Combatant Commands (c. UCP-2004)
JFCOM’s Transformation Engines

Building tomorrow’s joint force today

Joint Interoperability

Joint Concept Development and Experimentation

Integration

Joint Force Trainer

Joint Force Provider

Trained and ready forces today are the foundation for tomorrow

Our clients are TOMORROW’s joint warriors!
JFCOM Future Development Centers

Developing tomorrow’s joint force

Joint Futures Laboratory

Joint Warfighting Center

Concept Development

Modeling and Simulation
**NSF Partnering Interests**

Many of the DDDAS funded projects have application to JFCOM M&S and Concept Development efforts:

1) Interested in the longer term projects – multi-year

2) Projects with strong potential to produce products we can use to enhance our M&S tools

3) Likely to invest contract support to transition enhancements that have clear application to infrastructure, decision aid or other national security applications – the SEAS effort is a good example
NSF Partnering Models

Two broad models for collaborative partnering with JFCOM in research areas of mutual interest:

• Providing access to PIs of real world data, code, and testing facilities for DDDAS research applications
  Such as:
    Command & Control
    M&S models
    G-2 (process), JWARS (constructive), JSAF (HITL)
    Networks – posted data
    Model expertise

• Supporting industrial collaborations - potential is there for subcontracting funds to PIs that support specific development efforts
Example: Building on DDDAS efforts

History of using distributed “synthetic” Human in the Loop M&S. The Command started developing complex experiments using DARPA STO M&S project, evolved into Joint Semi Automated Forces (JSAF).

1999  JFCOM - fist major experiment with JSAF - JEXP 9901
2000  NSF funds initial efforts for Synthetic Environment for Analysis and Simulation (SEAS) – Purdue
2001-2003 NSF supports SEAS as part of evolving DDDAS Effort
2002-2003 JFCOM Follow-on Urban Future experiment – lacked social modeling
2004 Working with Purdue commercial spinoff group SIMULEX - SEAS prototype demonstrated in JFCOM experiment
2004-2005 SEAS social modeling further integrated into JFCOM efforts

Ongoing efforts include:
• Continuing evolution of Social Modeling Simulation as part of Joint Experimentation Federation
• Dynamic Link to “Holistic Mil Planning”–Operational Net Assessment (ONA)
• Informing other DoD simulations
• Faster than Real Time and Real Time
• Super-computer capable
Technology Transfer at JFCOM

• New technology transfer authorities granted to JFCOM in March 2005
• Give JFCOM more flexibility in working with industry and universities; new mechanisms
• Office of Research and Technology Applications
• Cooperative Research and Development Agreements (CRADA); Educational Partnership Agreements; Personnel Exchanges; Small Business Innovation Research (SBIR)
• CRADA: JFCOM can provide all types of resources except $ (personnel, equipment, facilities, networks, databases, scenarios, M&S tools, evaluations, experiments)
Engaging with NSF Researchers

- NSF Grant
  - JFCOM CRADA: JFCOM, University, Industry (possibly with $ from industry); other JFCOM resources
  - Educational Partnership Agreement; Personnel Exchange
  - SBIR: $ from JFCOM
  - Partner with Industry; Subcontractor ($)

Influence Topics

Time (RDT&E Phases)

Pre-NSF Award
Basic Research
Applied Research, ATD and Prototype Development
Test, Experiment and Evaluate
Capability Transition
Questions