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September ASKE Milestone 9 Report for AMIDOL

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Contents

1. Introduction

Focus on project objectives

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- Graph-based knowledge representation utilizing meta-model ontology. Development of rich outcome representation in the VDSOL ontologies and meta-models to improve explainability of the model for practitioners.

- Verification and validation of inference engine. Verification and validation of back-end algorithms using benchmarks developed for 2.2 to find possible flaws in prototype implementation. Refinement of metrics developed in 1.5.

- Refinement of VDSOL, AFI, and Inference Engine. Based on lessons learned in task 2.1, and V&V efforts for 2.4, we will update the VDSOL, AFI, and inference engine implementations for the scripted demonstration of the new system for use in a real world example of crises response to an emerging epidemic.

2. Machine Generation of Hypotheses

3. Machine Evaluation of Hypotheses

4. Interpretation of Model Outputs

4.1. Characteristic Identification

4.2. Flaw Identification and Debugging

5. Ongoing Work

5.1. Design of Experiments

5.2. Treatment of Data

5.3. Metric Algebras

5.4. Formulations in Multiple VDSOLs/Across VDSOLs