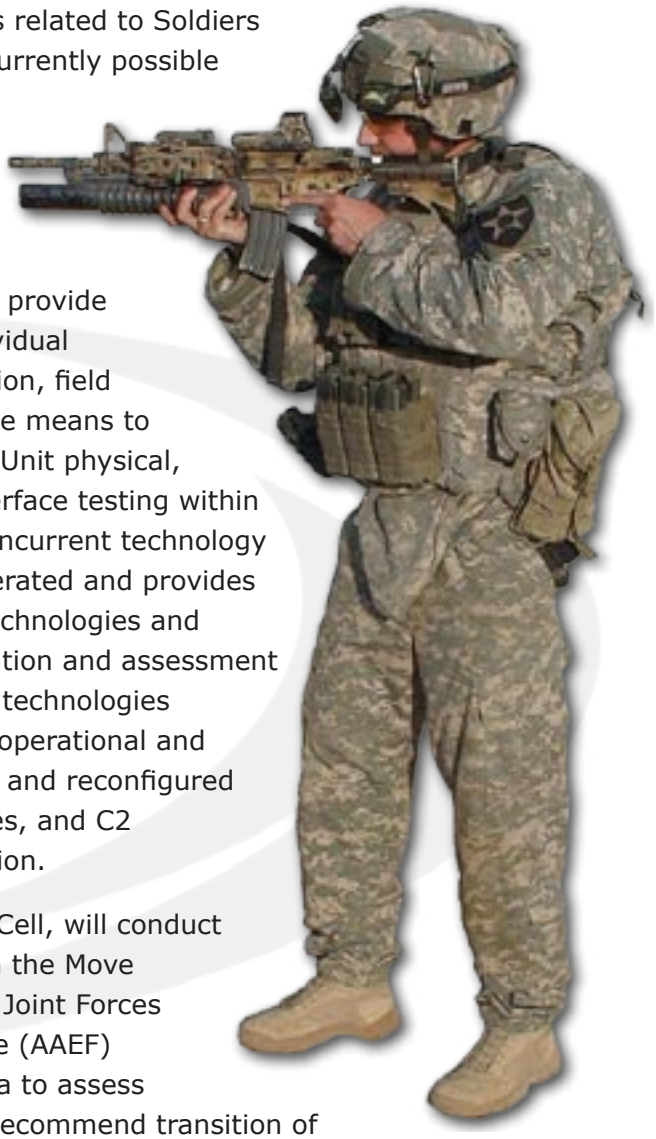
SOLDIER SYSTEM INTEGRATION LAB (SSIL) | TSPID

OVERVIEW:

The **Soldier System Integration Lab (SSIL)** is a dedicated, open architecture laboratory environment for the rapid design, development and evaluation of advanced prototype Soldier systems. The SSIL will expand the Natick Soldier Research, Development & Engineering Center capabilities to include an open architecture lab environment, coupled with a robust data collection and knowledge base associated with field experimentation, execution, and analysis infrastructure to support early and iterative analysis and integration of emerging Government and Industry technologies focused on Soldier and Small Combat Unit (SCU) operational and interface issues.



The Soldier System Integration Lab (SSIL) will facilitate the technology maturation assessment of new technology concepts related to Soldiers and allow more extensive regression testing than currently possible prior to Soldier field evaluation. The goal of the SSIL is to increase Soldier system prototype reliability and reduce the cost (time, staff, dollars) of troubleshooting and repair of systems at test sites, and help reduce Soldier system spiral development time. The SSIL will help provide better solutions and products to the Army and individual Soldiers by tightly coupling Soldier system integration, field experimentation, and analysis. The SSIL will provide means to improve Soldier, Soldier system and Small Combat Unit physical, network, software, interoperability, and human interface testing within a system of systems platform without impacting concurrent technology innovation. The SSIL is government owned and operated and provides an opportunity for *honest broker* assessments of technologies and systems. The SSIL will conduct performance evaluation and assessment of survivability, lethality, power, and energy-saving technologies seamlessly within current and emerging small unit operational and technical architectures; evaluate rapidly configured and reconfigured modular operational concepts, network architectures, and C2 information systems through modeling and simulation.

The SSIL, in conjunction with the Experimentation Cell, will conduct experiments and demonstrations such as C4ISR On the Move (OTM), Future Combat System (FCS) Experiments, Joint Forces Experiments (JFEX), Air Assault Expeditionary Force (AAEF) field experiments, analyze test and experiment data to assess subsystem and system usefulness to Soldiers and recommend transition of products to Army PEOs and other services.

FACILITIES:

- Interim SSIL (In use now), final SSIL (Set up in FY09)
- Mobile SSIL (Future - FY09 or FY10)

SSIL CAPABILITIES:

- Soldier in the Loop Evaluation System
- General Assembly and Physical Integration
- Electrical Measurement and Test
- Power Measurement Bench
- Preliminary EMI Assessments
- Cable Assembly and Test
- SW Test and Debug
- Drawing / Schematics Area
- Fabric Modification Area
- Collaboration space, Soldier Assessment Stations, and Storage

The SSIL includes a Soldier in the loop assessment center, a multi station virtual environment where engineers can test Soldier system interoperability and soldiers can test interfaces. The Soldier in the loop assessment center will greatly improve Soldier system pre-field test validation and Soldier-machine interface optimization. This will help to ensure that Soldier systems have high user acceptance and optimized Soldier-machine interfaces that provide greater efficiency and easier trainability. The Soldier in the loop simulator will allow engineers to integrate Soldier systems across multiple simulated battlefield networks and fire control systems; support investigation of Soldier system interaction with remote systems, such as simulation of UAV image transfer across tactical networks; permit engineers to validate software drops by vendors prior to field experimentation.

POINT OF CONTACT:

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