Unintentional Costs of Vehicle Alert Modality for Driving Hazards Morgan McAlphin, Human Systems Engineering Mentor: Dr. Robert S. Gutzwiller, Assistant Professor The Polytechnic School, Arizona State University



Methods

- 2 drives in a driving simulator
- One pair of hazards per drive
- Audio and Visual alert conditions
- Measurements include trust in system, hazard observance, and participant brake times



Research Question

What effect does the modality (auditory vs. visual) of in-vehicle alerts have on driver attention towards simultaneously occurring road hazards?

How can we use this data to improve driver safety?

Current Work

- Currently collecting data in the driving simulator at ASU
 Polytechnic
- Drives and hazards were designed and coded in the DriveSafety program





Future Work

Participant data will be recorded and analyzed to understand the attentional effects of in-vehicle alerts

Results will help to improve the design of in-vehicle alert systems

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