| Target | Record | Digitize |

ASE News

Camera based wagon inspection for DB Regio AG in Trier

In our current ASE report, we report on an application example that combines classic video surveillance with our OCR technology.

DB Regio AG has numerous locations in Germany where they provide services in the field of maintenance, repair and cleaning of rail vehicles

Demand

An important part of the maintenance work is the inspection of the vehicle roofs for possible damage. As not every garage is equipped with a roof work stand, this was previously a local problem that caused considerable effort. The DB Regio was therefore interested in a video-based solution to detect both damage and wear of pantographs. A further requirement was the image-based condition documentation of the wagons at entrances and exits.

As an image processing specialist, ASE GmbH was asked to design and install a camera-based monitoring system. After an initial pilot phase in Berlin-Lichtenberg, the system was recently installed in the Trier garage.

How do we do this?

On entering the garage hall, the NUMBER*Check* monitoring system is triggered by two wheel sensors in the track. With three cameras pointing at the train roof, a video recording is made and stored in a database together with a time stamp. Another camera is aligned to the side of the train and records the corresponding UIC number of the individual wagons. Thus, the recorded images can be clearly identified to the respective wagon.

The video recordings can be called up at any time on the screen. A zoom function in the freeze image makes even the smallest details visible. Thus, the condition of a wagon can be perfectly verified upon entering and leaving the garage.

The result

The monitoring system in combination with the automatic identification of the respective wagon number makes work much easier for DB Regio AG. Trains can pass through the maintenance process more quickly and provide evidence of damage and condition documentation. Unjustified claims for damages are thus a thing of the past.

We are pleased that DB Regio AG has been able to use our technology in a solution-oriented manner and would like to take this opportunity to express our thanks for the trust placed in us.

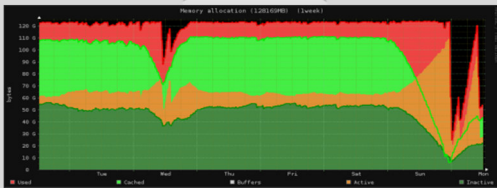## NUMBER*Check* – video gate also detects RFID data

Android or IOS? Just as there are different opinions and supporters for these operating systems, is it also the same with recognition/detection systems for traffic & logistics - OCR or RFID?

Our focus so far has been on OCR technology and optical recognition of wagon numbers, as these have to be individually located on each individual wagon and thus a complete registration can take place. On the other hand, not all wagons throughout Europe are equipped with RFID tags, but many EVU´s (railway companies) now use them for tracking purposes.

In order to still serve both sites and to cover the different interests, we have developed a solution with which RFID data can also be integrated into our system.

Efficient software monitoring for our OCR-system NUMBER*Check* – video gate

ASE works with highly efficient hardware and software components. Nevertheless - as with other products or systems - failures due to wear and tear can occur.

In order to counteract this in good time, we recommend our customers annual hardware maintenance and regular software monitoring.

Our IT department works with an efficient monitoring system, which also includes automatic alarms in the event of malfunctions.

In addition, our IT experts are continuously working on optimizing our NumberFinder software in order to make it even more efficient for our customers and to shorten processing times.

A further feature is the development of a video database, which complements the current image database. Further information will be available shortly.

Features and benefits → Surveillance and long time statistics of:

- ✓ Server hardware and system status (CPU, file system, memory, etc.)
- ✓ System components (camera, axis sensor, infrastructure, etc.)
- ✓ Software components (process statistics, resource requirements, etc.)
- ✓ Numberfinder statistics (recognition rate, confidence, processing time)
- ✓ Warning in case of critical values, alarm in case of error.

Result: Avoidance of failures or prompt re-establishment of functional condition

Do you have any questions or are you looking for an individual, image- or video-based solution for a monitoring relevant process in your company?

My team and I will be happy to advise you; call us: +49/7251/932590

Yours Eric Steck
ASE GmbH
-CEO-

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