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New: A Comparison of Distributed Situation Awareness Using Analogue and Digital Mission Planning Systems; 8 Is it Really Better to Share? Analysis of a New Digital Mission Support System and Implications for System Design; 9 A Model of Distributed Situation Awareness in Complex Collaborative Environments; 10 Conclusions for Distributed Situation Awareness Theory, Measurement and Teamwork; References; Index

Sommario/riassunto

"Having an accurate understanding of what is going on is a key commodity for teams working within military systems. 'Situation awareness' (SA) is the term that is used within human factors circles to describe the level of awareness that operators have of the situation that they are engaged in; it focuses on how operators develop and maintain a sufficient understanding of 'what is going on' in order to achieve success in task performance. Over the past two decades, the construct has become a fundamental theme within the areas of system design and evaluation and has received considerable attention from the human factors research community. Despite this, there is still considerable debate over how SA operates in complex collaborative systems and how SA achievement and maintenance is best supported through system, procedure and interface design. This book focuses on the recently developed concept of distributed situation awareness, which takes a systems perspective on the concept and moves the focus on situation awareness out of the heads of individual operators and on to the overall joint cognitive system consisting of human and technological agents. Situation awareness is viewed as an emergent property of collaborative systems, something that resides in the interaction between elements of the system and not in the heads of individual operators working in that system. The first part of the book presents a comprehensive review and critique of existing SA theory and measurement approaches, following which a novel model for complex collaborative systems, the distributed SA model, and a new modelling procedure, the propositional network approach, are outlined and demonstrated. The next part focuses on real-world applications of the model and modelling procedure, and presents four case studies undertaken in the land warfare, multinational warfare and energy distribution domains. Each case study is described in terms of the domain in question, the methodology employed, and the findings derived in relation to situation awareness theory. The third and final part of the book then concentrates on theoretical development, and uses the academic literature and the findings from the case study applications to validate and extend the distributed SA model described at the beginning of the book. In closing, the utility of the distributed SA model and modeling procedure are outlined and a series of initial guidelines for supporting distributed SA through system design are articulated."--Provided by publisher.
