Army Perspective on the Economics of Modeling & Simulation

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What benefits are derived by your service from the use of Modeling and Simulation?
Prior to an air-to-air missile's first intercept test a M&S driven test of the embedded software determined the missile would miss.

First test was postponed to correct deficiency.

Instrumentation readings later determined missile would have missed.

Impact to Army:
  • Savings from a test that would have failed
  • Political fallout avoided
M&S In Support Of Anti-Personnel Mine Research

APL-A NSD-A New Concept *

- Alternative to current M14/M16
- Man-In-The-Loop unless Non-Lethal

Presidential Directive

• Find suitable replacements for US anti-personnel landmines (APL-A).

• End use of all APL outside Korea by 2003

• Aggressive search for APL- A to have solutions for Korea by FY 06

Impact:

• Cost Avoidance

• Short timelines to meet national objectives

PM: ‘We could not have met the Presidential Directive timelines without M&S’
Some PoF Success Stories

JSTARS
- Analysis showed Commercial CCA OK
- $1.2M Saved

ARC-210 Radio
- Identified weak link in design & verified
- $27M Cost Avoidance

Comanche
- Air Force analysis showed commercial ICs OK
- $50M Savings

THAAD
- PoF analysis on Plastic Ball Grid Array
- $50M Savings

ICAM
- Corrected Vibration Problem
- Design Changes Implemented
- Design Changes Recommended
- Weight Reduced

Increase Reliability
Evaluate New Technology
M&S for Readiness and Sustainability

**OSRAP**: *

- Model for Estimating Spare Parts Requirements
- Spares Needed to Achieve Weapon System Availability At Least Cost

*Optimum Stockage Requirements Analysis Program

**War Reserve Sustainment Stocks**

**Deployment Stock Packages**

**Pre-positioned Brigade Sets**
- Europe
- Kuwait
- Korea
- Afloat

**2 MTW**

**Go-to-War Requirements for ASLs**

AMSAA
And the list goes on......

- Crusader
- Interim Armored Scout Vehicle
- UH-60

....and on and on and on and.....
What additional advantage is foreseen in the deliberate management and use of M&S?
What do you see as the particular costs of M&S?
How well are the costs, benefits, and market mechanisms of M&S understood?
What are your office’s intentions for understanding and affecting the economics of M&S?