Exploring Unconventional Interfaces for Racecars

Jack Sam
School of Interactive Arts and Technology
Simon Fraser University
Surrey, BC V3T 5X3

Abstract

This paper presents preliminary results from an ongoing design research project. The goal of this research project is to speculate on new media for human-machine interfaces. The advancements in electric motor research allow automotive designers more flexibility in creating cars that are not restricted by large, conventional mechanical components. The purpose of this phase of the research is to explore conceptual interfaces that are made increasingly possible thanks to electronic sensors and by-wire technology. We propose a participatory design workshop with race car drivers to harness their creativity and expertise with driving. They will brainstorm unconventional interfaces focusing on making innovative uses of sensory input/output, such as taste or smell, in order to more evenly distribute sensory and cognitive load during driving. We present the design of our research method specifically to obtain unique and radical ideas at the periphery of, and beyond conventional race car design. Finally, we discuss future studies that emerge out of this workshop. This research is meant to inspire automotive designers to explore the increasing number of possibilities in automotive human machine interfaces.