

Architecture for Real-Time Introduction

The Open Group RT&ES Forum
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What Happened Last Time (1)

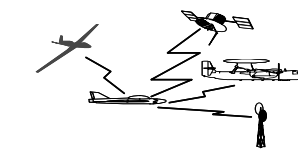
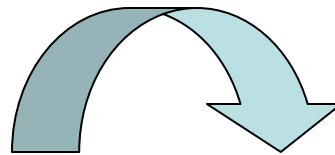
- Started work on problem statement
 - Q: What is purpose of RT architecture effort?
 - A: To facilitate communication and understanding of architectural requirements to move from “platform-centric” to “net-centric” systems
- What profiles should be considered?
- Develop guidelines for selection?
- Rationalization, harmonization or mitigation of various architectures in RT environment?

What Happened Last Time (2)

- Focus: Need to define scope, types of architectures (cf, Hagemeyer/NSSA) and domain(s)
- Then we can identify deliverable product(s)
- Point of departure: Use 6-level MOSA structure (SoS → Components) and describe requirements and attributes
 - Map 17 emerging standards from NCOW reference model into each level; then determine design impacts
- Identified additional RT attributes:
 - Autonomous operation, fault tolerance, interoperability, and timeliness
- Develop application guidance

Mapping NCOW RM Emerging Standards

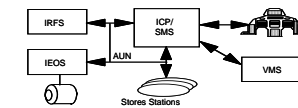
1. Policy Framework Protocol
2. Directory Enabled Protocol (DEN)
3. Common Open Service Protocol (COPS)
4. Common Information Model Schemas (CIM)
5. Routing Specification Language Protocol (RPSL)
6. Service Level Agreement (SLA)
7. IP Version 6 (IPv6)
8. Network Data Management Protocol (NDMP)
9. Universal Discovery Integration Protocol (UDDI)
10. Open Object Database
11. Access Protocol (SOAP)
12. Class of Service Protocol (CoS)
13. Uni-Directional Link Routing Protocol (UDLR)
14. Multi-Protocol Label Switching Protocol (MPLS)
15. Web Services Language Protocol (WSDL)
16. Mobile Ad hoc Protocol (MANET)
17. IP Security Policy Protocol (SPP)



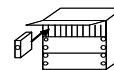
**Level 1: Force Structure/
System of Systems**



**Level 2: Weapon System/
e.g. JSF**



**Level 3: Major Subsystem/
e.g. Avionics Suite**



**Level 4: Functional Area/
e.g. Integrated Core Processing**



**Level 5: Hardware/Software
e.g. Building Block**



**Level 6: Hardware/Software
e.g. Component**

