The Peripheral Detection Task – A sensitive method for measuring Drivers' Workload? - A Field Experiment for Method Development

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Embedded in the IHRA-ITS Swedish-German driving study on method development, this thesis for diploma investigates the sensitivity of the peripheral detection task (PDT) for peaks in workload. The PDT is a recent and promising method to measure driver workload and could become part of a standardised set of methods developed to evaluate the safety impact of in-vehicle information and communication systems. The PDT has shown sensitivity to overall workload in the driving studies in Sweden and Germany. In an in-depth analysis, five short lasting situations of elevated workload within the German part of the driving study were identified and the corresponding PDT performance of 18 drivers was analysed. The situations varied in the amount of demand placed upon the driver. The PDT successfully detected these variations of workload and therefore proved sensitivity to peaks in driver's workload in a real traffic driving study.