

OBJECTIVE EVALUATION OF SITUATION AWARENESS FOR DYNAMIC DECISION MAKERS IN TELEOPERATIONS

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Situation awareness, a current mental mode of the environment, is critical to the ability of operators to perform complex and dynamic tasks. This should be particularly true for teleoperators, who are separated from the situation they need to be aware of. The design of the man-machine interface must be guided by the goal of maintaining and enhancing situation awareness.

The objective of this work has been to build a foundation upon which research in the area can proceed. A model of dynamic human decision making which is inclusive of situation awareness will be presented, along with a definition of situation awareness. A method for measuring situation awareness will also be presented as a tool for evaluating design concepts. The Situation Awareness Global Assessment Technique (SAGAT) is an objective measure of situation awareness originally developed for the fighter cockpit environment. The results of SAGAT validation efforts will be presented. Implications of this research for teleoperators and other operators of dynamic systems will be discussed.