



# NASA AIST Sensor Web PI Meeting II

## Agenda

Background

Meeting Objectives

Work Session Overview

Desired Products

Wrap up Topics

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# AIST Sensor Web Motivation

- AIST-05 Goals and Objectives
  - Evolve concepts demonstrating the benefit of sensor webs to Earth science applications
  - Developing selected component technologies to enable sensor webs
  - Enhance PI collaboration
  - Promote sensor web technology infusion
- Show Relevance to NASA Earth Science
  - NASA Strategic Plan (06)
  - NRC Decadal Survey (07)
  - WGISS / CEOS / GEOSS



# Sensor Web Concept View (2007)

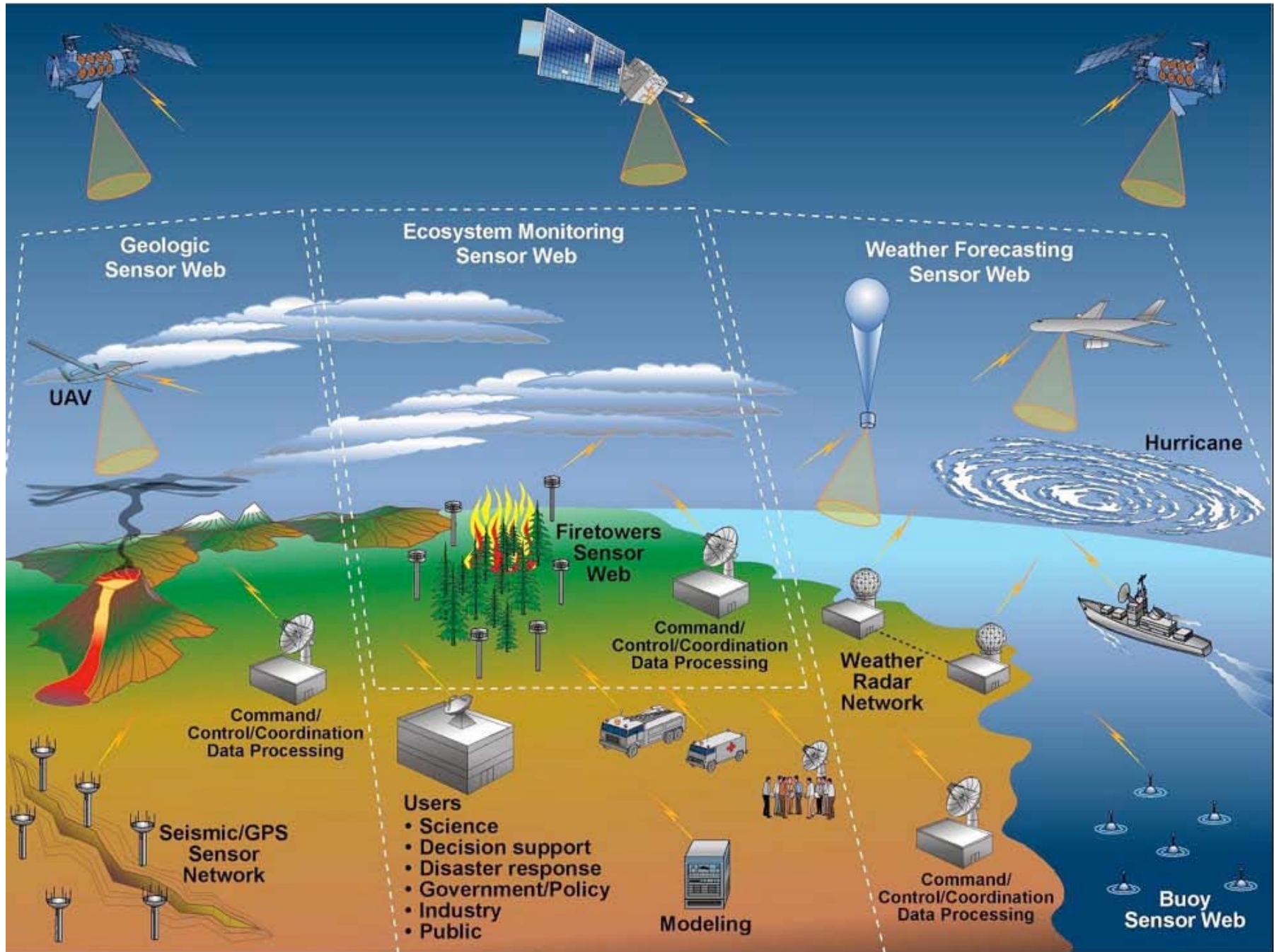


Image from the NASA report *ESTO AIST Sensor Web Technology Meeting Feb 2007*

# PI Meeting Objectives

- Increase awareness and understanding of Earth science sensor web *features and benefits*
  - Amongst ourselves
  - For the Earth science community, including GEOSS
  - But especially for NASA HQ ESD managers
- Capture sensor web use cases for meeting report
  - Characterization check list
  - Compelling use case from science and/or application user view
  - Understandable summary and basic flow
- Highlight sensor web features and benefits “take home” messages for NASA HQ
- Provide a forum for PI collaboration
- Further refine your use cases for potential prototype demonstration

# Work Session Overview (1)

- Each Break-out Group includes
  - ESTO facilitator and staffer
  - Aerospace reporter
  - PI to present sample use case
  - Assigned use case challenges from Decadal Survey and to feature specific sensor web capabilities/uses
  - PI's from similar NRA topic area to maximize common perspectives and delve deeper into:
    1. MW1 Middleware I - Model Interoperability
    2. MW2 Middleware II - Systems Management
    3. SS Smart Sensing

# Breakout Group Assignments

	MW1: Model	MW2: Sys M	SS: Sensors
NRC Mission	DESdynI	HyspIRI	SMAP
Science Category	Solid earth	Land use	Water
Application	Forecasts	Rapid response	Sensor cal/val
Sensor Web feature	Data assimilation	Workflow	Agents Autonomy

# Breakout Group Further Considerations

	MW1: Model	MW2: Sys M	SS: Sensors
NRC & NASA Missions	DESdynI CLARREO SMAP 3D Winds	HyspIRI SWOT	SMAP ICESat-II
Science Category	Solid earth Ecology/Carbon Weather Air quality	Land use Oceanography	Water Climate Solid Earth
Application	Forecasts Mission OSSE Health	Rapid response Campaign planning	Early warning Sensor cal/val
Sensor Web feature (methods)	Data assimilation Data fusion Web services Grid services Virtual sensors (sim.)	Workflow Planning & sched. Adaptive sampling RT data streaming	Agents Sensor autonomy Adaptive resource mgmt. Sensor fusion

# Work Session Overview (2)

- Resources
  - Internet wireless access to research concepts & terminology
  - User ID and password to access TIWG collaboration web site
    - File folders for each group's use cases
    - Resource documents include NRC pdf, AIST Needs
    - Workshop preparation materials
  - Computer projector, flip charts
  - Shared printer (see Mary)
  - Worksheets & output templates
- Other help
  - Use Case consultants - Peter and Karen
  - ESTO team will be looking at the coverage and diversity within each group
  - Karen and Peter will assess coverage between groups



# Break out Work Session Agenda (1)

- Introductions
- Sample Use Case presentation (15 min)
  - To gain common understanding about the scope and detail needed for each use cases
    - Short with limited focus
    - OK to cut and paste similar pieces of different use cases
    - Document carefully (italicized fields are optional)
    - Cover your own use case
  - Delve into common features of projects, seek collaborations, share services (data, code, demos, ...)

# Break out Work Session Agenda (2)

- Brainstorm range of use cases that your group should consider (~25 min)
  - Discuss suggested assignments
  - Determine which Sensor Web features to dwell on
  - List use case titles/POC/contributors and prioritize
- Work assigned use case (or alternative) as a group (45 min)
  - Identify use case characteristics (1st or last)
  - Discuss all required Use Case fields
    - Name, Goal,
    - Summary,
    - Actors,
    - Preconditions, triggers, basic flow, post conditions
  - Resource tables optional but good points to consider
- Break into smaller teams to do additional use cases in parallel
  - Determine who will present your findings

# Break out Work Session Agenda (3)

- Lunch back in Lake Room
- Poster Session in the Osceola Room
- Day 2 Break out sessions continue
- Prepare feedback briefings (45 min each)
  - Use case summaries
  - Lessons Learned
  - Action Items
  - Recommendations
- Goal of the plenary feedback session is to assess the collective results of the break out sessions
  - Key findings
  - Common themes
  - Unique perspectives

## Questions?

# Desired Meeting Products

- Earth Science Sensor Web Use Cases
  - Documented
  - Compelling examples of all features and benefits
  - Show relevance to NRC Decadal Survey
  - Identify potential NASA roles for GEOSS
- Meeting Report (mid May, Aerospace lead)
  - Capture discussion highlights within each group
  - Capture use cases, additional contributions due by 4/10
  - Draft document available by 4/24; all comments due by 5/1
  - Target completion by 5/8
- Goal - Shared view of sensor web features and benefits to NASA Earth science

# Wrap up Session Topics

- Action Plans
- Target Outreach Opportunities
- Collaboration Forums
- Schedule

Ready to Start?