How to Communicate with Pedestrians: Exploration of the Interplay of Dynamic HMI and External HMI for Different Sized Automated Vehicles

This study deals with the interplay of an external HMI to transmit explicit communication signals via 360° LED light-band and a dynamic HMI to transmit implicit communication signals via vehicle dynamics. Previous results on the interplay of dHMI and eHMI indicated that pedestrians tended to rely on the explicit communication via eHMI to indicate their willingness to cross. Nevertheless, this was investigated in a traffic scenario in which the automated vehicles approached from the left-hand side and the traffic rule "right before left" might have affected pedestrian's willingness. To rule this out, pre-recorded video sequences were shown in which the automated vehicles approached from the right-hand side. This study is work-in-progress and the data-collection is still ongoing. Results and further implications for future studies will be discussed.