# Success Stories

Homegrown Programs

- Hubbard Brook
- H.J. Andrews

MatLab

- Coweeta
- Niwot

Campbell – Loggernet

- Huntington Forest
- Jornada
- Konza
- Plum Island

# Common Themes

We use different dataloggers

Most use Campbell, but others too

Davis Instruments - www.davisnet.com
Nexsens – nexsens.com
Hobo – www.onsetcomp.com

Grape – NEON

Need software products that accommodate different dataloggers

# Common Themes

Really neat software and tools exist and are being used.

Campbell Software does a lot. Other tools are free and offer some flexibility.

Outbox – used to ftp files from datalogger to server

Flot – Graphing tool (Javascript Library)

Tools for remote access

# Approaches

Top Down vs Bottom Up Approach

Top down (NEON, USGS, SCAN)

- More uniform
- Faster implementation
- Less flexible

Bottom up (LTER, Individual Sites)

# Approaches

Adopting new solutions – How to make decisions

Reluctance to invest time and energy

Much of the software seems to be in its infancy and would take a lot of effort to learn

A concern with long-term data

Need to reduce this barrier

# Greatest Needs

- Middleware between sensor / data logger and data base / applications
- Programming support – hire CS students
- Training workshops could disseminate knowledge & solutions (LTER – Also for non-LTER people) Webinar?
- Ways to share experiences with software and tools that are useful (or not)

# Action Items

- Useful tools – figure out a way to share experiences and what works
- Clearinghouse for sharing code and solutions
- People want more information about Kepler – Training - Mechanism for sharing Kepler workflows

# Action Items

- Standardization - LTER is moving toward network database (NIS). Controlled vocabulary, unit registry, etc as shared tools. Adding a top-down component to a bottom-up system. No standardization of methods, even for met data (Light handed top down veneer).