

Applied Research Laboratories
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Information Systems Laboratory

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**Signal Physics
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**Space & Geophysics
Laboratory**

Live Training Systems
Phil Bookert

**Information
Operations**

**Electronic Warfare and
Network Simulations**

**Intelligence Information
Management**

**Distributed
Simulations**

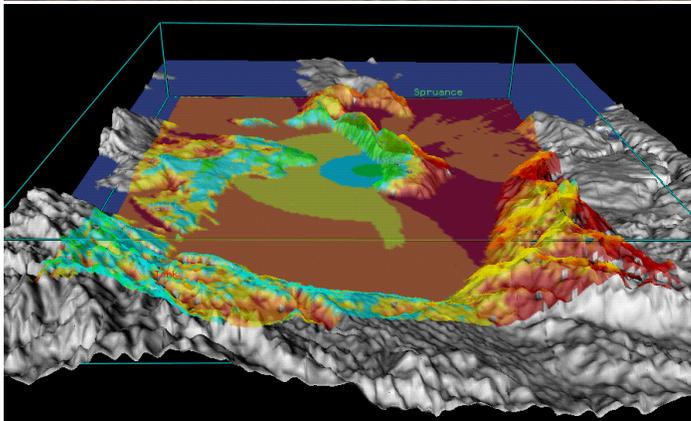
**Modeling and Simulation
Information Management**

Characteristics

- **Trusted independent technical advisor**
 - **Honest broker**
 - **Extension of government engineering staff**
 - **Collaboration with industry, government and university labs**
- **Solve diverse, difficult, and sometimes ill-defined problems**
- **Applied research**
 - **Not production oriented**
 - **“One of a kind” systems**
- **Non-profit**

Information Systems Laboratory

Sponsors: Army - Navy - Air Force - DMSO - JC2WC



- **Live Training Systems**
 - **NTC-OIS**
 - **ABCS/CTC Integration**
- **C4I Test Instrumentation**
 - **Fire Support C2 M&S**
 - **Data Collection & Analysis**
- **Data & Information Management**
 - **M&S Data Interchange**
 - **HLA Data Standards**
 - **Data Warehousing/Mining**
- **Information Operations/Command & Control Warfare**
 - **Communications M&S**
 - **EM Tactical Decision Aids**
 - **Intrusion Detection Using AI**

Current Research Thrusts

- **Machine learning techniques such as Genetic Algorithms and Neural Networks**
- **Rule-based compilers**
- **Efficient data warehouse techniques to support intelligence community**
- **Logical network construction**
- **Intelligent/Sensible Agents**
- **Live training systems**
- **Conceptual Models of the Mission Space**
- **Modeling and simulation data interchange formats**
- **Improved network analysis techniques (vulnerabilities)**

NTC-OIS

Previous Program Direction

- **Develop a NTC-OIS**
 - **NTC Domain Model**
 - **NTC-OIS FPS**
 - **Cost Analysis**
 - **Technology Investigations**
 - **Key Technology Modeling**
 - **Technology Insertion Process**

Change in Programmatic Direction

Live Environment Training System

Strategy describing the overall management, capabilities, and technical thrusts for modernizing the family of live environment training systems (CTCs and HITS).

OIS

Change In Technical Direction

- **Common Training Instrumentation Architecture**
 - **CTC Domain Models**
 - **OIS FPS**
 - **Modeling Tools**
 - **Technology Investigations and Risk Assessments**

Goal

Development, production, and maintenance of guidelines, standards and specifications for a training instrumentation product line to support Army Training Centers and Home Stations under the LETS strategy.

Morning Agenda

8:20	10:00	SE Process Overview	Michael Gibson
		CTIA	
10:00	10:15	Break	
10:15	11:15	Domain Modeling	Bill Stump
11:15	11:35	Industry Interaction	Phil Bookert
11:35	1:00 pm	Lunch	
1:05	1:25	FPS Overview	Doug Cummnngs
1:25	1:55	Functional Model	Michael Gibson
		Introduction	

Afternoon Agenda

1:30	2:10	Functional Model Details: Communications	Doug Cummings
2:10	2:35	Functional Model Details: Data Collection	Doug Cummings
2:35	2:50	Break	
2:50	3:20	Functional Model Details: Data Management	Patrick Welton
3:20	3:40	Functional Model Details: Data Analysis	Patrick Welton
3:40	4:00	Functional Simulation	Patrick Welton