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Truck Parking Guidance by occupancy detection on the Motorway A61

Service and rest areas (SRA) and rest areas (RA) on the main motorways like the A61 are often heavily overcrowded by trucks in the night hours, at the weekend and at public holidays. The truck parking situation was lightly improved by the extension of 4 existing rest areas. But the main problem still exists. The experience of the Landesbetrieb Mobilität Rheinland-Pfalz (LBM) is that the RSA and RA are not used equally. The plan is to improve the situation by a truck parking guidance system (TPGS) with an extension of about 210 km. In each direction, 5 service- and rest areas and respectively 5 rest areas are integrated in the system. In total, the system consists of 20 facilities with 1,150 truck parking spaces. Actually counting the ins and outs is still state of the art. 65 IP-Cams have to be realized to ensure a stable calibration. The data transmission concept bases on a 3-level-architectur:

Level 1: data transmission between the detection devices, IP-Cams and electrical installation to the road side unit.

Level 2: data transmission between road side unit and sub center unit

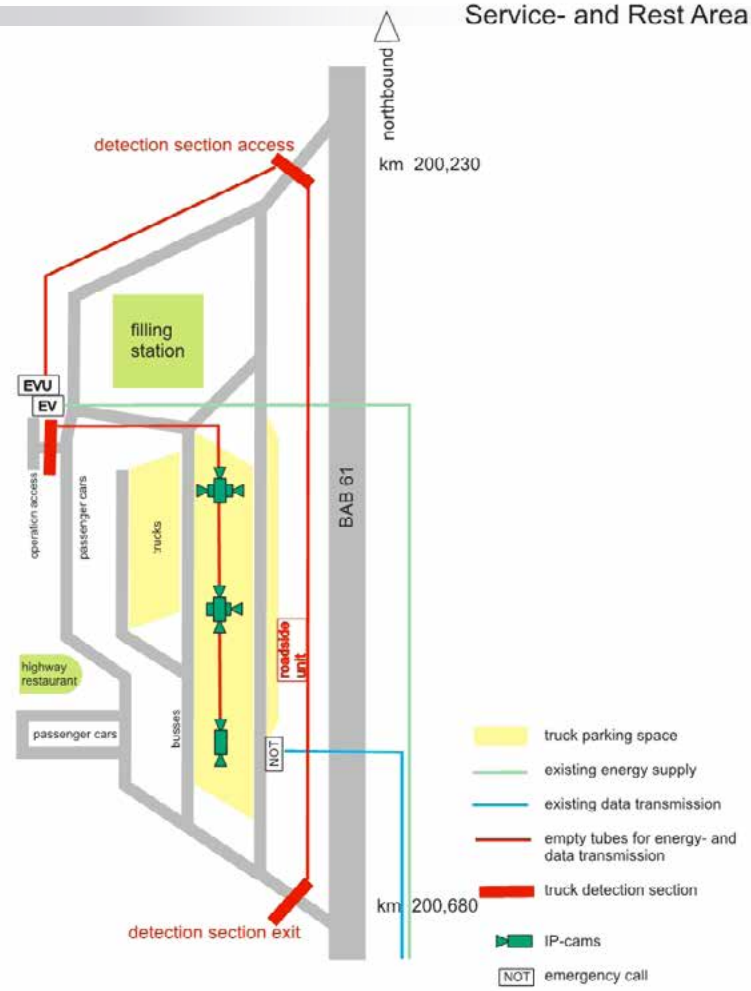
Level 3: data transmission between the sub center unit and traffic control center

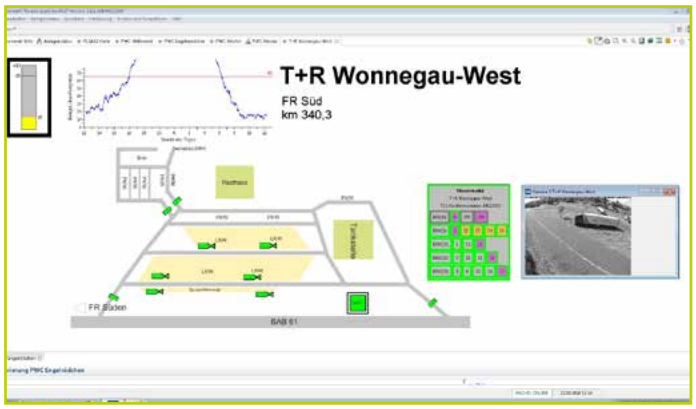
The driver will be informed exclusively on-line by digital information. The LBM and the Federal Ministry for Transport of German (BMVI) had decided not to provide the information on-site by VMS. The reasons are the high cost of earth works and the small information target group of truck drivers. Instead the LBM will disseminate the information via DATEX II to the Mobility Market Place of the BMVI and BASt and use the information for own purpose by integration in the existing traveler information system (*www.verkehr.rlp.de, www.mobil.rlp.de*).

The LBM decided to call for tenders functionally in order to open the market for new manufacturers and probable new technologies. The most important functional criteria cover the detection quality, data transmission by cable, wired energy supply and detection devices working stable at worse weather conditions. A combination of CCTV-image processing and laser-scanning detection will be realized. A second call for tender was published for the controller software of the sub center unit. The controller software will be part of the open software platform of 7

Federal States (*www.nerz-ev.de*). The software can be used without any fee by other authorities and private third parties.

The TPGS will come into operation in November 2018. First testing of data generation and transmission has been successful. If the experience is positive especially in terms of acceptance and homogenization of utilization ratio, the BMVI will probably extend the system to North Rhine-Westphalia in the north and Baden-Württemberg in the south.





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