Proceedings of the Annual General Donald R. Keith Memorial Conference
West Point, New York, USA
April 30, 2015
A Regional Conference of the Society for Industrial and Systems Engineering

Measuring Situational Awareness at the Small Unit Tactical Level

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The views expressed herein are those of the author and do not reflect the position of the United States Military Academy, the Department of the Army, or the Department of Defense.

Author Note: The authors are grateful for the opportunity to conduct research through the US Army Project Executive Office, Project Manager Soldier Warrior, Product Manager Soldier Systems.

Abstract: The purpose of this study is to propose and validate a method to measure the value of situational awareness at the small-unit tactical level. Currently, the Situational Awareness Global Assessment Technique (SAGAT) is widely considered the best method for measuring situational awareness. Research on situational awareness is largely focused at the command post and above level, and implementations of SAGAT do not address operations at the small-unit level. In today's Army, technology is an increasingly critical component of modern warfare used to increase the information provided to decision makers on and off the battlefield. The question remains as to whether or not increasing this information will increase the likelihood of making a well-rounded decision or if the additional information will overwhelm the decision maker. In order to accomplish the purpose of this project, we conducted a controlled experiment using the Nett Warrior system and VBS2 tactical simulation program, incorporating a modified form of SAGAT and the principles of cognitive engineering and human factors studies to measure a user's situational awareness. This study finds that the principles of a modified SAGAT can measure situational awareness at the small-unit tactical level. Additionally, the experiment validates that Nett Warrior increases situational awareness of soldiers in tactical operations. Future work on the topic includes a planned field test of the Nett Warrior system in which cadets will utilize the technology to accomplish a small-unit training mission.

Keywords: situational awareness, Nett Warrior, simulation, VBS2, simulation integration, SAGAT