Process Mismatch with COTS-Based Systems: Problems and Solutions

GSAW Breakout Session Outbrief

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Breakout Session Objective

Recommend suitable requirements and architecture processes for acquiring, developing and maintaining COTS-Based Ground Systems
What do we want from COTS?

Meet real needs/operational requirements with capability that you can believe in
  • Formal certification???
    - for security
    - networthiness
    - human factors
    - standards compliance

And the usual suspects ... cheaper, sooner, ease of maintenance, new features, maturity of products, recapitalization of investment
Requirements Processes

How do we have an honest dialogue early enough?

Underlying needs:
• Acquirer wants to avoid protest
• Acquirer wants ease of evolution and maintenance of system
• Offeror wants to look good to win the business
• Integrator and vendor want to protect competitive environment/avoid protest

Recommendations:
• Prototypes help
• Prioritize requirements
• Define “must haves”, growth needs (vs objectives)
• Specify “ideal” but potentially unachievable requirements
• Leverage use cases to capture requirements (captures behaviors of the operators)
Architecture Processes

What do we want from an architecture?

Underlying needs:
• Acquirers want to
  - analyze attributes (e.g. flexibility, replaceability), understand the system to refine requirements
  - visibility to assign responsibility, analyze risk
  - protection of investment (vendor goes out of business, contractor no longer interested)
• Integrators want to
  - evaluate choices of COTS products, encapsulate product to fit needs
  - make system work
  - interpret requirements, anticipate growth
• Vendors want to have product used and protect position in market

Recommendations:
• Be flexible across stakeholders
• Band together to define domain-specific reference architecture – create market incentive
In Summary

Conflicting interests and needs were surfaced

The necessary dialogue has just begun…