— Working Group Session Summary —

Early Software Discipline for Ground Systems

Session 4F

Capt DeWitt Latimer, AFIT & USC

Francis Sisti, Aerospace

GSAW2007
Ground System Architectures Workshop

Session Goals

Today's ground systems rely on complex software to capture, translate, and process data from satellites into actionable information for decision makers and war fighters. However, software management and engineering disciplines are typically ignored in the early life of a program. Strangely, other technology disciplines tend to be well represented in the early phase. Why is there a disconnect? Are there demonstratable examples of success? Individual panelists will address the issue of software discipline and leadership in various contexts.

Presenters/Panelists

- Capt DeWitt Latimer IV (USAF)
- Mauro Pecchioli (ESA)
- Joanne Lane (USC)
- Jim Roundtree (Lockheed Martin)
- Ed Colbert (USC)
- Glenn Berg (USAF)
- Francis Sisti (Aerospace)
- + 16 working group participants

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Key Points

- Advantages of early simulator architectures (GETS)
- Incremental Commitment Life Cycle Model
- Organization and motivation for continuous developer SCAMPI[SM] appraisals
- Costing models for higher assurance (EAL >= 3) software (COSECMO)
- Organization and experiences of a government office with an early software focus
- Transformational leadership for software systems

Conclusions

- The software-intensive, net-centric systems of the future demand a new leadership model to succeed
- There are (few) examples of novel leadership being effective for the total system - most management models for software being used are 10 to 15 years old
- Early software involvement is essential for building defendable estimates and risk profiles for systems
- The current systems engineering products are effective for hardware, but seem to be lacking for capturing essential aspects of the software components