

## Supplementary Material

### Communicating intent of automated vehicles to pedestrians

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#### 1 Supplementary Tables

Supplementary Table 1. Procedure in the *Experiment I*.

Phase	Encounter #	AVIP signal(s)	Narrative
F A M I L I A R I Z A T I O N	1	<i>I'm in automated mode</i> -> <i>I'm about to yield</i> -> <i>I'm waiting</i> -> <i>I'm about to start driving</i> -> <i>I'm in automated mode</i>	<ul style="list-style-type: none"> <li>Vehicle accelerates from a ca 85 distance while pedestrian is turned with his/her back towards the roadway. The (fake) driver is reading newspaper. The <i>I'm in automated mode</i> signal is activated.</li> <li>Pedestrian turns towards the roadway and starts observing the vehicle (12 km/h) when it is ca 50 m from him/her.</li> <li>At ca 45 m distance, <i>I'm about to yield</i> signal is activated.</li> <li>At ca 20 m distance, the vehicle starts decelerating.</li> <li>The vehicle stops at ca 5 m distance and <i>I'm waiting</i> signal is activated.</li> <li>After ca 30 seconds, the <i>I'm about to start driving</i> signal is activated.</li> <li>The <i>I'm in automated mode</i> signal is activated and the vehicle starts accelerating.</li> <li>Pedestrian turns his/her back towards the roadway and answers the following questions: <ul style="list-style-type: none"> <li><i>Describe what you saw?</i></li> <li><i>How did you experience the traffic situation?</i></li> <li><i>How did you experience the light signals in the windshield?</i></li> <li><i>What function did the light signals in the windshield have?</i></li> </ul> </li> </ul>
	2	Same as Encounter #1	Same as Encounter #1, but different questions: <ul style="list-style-type: none"> <li><i>Do you have any questions about the system?</i></li> <li><i>Have you understood how the system works?</i></li> <li><i>Do you have any comments about interacting with a self-driving car and its attempt to communicate with you?</i></li> </ul>
U N D E R S T A N D A B L Y	3	<i>I'm in automated mode</i> -> <i>I'm about to yield</i>	<ul style="list-style-type: none"> <li>Vehicle accelerates from a ca 85 distance while pedestrian is turned with his/her back towards the roadway. The (fake) driver is reading newspaper. The <i>I'm in automated mode</i> signal is activated.</li> <li>Pedestrian turns towards the roadway and starts observing the vehicle (12 km/h) when it is ca 50 m from him/her.</li> <li>At ca 45 m distance, <i>I'm about to yield</i> signal is activated.</li> <li>Pedestrian turns his/her back towards the roadway and answers the following questions: <ul style="list-style-type: none"> <li><i>What signal did the car show?</i></li> <li><i>How confident are you on your answer on a scale from 1 to 5 where 1 is uncertain and 5 is very certain?</i></li> </ul> </li> </ul>
	4	<i>I'm waiting</i> -> <i>I'm about to start driving</i> -> <i>I'm in automated mode</i>	<ul style="list-style-type: none"> <li>The vehicle stops at ca 5 m distance and <i>I'm waiting</i> signal is activated.</li> <li>After ca 30 seconds, the <i>I'm about to start driving</i> is activated.</li> <li>The <i>I'm in automated mode</i> signal is activated and the vehicle starts accelerating.</li> <li>Pedestrian turns his/her back towards the roadway and answers the questions (same as in Encounter #3).</li> </ul>
	5	Same as Encounter #3	Same as Encounter #3
	6	Same as Encounter #4	Same as Encounter #4
	7	Same as Encounter #1	Same as Encounter #1
COMPARISON	8	Automated driving, no AVIP	Same as Encounter #1 (but without AVIP signals active)