

### Day 3- April 5, 2006

#### **Modeling Motivation and Intent** - Ryan Hohimer, M&I Ontology Development Team, Pacific Northwest National Lab

Hohimer discussed a multi-year and multi-lab “motivation and intent” (M&I) research effort being conducted under the auspices of the Department of Homeland Security (DHS). The project is currently in its first year. The overall effort seeks to model the likelihood of individuals and groups turning to violence. Hohimer and his team are focused on bridging the language divide among computational modelers and social science experts, who may have different notions of concepts and terms. This effort aims to formalize in ontological language social scientific knowledge to make it useful to modelers. The M&I ontology seeks to provide definitions of terms, concepts, and logic used in each scientific domain’s theories by eliciting opinion from experts. Currently, the team is prioritizing what social science theories will be included in the ontology, but possible candidates include social movement theory, social identity theory, collective action theory, deviant legitimization theory, attribution theory, social cognition theory, and group dynamics theory. He asserts that this method of classification will help maintain the integrity of the scientific theories as the knowledge is transferred from the language of the scientist into a formal, standardized web language, thereby creating a shared language (lingua franca) between the modelers and the scientists. Hohimer highlighted the iterative nature of building an ontology which seeks to address fundamental knowledge transfer problems (how to formally capture what is in the experts’ heads and in the literature). In this vein, he maintains that validation efforts are essential.