National Geospatial Data Clearinghouse

Archie Warnock, U.S. Federal Geographic Data Committee Secretariat
Reston, VA

What is Clearinghouse?

- Distributed service to locate geospatial data based on their characteristics expressed in metadata

- Clearinghouse allows one to pose a query of all or a portion of the community in a single session

- Like a spatial AltaVista

Components of Clearinghouse

- There are three functional areas that interact to create the Clearinghouse:
  - Metadata preparation and indexing
  - Metadata service
  - User Access via Gateway forms

Clearinghouse Design

- The Clearinghouse in its distributed form includes a registry of servers, several WWW-to-Z39.50 gateways, and many Z39.50 servers

- A primary goal of Clearinghouse is the ability to find spatial data throughout the entire community, not one site at a time

Clearinghouse Method

- User downloads query form

- User sends query to Web server

- Gateway passes query to clearinghouse servers

- Gateway receives and collates response as list of "hits"

- Client receives results summary as HTML by default

- Client can request a specific metadata record for viewing

Metadata Solutions

- Numerous software solutions available

- Commercial and free-ware

- Standalone, DB-linked, GIS-linked

- Permit collection and structuring of FGDC-compatible metadata

- Present metadata as HTML, XML, or text

Server Solutions

- Z39.50 Protocol is used

- "GEO" Geospatial Metadata Profile is published for Z39.50 implementors to understand FGDC metadata structures

- Supports search across numeric, text, date, and spatial extent and full-text

- Freeware and commercial solutions

- User Interfaces

- HTML-based forms hosted at Gateways are the primary access method

- Java map-based interface from MEL allows more sophisticated search

- Inclusion of search capabilities in GIS client software is possible

Who's in Clearinghouse?

- 109 Nodes (servers) online as of 3/1/99
  - 28 Federal, national scope
  - 35 State/University state-wide scope
  - 28 International scope or location
  - 18 Local or Regional scope

  ### Federal Participation

- NOAA (10)
- USGS (6)
- FEMA (sampler)
- NRCS climate and soils
- CIESIN/EPA
- CIESIN/NASA
- DOT NTAD
- National Park Service
- Army Corps of Engineers
- Tri-Services Center
- National Wetlands Inventory
- Census (sampler)
- Minerals Management Service

State Participation

- New York (2)
- North Carolina
- Oklahoma
- Kansas
- Texas
- Montana (3)
- Vermont
- Pennsylvania
- West Virginia
- Washington
- Wisconsin
- Wyoming (2)
- Florida
- Alabama
- New Mexico
- Arizona
- Georgia
- Illinois
- Minnesota
- Alaska
- California
- Delaware
- Nebraska
- New Jersey

Regional/Local Participation

- McKinley Co, NM
- City of Santa Fe, NM
- North Texas GIS
- Research Planning
- Sabine R Authority, TX

- San Francisco Bay
- S Florida Ecosystem
- SW Natural Resources
- Olympic Peninsula, WA
- Greater Yellowstone
- Helena NF
- Ecological Reserves, KS
- MIT/Mass Boston DOQs
- Great Lakes EIS
- Eastern Sierra

International Participation

- NOAA/Japan GOIN
- South Africa (2)
- ESA AVHRR sampler
- GELOS, Italy
- PAIGH, Mexico
- S57 Hydrography, Canada
- NRL MEL
- Africa DDS
- Inter-American Geospatial Data Network
- Hong Kong
- CIESIN/USDA Global Environmental Change
- Australia (10+)
- Costa Rica
- Caribbean CEPNET, Jamaica

Planned or Funded Nodes

- Mt. Desert Island, ME
- SW Washington COG
- NASA GCMD
- CODEPLAN, Brazil
- Iowa
- Missouri
- Kentucky
- South Dakota
- Oregon
- Louisiana
- Ohio
- Connecticut MAGIC
- Colorado
- NW Ecosystems

For more information:

Visit the FGDC Web site: **http://www.fgdc.gov**