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"Adapting C2 to the 21st Century"
Representability of METT-TC Factors in JC3IEDM
Track(s): 2, 3, 4, 8

Brian Ulicny, Christopher Matheus, Gerald Powell*, Robert Dionne, Mitch Kokar
Brian Ulicny
VIStology, Inc. (*US Army)
5 Mountainview Dr., Framingham, MA 01701 USA
(508) 788-5088
bulicny@vistology.com

Abstract: Commanders require relevant information about METT-TC factors in order to exercise effective command and control (C2). METT-TC factors (Mission, Enemy, Terrain & Weather, Troops, Time Available and Civil Considerations) represent the context against which information is evaluated and military decisions are made. If this context is to be encoded, shared, and, ultimately, processed and reasoned about by computers or computer-assisted C2 systems, the METT-TC context must be represented in some standard format with a shared semantics. The JC3IEDM (Joint Commmand, Control, and Consultation Information Exchange Data Model) represents several years of effort by the Multinational Interoperability Programme at developing a representation of military situations supporting communication and interoperability among NATO forces. All information to be shared by participants must, therefore, be representable within JC3IEDM. In this paper, we point out aspects of METT-TC that are not currently representable (or only partially) representable in JC3IEDM. These include aspects such as cover and concealment, fields of fire, and mission purpose. We end by suggesting ways in which JC3IEDM can be extended to represent these aspects of METT-TC factors.

Outline:

1. Introduction: METT-TC Factors and Representability
2. Semantic Interoperability: JC3IEDM and Related Work
3. Representing Mission in JC3IEDM
4. Representing Enemy in JC3IEDM
5. Representing Troops in JC3IEDM
6. Representing Time Available in JC3IEDM
7. Representing Terrain and Weather in JC3IEDM
8. Representing Civil Considerations in JC3IEDM
9. Other Issues: Negation, Possibility, Conditionality in JC3IEDM
10. Suggestions for Extending JC3IEDM for METT-TC Coverage