

Title (en)  
SYSTEM AND METHOD FOR DISPLAYING THE STATUS OF A RAILWAY TRANSPORTATION PLANT

Title (de)  
SYSTEM UND VERFAHREN ZUR ANZEIGE DES ZUSTANDS EINER EISENBAHNTRANSPORTANLAGE

Title (fr)  
SYSTEME ET METHODE D'AFFICHAGE DE L'ETAT D'UNE INSTALLATION DE TRANSPORT FERROVIAIRE

Publication  
**EP 4234359 A1 20230830 (EN)**

Application  
**EP 23158266 A 20230223**

Priority  
IT 202200003482 A 20220224

Abstract (en)  
Described is a system in accordance with the requirements specified for the maximum levels of safety integrity and security for safety-critical applications, designed to: (a) safely display the status of a railway transportation plant on an operator interface terminal, consisting of a commercial off-the-shelf (COTS) device (3), of fixed or mobile type (such as, for example, tablet and smartphone devices), connected through an open network (including the 3G/4G/LTE/5G mobile networks) to a calculation terminal (2), which receives the status of the railway transportation plant from a command and control platform (10); (b) sending commands towards the command and control platform (10) from the COTS operator terminal (3). Protection of the transmission of data over an open network (security) is guaranteed by a "transfer server" (4), which provides a protected workspace, for example, in accordance with NIS-2016/1148, for controlling access and directing the railway transportation plant to the command and control platform (10), for decrypting and decompressing images and for any other type of communication from and to the COTS operator terminal. The maximum Safety Integrity Level (SIL) is guaranteed by the architecture of the calculation terminal (2), in accordance with the requirements defined by CENELEC EN 50126 EN 50128 and EN 50129 standards, and by decrypting on the transfer server (4) the image previously encrypted by the calculation terminal (2) before transmission. This system may also be used in all industrial applications different from railway applications, in which it is necessary to safely control remotely a generic operator interface terminal.

IPC 8 full level  
**B61L 25/08** (2006.01); **B61L 27/30** (2022.01)

CPC (source: EP)  
**B61L 25/08** (2013.01); **B61L 27/30** (2022.01)

Citation (applicant)  
• EP 3438828 B1 20191211 - HITACHI RAIL STS S P A [IT]  
• EP 0970869 B1 20060322 - CIT ALCATEL [FR]  
• DE 4432419 A1 19960307 - SIEMENS AG [DE]

Citation (search report)  
• [IY] IL 72348 A 19871020 - INT STANDARD ELECTRIC CORP [US]  
• [Y] EP 0970869 B1 20060322 - CIT ALCATEL [FR]  
• [Y] DE 4432419 A1 19960307 - SIEMENS AG [DE]  
• [A] WO 2012025406 A1 20120301 - SIEMENS AG [DE], et al  
• [Y] "Railway applications - Communication, signalling and processing systems - Safety related communication in transmission systems", IEC 62280:2014, IEC, 3, RUE DE VAREMBÉ, PO BOX 131, CH-1211 GENEVA 20, SWITZERLAND, 6 February 2014 (2014-02-06), pages 1 - 132, XP082001126

Designated contracting state (EPC)  
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Designated extension state (EPC)  
BA

Designated validation state (EPC)  
KH MA MD TN

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