

Team Coordination and Shared Situation Awareness in Combat Identification

Cheryl A. Bolstad, SA Technologies

Haydee M. Cuevas, SA Technologies

At its core, situation awareness (SA) involves being aware of what is happening around you to understand how information, events, and your own actions will impact your goals and objectives, both now and in the near future. SA is especially crucial in any domain where the effects of ever-increasing technological and situational complexity on the human decision-maker are a concern. In particular, poor SA in combat identification can lead to higher casualties due to combat errors, fratricide, and failing to anticipate enemy actions. Thus, meeting the combat identification requirements across the full range of military operations requires developing and maintaining high levels of SA of the current and future status of the operation in order to achieve an accurate characterization of entities (both friendly and enemy) in a combatant's area of responsibility. To optimize combat identification processes and enhance combat/mission effectiveness, greater emphasis must be placed on developing technologies that promote a coherent view of the battlespace through a common operating picture. Incoming data must not only be accessible, but filtered, analyzed, and integrated to develop an overall situational picture to support team coordination and shared SA. To address this issue, in this paper, we begin with a brief overview of the situation awareness construct, including defining the three levels of SA as well as distinguishing between team and shared SA. We then demonstrate, with examples from our own work, how a theoretical model of team SA can guide the development of new technologies, or enhance the utility of existing technologies (e.g., Blue Force Tracker), to improve combat identification. We conclude with implications for future research.