

先端科学技術研究科 修士論文要旨

所属研究室 (主指導教員)	ヒューマンロボティクス (和田 隆広 (教授))		
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学生氏名	松尾 隆志		
論文題目	An Educational HMI Providing Request-to-Intervene Trigger and Reason Explanation for Enhancing the Driver's Comprehension of ADS's System Limitations		
要旨			
<p>Level 3 automated driving systems (ADS) have attracted significant attention and are being commercialized.</p> <p>A Level 3 ADS prompts the driver to take control by requesting to intervene (RtI) when its operational design domain (ODD) or system limitations are exceeded.</p> <p>However, complex traffic situations can cause drivers to perceive multiple potential triggers of RtI simultaneously, causing hesitation or confusion during take-over.</p> <p>Therefore, drivers need clearly understand the ADS's system limitations ensure safe take-over.</p> <p>In this study, we propose a voice-based instructional HMI for providing RtI trigger cues and reason to help drivers understand ADS's system limitations.</p> <p>The results of a between-group experiment using a driving simulator showed that incorporating effective trigger cues and reason into the RtI enabled drivers to comprehend the ADS's system limitations better.</p> <p>Moreover, the vast majority of participants, instructed via the proposed method, could actively takeover control of the ADS in cases where RtI fails, thereby significantly reducing the probability of collisions.</p> <p>Therefore, using the proposed method to continually enhance the driver's understanding of the system limitations of ADS is crucial for promoting safer and more effective user interactions with ADS in real-time.</p>			