



# Deploying a Range Communications Modeling & Simulation Tool Suite to Support Distributed Testing Networks

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**Presented  
by**

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## Outline

- **Co-Authors**
- **How We Started**
- **Where We Are Now**
- **Future Leveraging Possibilities**



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## How We Started

### Co-Authors

### Organizations

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**U.S. Army Program Executive  
Office for Simulation, Training and  
Instrumentation (PEO STRI)**

**John Medina**

**U.S. Army White Sands Missile Range**

**Rick Drapala**

**U.S. Army Yuma Proving Ground**

**Ralph Holweck**

**U.S. Army PEO STRI**

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**AEgis Technologies Group**



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## How We Started

### DEVELOPMENT OBJECTIVES

(Phase I thru Phase II – Dec 00 thru Nov 03)

- Reduce range networking risk for end-users via a predictive telecommunications modeling capability, and, provide a generic tool with ‘Plug-n-Play’ capability
  - Provide process, protocols and applications for iterative design & development of
    - › Data
    - › Voice
    - › Telemetry
    - › Video
- Transmission Systems
- Provide network planning & load analysis capability



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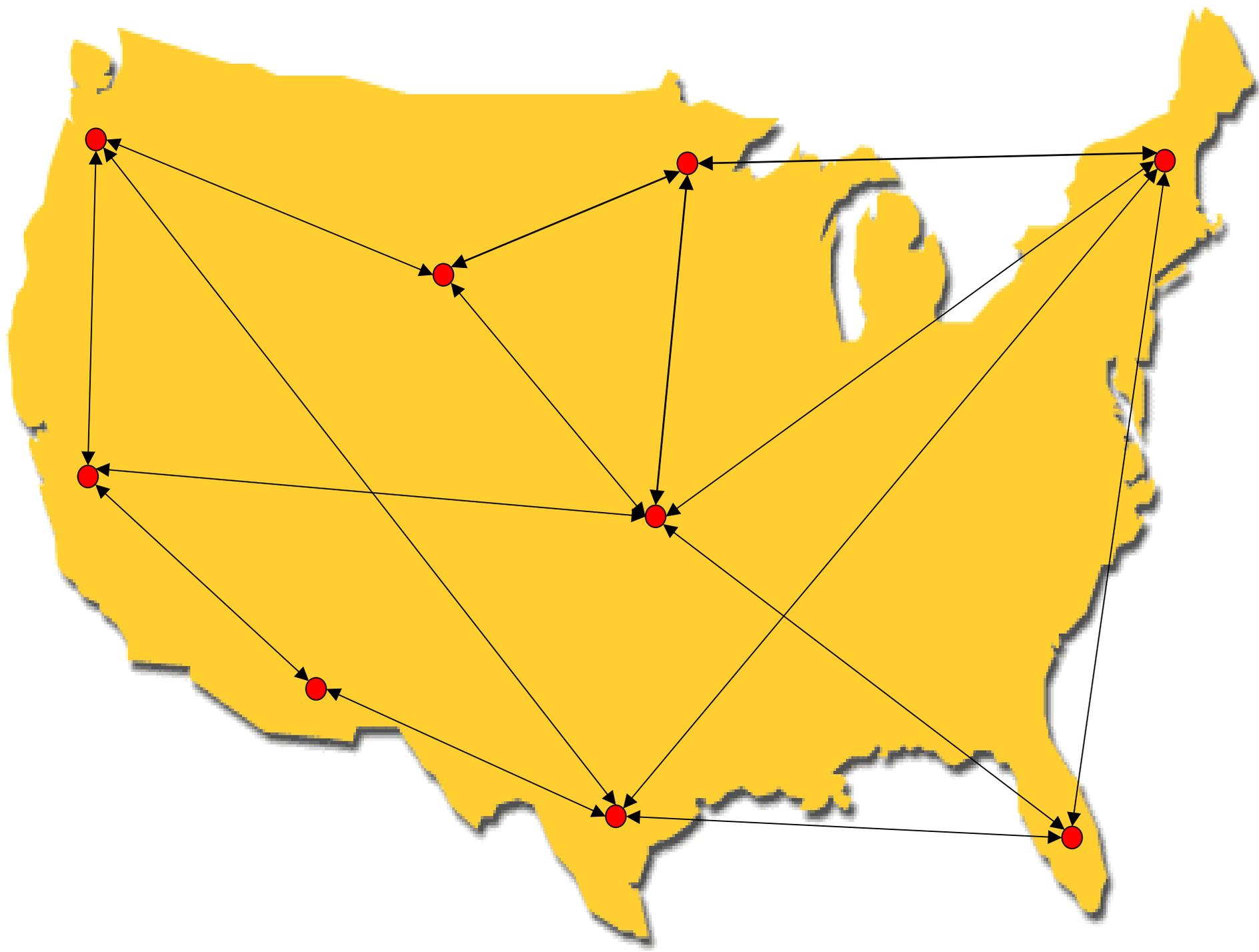


## How We Started ACCOMPLISHMENTS

(SBIR Phase I thru Phase II – Dec 00 thru Nov 03)

- **Phase I – Performed data analysis; generated model abstracts; established baseline models and tables**
- **Phase II – Developed “generic” virtual prototype model for:  
1) Planning; 2) Resource allocation; 3) Network performance/traffic flow analysis; and 4) Validate model against White Sands Missile Range Test Support Network (WSMR – TSN)**

**WSMR Planner deployed to WSMR for V&V - May 03**





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## Where We Are Now

- **Phase II+: October 03 -- November 04**
  - › **Scope**
    - **Enhance WSMR Planner**
    - **Integrate with Network Management System (NMS)**
      - **Develop shared database capability with 1-way export of NMS database to WSMR Planner**
    - **Adapt “generic” tool for Yuma Proving Ground (YPG)**
      - » **Analyze YPG Range Digital Transmission System (RDTS) network requirements**
      - » **Integrate unique RDTS digital processing and electronic telecommunications components**
      - » **“Validate” Yuma Planner prototype at YPG**



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## Future Leveraging Possibilities

- **Explore interest in adapting WSMR and Yuma Planners**
  - › **Additional Test Centers**
  - › **ATEC Test Integration Network (ATIN)**
  - › **Joint Urban Operations Test & Training Facilities**
  - › **Training Ranges**
  - › **Home Station Training Exercises**



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