



National Biological Information Infrastructure

Institutional Strategies

NBII: A Federation Approach

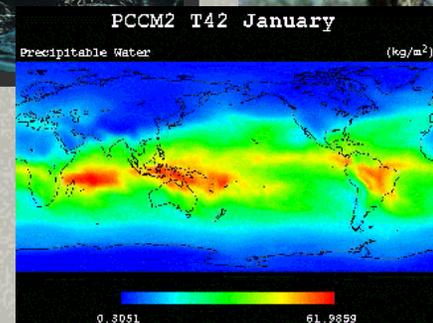
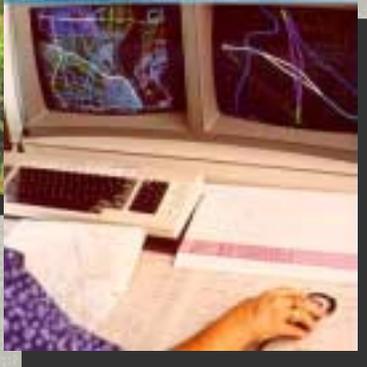


Gladys Cotter

April 18, 2001

National Biological Information Infrastructure (NBII)

- A broad, collaborative program to provide access to data and information on the Nation's biological resources and tools for integration and analysis.



Federation approach

- USGS program management office
- Focus on community building

GOVERNMENTS



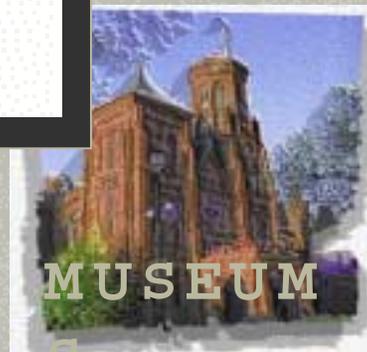
PRIVATE
SECTOR



UNIVERSITIES

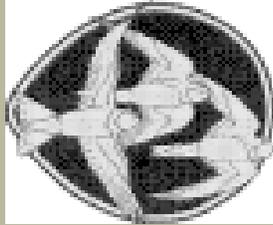


MUSEUMS



Federation approach

- Data and information products from many diverse distributed sources



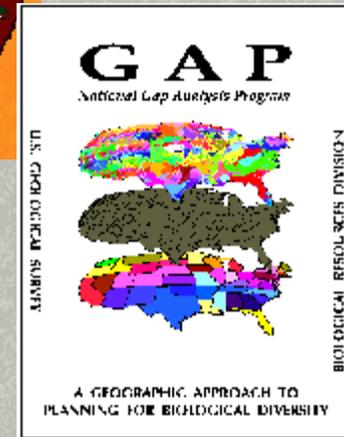
BREEDING
BIRD
SURVEY



LUHNA



VEG
MAPPING





Federation approach

- Community building efforts for collaborative development of
 - standards and procedures
 - data and information content
 - new information technologies



Federation approach

- Access to software tools for analysis and application of biological data (e.g., ecological models and simulations, GIS)

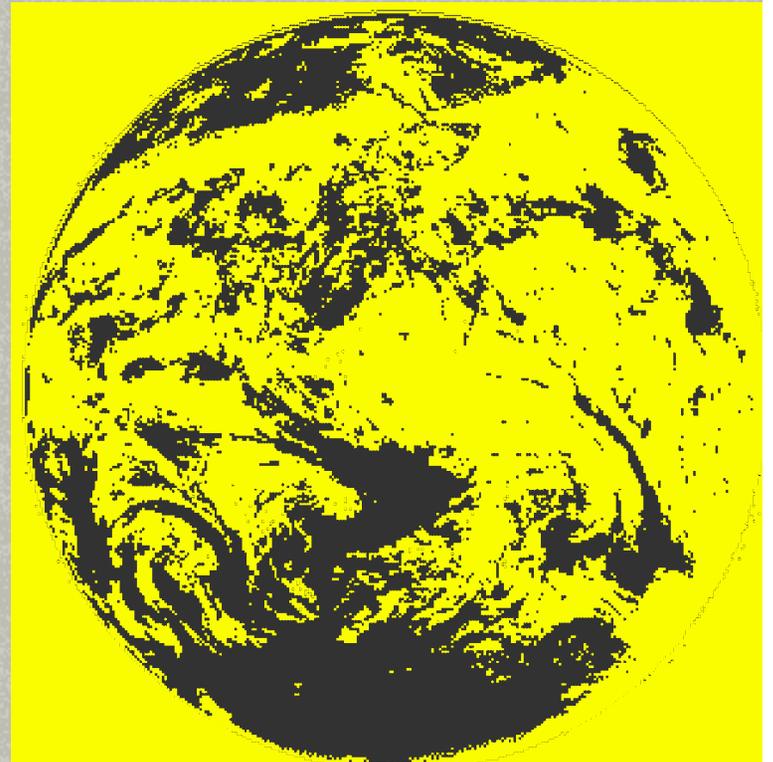




BioEco Working Group

■ Objectives

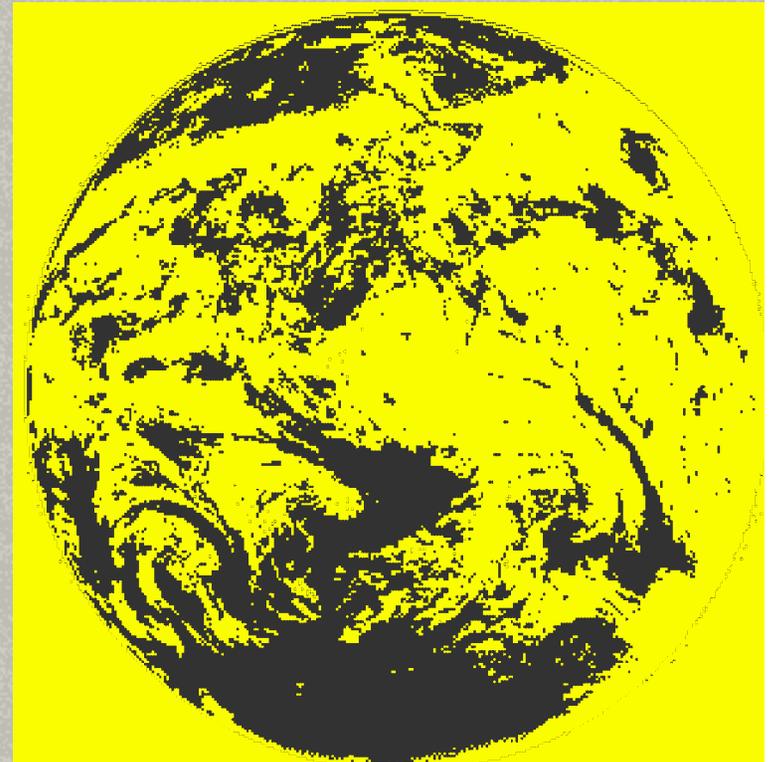
- Provide a US focal point for interagency, intergovernmental and international cooperation
- Promote opportunities for public-private bioinformatics cooperation





BioEco activities

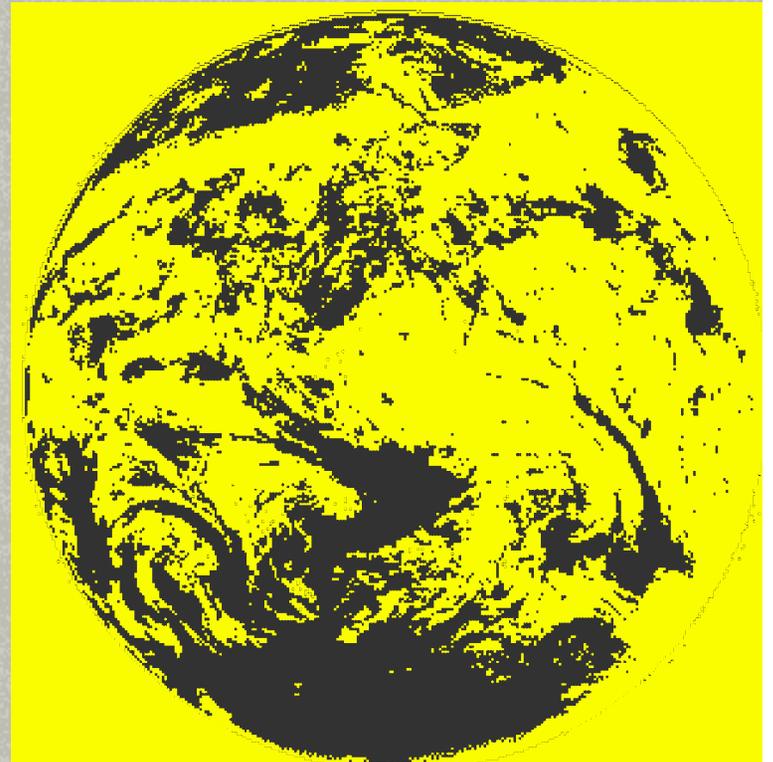
- National framework document
- Coalition building meetings
 - Philadelphia Academy of Sciences
 - Metadiversity conference
 - AAAS panel discussion





BioEco activities

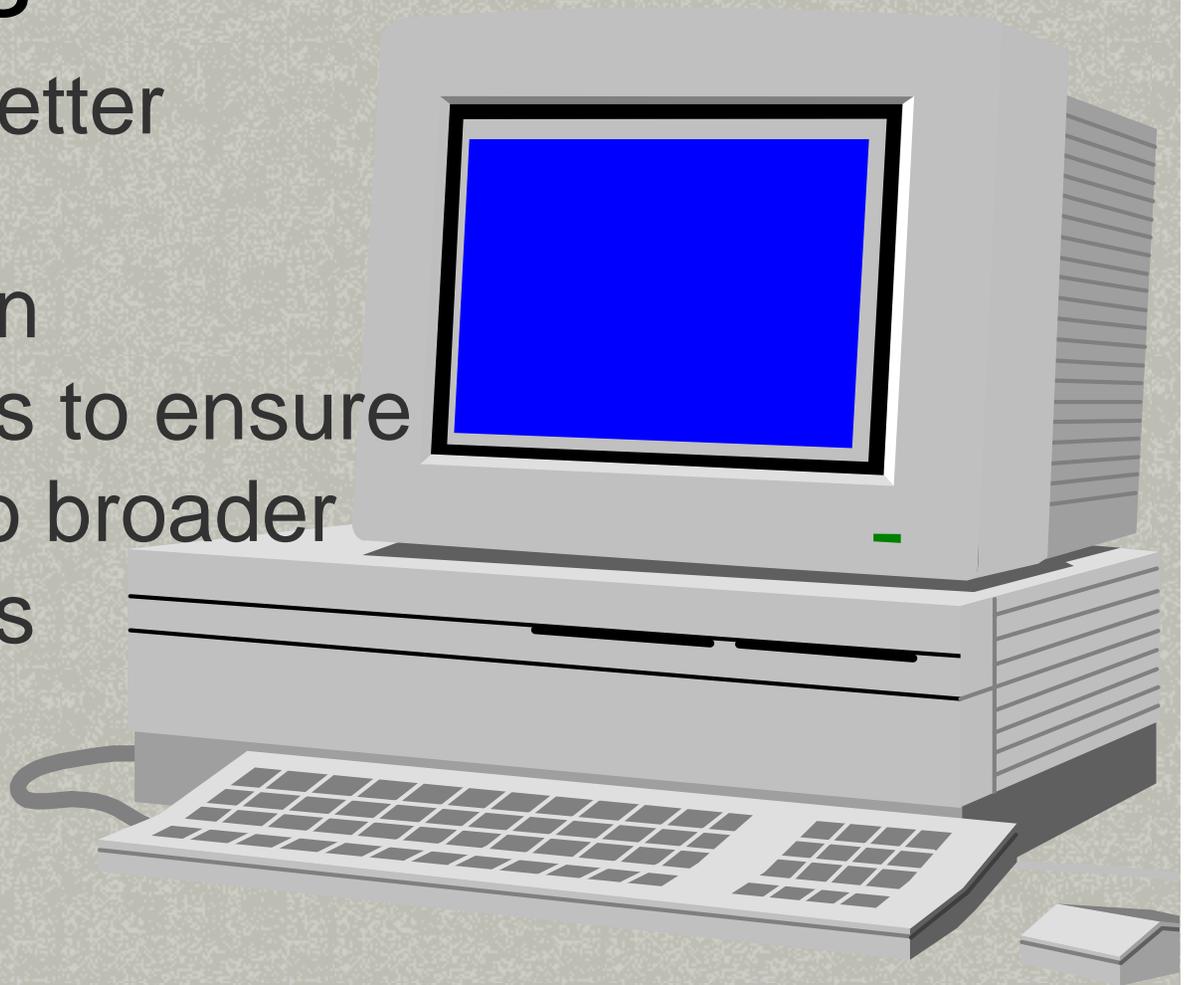
- Joint budget initiatives
- Maintain community awareness
- Partnership with IT community





Information technology initiatives

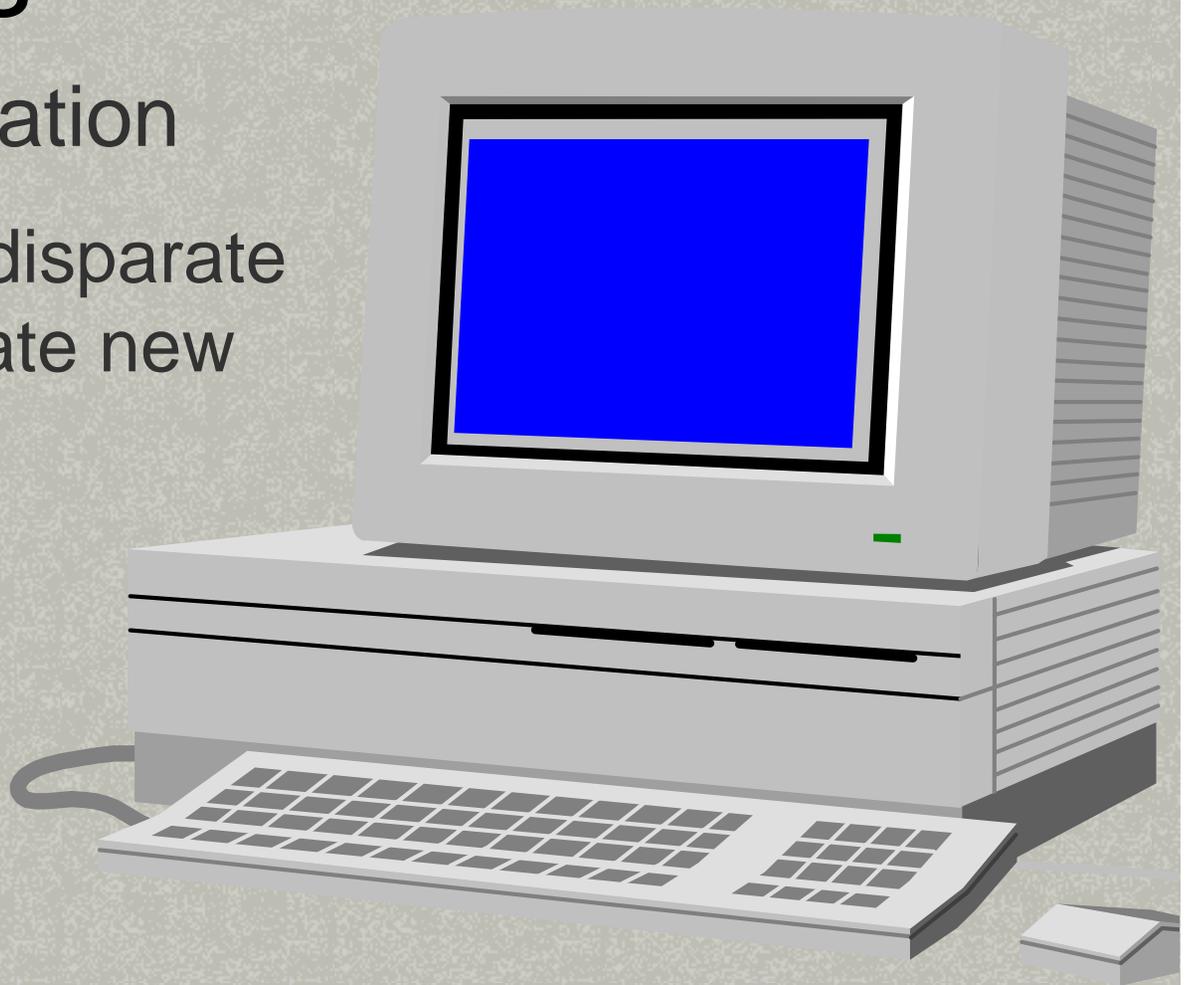
- Develop better knowledge manipulation mechanisms to ensure relevance to broader communities





Information technology initiatives

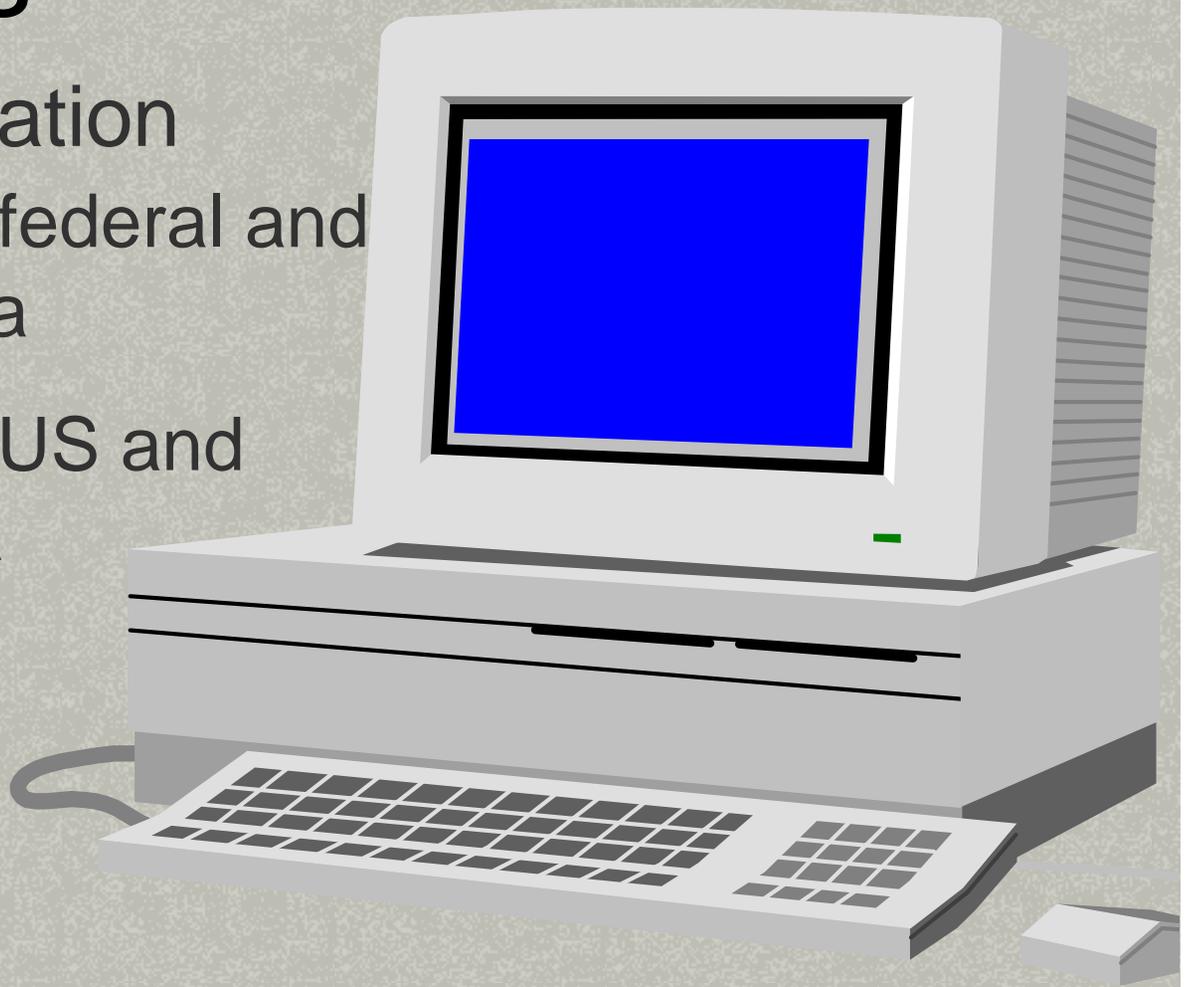
- Data integration
 - Integrate disparate data to create new knowledge





Information technology initiatives

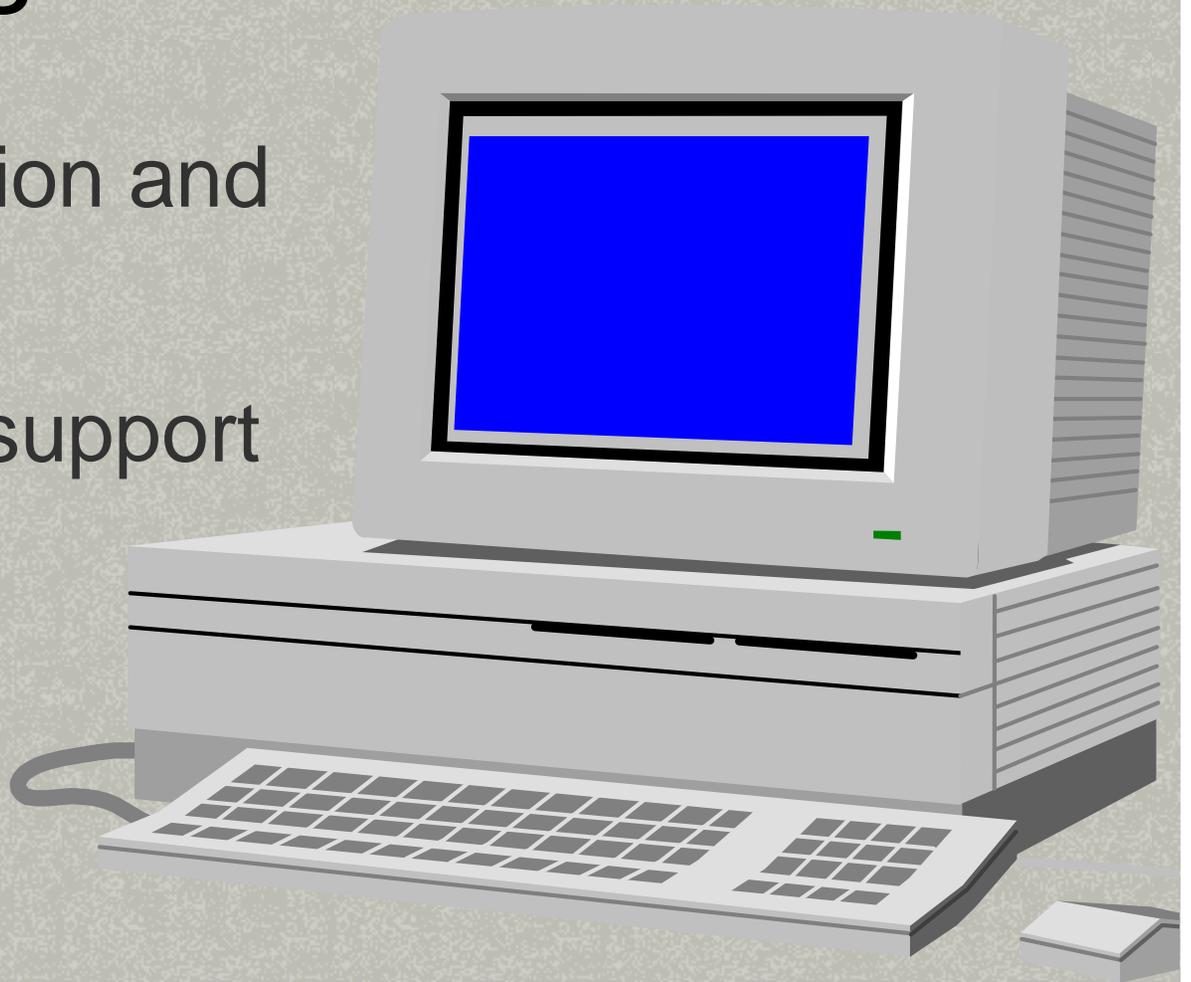
- Data integration
 - Integrate federal and private data
 - Integrate US and global data





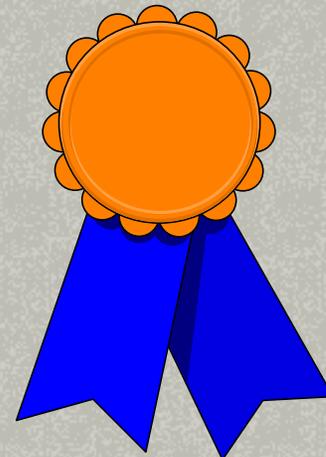
Information technology initiatives

- Visualization and modeling
- Decision support systems





Scientific and technical validation



- National Research Council
- President's Committee of Advisers on Science and Technology
- Hammer Award for ITIS – a vital NBII component
- Government Technology Leadership and **Best Feds on the Web**



Cross-cutting groups

- Supporting organizations made up of federal and non-federal members representing many disciplines
 - CENDI
 - NFAIS
 - ICSTI
 - ASPRS



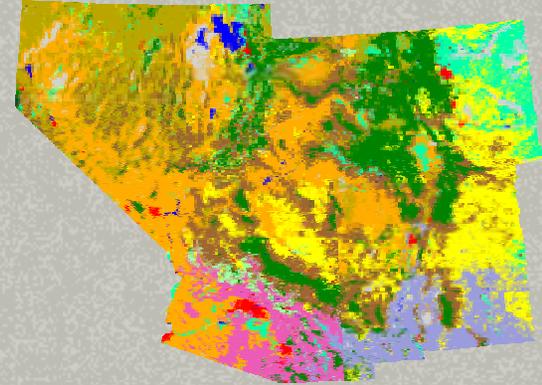
NBII Coalition

- Non-federal partners
- Prioritize content requirements
- Build awareness
- Support budget initiatives



Collaborative nodes

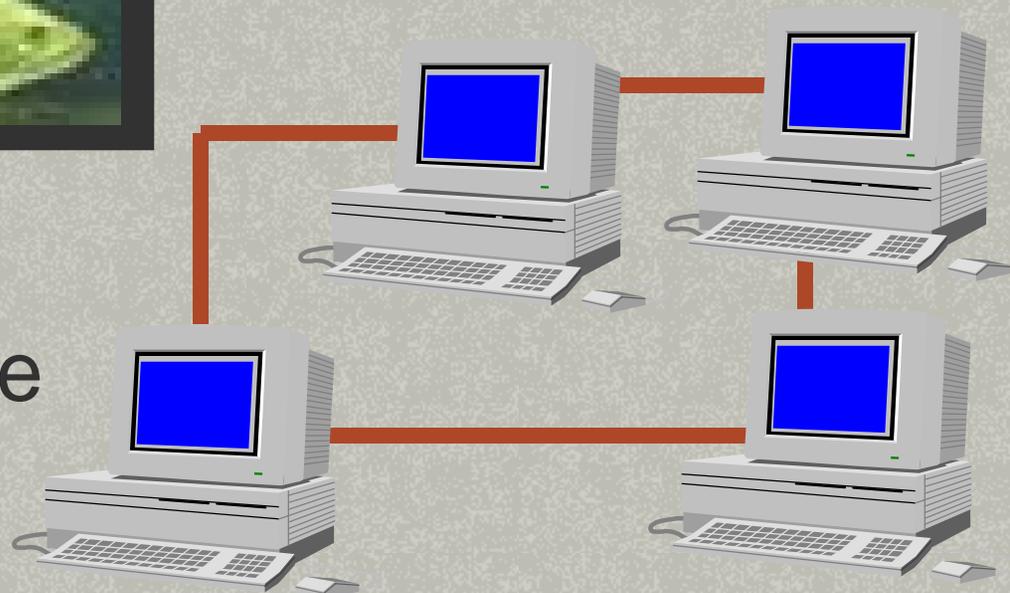
■ Regional



■ Thematic



■ Infrastructure





Geopolitical collaboration

GLOBAL

Global Biodiversity Information Facility
(GBIF)

REGIONAL

Clearinghouse Mechanism (CHM)

IABIN

NABIN

NATIONAL

NBII (US) CBIN (Canada) CONABIO
(Mexico)

LOCAL

ERIN (Australia)
TNC State Heritage

GAP State Information

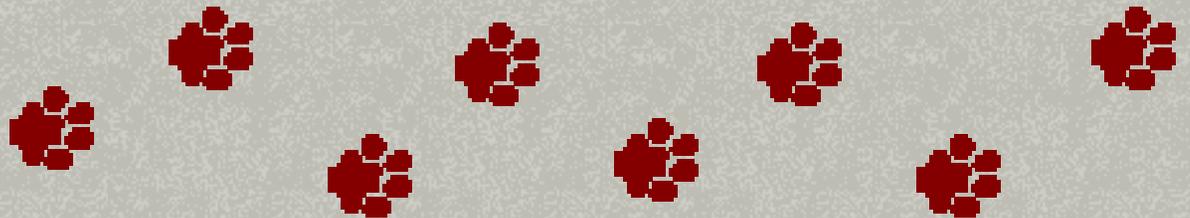
County Park Information





Benefits

- Access to a great variety of biological data and tools from multiple sources
- A way to showcase, share and exchange (sell) the biological data and tools they are producing.





The vision for the future

“Research is conducted in virtual laboratories in which scientists and engineers can routinely perform their work without regard to physical location - - interacting with colleagues, accessing instrumentation, sharing data and computational resources, and accessing information in digital libraries.”

President's Information Technology
Advisory Committee, Interim Report
to the President. August 1998.

