

A Next Generation AmeriFlux Network Data Server

Deb Agarwal, Catharine van Ingen, and Susan Holladay

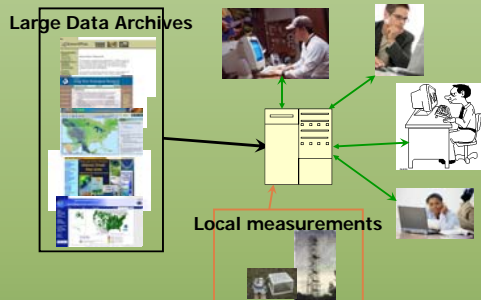
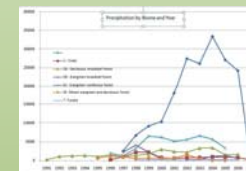
Berkeley Water Center and ORNL

Enabling cross-site carbon-climate synthesis depends on:

- Data and site ancillary data submitted to network archives by tower investigators
- Common processes for data quality assessment and gap filling now evolving
- Collaborative analyses that build on single site investigations
- Enabling data availability browsing and simple analyses

Leads to dramatically increased data availability – 600+ site years from 250+ sites now available

Requires help from investigators: no longer bypass common processes and the archives, apply their own corrections, lose data files, etc which can make comparing results problematic



Ameriflux data server

- Common data repository capturing provenance information and common data processing
- Ancillary and biological data being incorporated
- Data browsing, mining, and plotting capabilities
- Data repository that is easy to maintain, load with data, and expand capabilities

Reduce cut & paste manipulation of data

Dramatically increase the scale of the data that can be analyzed

Ameriflux/Fluxnet Data Intersection



FLUXNET Data Site – <http://www.fluxdata.org>

~920 site years from ~240 sites

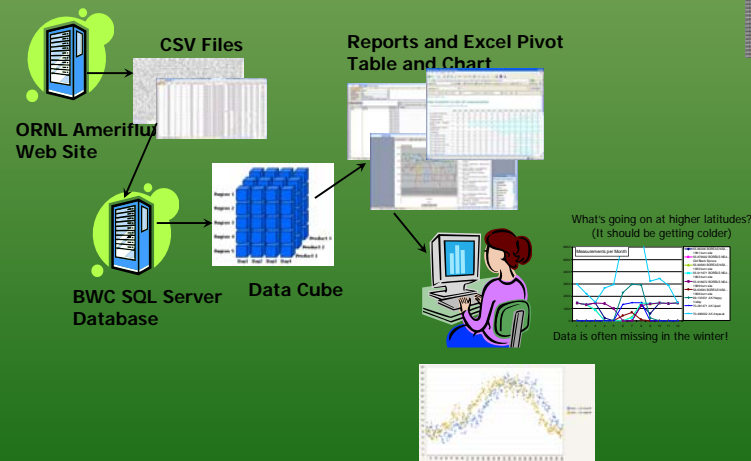
- Summaries of data and availability information
- Data download
- Pivot tables
- Collaboration services
- Site PI contact support

All data and site ancillary data are held in a relational (SQL) database

- Available data from ORNL web archive automatically downloaded and ingested into the database
- Site ancillary data updated infrequently by manual load

Selected data and site ancillary data flow into data cubes (OLAP database)

Client visualization and analysis tools query the database or data cube



Fully normalized schema for both data and ancillary/biological data

Built in versioning to handle data changes for cleaning

Data Cube User Support Available

- Tutorials - Wednesday and Thursday, 3-5pm, Evergreen Room
- One-on-one - help available at this table during meeting breaks

E-mail: bwc-support@lists.berkeley.edu

