BUILDING THE DAML ELECTRONIC COMMERCE DOMAIN

QUARTERLY R&D STATUS REPORT
No. 3.

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Project Status

This reporting period was quite busy. We made progress in ontology design, and established the project Web page (http://damlgate.bowiestate.edu). To demonstrate our e-portal design, we deployed the DAML eCommerce Gateway (DAMLGate) prototype on a private server that also temporarily hosted our Web page.

Planned Activities and Milestones for the next Reporting Period

The project will install the gateway server at BSU and refine DAMLGate prototype in the next quarter. Also, we will initiate final documentation of the results of the complete project effort.

Special Equipment Purchased during the Reporting Period

The following equipment were delivered during the reporting period:

Dell PowerEdge 2500 1.26GHz/512K Cache Server 1GB SDRAM 4x256 MB DIMM, 36GB, SCSI, 10,000 RM (BSU_ID Number: 1000000962), with Dell P793 17" Color Monitor (BSU_ID Number: 1000001628), and other peripherals.

Total cost: $6,307.00

Changes in Key Personnel in the Reporting Period

Marcel Nwadibia and Blessing Okafor, graduate students in the Management Information Systems (MIS) program at Bowie State University, joined the project team as Research Assistants. Marcel designed the project Web page and assisted in the configuration of DAMLGate. Blessing expanded the enterprise base ontology and marked up numerous ontologies for the electronics industry.

Summary of the Substantive Information Derived during the Reporting Period

The challenge of showing how DAML+OIL ontologies support functionality that cannot be achieved with a database or XML was raised at the February 2002 P.I. Meeting. A follow-up meeting with project consultants and other SMEs focused on several challenges in DAML+OIL development and its application to eCommerce. This forum discussed, among other things, the fundamentals of forward chaining and various strategies for using it to implement DAML+OIL semantics. We have observed demonstrations of DAML's superiority in supporting

myriad functionalities through various Work Group participation and informal interaction with other DAML projects.

Summary of Problems or Areas of Concern:

The project is exploring agent tools that facilitate data aggregation and fusion in the rapidly changing electronics manufacturing environment. Although a number of major manufacturing and service enterprises have expressed some interest in DAML+OIL, broad-based industry acceptance of DAML-S and other DAML technologies remains a major challenge to this and projects in the DAML Program.

Related Accomplishments since Last Report

This project participated in the DAML Experiments. We developed additional project metrics and use cases for DAML-S Profiles.

Building the DAML ECommerece Domain Project
Bowie State Unviersity

Phase 3 Effort Analysis

The following is the structure of task performance in Phase 3 of the project. Phase 3 was initiated on November 16, 2001 and completed on February 15, 2002.

Ontology Building	* Create and markup expanded enterprise and other ontologies	Marcel	300	hrs	45.45%	4,586.33	3,780.94
		Uchenna	360	hrs	54.55%	6,815.14	5,907.85
		Total	**660**	**hrs**	**100.00%**	**11,401.47**	**9,688.79**
DAML Gate Prototyping	* Develop the DAML Gate Prototype	David	40	hrs	17.02%	2,349.37	3,698.96
		Marcel	120	hrs	51.06%	1,834.53	1,795.26
		David	75	hrs	31.91%	4,405.07	6,935.56
		Total	**235**	**hrs**	**100.00%**	**8,588.97**	**12,429.78**
Testing	* Develop the test plan and testing strategy	David	12	hrs	7.10%	704.81	1,109.69
	* Refine project metrics	David	5	hrs	2.96%	293.67	462.37
	* Demonstrate the utility and benefits of the DAMLGate using selected End Users in the electronics industry	David	48	hrs	28.40%	2,819.25	4,438.76
		Marcel	80	hrs	47.34%	1,223.02	1,196.84
		Uchenna	24	hrs	14.20%	454.34	393.86
		Total	**169**	**hrs**	**100.00%**	**5,495.09**	**7,601.52**
Implementation Planning	* Develop a plan for full-scale construction and deployment of DAML Gate	David	7	hrs	35.00%	411.14	647.32
		Marcel	8	hrs	40.00%	122.30	119.68
		Uchena	5	hrs	25.00%	94.65	82.05
		Total	**20**	**hrs**	**100.00%**	**628.09**	**849.05**
Transition	* Coordinate with DARPA and DAML developers	David	12	hrs	42.86%	704.81	1,109.69
	* Identify early adopters of DAML within the electronics industry	David	8	hrs	28.57%	469.87	739.79
	* Respond to new ideas and opportunities	David	8	hrs	28.57%	469.87	739.79
		Total	**28**	**hrs**	**100.00%**	**1,644.55**	**2,589.27**
Management	* Monitor and control overall task performance	David	10	hrs	100.00%	587.34	924.74
		Total	**10**	**hrs**	**100.00%**	**587.34**	**924.74**

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