The Southwest Environmental Information Network

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The Center for Environmental Studies announces the upcoming release of a new website, the Southwest Environmental Information Network (http://seinet.asu.edu) to serve as a gateway to distributed data resources of interest to the environmental research community. SEINet is more than just a web site – it is a suite of data access technologies and a distributed network of departments, museums and agencies that manage environmental information.

SEINet
Southwest Environmental Information Network

Graphic Designs by Shalini Prasad

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Tempe, Arizona
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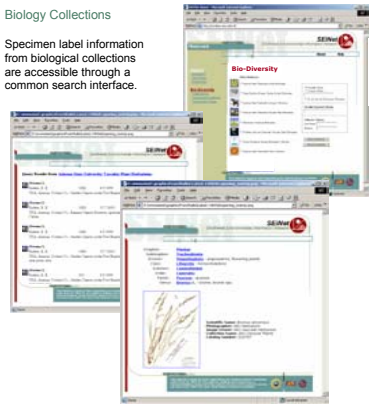
User Interface

SEINet provides a consistent and extensible interface to this data infrastructure.

Biology Collections

Specimen label information from biological collections are accessible through a common search interface.



Taxonomy Explorer

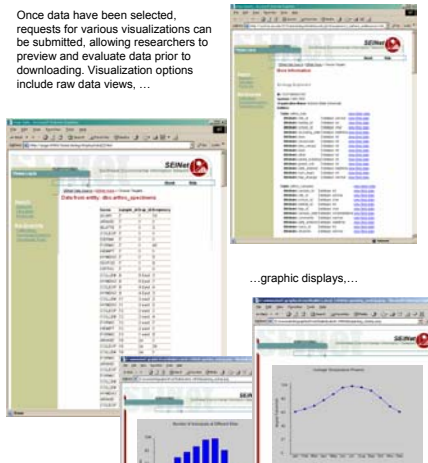
An integrated database of taxonomic name information can be browsed online, or used help identify taxa online.

Data Search

The SEINet Query system uses the hierarchical structure of ecological metadata to support simple or advanced searches across multiple inventories of different kinds of information.

Visualization & Analysis

Once data have been selected, requests for various visualizations can be submitted, allowing researchers to preview and evaluate data prior to downloading. Visualization options include raw data views, …



…graphic displays,…

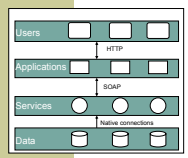
…and maps.

Data access services can shorten download time by performing intensive processing such as resample, reclassify, etc at the data source. 22

Web Services

The foundation for the new "semantic web", distributed services form the infrastructure that links data to applications.

The open design of these components allow them to be used beyond this website. Ecology Explorers, the GP2100 atlas, and the new "Networking Urban Models" project will all use these same services.

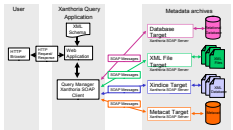


Ecological Metadata Language (EML)

provides a standardized description of a dataset, enabling applications to configure themselves dynamically to the data with each request.

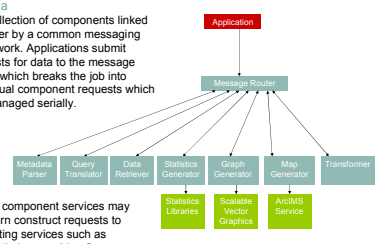
Xanthoria

searches multiple data archives of literature, datasets and protocols, regardless of the remote computing platform or data schema.



Xylopia

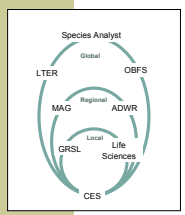
is a collection of components linked together by a common messaging framework. Applications submit requests for data to the message router which breaks the job into individual component requests which are managed serially.



The component services may in turn construct requests to existing services such as ESRI's Internet Map Server, or a statistical processor such as MatLab or R.

Data Network

An ecological research program draws upon data sources at many scales. The goal of SEINet is to integrate southwestern researchers with local, regional and global networks – what many are now calling the "EcoGrid".



Environmental Data Archives

Online archives of data at ASU include:
- CES: CAP LTER, IGERT
- Mesonet: Arizona hydrologic and climate data
- Geology Remote Sensing Lab: Remote sensed imagery
- IT GIS Lab: Census and GIS data for Arizona

New partners participating in a new ITR grant to extend SEINet to the GP2100 mission:
- Arizona Department of Water Resources
- Maricopa Association of Governments

National grids based on the metadata and data access protocols of SEINet:
- Knowledge Network for Biocomplexity
- Science Environment for Ecological Knowledge

Biology Collections

SEINet has successfully integrated collections databases from 8 museums and herbaria in the southwest:
- ASU Vascular Plant Herbarium
- ASU Lichen Herbarium
- ASU Zoology Collections
- ASU Paleobotanical Collections
- UofA Vascular Plants
- NAU Vascular Plants
- Desert Botanical Garden
- UCSB Lichen Collection

http://seinet.asu.edu

Will be available March 2003

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