OSGi Technology Based In-Vehicle Computing Platforms: The Embedded Systems Perspective

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Goals for today…

- Discuss:
  - Today’s in-vehicle computing issues
  - In-vehicle computing trends
  - How does the OSGi paradigm further efforts in this space?
  - Is there an even bigger opportunity?
Industry Issues...

• Today’s in-vehicle computing architecture highly decentralized and tuned for efficient processing
Industry Issues...

- Design process does not support the development of an efficient, cost-effective computing infrastructure
Industry Issues...

- Platform support for embedded systems
Industry Issues...

• In-vehicle computing infrastructure needs to be:
  – Updated periodically
  – Communicate bi-directionally with back end systems in a secure fashion
In-vehicle computing trends…

• Increasingly sophisticated
• Increasingly integrated
• Separation of HW from SW
• Consolidation of ECU’s
• Following (or at least looking to) traditional IT constructs to tackle some of the issues
How does the OSGi paradigm further efforts?

• The obvious…
  – Provides a standardized framework for deployment, registration and operation of services (any services) in-vehicle

• The not so obvious…
  – Secure gateway for integration with industrial-strength backend systems
Is there an even bigger opportunity?

- Many only looking at OSGi for “infotainment” services
- Broader applicability
- Use it to run:
  - Maintenance software payloads
  - Diagnostic payloads
  - Notifications/communications
Questions???