Unlocking the OSEE Core Framework

Roberto Escobar

Boeing
Mesa, AZ

© 2009 by Boeing; made available under the EPL v1.0 | March 22, 2009 |

Objective

- Inform developers what the OSEE application framework services offer

- For more information http://www.eclipse.org/osee

 © 2009 by Boeing; made available under the EPL v1.0

What is OSEE?

- OSEE is a tightly integrated environment designed to support lean engineering principles across a product's full life-cycle in the context of an overall systems engineering approach
- OSEE has been deployed on Boeing's next generation Attack Helicopter
  - 300 users
  - Managing ~300,000 Artifacts
  - ~250 Active Branches

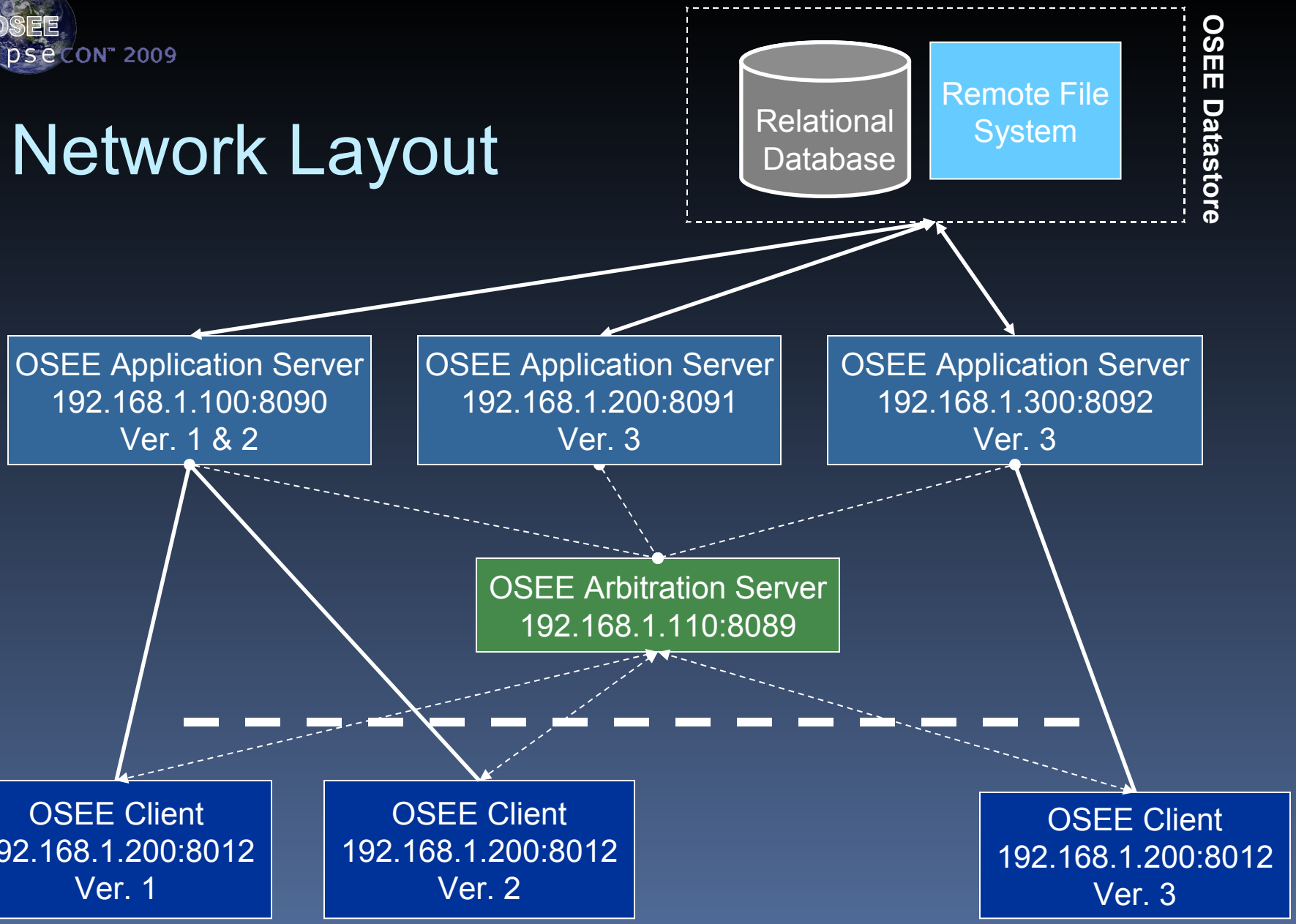
 © 2009 by Boeing; made available under the EPL v1.0

OSEE Framework Services

- Providing the following facilities:
  - Transaction-based object-oriented persistence layer
  - Dynamic and strongly types artifact model
  - Advanced version control including multi-level branching
  - Variant management
  - Database independent import/export
  - Subject-based and object-based access control
  - Session management and authentication service
  - Multi-client event notification service
  - Extensible tagging and searching capabilities
  - Task scheduling framework

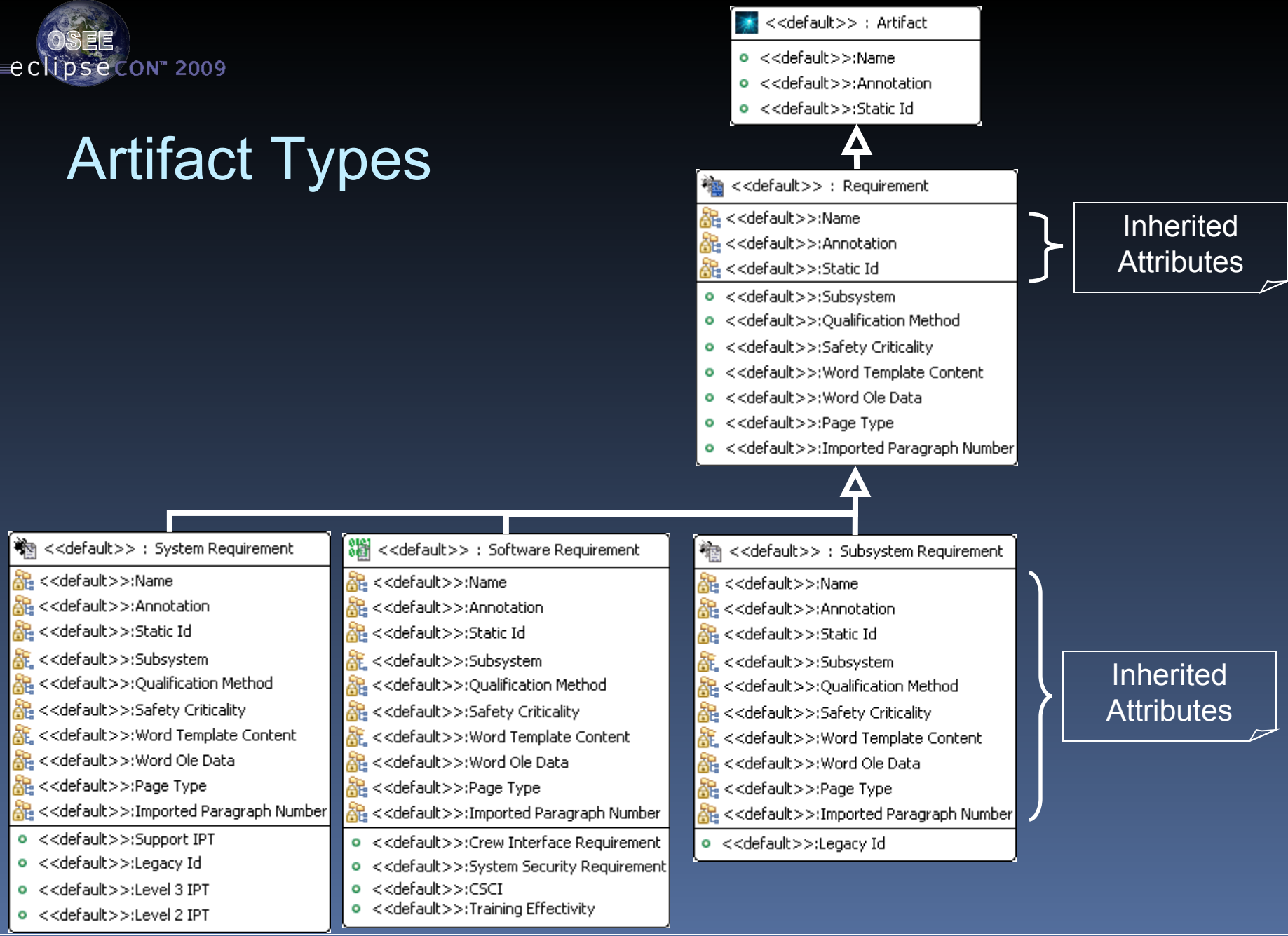
 © 2009 by Boeing; made available under the EPL v1.0

Network Layout



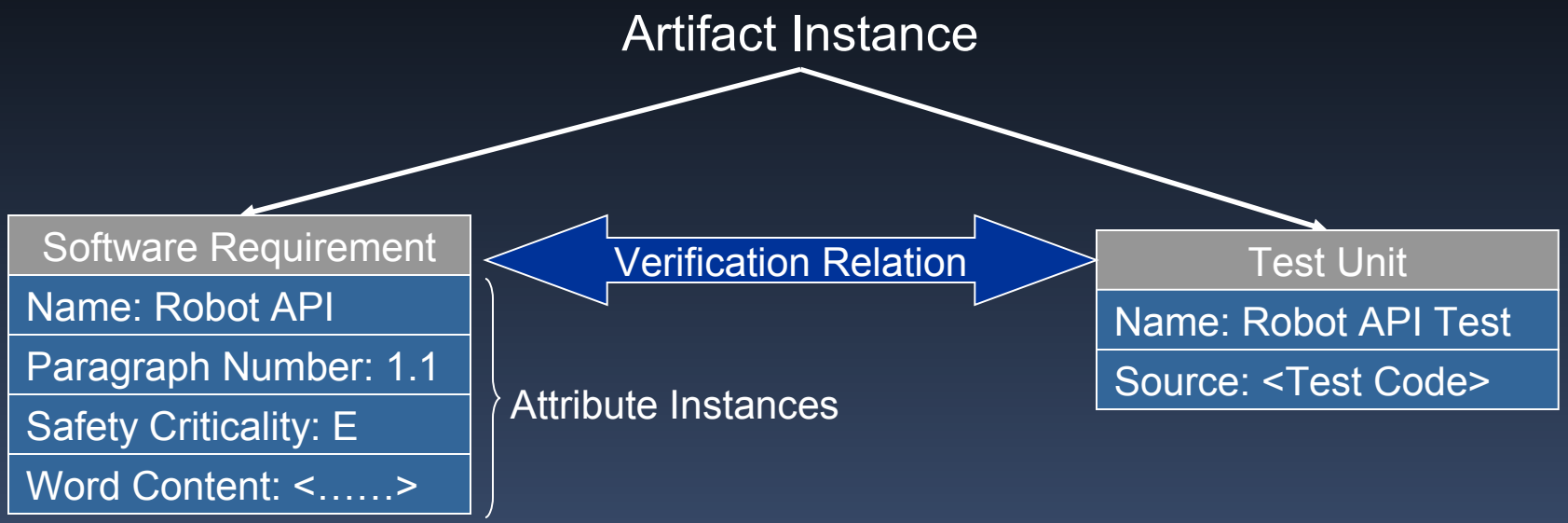
 © 2009 by Boeing; made available under the EPL v1.0

Artifact Types



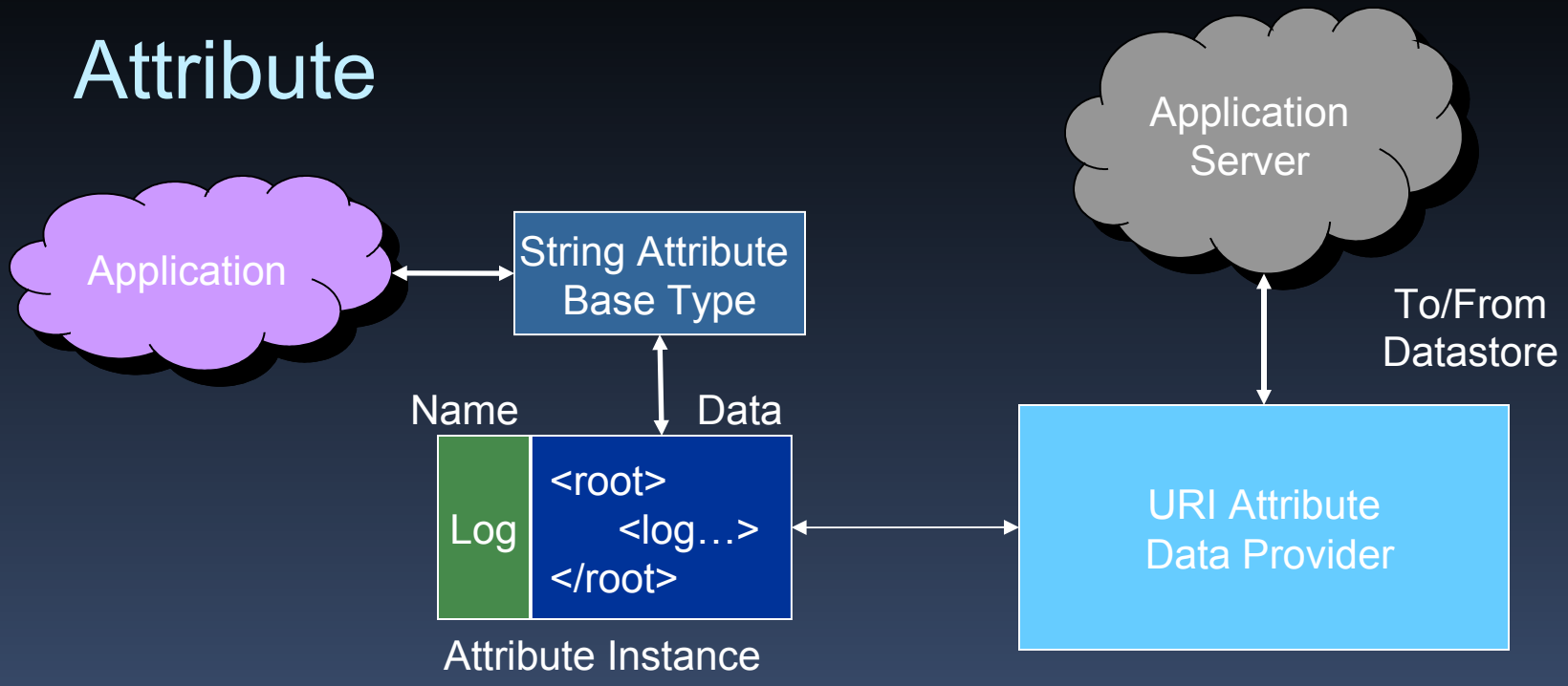
 © 2009 by Boeing; made available under the EPL v1.0

Artifacts



 © 2009 by Boeing; made available under the EPL v1.0

Attribute

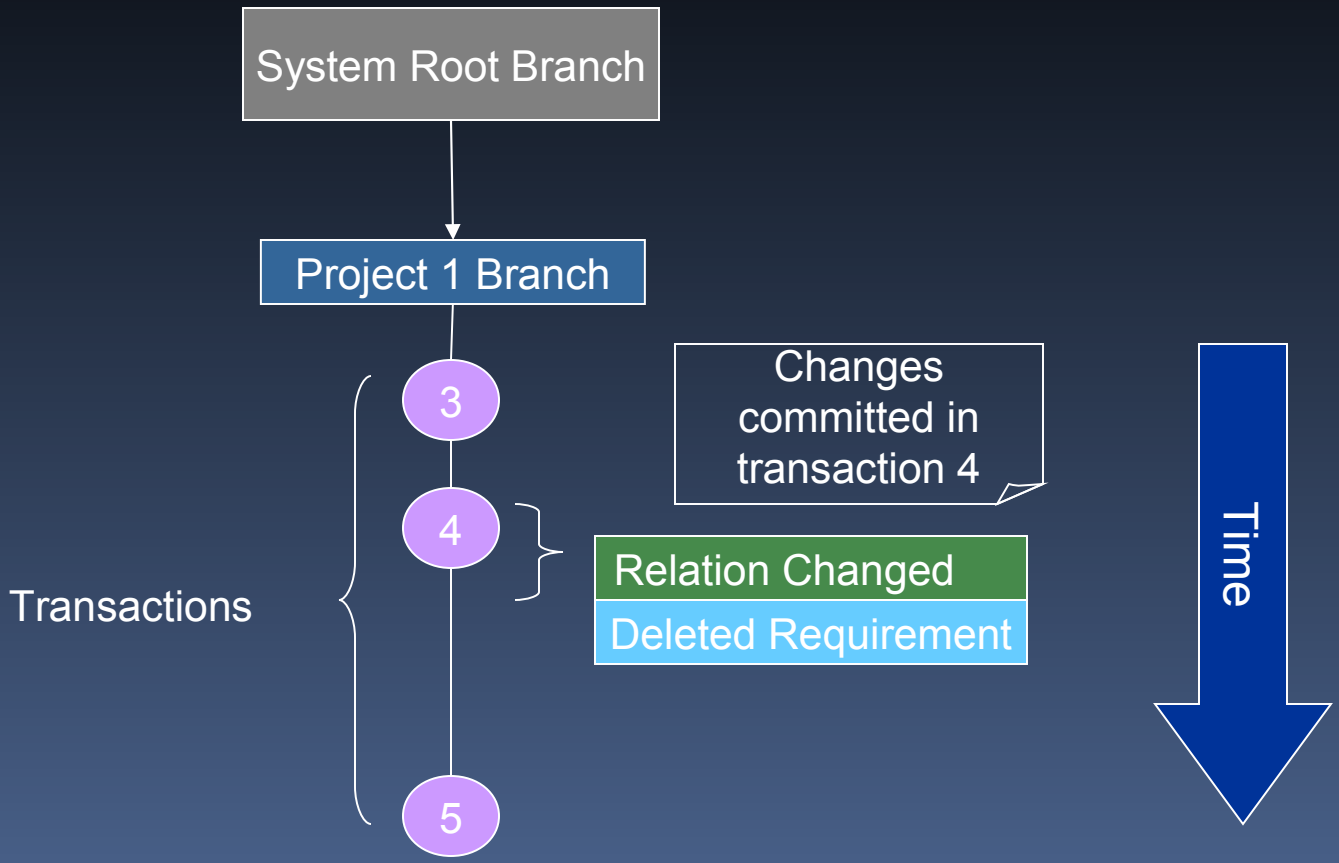


Attribute Name: Log
Attribute Base Type: String Attribute
Attribute Data Provider: URI Attribute Data Provider
File Extension: xml
Default Value: <root></root>
Validity XML:
Min Occurrence: 1
Max Occurrence: 1
Tip Text: Contains log information

Attribute Type

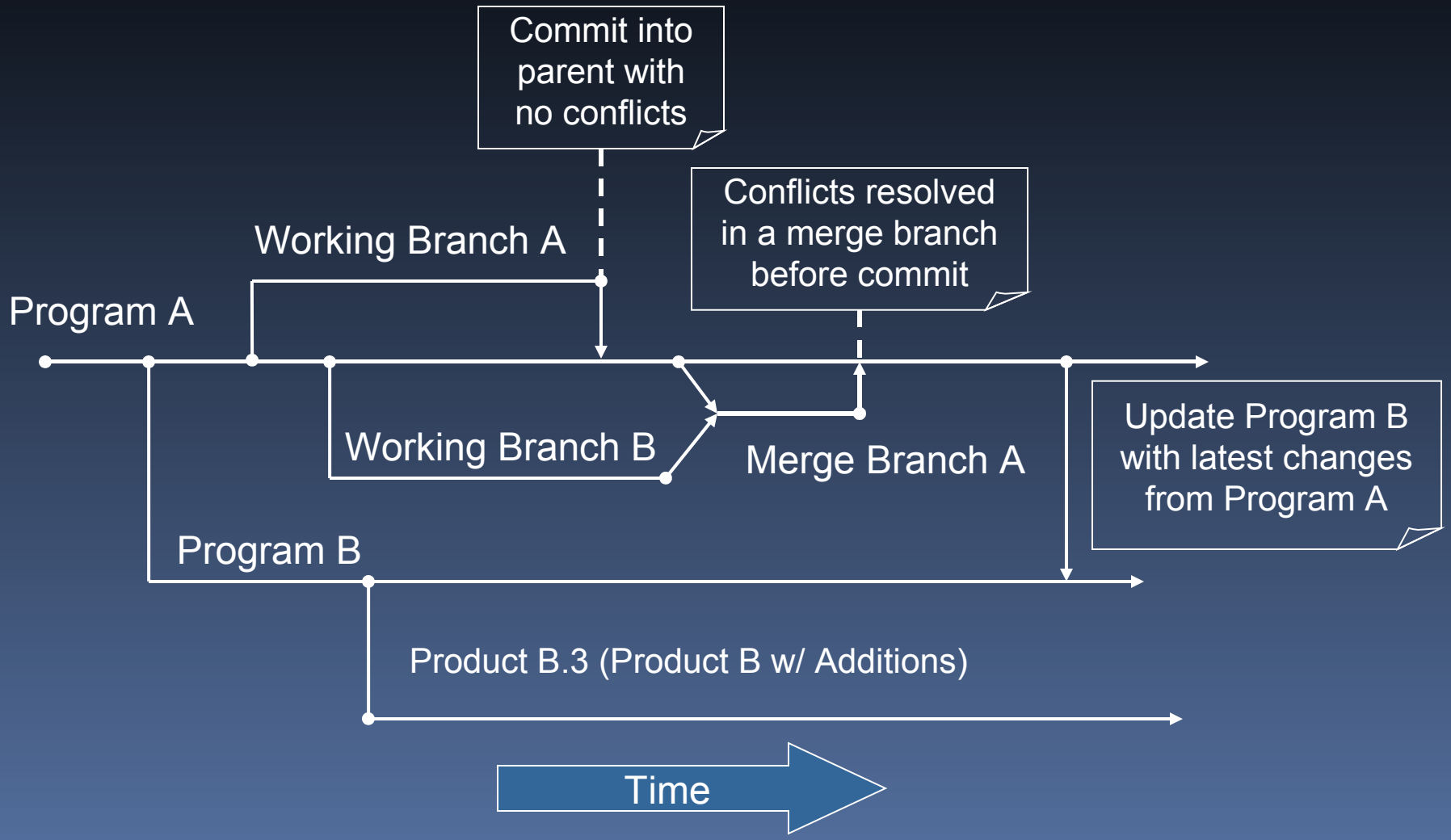
 © 2009 by Boeing; made available under the EPL v1.0

Transactions and Branches



 © 2009 by Boeing; made available under the EPL v1.0

Variant Management



 © 2009 by Boeing; made available under the EPL v1.0

Example

- Aircraft Maintenance Log Book
  - Stores multi-program historical flight information
  - Uses authentication and access control
  - Using Artifact search API to easily access data
  - Easily pluggable with Eclipse plug-ins
    - For example - using BIRT to chart flight performance indicators
  - Flight data analysis

 © 2009 by Boeing; made available under the EPL v1.0

QUESTIONS?

 © 2009 by Boeing; made available under the EPL v1.0