



# University of Tennessee

## Data-Sharing Middleware for Information Dissemination among Heterogeneous Sources



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Prevent, Protect, Respond, Recover

### Homeland Security Challenge:

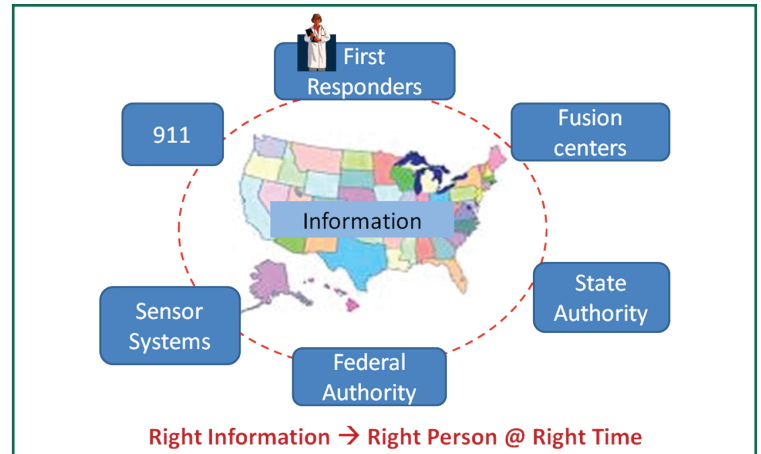
The increasing volume, diversity, and complexity of resources and data continue to raise challenges in sharing and retrieval of information. Getting the required information to the appropriate person in a timely manner becomes the ultimate challenge.

### Research Project Solution:

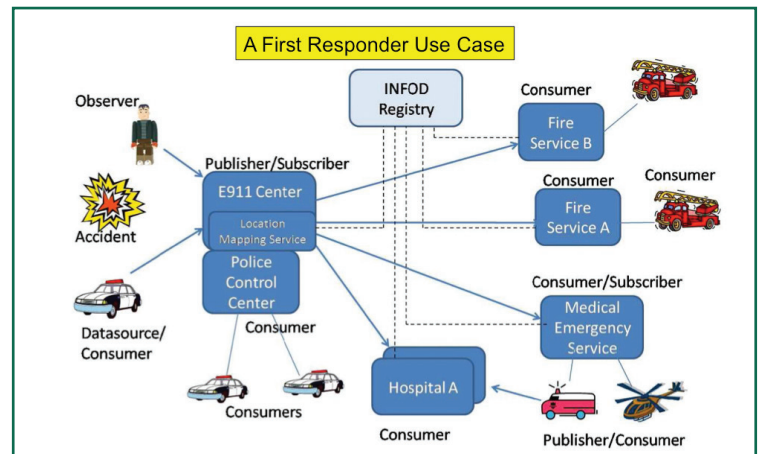
The INFOrmation Dissemination (INFOD) model proposed in this project will introduce a flexible and dynamic framework for brokering information from the publisher directly to the consumer. The model enables communities of interest, e.g., publishers, consumers, and subscribers, to constitute and use vocabularies for describing their interests as well as their capabilities (available data). The INFOD registry matches publishers and consumers based on information needs expressed through subscription and limited by properties and can thereby rapidly facilitate getting critical information to the appropriate person.

### National Implications:

In applications involving emergency responders and inter-agency data sharing across fusion centers, it is critical that information be communicated to the right entity. With policies and regulations on sharing such critical information, the INFOD system developed in this project provides the capability to efficiently communicate the right information to the right person at the right time.



INFOD is able to facilitate data sharing among multiple heterogeneous sources, such that right information can be routed to the right user at the right time.



A use case scenario demonstrating how INFOD, as a middleware, setting up matching publishers (who possess the information, e.g., E911 center) and consumers (who need the information, e.g., policeman and fire truck).

[www.serri.org](http://www.serri.org)

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SERRI is managed by the Department of Energy's Oak Ridge National Laboratory for the U.S. Department of Homeland Security