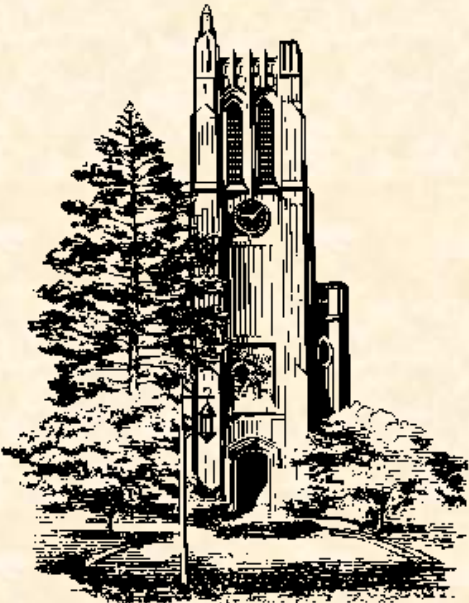# Technical Specification / Schedule AJAX Based Management Console for the Agent Framework

Team 4: Motorola

CSE 498, Collaborative Design

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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

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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
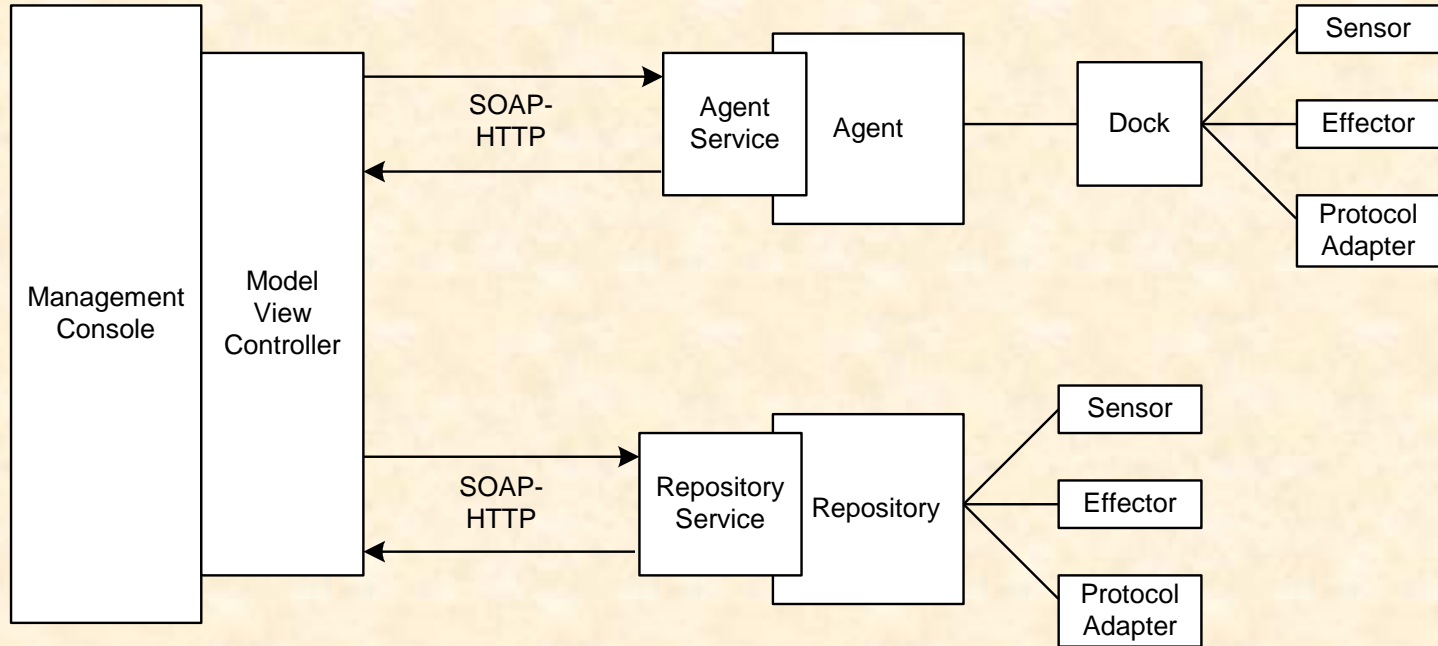- SOAP-HTTP interface created for repositories to allow for lifecycle management of repositories.
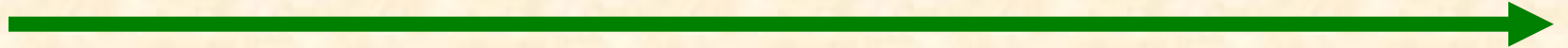
System Components

- 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

```
Management        Model              SOAP-          Agent      Agent              Dock         Sensor
Console           View               HTTP           Service
                  Controller                                                                   Effector

                                     SOAP-          Repository Repository                      Protocol
                                     HTTP           Service                                    Adapter

                                                                                               Sensor

                                                                                               Effector

                                                                                               Protocol
                                                                                               Adapter
```

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

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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

Project Schedule

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

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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