example, when communication is available, the OCC can see live videos, be updated on the status of the different sensors, etc. When communication is lost, a mobile terminal onboard (or the generally available onboard consoles) can play the role of a local OCC, allowing staff to manage situations even if they can't communicate with the control center.

In order to make this architecture open and future-proof, SECUR-ED relies on the various standards currently emerging or available, like IEC62676/ONVIF, ISO22311 and others. They have been studied in details in order to define the minimum requirements specifically applicable to rail onboard systems.

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