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12TH ICCRTS, "Adapting C2 to the 21st Century"

Title of Paper: A Philosophical Approach to Knowledge Management for a Networked Army.

Topics: Suited to "Track 4: Cognitive and Social Issues" - Sensemaking, mental models, C2 decisionmaking.

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Body of Abstract (196 words):

This paper explains the concept of *temporal convergence* in the context of the time-value of knowledge. We explore the epistemology of knowledge/information management from the notion of human cognitive awareness and mental models, through which we share situation images and common will. We explore the temporal relationships of information (lag, reiteration, timeliness, lifetime and obsolescence) to decision-making based on shared intentions and desired endstates.

Temporal *convergence* needs to be considered in parallel with temporal *divergence*; being a representation of the future as an expanding set of probabilities originating from one fixed reality - the present. The scientific community is most familiar with this concept. Conversely, for temporal *convergence* a desired future state is deemed to have already happened while we work in the present to make it so; correcting any misalignment in the immediate chain-of-events that may skew our planned way forward away from the desired end state.

We present an ontological framework as a model to help us understand some of the complex military processes addressed under Network-Centric Warfare, such as: command direction and intent; team self-synchronization; endgame focused "Course of Action"; effects-based approach and combined effect; shaping a malleable environment; and shared situational awareness.