Apogy
Multi-Mission Operations & Planning Software Framework
Eclipse Con 2016

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Exploration Technology Development Cycle

1 - Concepts

2 - Development

3 - Mission
The Challenge
1. Plan, Execute and Monitor
2. Support Multiple Missions
3. Modular & Open Architecture
4. Eclipse Based & Open-Source
Apogy Concepts

- Systems
- Environment
- Operations
- Data
1 Robotic Arm

2 Cameras

1 Mobile Platform
/* The operation is used to change the mobile platform's linear and angular velocities, which are in metres / second and radians / second, respectively. */

```java
op void cmdVelocities(@GenModel(apogy_units="m/s") double linearVelocity,
                     @GenModel(apogy_units="rad/s") double angularVelocity)
```
<extension point="...typeContributor">
<Type>
URI="model/RoboticArmApogySystem.ss"
</Type>
</extension>
Turret Angle (°) : 0.00
Shoulder Angle (°) : 90.00
Elbow Angle (°) : -180.00
Wrist Angle (°) : 0.00

Arm Moving : false
Camera FOV : -18.4°
## Architecture Overview

### Examples (42)

### Addons (72)

### Core (36)

### Common (71)

<table>
<thead>
<tr>
<th>EMF</th>
<th>Sirius</th>
<th>CDO</th>
<th>JMonkey 3</th>
<th>NASA World Wind</th>
<th>ESA OreKit</th>
</tr>
</thead>
</table>

Eclipse Platform
Benefits

Your Project Here
Status

- Functional Prototype
- 10+ “Apogyzed” Systems
- 5 Deployments Accomplished
Future Work

• Framework
• UI
• Documentation
• Apogy Javascript Program
• Distributed Operations (CDO)
• Apogy Systems Repo
• Apogy Worksites Repo
• Source Code Available
  https://bitbucket.org/apogy

• P2 Update Site
  https://dl.bintray.com/apogy/Releases/0.5

• Eclipse Project Proposal Submitted
  https://projects.eclipse.org/proposals/proposals/apogy
Evaluate the Sessions

Sign in and vote at eclipsecon.org
Variety of Examples