

# System-of-Systems Analysis (SoSA)

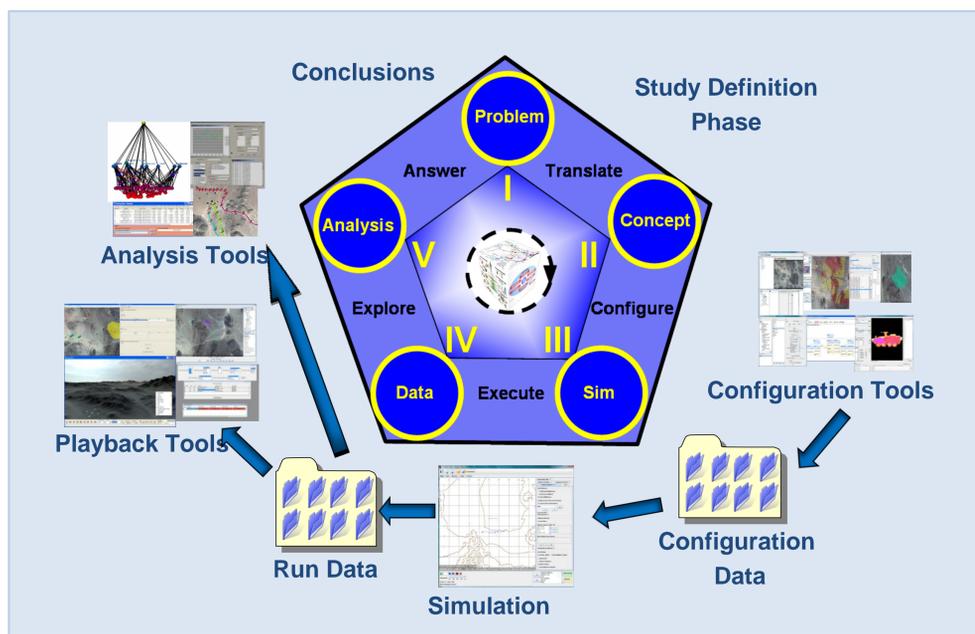


S&T Campaign: Assessment & Analysis  
Small-Unit Modeling and Architecture

Phil Simpson, (575) 678-2324  
philip.b.simpson.civ@mail.mil

## Objective

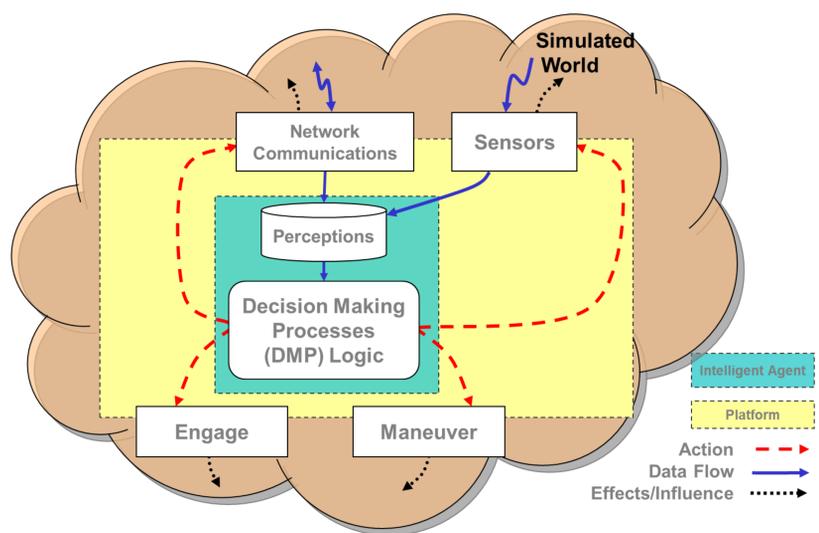
- Assess mission impacts of new or revised technology or tactics by modeling small-unit combat at an engineering level of detail



The SoSA Process

## ARL Facilities and Capabilities Available to Support Collaborative Research

- Computing hardware and visualization rooms at PSL/NMSU and WSMR
- Experts in engineering-level combat modeling with unique expertise in threat modeling and effects for ballistics, electronic warfare, and cybersecurity



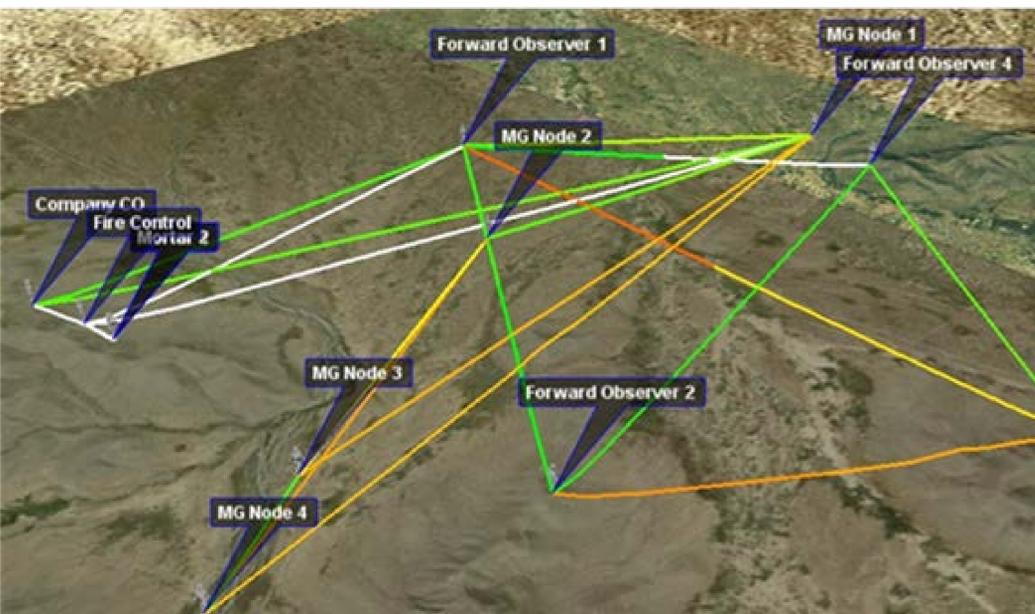
The Intelligent Agent

## Challenges

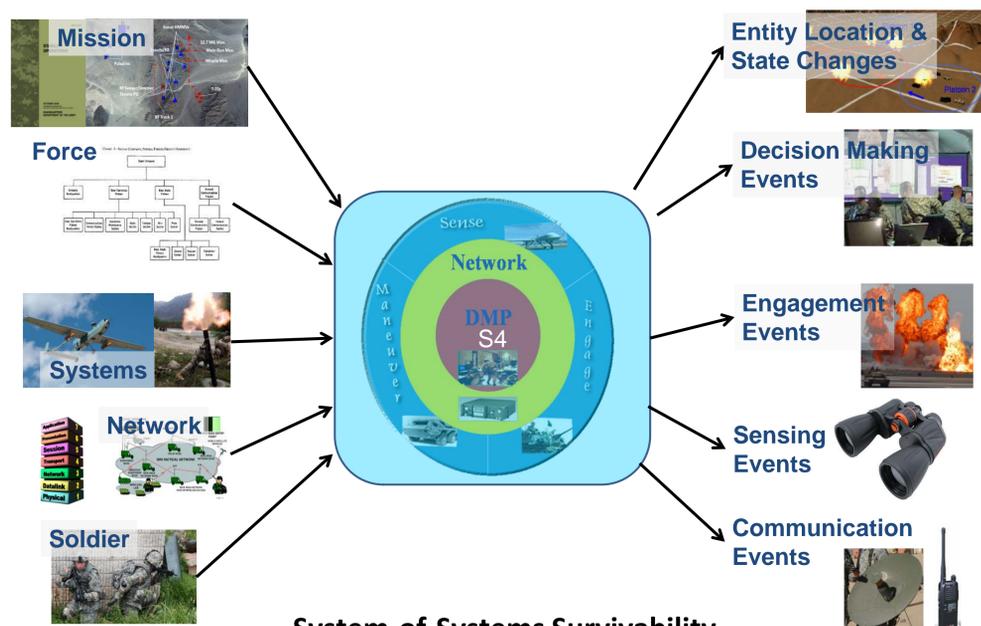
- Need decision-making processes with sufficient scope that can be tailored by the end user
- Need processes that facilitate SoSA requirements generation that can trade software development and analysis time versus fidelity of SoSA model
- New methods and strategies for quality control of software and experiments of complex systems

## Complementary Expertise/ Facilities/ Capabilities Sought in Collaboration

- Mathematical or analytical expertise in modeling complex issues at multiple levels of abstraction or fidelity
- Recent experience in:
  - Small-unit tactics
  - visualization
  - communications



Link Quality of MANET Radios



System-of-Systems Survivability Simulation (S4): input, process, output