

# **UCLA**

## **Posters**

### **Title**

CENSDC: Adding Context to Content

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### **Publication Date**

2007-10-23

# CENSDC: Adding Context to Content

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## Challenges: The Diversity of CENS Research

### Many different types of deployments and trips

- Campaigns – Sensors installed and removed after short periods
- Static deployments - Long term installed stationary sensors
- Hybrid deployments – Campaigns adjacent to static sensors
- Monitoring/Maintenance Trips
- System experiments

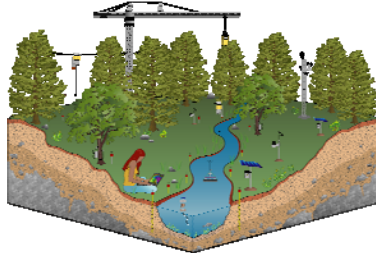
Any of these types can utilize or impact the same sensor installations



### Exploratory research vs. Monitoring

Environmental monitoring requires highly structured, quality data

- CENS technical research is exploratory in nature, deployments may collect no useful scientific data
- Technology is of limited scientific use until it hardens
- Once technology hardens, science researchers become responsible for upkeep



### How to capture in-field data decisions?

Field conditions cannot be predicted

- Deployment activities are determined by field conditions and state of equipment
- Many decisions effecting data are made on the fly, including:
  - Sensor placement
  - Data aggregation
  - Utilization of time

How do you capture this?



## Future Work: Deployment Documentation as One Part of the Data Life Cycle

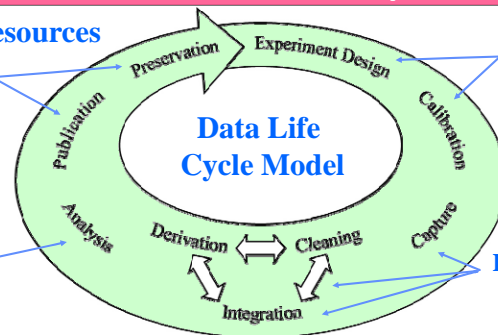
### Capturing Deployment information in field

- CENS is researching the use of cell phones / PDA's as sensors and tools for field research
- Handheld devices may be a means to capture photo documentation and in-field deployment activity annotation.

### Aggregating Digital Resources

Publications in the California Digital Library eScholarship Repository

Scripts and Models generated with analysis tools

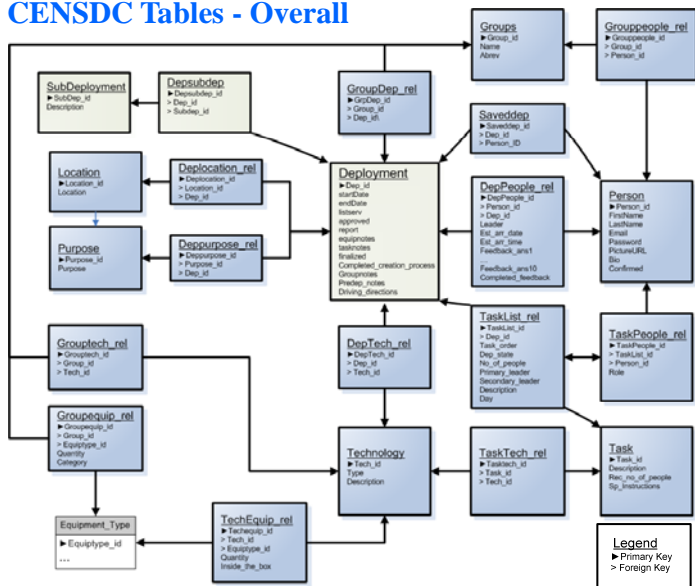


Deployment Information in the CENSDC

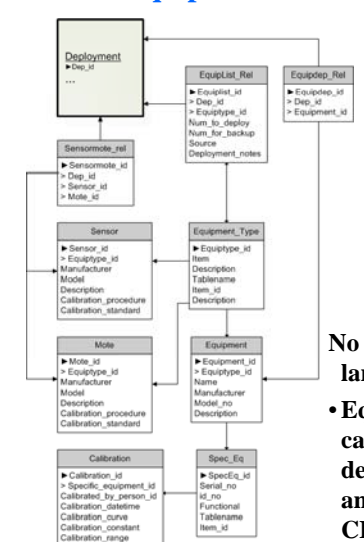
Data Sets in data repositories and shared servers

## Technical Layout: CENS Deployment Center Database Diagrams

### CENSDC Tables - Overall



### Subset - Equipment Tables



### Other Tables

Outside Links:



Update tracking:



No widely used metadata languages available

- Equipment and calibration parameters derived from SensorML and discussions with CENS researchers