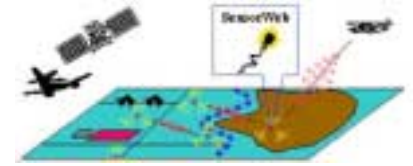


## Experimentation, Demos, and Transitions

Alan S. Willsky

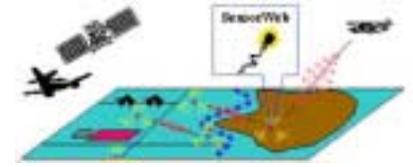
SensorWeb MURI Review Meeting

June 18, 2001



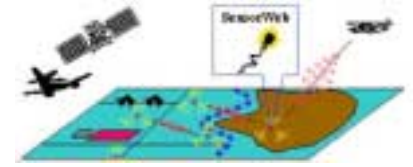
# Our Approach

- Explore multiple opportunities
  - Our own experimental set-ups
    - Allow maximum flexibility in our control of experiments
    - Limited resources (human, equipment, and financial) require leveraging other activities
  - Working with collected data
    - Limited opportunity to vary experimental conditions and examine “what-ifs”
  - Working with our partners
    - Experiments and Transitions



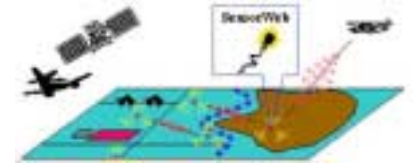
## Working with Our Partners - I

- Lincoln Lab (Dan Dudgeon, Gary Shaw)
  - Ongoing interactions and discussions on collaboration, including using Lincoln sensor testbed and simulation capabilities
- Alphatech (Bob Washburn, Mark Luettgen, Nick Pioch, Mahendra Mallick)
  - Potential transition of fusion algorithms to multiple programs, e.g.,
    - Phase II/III Army SBIR (Distributed tracking and control; Raptor, FCS as possible transition targets)
    - Tanks under Trees (AF)
    - Dynamic Tactical Targeting (DARPA)



## Working with Our Partners - II

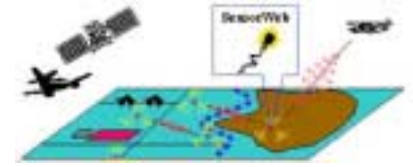
- Xerox Parc (Feng Zhao)
  - Extended visit by Maurice Chu
  - Further collaboration and continued use of Parc's experimental facility under discussion
- Draper Labs (Paul DeBitetto, Ken Houston, Paul Rosenstrach, Mukund Desai)
  - Use of acoustic/seismic array data collect (under ARL sponsorship) for footstep detection
  - Potential transition of both methods for multimodal fusion and for robustness to location errors to Draper program on mini-UAV sensing systems



## Working with Our Partners - III

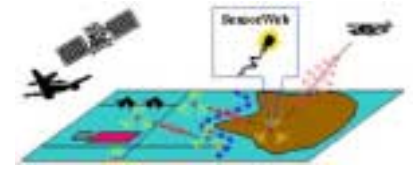
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- Lucent (Tom Marzetta)
  - Exploration of opportunities for transition of our research into wireless applications



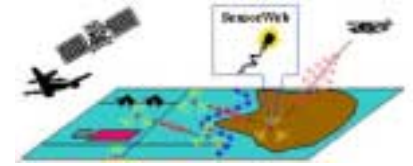
## Experimental Facilities - I

- MIT: Building onto the AI multisensor facility and “smart room”
  - Augmented system currently being formulated and purchased
    - Small network of PC's connected through a wireless LAN
    - Microphone arrays and cameras attached to each
    - Additional sensors in the facility as well
  - Possible future incorporation of nodes being developed by Anantha Chandrakasan



# Experimental Facilities - I





## Experimental Facilities - II

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- Illinois
  - Testbed for convergence of sensing, communication, computing, and control