Cross-Domain Decision Support

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Problem

- Competing priorities strain global combat support (CS) resource availability
  - New EAF force structure further complicates CS availability problem
- Need timely, effective CS decision aids integrated across commands and theaters

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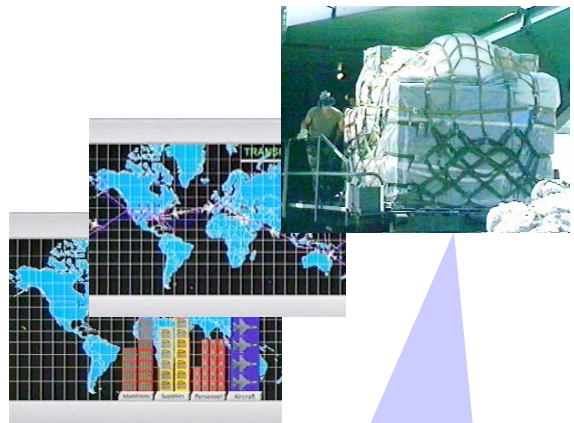
Background

EAF - Mission Requirements

What do I need to carry out my tasking?

Commander's Combat Support Picture

Resource locations and status



Who needs to have what?
When do they need it?
Where is it now?

Transportation

Time Definite Delivery

Where are the resources now?
Where do they need to be?
When/how can I get them there?

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Objectives

Operational

- Propagate notification of changes to information in one mission area to other areas and flag potentially affected data
- Determine effective means to indicate data potentially affected by changes in other mission areas

Technical

- Develop decision aid toolkit to fuse information across mission areas
- Integrate cross-domain info in a visual display
- Evaluate effectiveness of correlation/presentation mechanisms

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Activities

- Enhance combat support tasking with re-supply & collaborative C2 function
- Build cross-domain info correlation tool
- Implement visualization capabilities in a visualization toolkit
- Conduct evaluation in CEIF with distributed participants such as AC2ISRC, EAF Center, USTRANSCOM & MSG

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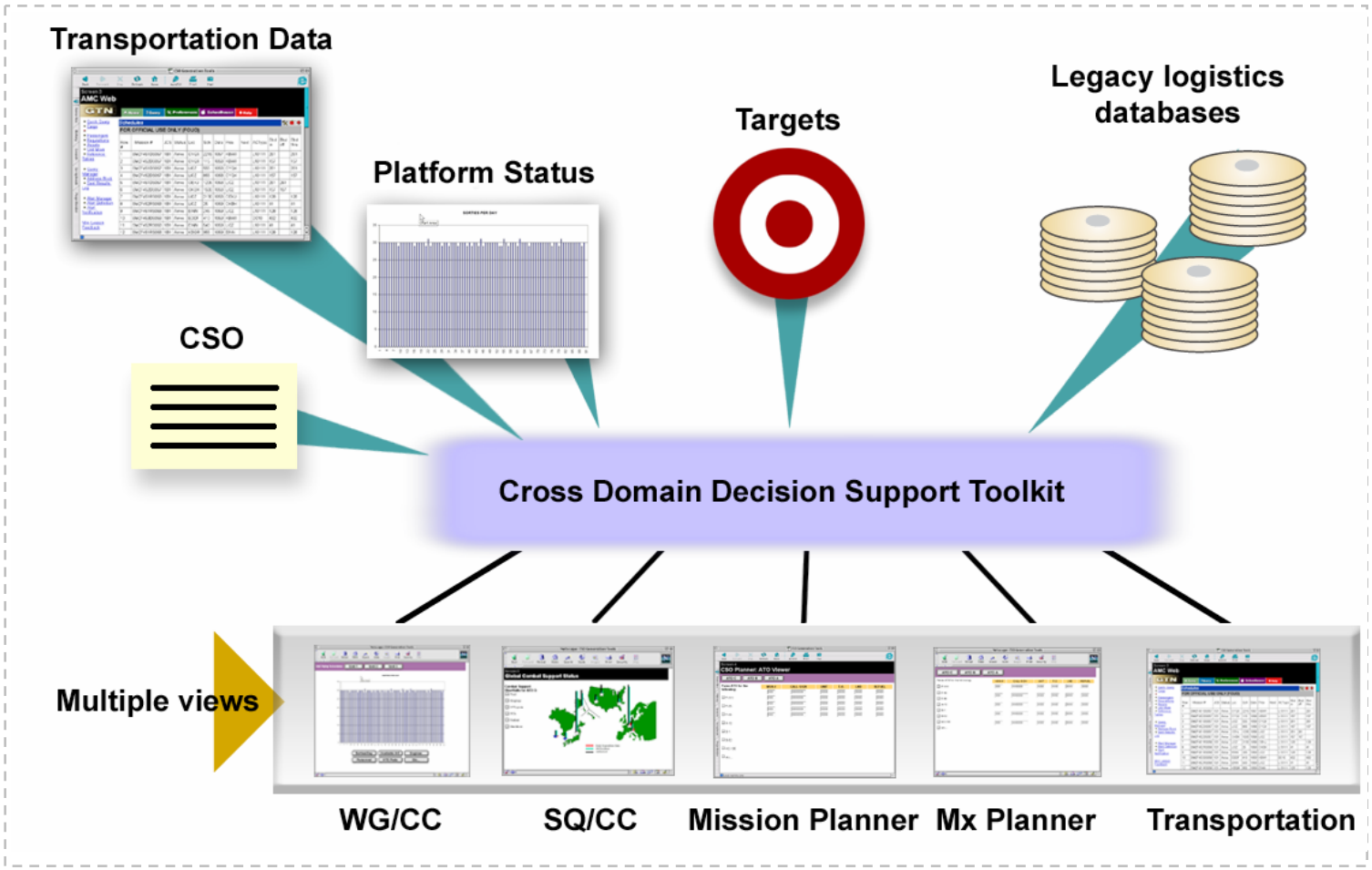
Highlight



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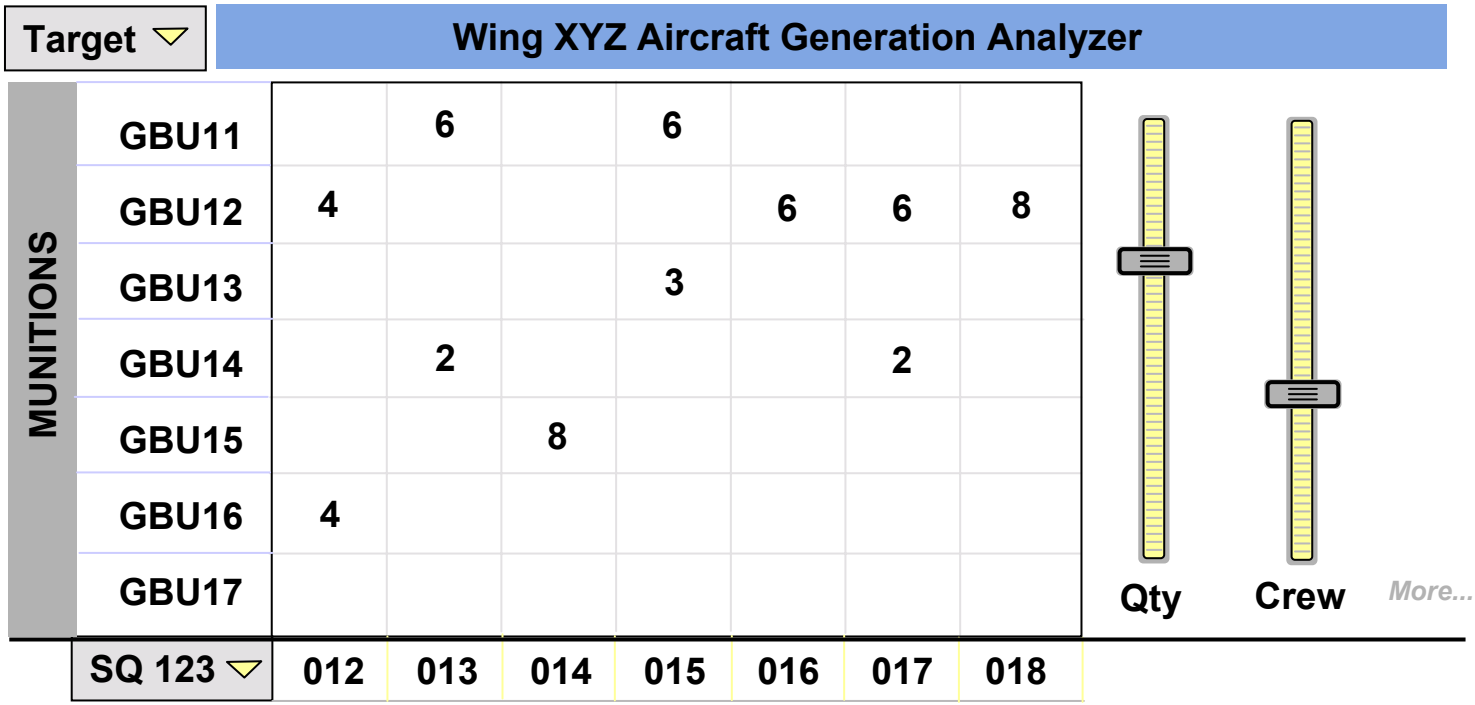
Demonstration



- Wing/Squadron level DSS tool
- Dynamically relate targeting requirements to relevant aircraft generation and support scheduling parameters
- Multiple adjustments and views (resources, units, tasks, etc. ...)

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Impacts

- Better integration of combat support information into a ‘decision-quality’ picture on which decision-makers can base decisions about force employment
  - High level Go/No Go view :
  - Drill down capability to WHY it’s a no go
  - Simulation-based analyses to evaluate “what-if” scenarios
- Benefit of cross-domain decision-making: composite decisions can be made in a collaborative environment and are faster than making separate decisions within the confines of each mission area, then trying to link them into an overarching solution.

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Future Plans

- Expand range of decision aid capabilities to include wider use of software agents, negotiation tools and collaborative technologies
- Expand capabilities to address broader range of operational requirements
- Transfer capabilities to ongoing programs such as AT21 and GCSS
- Transition findings to industry to influence the offerings of COTS providers

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