

ELIST Enhances Military Readiness and Deployment



Introduction

The ability to assess our nation's military resources and assets helps the U.S. Congress make decisions that ensure the military's readiness to face future conventional and unconventional warfare. In addition, the U.S. Department of Defense's (DOD) ability to evaluate transportation plans in advance of troop movement can greatly enhance the effectiveness of U.S. military operations.

Argonne's Enhanced Logistics Intratheater Support Tool

Argonne National Laboratory's detailed transportation forecasting simulation program, Enhanced Logistics Intratheater Support Tool (ELIST), is being used by the U.S. Congress and DOD to improve U.S. military readiness and deployment.

ELIST simulates planned deployments, allowing problems to be solved prior to actual deployment. ELIST predicts the arrival of troops, equipment, and supply cargo to final destinations or tactical assembly areas from departure ports or geographic areas of responsibility, known as theaters. By simulating movements over a detailed infrastructure model with constrained transportation assets and resources, strategies can be developed to eliminate bottlenecks and increase resources where needed. ELIST easily integrates with other military models.



ELIST Provides Detailed Simulations

ELIST provides a detailed simulation of the following activities:

- Berth and offload ships at seaports
- Park and unload airplanes at airports
- Document and order cargo and personnel for further movement
- Staging areas where resources are delayed, combined, or reinforced
- Enabling Units, where additional forces are brought in to increase port and staging area capabilities
- Predicting arrivals at destinations
- Transport of cargo, using host military nations and military assets

ELIST Answers Critical Questions

The broad expertise of U.S. military planners and logisticians has been captured in the ELIST knowledge base. ELIST's key features include simulations that expedite time-phased planning; object-oriented databases of transportation infrastructure; heuristic algorithms; and an easy-to-use user interface that integrates maps, data, reports, and model results.

ELIST supports military planning by answering critical questions such as:

- Will the theater infrastructure support the plan?
- Are the theater assets sufficient to support given delivery dates?
- Where are the bottlenecks in the theater transportation system?
- What are the effects of events outside the plan on the transportation infrastructure?



ELIST Applications

The DOD and U.S. Congress widely use Argonne's ELIST for planning and analysis in such applications as:

- Quadrennial Defense Review
- Mobility Requirements Study (2005 and 2010)
- Force modernization
- Advanced Mobility Concepts Study
- Crisis action planning for deployment in Bosnia
- Desert Storm follow-on deployments (i.e., Kurdish relief)
- Homeland Defense



For Further Information

Chuck Van Groningen
Argonne National Laboratory
630-252-5308
vang@anl.gov

