

Ground System Architectures Workshop



Manhattan, Beach CA. March 29 - April 1, 2004

Breakout Session 10F

Component- and Web-Based Ground System Architectures

Breakout Chairs: Dan Smith – NASA/GSFC

Russ Abbott – The Aerospace Corporation

10F

Session Topics

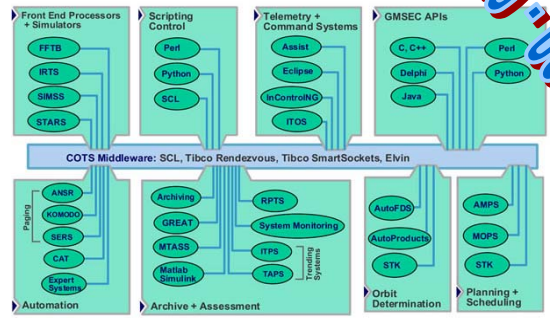
- **Message Oriented Middleware, Web Services, Agents**
 - What are they? What has been accomplished?
 - What are the benefits we've seen? What is the potential?
 - Are they the “latest crazes”, “the way to go”, or both
 - Are any of these approaches really practical for ground systems?
- **Can we, as an industry, pursue a common approach?**
 - Can we expect to create multi-vendor “plug and play” control centers?
 - Should we?
 - How would we go about doing it?
- **Are industry standards the answer?**
 - What would we standardize?
 - Who's in control?

We seek the audience's participation in answering these questions.

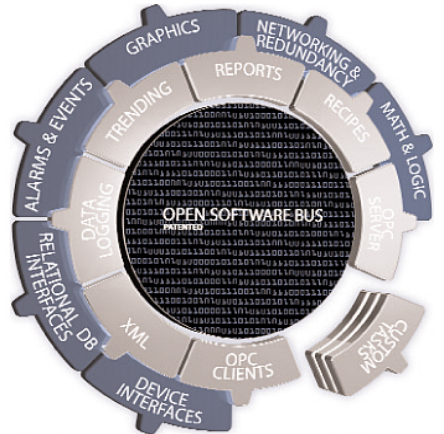
10F First Conclusion

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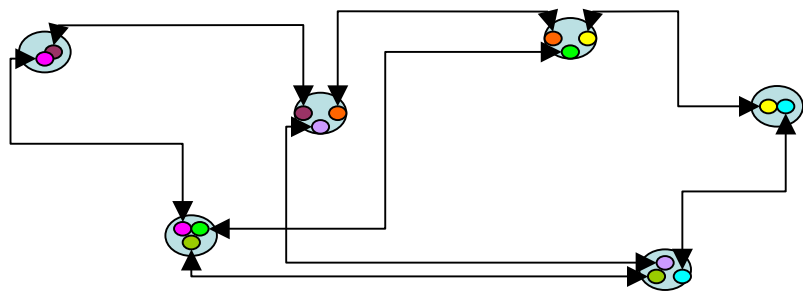
New approaches have many common traits and benefits, but no common diagram style.



BETTER COLLABORATION

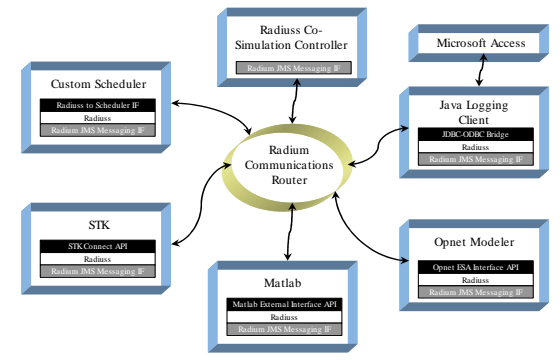


The diagram shown here shows the patented (U.S. Patent #4,908,746) Open Software Bus architecture.



LOW COST INTEGRATION

TECHNOLOGY INFUSION



FASTER DEVELOPMENT

10F Presentations

1. Using Message-Oriented Middleware to Integrate Legacy Applications and Commercial Off-the-Shelf Products – The RADIUM Case Study
 - **Jared Stallings - Raytheon Intelligence and Information Systems**
2. Telepresent Agents - A New Paradigm for Sharing Information in Networked Systems
 - **Russ Abbott - The Aerospace Corporation**
3. A Modular, Data Driven System Architecture for GSFC Ground Systems
 - **Everett Cary - Emergent Space Technologies, Inc.**
4. Successes of Component-Based Approach in Similar Industries
 - **Gamal Balady - Mass Group**

10F includes presentations, panel discussions, and group discussions.