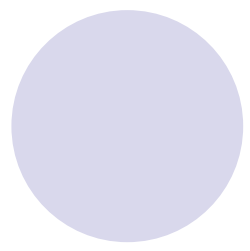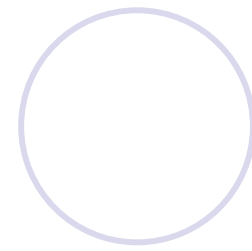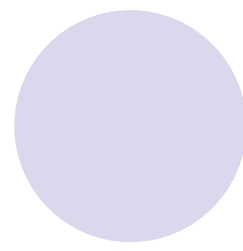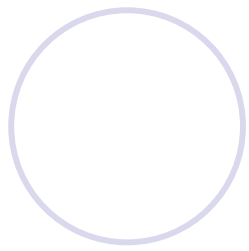# Database and publishing on Web

Zhao Bin

Objects

- Facilitating the sharing of information and data via Internet

- Establishing clear protocols for data and metadata preparation and submission

- Defining the data structure and function of USCCC

- Establishing a clear data policy to ensure the quality, availability, and fairness of using all data

Ideal data policy

- First of all, long-term data collection and high quality data archive are important scientific legacy of USCCC. The ideal data policy has the following principles:

  - Within a reasonable period of time for post-processing and quality control, all data of USCCC Participants must be made available to the network.
  - USCCC Participants will be given a reasonable period of time to analyse the data they collect and publish the results, before these data are released to the general scientific community.
  - Data sets will be easily web accessed, simply formatted, web-based analysis system, and fully documented.
  - Both measured and modelled data will be archived.

Database sharing on Web

- Simple file sharing
  - Download via FTP, WWW server
  - File type: TXT, DBF, MDB, XLS (CSV) et al.
- Static page
  - HTML, XML
- Active page
  - CGI, ASP, PHP et al.

Static page

- **Advantages**
  - Reliable and highest-performing pages
  - No extra work to share data.
  - If the content of a page changes less often than it is viewed, and the page has no user-dependent content, it is a good candidate for static page generation.
- **Disadvantages**
  - Won't work for production sites due to dynamic data. Of course not suitable for USCCC database integration. For example, one user want to compare the air temperature at the same time both in Beijing and Shanghai.

Active page

- Essential for dynamical database publishing.

- Online data analysis via Internet.

- Inter-operation on inter-site.

- To provide a Interface and standard for FLUXNET data submission.

Why do we select MS-Excel?

- General format: This format can be opened on any PC.

- Easily management: Almost every one know how to use it.

- Can be easily converted to other formats.

- Simple statistical and a plenty of charting functions.

- Partial security: you can use password to protect your documents.

Excel: Some disadvantages

- Not a real database management software.

- The maximum size of the worksheet is 256 columns by 65536 rows, not appropriate for 10 Hz real time data, but enough for half-hour totalized data.

- File size is big. 2-3 times of file size than ACSII file.

Alternative formats

- IF you prefer to save your disk space, please use the following format:
  - Formatted text (space delimited) (.PRN extension) This is COLUMN LIMITS for the field command can be used when the data columns have unequal length.
  - CSV (Comma delimited) (.CSV extension) This format will separate data fields with a single comma. Missing data is represented with successive commas.
  - Text (Tab delimited) (.TXT extension) Text (MS-DOS) (.TXT extension) These files will separate

Current recommendation

- Save half-hour totalized file as Excel file.

- Use simple file sharing via FTP or HTTPD.

- Register your sites on FLUXNET website.

- Our site is a template for this application. This is just a temporary resolution, not the best and the last

How to register your site?

- Write email to ornldaac@ornl.gov, webmaster@www.daac.ornl.gov.

- Online register: http://www.fluxnet.ornl.gov/fluxnet/

  - Note, the site is very slow, especially when you click the "register site" button, keep patience on it!

http://www.fluxnet.ornl.gov/fluxnet/

FLUXNET

Integrating Worldwide CO$_2$ Flux Measurements

About FLUXNET | Program Information | Obtain Data | Submit Data | Resources | Regional Websites | Contact Us

Register Site
Submit Site Data
Edit Site Data
Best Practices
Data Format

FLUXNET

FLUXNET, a "network of regional networks," coo... and global analysis of observations from micrometeorological tower sites. The flux t... ...ddy covariance methods to measure the exchanges of carbon dioxide (CO$_2$), water vapo... ...ween terrestrial ecosystems and the atmosphere.

Register New Site

The Flux Community has identified information to characterize the location and environmental context for each tower. Information is requested on the tower's identification, contact person, location, operation, site, vegetation, long-term climate, and average soil, vegetation, and stand properties. This information provides an overview of the distribution of towers in geographic or environmental space and is useful for individuals doing synthesis or modeling activities. It can be used to promote the scope and scientific value of the flux networks.

- Enter information about a new site.

The Site Registration Tool provides a way to either enter information for a new flux tower site or to

Fill out your information

About FLUXNET | Program Information | Obtain Data | Submit Data | Resources | Regional Websites | Contact Us

Site Information Form

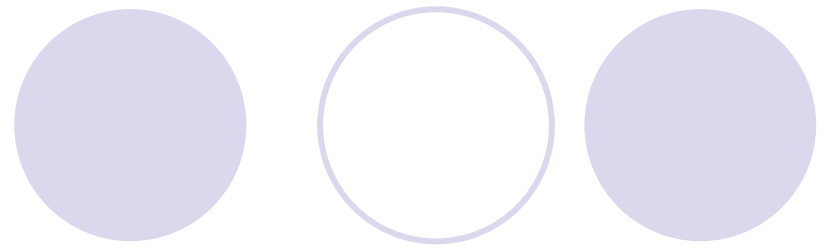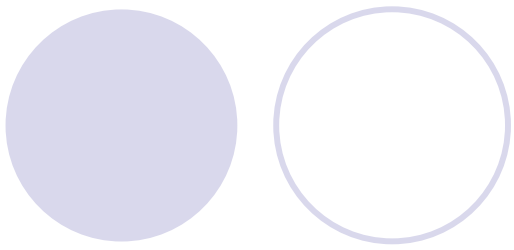| IDENTIFICATION	
Parameter	Value
Site Name:	
Country:	
State:	
Information provided by:	
Email of Provider:	
Sources of information	

Future development

- Excel-server software may our choice to develop our excel-based database as a real database system.

- Online chart generator:
  - ASP.NET (ASP) + system + Web Components

- Inter-operation on database of inter-site.

Thanks!