The University of North Dakota is actively seeking companies to commercialize a system and method that improves situational awareness, fatigue mitigation, and navigation via feedback to vehicle operators or third parties.

Applications
- Aviation, Commercial Trucking, Maritime Tanker, and Military Applications

Advantages
- There are currently no examples where a tactile feedback system was used to specifically improve navigation, improve situational awareness, and mitigate fatigue. Single pilot operations in what is referred to as “General Aviation” or “GA” are very commonly done without an autopilot and therefore do not have the protections provided by that automation.

The Technology
This invention is an improvement to situational awareness, fatigue mitigation, and navigation via tactile feedback to vehicle operators, such as via a piezoelectric device. The tactile feedback can be provided to a vehicle operator in response to data gathered from external navigation sensors, which can be used to identify navigational deviations outside of pre-established tolerances. The tactile feedback can be provided to a vehicle operator in response to physiological operator metric gathering and processing. One or more physiological sensors may be included on an operator headset, and may be either proximate to or separated from the tactile feedback device. As data is provided to the operator of a vehicle, equivalent data may be provided to a third party (e.g. a control center, dispatch, mission control).

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