



News: Dynamically Plotting the Future: An International Information Management Workshop for Forest Dynamic Plot Databases

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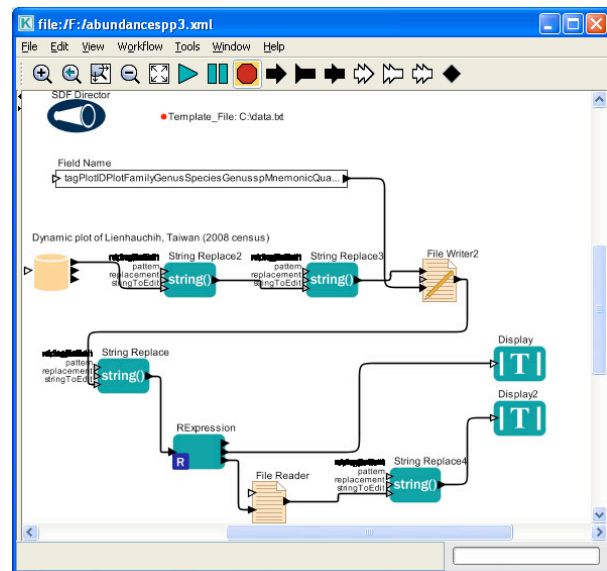
The cicadas were singing loudly in the trees at the Leihuachih Research Center of the Taiwan Forestry Research Institute (TFRI) in Nantou Taiwan, when an international group of forest researchers and information managers started work on developing new systems and methodologies for the study of dynamic forest plot databases in mid-June 2009. Their goal was to build on a series of workshops focused on IM Training in the East-Asia Pacific ILTER Region, by providing concrete, scientifically valuable products that exploit advanced information management techniques. The workshop was hosted by Chau Chin Lin and the Information Management Team of TFRI with funding from the Council of Agriculture. The forty participants included representatives from the East-Asia Pacific region including Japan, Malaysia and Taiwan and four U.S. LTER Information Managers.



The workshop focused on the analysis of data from large dynamic forest plots, many, but not all of which, are associated with the Center for Tropical Forest Science (CTFS). It began with scientific presentations by I-Fang Sun (Taiwan), Abdul Rahman bin Kassim (Malaysia), Kaoru Niiyama (Japan), that addressed the science issues related to large forest plots. Yu-Yun Chen (Taiwan) and Eda Melendez (US) presented information on the existing data structures used by CTFS for forest dynamics plots.

Participants then used a brainstorming session to identify scientific needs associated with the analysis of plot data, the analysis of ancillary data (e.g., mammals on forest plots), quality control and assurance and visualization. They then consolidated their vision to focus on particular analysis tools and how they would be used. Each regional group also included information managers, who then worked on defining a system architecture that could be used to create the needed tools, while the forest plot researchers worked on further defining and prioritizing the functionality they needed. The system they proposed focuses on exploiting the capabilities in Metacat, an Ecological Metadata Language (EML) database, linked to the Kepler scientific workflow system, which, in turn, exploits an existing CTFS library of R statistical language scripts designed specifically for forest plot data.

During the workshop, new EML documents were prepared for forest plot data at several locations in Malaysia, Japan, Taiwan and the Luquillo LTER site using the Morpho editor. In the meantime, the IM-Team of the TFRRI and the Taiwan Ecological Research Network (TERN), in particular, Chi-Wen Hsiao and Cheng-Tsai Chou, provided support and training in the use of R and Kepler to scientists and visiting IM's alike. With their help, participants prepared several prototype workflows, including some that for the first time provided comparative analyses of these forest plots. There are plans for additional workshops in coming years to build on these successes, with the aim of advancing scientific progress in the East-Asia Pacific Region.



Participants also got a chance to tour the Forest Dynamics Plot at the Leihuachih Research Center and to tour nearby Sun-Moon Lake, Checheng ecological village, an organic tea farm and historic villages. U.S. LTER Information Managers participating in the meeting were Kristin Vanderbilt (chair of the ILTER IM committee), Don Henshaw, Eda Melendez and John Porter.