Research Objective

• Perform basic and applied research with a holistic view to sensor, data, information processing and fusion for linking the physical sensors and data/information sources to users at the tactical edge.

• Focus research on relevant aspects such as distributed, disparate & multi-modal, dynamic, end-to-end information flow in constrained environment.

Challenges

• Highly dynamic, complex, coalition, constrained and contested tactical environment.

• Situation understanding involving multiple interacting actors in many dimensions (military, coalition, economic, social, political, etc.).

• Rapid growth in the volume and complexity (variety, velocity and veracity) of data and information.

• Downward trend in number of military personnel.

ARL Facilities & Capabilities Available to Support Collaborative Research

• Sensor Information Testbed for COLlaborative Research Enterprise (SITCORE)

• Automated Online Data Repository (AODR)

• Access Open Standards for Unattended Sensors (OSUS)
  – networked sensing sensor integration laboratory (SIL)

• Network Science Research Laboratory (NSRL)

• Access to NS CTA & ITA Experimentation Facility and Open Campus guest researchers

Complementary Expertise/ Facilities/ Capabilities Sought in Collaboration

• Access multi-modal signature database and baseline signal processing & fusion for advanced algorithm development.

• Access to fielded ISR sensor assets for testing and implementing algorithms.

• Access to military SME’s to develop relevant use cases and operational context for research.

• Participation in networked sensing and fusion related field experiments and technology demonstrations.

• Subject Matter Experts for unattended sensor integration and interoperability.