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Title of Paper: The Translation of JC3IEDM into an OWL Ontology

Topic: C2 Concepts, Theory, and Policy
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The Transformation of JC3IEDM into an OWL Ontology

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Abstract:

The Joint Command, Control and Communication Information Exchange Data Model (JC3IEDM) is a data model intended for the exchange of C3 information among coalition forces. This paper describes the development of a set of transformations that convert the JC3IEDM into an OWL ontology. The primary motivation of this work was to provide the basis for a semantically-rich and extensible ontology for use in representing and reasoning about command, control and communication operations. This paper explains the approach taken and the major challenges encountered. It concludes with a number of issues concerning the practical use of the resulting ontology.

Outline:

- Introduction
- The JC3IEDM
- The ERwin XML Definition
- Entity to Class Translation
- Attribute to Property Translation
- Relation to ObjectProperty Translation
- Codes to Enumeration Class Translation
- Discussion
- Conclusions