Aperi
Storage Management

Creation Review

Eclipse Technology Project (ETP): Aperi Storage Management Project

Overview

- Mission
  - Create a vendor-neutral, open, storage management framework and cultivate both an open-source community and an ecosystem for complementary products, capabilities, and services around the framework to promote greater consumer choice and foster competition.
  - Promote interoperability, eliminate complexity and incompatibility, foster greater opportunity for innovation, and provide a greater choice and added-value functionality for end-users.
- Summary
  - Enterprise management applications face unique deployment, scalability, and serviceability challenges. Aperi seeks to overcome these and further advance enterprise readiness of the Eclipse Platform.
  - Leveraging the Eclipse Platform, Aperi intends to develop an extensible storage management application framework that will include standards-based services for control, discovery, and monitoring of storage resources and an initial set of exemplary, exploiting applications. Candidates include file system, fabric, tape, and disk management applications.

Scope

- The Aperi Storage Management Framework architecture:
  - The discovery of host, storage, and infrastructure components through SMI-S;
  - Maintenance of a coordinated database;
  - A set of services including configuration, event and performance management;
  - Formalized interfaces between the applications and the storage management framework.
- The Aperi software project:
  - An open source implementation of the Storage Management Framework;
  - Implementations of representative applications that utilize the framework and deliver end-user functionality for enhanced storage management;
  - Additional functionality in the storage management framework.

Participants

Proposed Project Lead: Ted Slupesky

- **Identified Committers (see next slide for list of individual names)**
  - Emulex http://www.emulex.com/
  - Fujitsu http://www.fujitsu.com/
  - IBM http://www.ibm.com/
  - McDATA http://www.mcdata.com/
  - NetApp http://www.netapp.com/
  - Novell http://www.novell.com/
- **Intended Committers (finalizing individual names):**
  - CA http://ca.com/
- **Interested Parties**
  - Brocade http://www.brocade.com/
  - Cisco http://www.cisco.com/
  - LSI Logic (Engenio Storage Group) http://www.engenio.com/

Note*: These companies have been active in the formation of the Aperi Community for months.

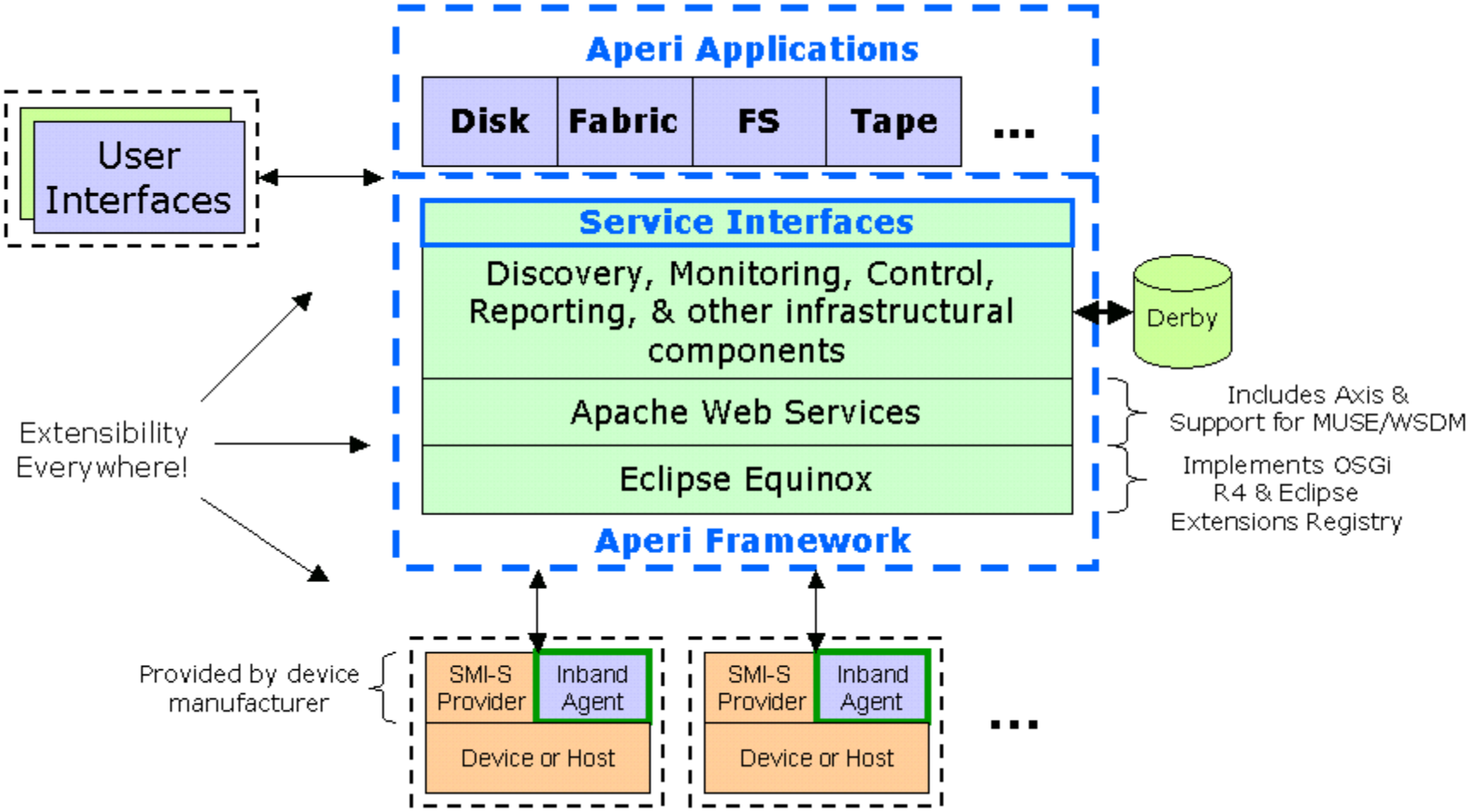
Committers with paperwork complete or underway*

Emulex	Scott McIntyre*
Fujitsu	Ed von Adelung*
IBM	Bill Warren, Brian Delaire, Christoph Reichert*, Christopher King, Craig Laverone, Dave Wolfe, Hans Lin, Helen Bergin, Khan Tasinga, Marcus Siegmund*, Ophelia Yip*, Prasenjit Sarkar, Ryan Doherty, Ted Slupesky, Todd Singleton, Tom Guinane
McData	Bill Tanaka*
NetApp	Alan Yoder, Anil Degwekar, Brian Hackworth, John Tyrrell, Niraj Jaiswal, Sreenivasa Potakamuri, Tim Thompson
Novell	Alex Danoyen*, Randy Stokes*

Eclipse (and other) components

- The Framework Layer:
  - It is based on technologies from the Eclipse Platform such as the OSGi implementation, the plug-in model, and the Extension Registry
  - It extends these Eclipse Platform technologies to include services that are fundamental to storage management, such as Discovery, Monitoring, Control, Alert management, and Database interface
- Intersecting projects:
  - Equinox, Corona, and Enterprise Component Framework are projects intersecting “Eclipse as an enterprise platform” and “Eclipse on the server.”
  - We will communicate with these projects and any others identified as within the Aperi scope.
- Organizations other than Eclipse
  - Aperi uses some technology from other open source organizations, such as Apache Derby and the SBLIM CIM client
  - In addition many Aperi participants are also active in storage management standards development hosted by the Storage Network Industry Association
  - Our goal for Aperi is to be an exemplary implementer of SNIA standards for storage management (both as the standards are currently and as they evolve)

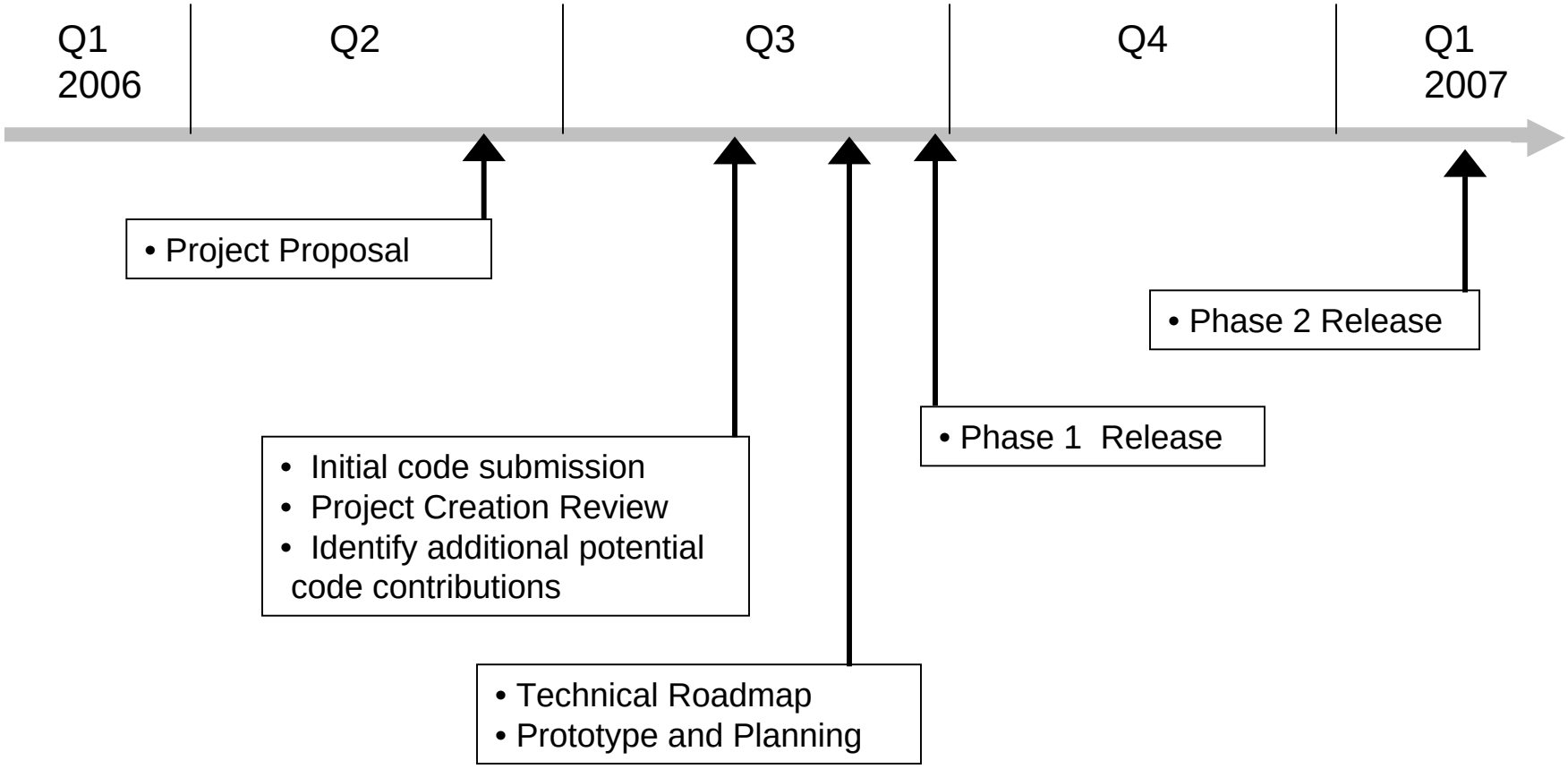
Architecture overview



Initial Code Contributions

- Code Contribution includes
  - GUI
  - API
  - Server
  - Host agent
  - Database schema and open source RDBMS
- Major functions
  - Resource discovery, monitoring and reporting
  - Event management
  - Storage subsystem configuration, LUN assignment, and zoning
  - SAN Fabric Manager including graphical topology display
  - Tape Manager library discovery and reporting
  - File System Capacity Reporting (size, % used, %free only)

Project Plan



Questions?

- Project Proposal:

http://www.eclipse.org/proposals/aperi/

- Newsgroup:

news://news.eclipse.org/eclipse.technology.aperi