

StateSim & METIS: Attack the Network (AtN) Simulation to Support Military Staff Training

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The goal of this serious game is to facilitate the training of how to detect, deter, detain, and destroy counter-insurgent networks (eg, 150 bad guys) operating in a population of many 10,000s of civilians. Specifically, Metis is a low-overhead, agent-driven simulation to support military staff training built by PEO-STRI, 42six, and University of Pennsylvania's ACASA lab. Metis fills a previously unaddressed need for an agent based-staff training simulation to support Attack-the-Network and Counterinsurgency operations.

Metis uses ACASA's socio-cognitive agents (StateSim) to accurately model ethno-political communities. It is scalable to represent cities of tens of thousands of people. Within the simulation each agent simulates human activity across multiple networks: criminal, government, coalition, insurgent, etc. As a result, Metis allows the staff to train real world decision making and discover the impact of their decisions without real world risks.

The requirements for this simulation covered a need within the Army for a low-overhead, home station, staff training capability. The solution should:

- Facilitate practical execution of each step in the Military Decision Making Process
- Allow flexibility for the individual staffs to use unit-derived Standard Operating Procedures
- Scale the solution to allow staff members their own workstation and shared operating environment
- Require minimal hardware with no additional licensing requirements
- Require no more than one Observer/Controller

Metis is designed to run on a desktop computer, but allows whole staff interaction from individual workstations through a client-server approach. The user interfaces replicate the look, feel, and workflows trainees would use on a deployment in a Tactical Operations Center (TOC). By modeling reporting and the system interfaces, Metis allows the staff to use their existing processes and tools to create and share products to facilitate their decision making process. Staff courses of action result in AtN performance reporting developed from simulation metrics and agent activities. Metis v1.0 was fielded and deployed in 10 Army locations during 2012. It is currently in use for training of command staffs.

