SECUROS TRANSIT

CARRIAGE & CARGO RECOGNITION

ISS

SecurOS TRANSIT is an intelligent image analytics module for the ISS SecurOS video surveillance framework which provides character recognition of carriages, trains, tankers, and platforms.

SecurOS TRANSIT is an effective tool for registration of railway vehicles at shunting-yards, seaports, and customs terminals, as well as for the control of containers and deliveries to industrial enterprises, storehouses, etc.

FUNCTIONALITIES

automatic carriage number recognition of moving train in real-time

forming video-archive as still image / video clips of separate carriages or whole train

forming database of carriage numbers, date and time of travel, direction, serial number of a carriage, number of carriages, average speed in control area

information search in video-archive and database on given characteristics: date and time of pass, carriage number, camera name or number

automatic comparison of carriage numbers with information of internal or external database

CONVENIENCE OF USE

convenient graphical user interface

wide spectrum of user's functions: export video to AVI/JPEG, print of files or e-mail, digital zoom, adjusting color and contrast, remote control by video cameras, display video in real time and work with archive, etc.

event and scenario management

robust analytics and forensic capabilities

FIELD OF APPLICATION

automatic registration and the control of railway vehicles

check formation of railway vehicles and definition of railroad car types

comparison of railway vehicles numbers with database, detection of railroad cars without numbers

automatic counting of railroad carriages

control and registration of cargoes

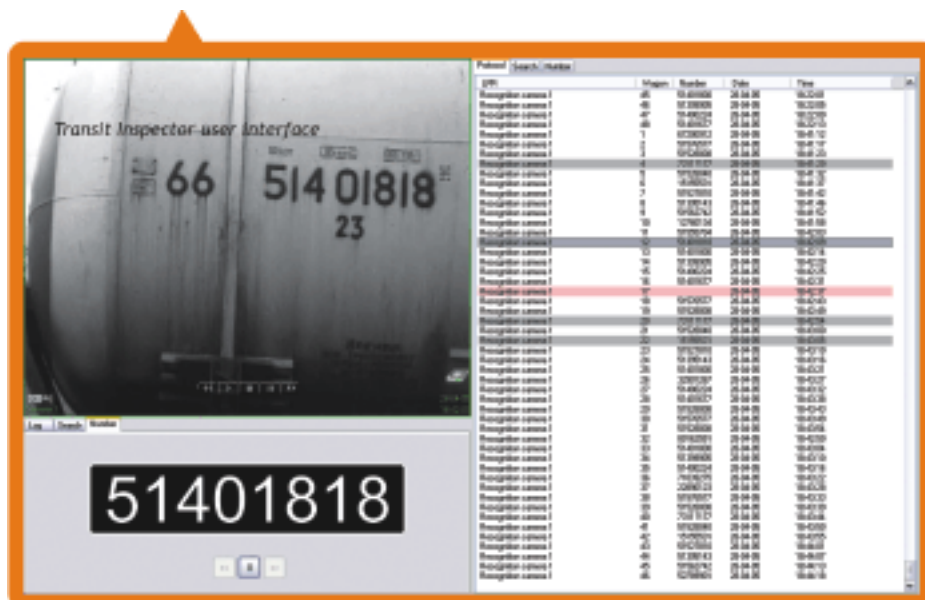commercial check of railroad cars

check integrity of cargo in open railroad car or at platform, control of cargo position on transport platforms

visual control of railroad cars: check of integrity of railroad car body, presence of seals on locks

check conformity of cargo data

collection of statistical data

SecurOS TRANSIT GUI

INTEROPERABILITY

integration with components of integrated security systems, automated enterprise control systems, software and information systems, external databases, manufacturing equipment and electronic weights & sensors

SCALABILITY

ability to organize geographically distributed systems

simultaneously work with multiple video channels

support for data transfer over low-speed network infrastructure

organization of common database with multiple operator and administrator workstations with different access rights

METRICS

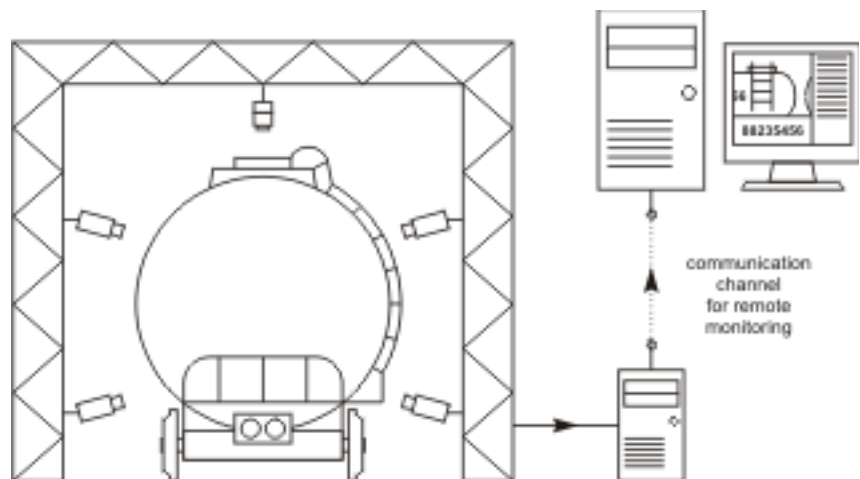|	
Allowable speed of movement in detection zone	up to 60 km/h (36 mph)
Recognition accuracy in daylight / at night with artificial illumination greater than 50 lux	95% / more than 90%
Width of the zone under control	from 5m to 10m
Camera installation height	from 2m to 4m
Allowable angle of view from camera towards the surface with number (vertical / horizontal)	up to 45° / up to 10°
Distance from camera to the surface with number	30m max / 5m - 8m optimal
Volume of wagon frames database (for 100GB HDD)	up to 10 million depending on compression level
Time of processing of one still frame (recognition > comparison > storing in database)	less than 0,0025 sec
Data transfer capabilities (for networking configurations)	any network supporting TCP/IP

FLEXIBILITY

adjustment of system reaction and operator notification (audible sound, phone, e-mail) in case of discrepancy between number recognition and database or identification of unusual events

cameras may be placed above railway for automatic control of presence/absence of cargo

fast adaptation according to features of object and requirements of the end user

adjustment for work with legacy video cameras

communication channel for remote monitoring

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