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

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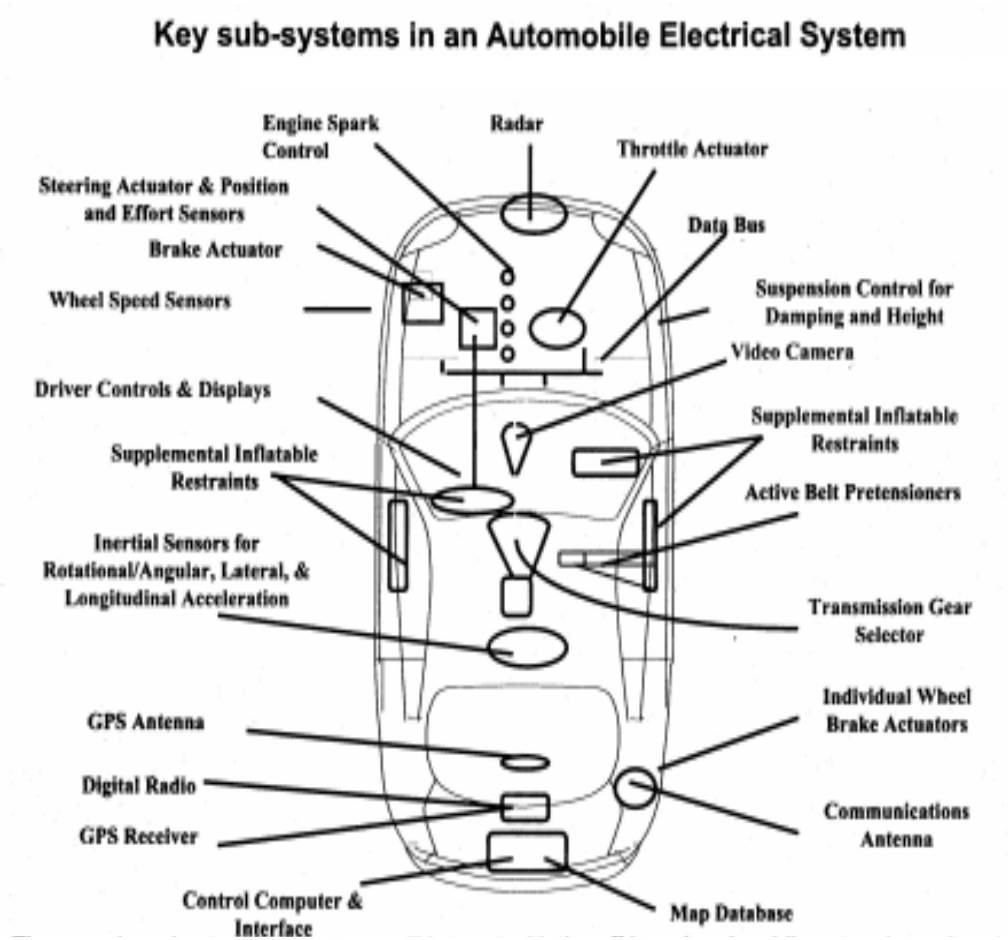
Goals for today…

- 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

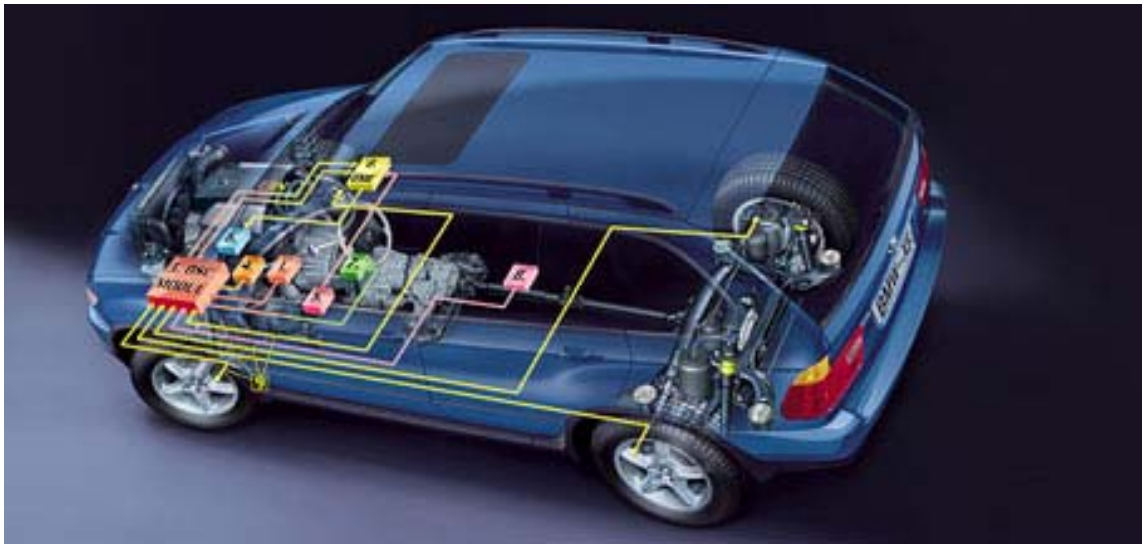


Industry Issues…

- 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???