Integrating Physical and Cognitive Models to Represent Driver Behavior

Helen Fuller, Matt Reed, and Yili Liu
HFES, Santa Monica, CA., 2010

This research addresses the divide between cognitive and physical human models by integrating a cognitive human model with a physical human model. This new combined model uses the advantages of each type of model to overcome the weaknesses of the other. The capabilities of the new integrated model are evaluated in terms of modeling a task scenario with both cognitive and physical components: driving while performing a secondary in-vehicle task. The result is the Virtual Driver model.

abs2010_08