

A Best Practices Manual for Individual and Networked Sensors

- Purpose - Robust against staff turnover
- Format
 - Online guide which summarizes the group's collective knowledge
 - Divided into sections
 - Summary of topic
 - Cite other protocols from USGS, NOAA, NERRS, US Forest Service
 - A page “manager” is responsible for updating the summary 2x/yr (?)
 - Discussion blog beneath each summary

Managing sensors

- Terrestrial / Aquatic / Atmospheric / below ground sensors
 - Protocols for installation and calibration schedules
 - Identifying the appropriate sampling frequency
 - Sensor audits
 - Would require a designated staff person
 - Sensor leasing for QAQC
- Power sources / enclosures / towers
- Traceability of a particular sensor
 - Discussion of method options
 - PDA or an Android phone in concert with data turbine.
 - “Grape” boxes
 - Bar code on each sensor which could be photographed by a georeferenced camera and linked to observations later on
- Network level / process level design

- Streaming

- Review of software packages
 - Off the shelf (turn key versus not turn key)
 - Open source
 - custom built system – provide an example of the development process
 - NOTE: Custom packages that grad students or techs write can be excellent, but their usefulness can expire when that person leaves.
- Telemetry / communications options
 - Discussion of hardware options - 3G cell phones, satellite, radio, etc
 - would be helpful to avoid circuitous phone calls with engineers.
 - Tools for design
 - Analagous to “Landscape Toolbox”
 - Matthew Munson remembered a similar tool for setting up VHF radios and promised to get us that information later
- Linking metadata with data flow

- Archiving

- Software discussion (possibly the same as the streaming)
- Creating a “citable” database
 - Versioning (monthly vs. annual ; provisional v. final)
 - Snapshot – database at one time or query
 - Tracking changes to the database
 - It may also be possible to promise to review data every year, and then provisional data becomes more permanent annually. Provisional data would be subject to change until the annual data file emerges.

- Access

- Discussion of how to identify and access users
- Discussion of our user communities
 - Help each other to identify untapped user groups