



Call for Innovation (CFI) Opportunities for Member Consideration

Objective:

The EDGE Network is requesting Member collaboration to provide a 3 DOF head tracking system to determine the physical orientation of a soldier's head and gaze with respect to the battlefield.

Requested Innovation:

A light weight, low power head-tracking system to determine 3 DOF orientation of a soldier's head. Likely sensors would include solid state gyros (MEMS) to determine roll/pitch and solid state gyros combined with an electronic compass in order to determine azimuth/yaw data. This would include all hardware and software drivers for a Linux based computing platform.

Description:

The focus of this Call For Innovation (CFI) is to solicit Head Tracking System technologies to allow interpretation and display of situational awareness data onto a soldier display in relation to the environment viewed through the display. The soldier will typically (but not always) be wearing a helmet and Oakley eye protection glasses/goggles (Oakley, Revision, Wiley...etc), and this needs to be compatible with those protective items. The head tracking system should, if possible, be co-located on the soldier display in order to minimize cabling. Typical extreme environments and physical abuse needs to be considered. The unit will be powered from a nominal 16 volt DC source. Other considerations are minimization of head-borne weight and resistance to RF interference. This opportunity is envisioned to start as a rapid prototype with some limited number of units built for soldier evaluation (can be brass-board) followed by an integration project into Land Warrior and other soldier systems if successful.

Targeted Timelines:

- Confirmation of Interest in CFI no later than 10 March 2010
- Overview/Whitepaper on Technology Concept by 17 March 2010
- One-on-One discussions on technology and capability demo with The EDGE Network Team

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