Project Information Form

Project Title	Factors Influencing Visual Search in Complex Driving Environments
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Funding Source(s) and Amounts Provided (by each agency or organization)	**UTC funding:** UCF: $45,000.00 Georgia Tech: $69,822.00 Morehead: $24,977.00
Total Project Cost	**Total: $139,799.00**
Agency ID or Contract Number	
Start and End Dates	10/1/2012 – 12/31/2013
Brief Description of Research Project	Research on distracted driving has primarily focused on in-vehicle distractions including texting and cell phone use, "infotainment" navigation and audio systems, and other in-vehicle devices. Human factors engineering, which attempts to account for the capabilities and limitations of drivers, promises to provide ways to improve safety by designing more forgiving systems and environments. Successful human factors engineering requires a multi-disciplinary understanding of human perception, cognition, and the associated response factors. By understanding the driver's perception of the environment, engineers can make informed design changes to operational environments (such as temporary workzone areas and approaches) and reduce the potential for driver confusion, thus improving safety for both workers and drivers. The central focus of our research is to identify changes in the visual search patterns of drivers as environments become more complex. Specifically, we look to evaluate response patterns for drivers as they approach a temporary workzone area in which traffic flow has been altered from the 'normal' pattern by the use of traffic control devices. The study results will allow engineering guidelines for the use of these traffic control

	devices to be developed, improved and refined and thereby enhance the safe passage of vehicles through these proven dangerous locations. The overarching objective of this project is to evaluate the impact of visual scene complexity on driver behavior and to recommend improved methods to convey appropriate information to the driver. The study will initially be restricted to a simulated freeway environment focusing on interchanges and ramps with and without work zones. Based on our initial findings and available resources, the study will expand to evaluate conditions for at-grade intersections.
Describe Implementation of Research Outcomes (or why not implemented) (Attach Any Photos)	
Impacts/Benefits of Implementation (actual, not anticipated)	None yet.
Web Links • Reports • Project website	http://www.utc.gatech.edu/research/2076/details Report pending.