

**12<sup>th</sup> International Command & Control Research and Technology Symposium  
ADAPTING C2 to the 21<sup>st</sup> Century**

**Title: Deductive Sensemaking Principles Using Personal Constructs of the Field Commanders**

**Topic: C2 Concepts, Theory, and Policy**

Celestine A. Ntuen<sup>1</sup> & Dennis Leedom<sup>2</sup>

<sup>1</sup>Army Center for Human-Centric Command & Control Decision Making  
The Institute for Human-Machine Studies  
419 McNair Hall  
North Carolina A&T State University  
Greensboro, NC 27411  
Phone: 336-334-7780; Fax: 336-334-7729  
Email: Ntuen@ncat.edu

<sup>2</sup>Evidence Based Research, Inc, Vienna, VA 22182, [DKL-TEXAS@cox-internet.com](mailto:DKL-TEXAS@cox-internet.com)

The virtue of defining and measuring the commander's performance solely on their "knowledge in their heads" has become an important part of reconstructing battlefield sensemaking process. It is assumed that the expert commander constructs diverse and asynchronous sensemaking models when confronted with asymmetric situations—evolving and changing dynamics of the battlefield information. This personal construct systems are not static—they are confirmed when patterns of old information match the current situational goal or challenged every moment the commander realizes that everything "hold in the head" is not more relevance—a new construct system has to be developed to quickly adapt to the new situation. Some of these constructs represent the commander's atypical belief and core values can take place in either as a simple intuitive manner using heuristics or as a complex search procedure with wide-ranging hypotheses that are mentally simulated without conscious reference to personal commitment. We extend Kelly's construct theory to model the commander's sensemaking process based on his/her field experience. Information from expert interview with the field commanders from recent conflicts in Iraq and Afghanistan are used to develop the principles of individual sensemaking constructs based on evolving battle situations.