Ground Estimating from the Contractor Perspective

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Contractor Estimates/Proposals

• Engineering /Rough Order Magnitude (ROM)
  – Estimate not Certified
  – Most likely not priced using Forward Pricing Rates (FPR)
  – Uses Engineering Judgment, Analogous or Parametric approaches mostly
  – Approval by Management may be required

• Not-To-Exceed (NTE) or Ceiling ROM (CROM)
  – Estimate not Certified
  – Disclosed Contingency Factor added to cover missing scope (Not MR)
  – May use any reasonable estimating methodology depending on available information
  – Approval by Management required
  – Commitment by Company
    ♦ For Cost Plus contracts commitment applies to Fee only

• Engineering Change Proposals (ECP)/Contract Change Proposals (CCP)
  – Certified if required
  – Uses FPR and approved Cost Estimating Relationships (CER)
  – Materials priced using supplier proposals and recent history if possible adjusted for desktop analyses & Decrements
  – Approval by Management required
  – Subject to DCAA and internal Audit
Phases of the Program

**C&T Development**
- Architecture trades being done
- System design unknown
- Gov’t budget based on unknown system

**Development/Production**
- Architecture selected
- System design proposed

**Modifications**
- System & Architecture understood

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**Concept Exploration**
- Concept & Tech Development
- Review

**Component Development**
- Advanced Development

**System Integration**
- Review

**System Demonstration**
- Concept & Tech Development
- System Development & Demonstration

**Production Readiness & LRIP**
- Production & Deployment
- Review

**Rate Production & Deployment**

**Support**
Ground Station Development Costs

Increasing complexity, Quantity, Timeliness, Processing

Cost

Station Keeping  Simple Tasking  Complex Tasking
Health & Status  Little Data Proc  Significant Data Processing
Estimating

- Hardware cost usually a buildup of Material
- Software estimated based on Lines Of Code (LOC) or Function points and entered into parametric model
- System Engineering, Integration & Test, and Program Management (SEIT/PM)
  - Direct Detail Estimate by hours, material, STE
  - CER

- Items that can use added focus
  - Simulators and Stimulators
  - Ground – Space Data Requirements/Timing
  - S/W maintenance during development
  - Miscellaneous HW
  - Changing Security Requirements