Project Plan
Camera Control Appliance (CCA)

Team Team Raytheon
CSE 498, Collaborative Design
Project Overview

• Command Assurance – Civil (CA-C)
  – User interface
• Sensor Resource Manager (SRM)
  – ‘Brains’ of the operation
• Command, Control, and Display Equipment (CCDE)
  – Software that transforms messages from/to SRM
• Camera Control Appliance (CCA)
  – Translates data signals
  – What we make!
Functional Specifications

- **Signal Translation**
  - Translates status, control and registration signals into formats that various cameras can interpret

- **Encryption Placeholders**
  - Empty method for encrypting status signals from camera
  - Empty method for decrypting control signals from SRM

- **Network Integration**
  - Listens for incoming signals
  - Sends translated signals to proper destination
Design Specifications

- Should be able to recognize various cameras
- Cross-platform compatibility
- Provide universal interface between SRM and cameras
- GUI provided by CA-C
Design Specifications
Screen Mockups

May look similar to this...

In case of no audio, please click here.
Running in IPv4 mode.
Technical Specifications

• Platform Independence
  – Java driven environment

• Development Software
  – Eclipse Classic IDE
  – CA-C / SRM SDKs

• ICD-101A
  – CCDE Standards / Protocols
Architecture Illustrated
System Components

• Hardware Platforms
  – SheevaPlug Mini Computer
  – PTZ Camera
  – Network Router
  – Linux/Windows OS

• Software Platforms / Technologies
  – Command Assurance – Civil
  – Sensor Resource Manager
  – Command, Control and Display Equipment
  – Camera Control Appliance (Our goal)
Testing

- Unit testing
  - CCA translators properly translate from UCO/USO to various camera protocols
  - CCA can communicate with camera and SRM
- Integration Testing
  - SRM can communicate with CA-C
- System Testing
  - All aspects of the system work well together
  - Commands entered into CA-C are reflected in the movement of the camera
Risks

- Communication between CCA and cameras
  - Many different camera interfaces
  - Pulling information out of cameras
- Integration of proprietary software
  - CA-C with SRM
  - Communication between CCA and CCDE
  - Unfamiliar with CA-C, SRM, CCDE
- Memory constraints of SheevaPlug
  - 512 Mb storage / RAM