Technical Specification / Schedule
AJAX Based Management Console for the Agent Framework

Team 4: Motorola
CSE 498, Collaborative Design

Calvin Pinsuwan
David Dylegowski
David Robishaw
Drew Breider

Department of Computer Science and Engineering
Michigan State University

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Project Overview

- An Agent Framework was created last semester in order to allow for rapid development of agents to remotely manage entities (i.e., Routers, Switches, etc.).
- Create an AJAX based management console that can interact with components generated by the Agent Framework
- Extend the Agent Framework to allow for Repositories to be constructed
Functional Specifications

- Management console written using an AJAX toolkit
- Manage agents using the agent’s lifecycle management interface.
- Manage repositories using the repository’s lifecycle management interface.
- Query agents and repositories to learn what sensors, effectors and protocol adapters exist.
- Allow sensors, effectors and protocol adapters to be added and removed from a repository.
- Allow sensors, effectors and protocol adapters to be added and removed from an agent.
- Agent Framework extended to allow for rapid development of formal repositories
- SOAP-HTTP interface created for repositories to allow for lifecycle management of repositories.
System Components

- **Hardware Platforms**
  - Management Console should be able to run on any server

- **Software Platforms / Technologies**
  - Management Console implemented in AJAX using Tibco GI
  - Repository and Repository Service implemented in Java
  - Agents and Repositories managed through a SOAP interface
Architecture Illustrated

Model View Controller

Management Console

Repository Service

Agent Service

Agent

Repository

Dock

Sensor

Effector

Protocol Adapter

SOAP-HTTP

SOAP-HTTP
Risks

- Tibco GI for AJAX Development
  - No team members have used the toolkit
  - Documentation and tutorials

- Compiling and executing Agent Framework source code
  - Project settings, missing tools, incorrect source code linking
Project Schedule

1. Run agent
   a) Compile Agent Framework code to execute Agent
   b) Date: 9-18

2. Sensor
   a) Add and remove a Sensor from an Agent
   b) Date: 9-18

3. GUI Prototype
   a) Design GUI Prototype
   b) Date: 10-08

4. Implement MVC
   a) Implement Model View Controller Design Pattern
   b) Date: 10-08
5. Query Agents
   a) Query agents for their components
   b) Date: 10-15

6. Agent Components
   a) Add/Remove components on an Agent
   b) Date: 10-22

7. Implement Repository
   a) Extend the Agent Framework to allow for Repositories to be constructed
   b) Date: 10-29

8. Implement RepositoryService
   a) Implement SOAP-HTTP for Repositories
   b) Date: 11-05
Project Schedule

9. Query Repository
   a) Query repositories for components
   b) Date: 11-12

10. Repository Components
   a) Add/Remove components from a repository
   b) Date: 11-19

11. Testing
   a) Final testing
   b) Date: 11-26

12. Video, Deliverables
   a) Project is done
   b) 12-03, 12-05