Institute for Sensing Systems

Kansei Genie: Geni-fication to Orca-fication -- Architecture, current status &proposed integration plan

Anish Arora, Hongwei Zhang, Rajiv Ramnath, Mukundan Sridharan, Wenjie Zeng, Xi Ju

May 15, 2009

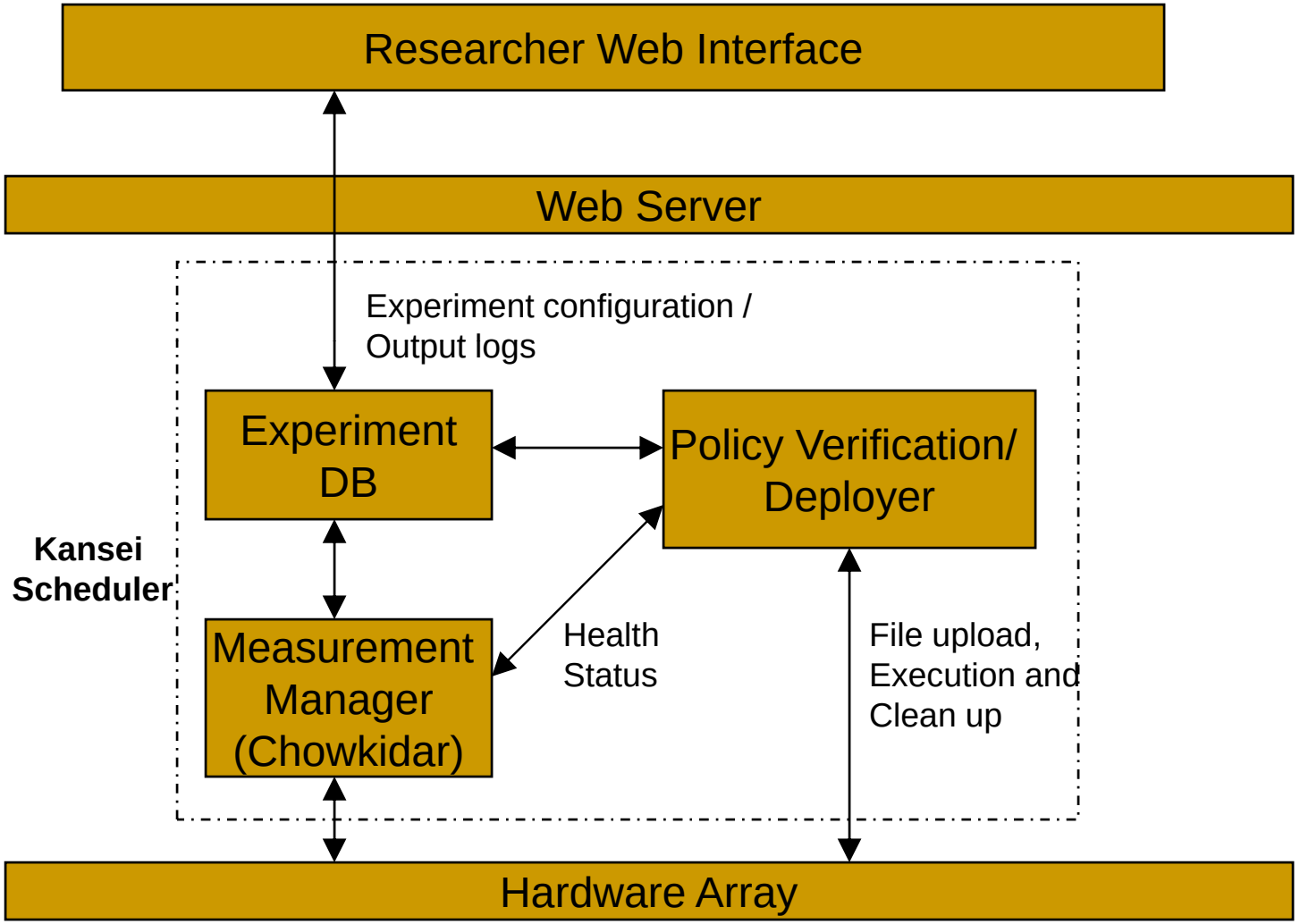
THE OHIO STATE UNIVERSITY

Wayne State University

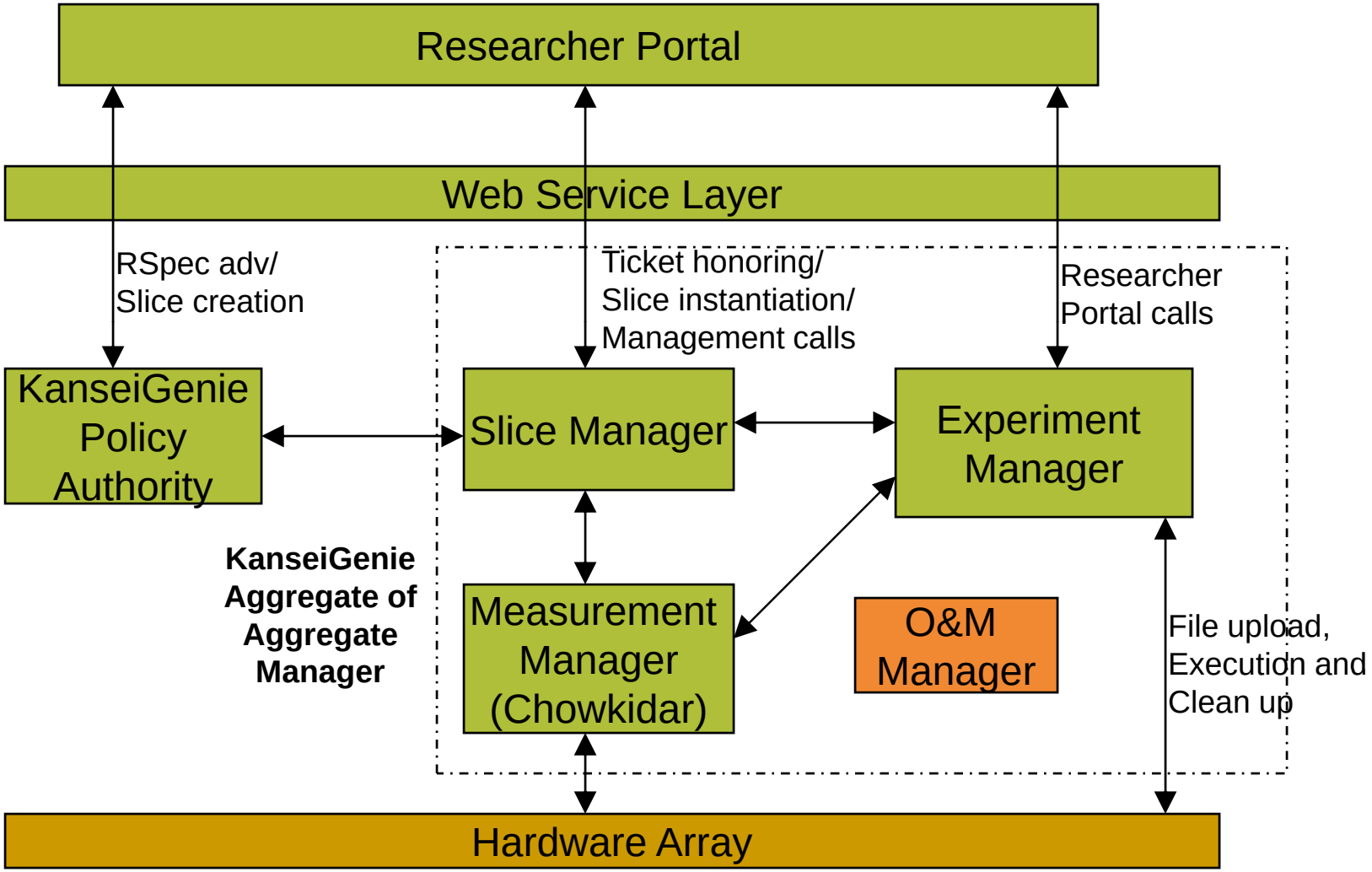
Los Alamos NATIONAL LABORATORY

Sun microsystems

Kansei Architecture © 2004-2007

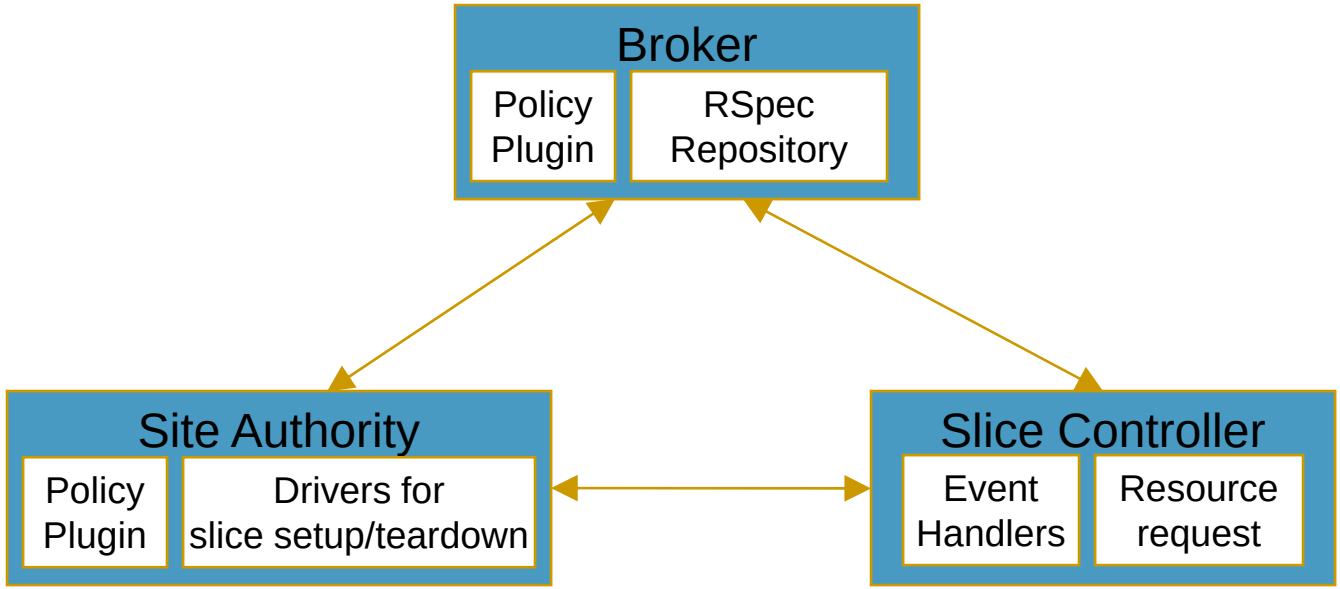


KanseiGenie Architecture © Q1-Q2

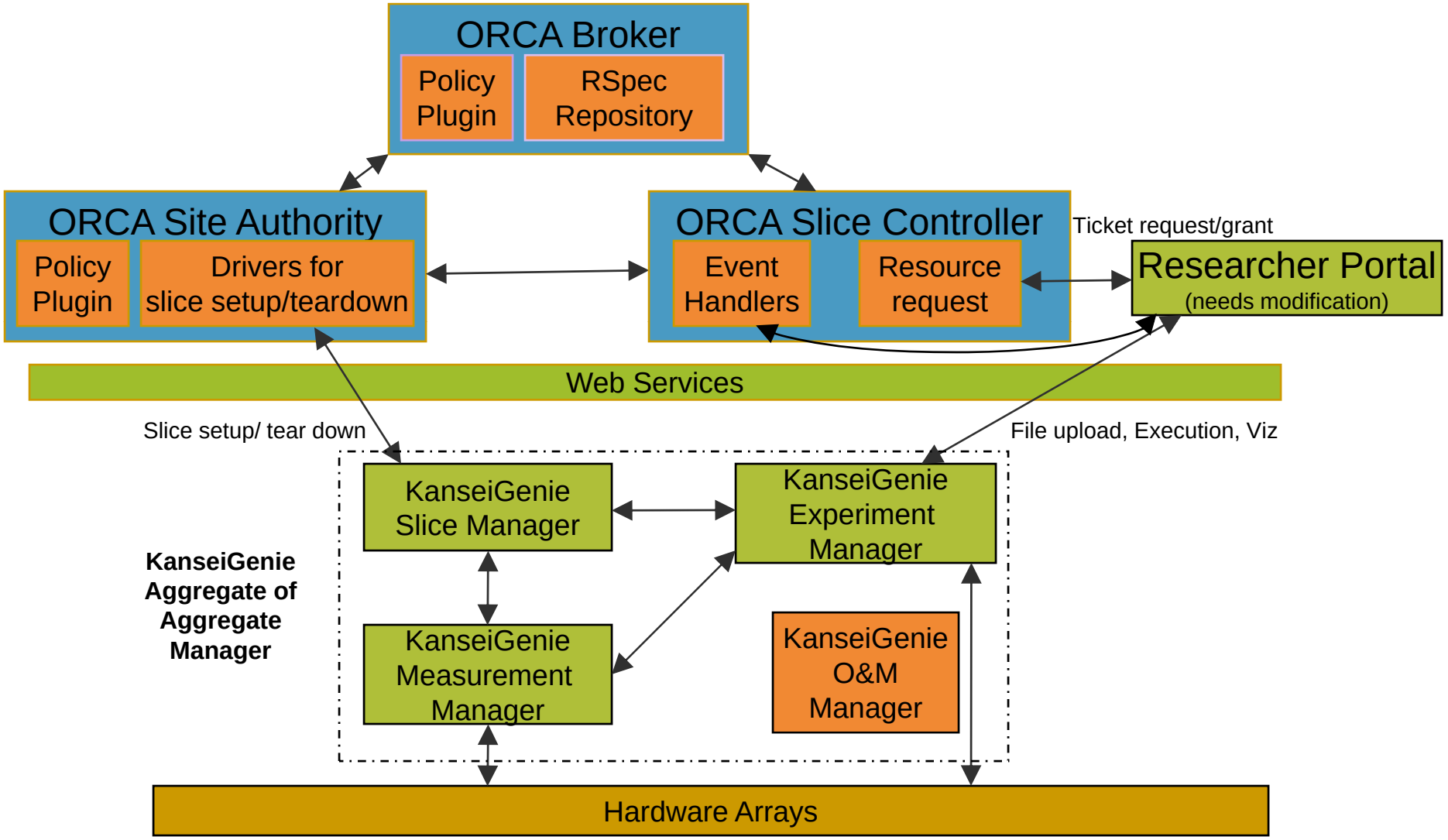


Legend: to be implemented | already implemented

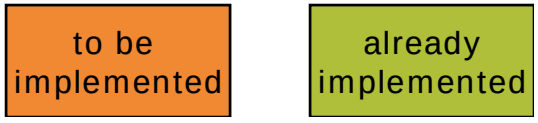
Orca Leasing Core Architecture



KanseiGenie Orca IntegrationArchitecture



Legend:



Substrate and user service tasks done

- Refactoring of Kansei web interface into Researcher Portal
- Genification of (most) Kansei user services as web services
  - e.g. implemented (some of the) experiment interaction interfaces as web services
- Genification of Kansei scheduler
- CM/AM aspects of Experiment & Slice Management planes

- Link quality measurement demo ready (shown at GEC4)
- Pursuer evader tracking demo ready (shown at GEC4)

Clearinghouse tasks done

- Deployed ORCA
- Developed SOAP, XML.RPC based interaction framework between clearinghouse and research portal/site authority

- “Hello, World!” Kansei demo, showing interaction between clearinghouse and researcher portal (shown at by GEC4)

Implementation Tools

- Researcher Portal: PHP
- Site Authority
  - Web services: EJB via JBoss server
  - AM, CM: Perl and C
  - Storage: MySQL
  - Substrates: TinyOS, Linux, (and Java, .NET, and Contiki)
- Clearinghouse: ORCA based