

# Research Studies Driver Distractions and Dashboard Design

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Central Michigan University psychology professor Richard Backs plans to make the roads safer with research that could ultimately help car companies develop better technology which would minimize driver attention failures and design dashboard devices that require less attention to operate.

Unlike most scientists who focus strictly on performance while researching driver safety, Backs and his students at CMU are using brain wave patterns and heart activity to study drivers' attention while behind the wheel. This series of psycho-physiological tests of driver responses are being conducted using a desktop driver simulator provided by the General Motors Corporation.

"We are simulating how people use their attention while driving to better understand distractions such as navigation systems, cell phones and other portable wireless devices," Backs said. "In normal situations, our driving performance is not affected by these distractions. We may think that we are driving safely, but physiological measures show how our attention is actually focused on these other devices. Through our research, we hope to learn how to minimize distractions from these types of devices."

A key focus of Backs' research is on how driver attention changes as people age, focusing on adults 65 years of age and older. He also plans to expand his research to focus on adults with attention deficit hyperactivity disorder and other diagnosed attention disorders, to learn how these disorders affect their attention while driving and help to

develop remediation for them.

Backs also plans to develop an attention test to assess functions such as visual scanning, flexibility of attention, and sustained attention to diagnose specific attention deficits.

Backs plans to acquire more advanced equipment to expand CMU's research, which will help to create a program that will incorporate his findings with the evaluation and education of drivers with attention disorders. This will be a program that will provide hands-on testing and training to help people understand what is distracting them while they drive and how they can better focus their attention while behind the wheel.

"There are so many things that we can do with this research," Backs said. "Not only do we want to understand how we use our attention as we drive, we also want to develop programs to educate people on how to better distribute their attention while driving."

Source: Central Michigan University

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