

— Working Group Session Summary —

Goal-Based Operations

Session 4G

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Presenters

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What is Goal-Based Operations?

■ Definition

- Explicit representation of operator *intent*
- Expresses *what* not *how*

■ Value

- Inherently closed-loop control
- Allow system to select among alternatives to achieve goals
- Intent includes not only activity objectives but also flight rules and other operational constraints

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Examples

- EO-1
- CHIPS
- ST-5

- DS-1
- DSAN

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Similar or Related Concepts

- Goals
- Services
- Service Oriented Architecture
- Model-based Operations
- Software Agent
- Semantic Web
- Common Objectives
 - Transition from centralized mission control to distributed control
 - Maximize interoperability by abstracting as much mission functionality as possible
 - Enable self-managing software components (autonomic computing)

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Discussion

- Differentiation of goals, services, models, semantics fuzzy
- Parallel technology development causing overlap in terminology
- Framework to integrate various technology????

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Why do we need standards?

- Interoperability for coordinated spacecraft
- Programs with assets developed by multiple agencies
- Common terminology
- Focus the community

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Conclusions

- The concepts of GBO are appearing in several places
- We need standards...to achieve interoperability and avoid stovepipes
- We are engaging several standards organizations (CCSDS, TOG, OMG)
- We need to start defining terms and promote a dialogue with the larger community

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Forum

http://www.opengroup.org/rtforum/rt_gbo

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