OSGi Specifications and Technology

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Agenda

- OSGi Service Platform Technology
- Evolution of the Specifications
What is the OSGi Service Platform?

The OSGi Service Platform is

- An extensible integration platform based upon an open, common architecture

- Used to remotely and dynamically deploy, provision, maintain, and manage applications and services

- For devices in networked environments, such as homes, enterprises, vehicles, mobile handhelds, and industrial settings
Why the OSGi Service Platform?

Scenarios

- Incremental platform upgrades/extensions in mission critical “always on” situations
  - e.g. Residential or Industrial Gateway

- Single device running disconnectable applications from multiple, independent sources
  - e.g. Mobile handset or PDA

- Enable viable management systems for resource constrained devices
  - Both end user “pull” and management “push” for applications and services
  - e.g. Automotive telematics devices
Features of the OSGi Service Platform

- Service Oriented Architecture
  - Service registry with notifications
  - Bundles

- Life-cycle Management

- Collaboration

- Open Management Architecture
Overall Architecture

- OSGi Framework
- Java
- Operating System
- Driver
- Hardware
Service Oriented Architecture

Runs multiple applications and services
- Single VM instance
- Separate class loaders
  - Independent namespaces
- Class sharing at the Java package level
- Secure
  - Java 2 Permissions

→ Enables dynamic, “on the fly” life-cycle management
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OSGi Service Gateway Release 1

May 2000

Device Access
Http Service
Log Service

Framework
OSGi Service Platform Release 2

October 2001
OSGi Service Platform Release 3
April 2003

Execution Environment
Framework
Execution Environment

Package Admin
Permission Admin
Start Level
URL handler support

Device Access
Http Service
Log Service
Preferences Service
Configuration Admin
Service Tracker
User Admin
Wire Admin
XML Parser Service
Measurement
Position
IO Connector Service
Jini Service
UPnP Service
Next Release of the OSGi Service Platform

- Work is underway in the OSGi technical community on the next release
- New capabilities responding to new markets…
Questions?