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Posters

Title

KNO 0: CENS Knowledge Transfer Overview

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Authors

J. Goldman

D. Estrin

W. Kaiser

et al.

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CENS Knowledge Transfer Overview

J. Goldman, D. Estrin, W. Kaiser, G. Pottie

Goals

1. Advance ENS Research

Influence the field

2. Enable New Observations of the Physical World

Spawn new real-world applications

3. Facilitate Commercialization of ENS Technology

Essential for wide adoption

Science applications

Use ENS to enable new discoveries in

terrestrial ecology
contaminant monitoring
aquatic microbial biology
seismology

Stewardship applications

Use ENS to ensure

food
air
drinking water
recreational spaces
energy

are

safe
secure
affordable
sustainable

Approach

KT activities are aligned with developmental trajectory of the technology

Description of KT activity categories

- Scholarly dissemination:** broadcasting theoretical & technological discoveries to ENS research community
- "Intra-actions":** sharing of expertise between CENS CS/EE researchers and CENS science application researchers
- User community:** activities aimed at building an external community of sensor network users
- Commercial products:** activities aimed at generating products for purchase and use by people outside the center

Scholarly dissemination

"Intra-actions"

User community

Commercial products



KT strategy over time

- Scholarly dissemination:** continual scholastic productivity; broad adoption of technology by ENS researchers
- "Intra-actions":** progressive success in fielding reliable scientifically-relevant systems, followed by high rate of scientific return.
- User community:** early engagement of thought leaders and early adopters, followed by more active cultivation of user base via training and new applications as technology matures
- Commercial products:** initial opportunistic partnerships with vendors, followed by more intense activity as technology matures

Accomplishments and Plans

Scholarly Dissemination

- Over 400 Publications in under 4 years**
 - Including ENS textbook
- CENS Annual Research Review**
 - Attended by nearly 200
 - Over a dozen presentations and 60 posters



- Adoption of hardware & software architecture by hundreds of individuals and labs**
 - CENS-developed tools: EmStar, SOS
 - Community-developed tools: TinyOS, Stargate



SenSys 2003



"Intra-actions"



- Scientific output through publications is key KT mechanism because it demonstrates the power of embedded sensing**
- First results from science applications have recently been published**

- Systems have recently reached a level of maturity that can support an increased rate of scientific output**
- Our "intra-actions" serve as a model for working with external user communities**



User Community

- Environmental observatories**
 - Efficient mechanism for developing user community
 - Mutually beneficial

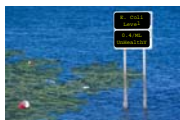


Formal and informal training

- To date, informal outreach to field stations and individual investigators
- Planning for formal summer training institute



- Broadening applications**
 - Technological advances permit exploration of new applications
 - Fueled by partnerships with scientific & environmental stewardship organizations



Commercial Products



Three CENS created products are commercially available.



- MDA300 data acquisition board**
 - Crossbow Technologies
- Cyclops mote-based imager**
 - Agilent Technologies
- ENSBox**
 - Aevena Corporation



Currently developing relationships with additional vendors to capitalize on maturing systems such as NIMS