

# ***Finding The Balance In Standard Bus Designs***




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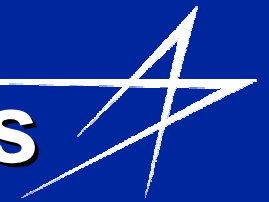
# Purpose

- **Standardization techniques**
  - **Requirements versus size**
- **Impacts on mission performance and utility**
- **Levels of standardization**
- **Lessons learned**



Level	Standardization	Typical Drivers
Architecture	Mission interface - Space to ground interface - Space to space interface	Customer
Spacecraft	Bus, payload interface, launch interface	Prime Contractor
Subsystem	Algorithms, specifications, electrical interface, mechanical interface	Major Subcontractor
Component	Electrical interface, mechanical interface, performance	Subcontractor
Piece-part	Performance, form factor	Manufacturer

# Mission and Funding Analyses



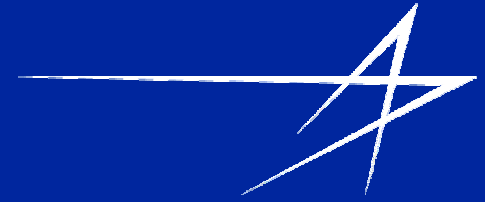
- **Drivers**
  - **Market**
  - **Funding**
  - **Mission requirements**
- 
- **Optimization**
  - **Utility versus cost**
  - **Utility versus mission requirements**

# Standardization Sacrifices



- **Initial investments**
- **Performance**
- **System versus subsystem level**
- **Manufacturing**
- **Logistics**                      ■

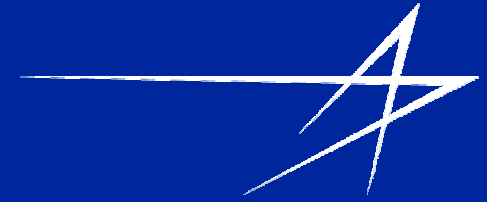
# Proposed Solutions



- **Quantity buys**
- **Contractor size**
- **Responsive development**
  - **Acquisition strategies**



# Benefits



- **Technology advancements**
- **Rapid development**
  - **Block buys**
- **Training**



**There is a delicate balance between  
performance, risk and cost to achieve  
Mission Success**

