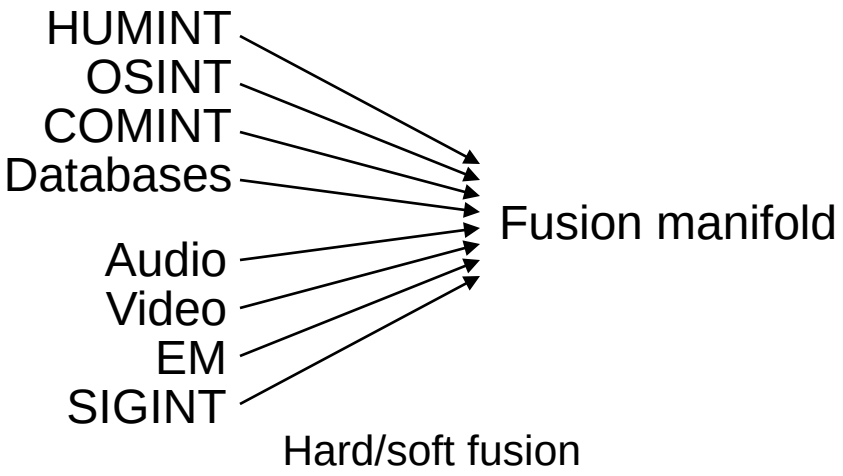
Network-based Hard/Soft Information Fusion



OBJECTIVE

Develop network-based fusion of “hard” info (geospatial, classification, identification) from physics-based sensors with “soft” info from “human-based” sensors (COMINT, OSINT, databases, HUMINT)

DOD CAPABILITY ENHANCED

- Enhanced urban target recognition/tracking

SCIENTIFIC/TECHNICAL ISSUES

- Nonlinear, distributed models for ad hoc hard/soft fusion
- Relation between ontologies, procedures and network structure: Storage of and access to info, discovery of sensors to be involved in fusion
- Latency
- Mathematically justified, computationally feasible, practically useful performance metrics
- Scalability

RESEARCH CONCENTRATION AREAS

- Create ontologies for soft info consistent with the hard information
- Create distributed fusion procedures for fusion
- Quantify the computational expense
- Develop metrics
- Determine robustness, fundamental limitations
- Create suites of events for testing
- Validate models on suites of events