



Contribution ID: 397

Type: oral presentation

## Multi-Agent Framework for Experiment Control Systems (AF ECS)

*Wednesday, September 5, 2007 3:35 PM (15 minutes)*

AF ECS is a pure Java based software framework for designing and implementing distributed control systems. AF ECS creates a control system environment as a collection of software agents behaving as finite state machines. These agents can represent real entities, such as hardware devices, software tasks, or control subsystems. A special control oriented ontology language (COOL), based on RDFS is provided for control system description as well as for agent communications. AF ECS agents can be distributed over a variety of platforms. All communication between the agents and their associated physical components are handled transparently by an underlying publish-subscribe communication system, cMsg, also developed at Jefferson Lab. This framework has been used to design the JLAB data acquisition run control system.

The main features of the framework, the COOL language in particular, as well as recent and near future upgrades will be discussed.

**Primary author:** GYURJYAN, Vardan (Jefferson Lab)

**Co-authors:** TIMMER, Carl (JEFFERSON LAB); ABBOTT, David (JEFFERSON LAB); JASTRZEMBSKI, Ed (JEFFERSON LAB); WOLIN, Elliott (JEFFERSON LAB); HEYES, Graham (JEFFERSON LAB)

**Presenter:** GYURJYAN, Vardan (Jefferson Lab)

**Session Classification:** Online computing

**Track Classification:** Online Computing