— Breakout Session Summary —

Components, Frameworks, and Web/Grid Services for Ground Systems

Session 9E

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Session Goals

- Explain "service", "service bus", and "grid".
- Identify the strengths of services.
- Identify how ground systems can and have benefited from services.
- List available service bus and grid resources.

Presenters/Panelists

- Jeff Simpson, BEA Systems
  Service Oriented Architecture: An Overview Discussion

- Todd Kaiser, Raytheon
  Enterprise Service Bus for Ground Systems Integration

- Everett Cary, Emergent Space Technologies
  Implementation of a Middleware-based Ground System

- Craig Lee, Aerospace Corp.
  Grid Standards

- Shirley Tseng, Infinite Global Infrastructures
  Space Grid and Web Services

Key Points

- "Service" is ill-defined
  - Kind of like a function, an object, a call
  - Needs a service bus or grid to work in
- Service bus takes a typical consumer-producer relationship and adds to it
  - Security
  - Monitoring/Reporting
  - Discovery/Brokering
  - Policies
  - Etc.
- Grid is a bus of services distributed across the Internet

Key Points

- **Old Paradigm**
  - Full in-house solutions
  - Proprietary data and communication
  - ICDs for communication
- **New paradigm**
  - Write only business logic
  - Leveraging legacy applications
  - Data driven systems
- **Transition should be incremental and need-based**

Conclusions

- Services promises real benefit
- Small details still being worked out
  - Replication/Seamless Failover
  - Dependability/Maturity
  - Stateful transactions
  - Standards
  - Distributed Security
- Organizational/cultural shifts biggest challenge
  - Loose coupling seen as dangerous
  - Migration to services seen as expensive or without merit
  - Must refocus on business processes
  - Worry that SOA/Grid is just the next technology