NOAA Satellites and Information

National Environmental Satellite, Data, and Information Service

NOAA Coastal Data Development Center Overview of Data Management Activities

SAFMC ArcIMS Workshop

October 13-14 2004

Peter Hoar

NCDDC Ecosystem Program Manager

Presentation Overview

- About NCDDC
- Meeting Data Management Requirements
- Questions

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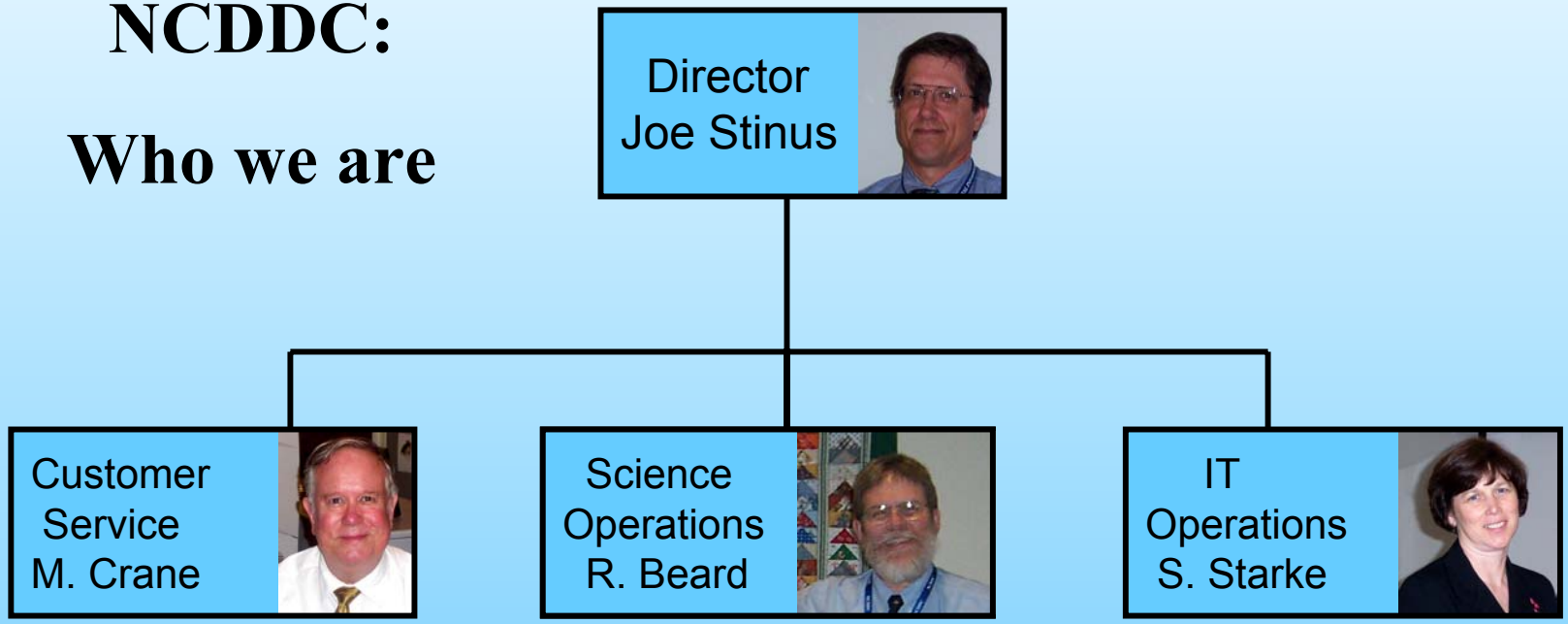
NCDDC:

Who we are

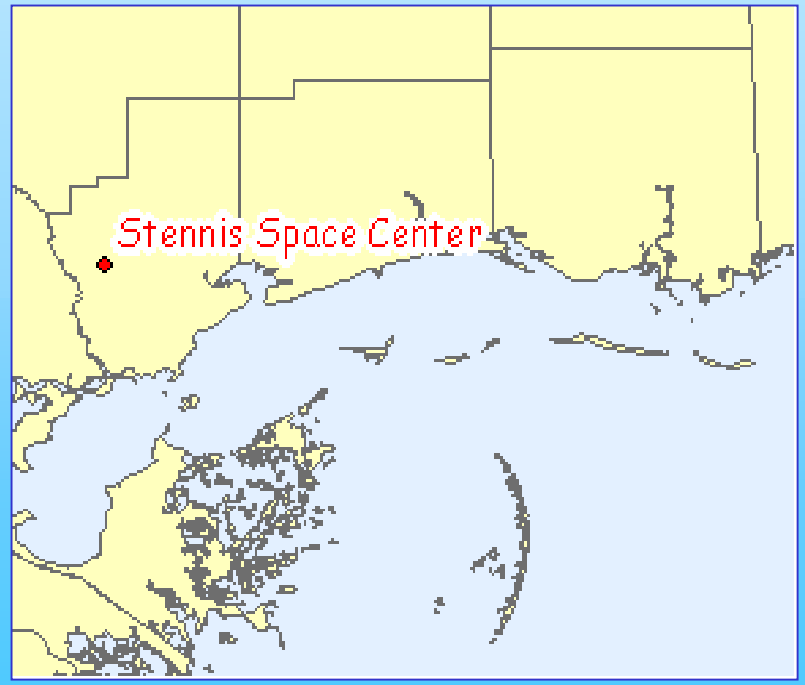


Total Personnel

Federal: 12 Contractor: 26

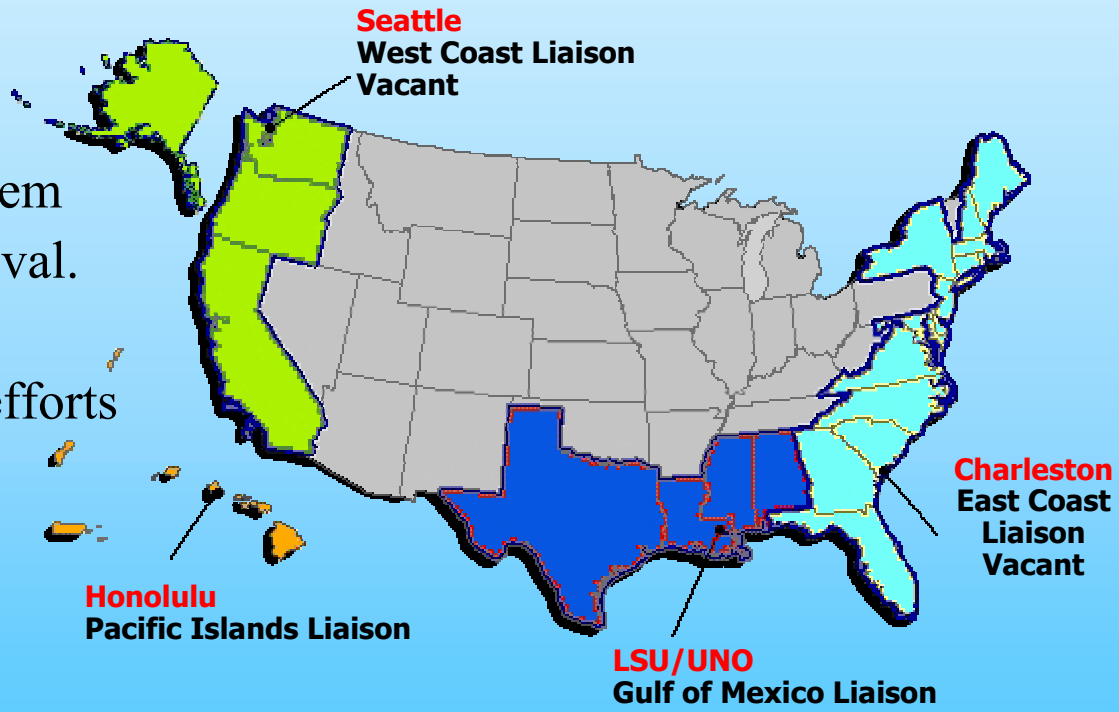
NCDDC: Location

- Located at the Stennis Space Center
  - A unique 'Federal City'
  - Home to more than 40 Federal & State Agencies
    - NOAA
      - NWS, NMFS, NESDIS, NOS
    - NASA, Navy, Coast Guard;
    - EPA, USGS;
    - Contractors & Vendors
    - Small Business Incubator;
    - Universities;
    - Many others . . .



Regional Offices

- Represent NCDDC at regional meetings and workshops.
- Provide assistance in ecosystem data access, archival and retrieval.
- Facilitate data management efforts in each region.
- Sponsored partnerships, e.g., NCCOS-Charleston.



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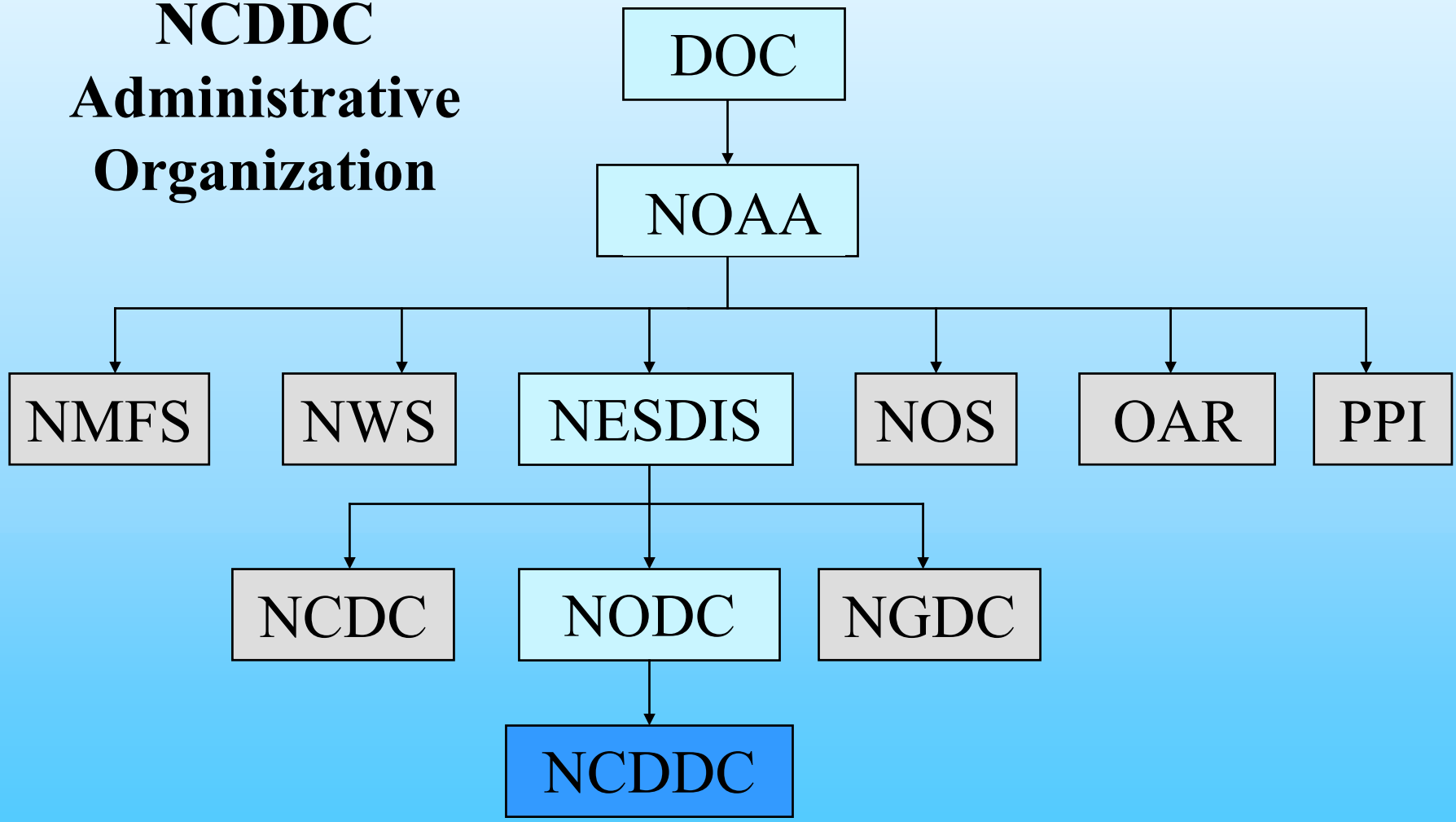
NCDDC Administrative Organization



Strategic Organization: NOAA Mission Goals

- Ecosystems → - 9 Programs → ✓ Ecosystem Observing Program
- Climate
- Weather & Water
- Commerce & Transportation
- Organizational Excellence & Mission Support

NCDDC: Mission

- To support ecosystem stewardship and to provide access to the Nation's coastal and marine data resources

NCDDC: Capabilities

- Practical implementation of Data Management services
  - Dynamic web capabilities and services
  - Metadata management via training, creation and publication
  - Software development to facilitate data access and retrieval
  - Geospatially enabling data for display, query and analysis

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  - Secure web access to project management & metadata tools
  - Metadata discovery & delivery of remotely held data
  - Map-based discovery & delivery of data geospatially enabled at NCDDC
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Project Organization and Management

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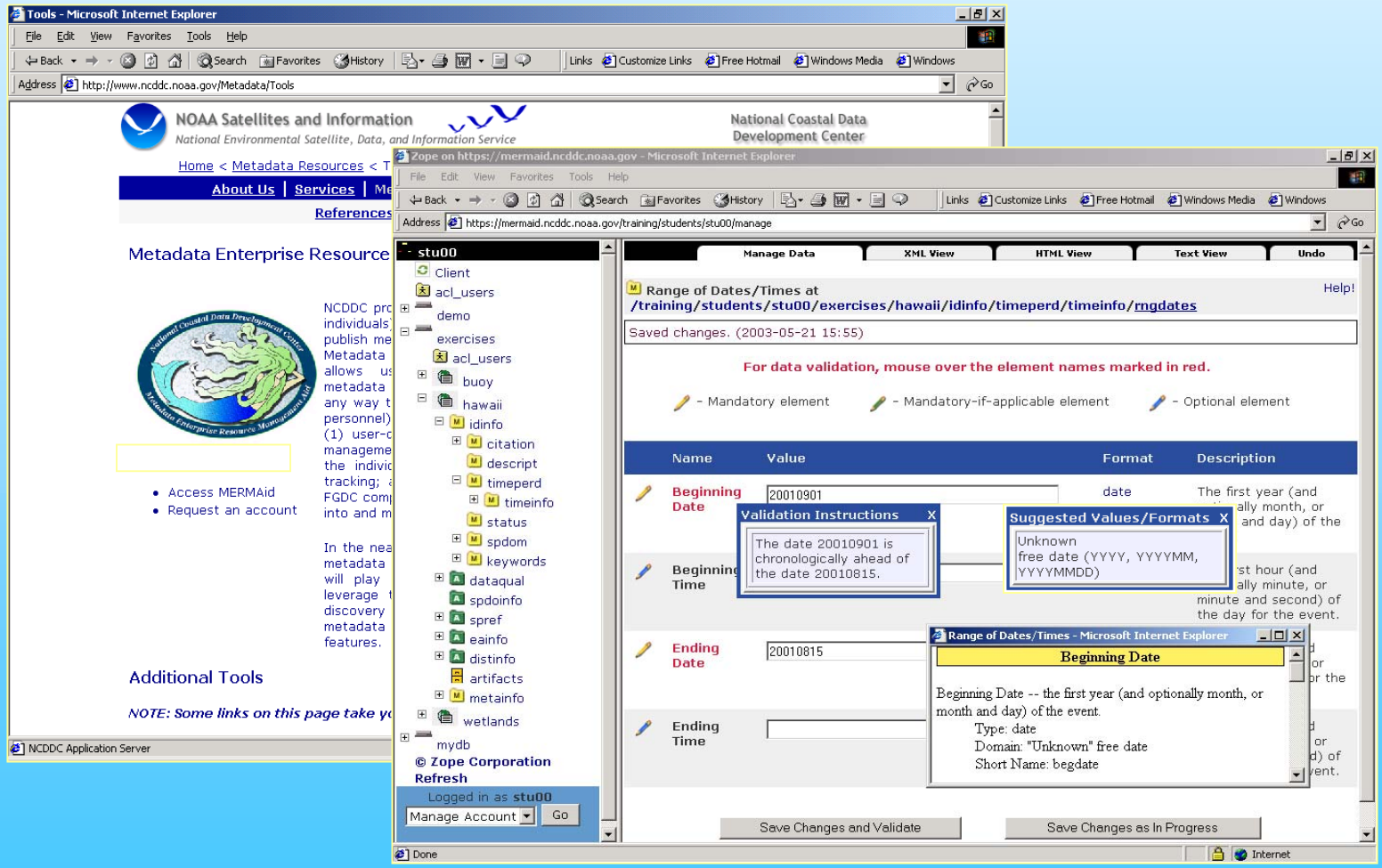
MERMAid: Metadata Creation and Management



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Internet Accessible Capabilities

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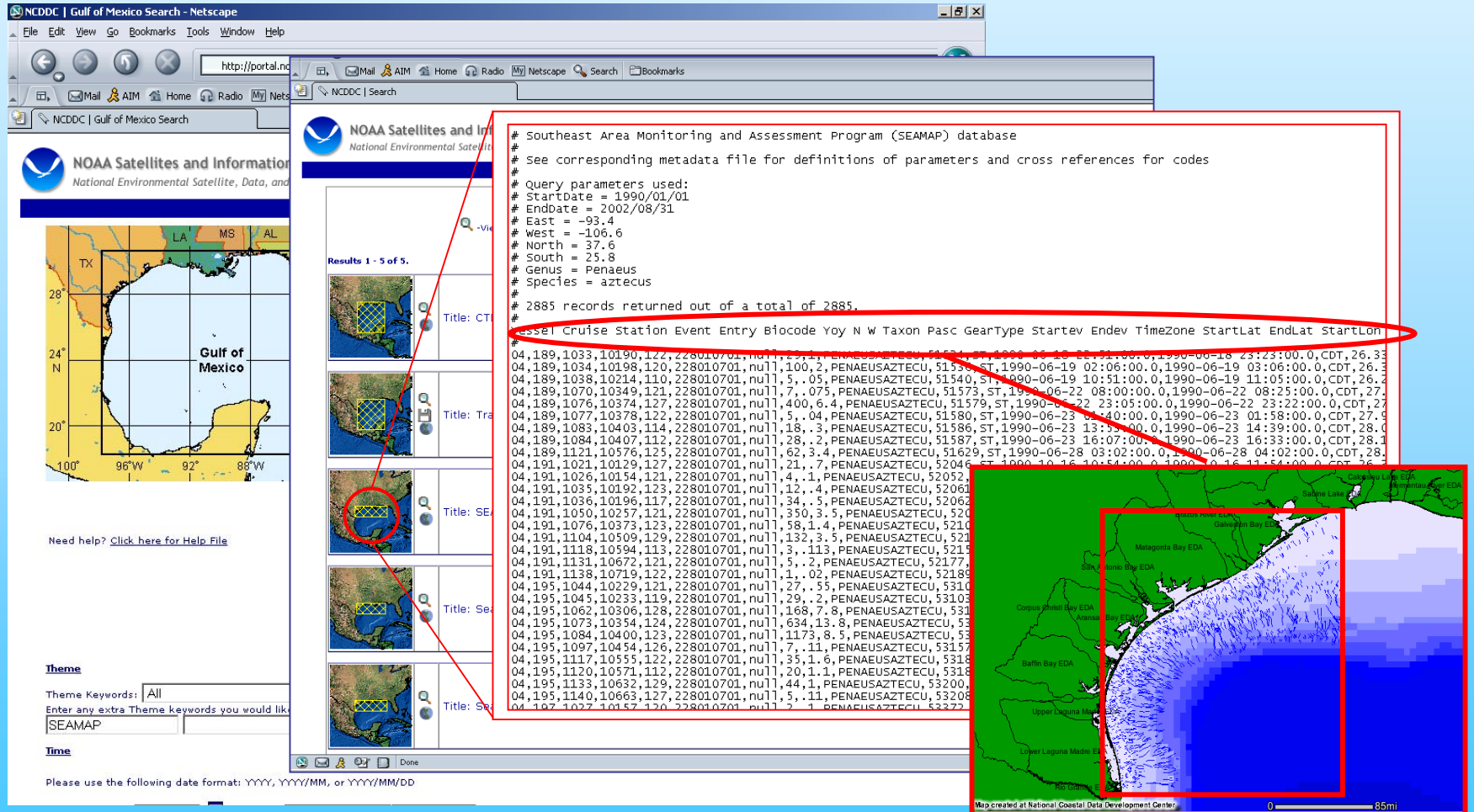
Data Discovery and Delivery



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Internet Accessible Capabilities

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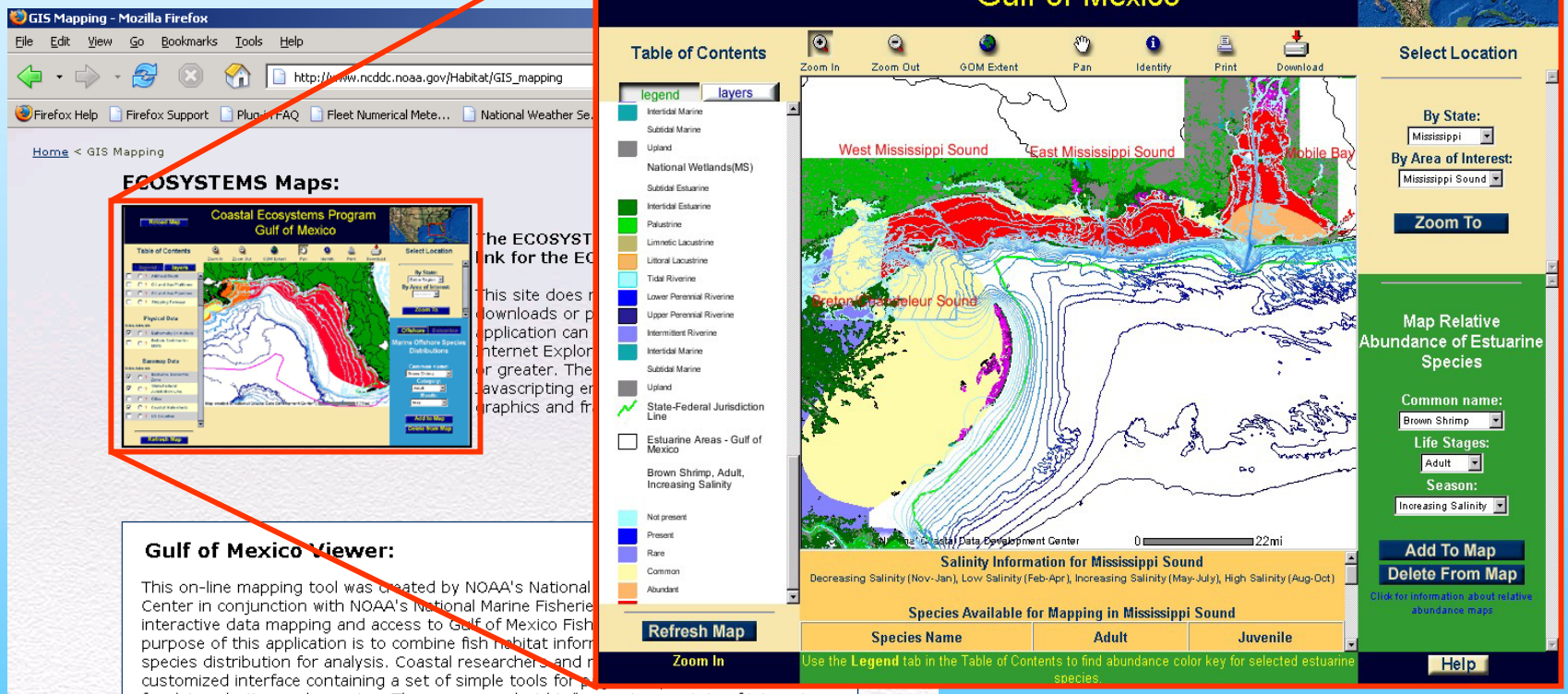

http://www.ncddc.noaa.gov/Habitat/GIS_mapping/ECOSYSTEM_Description_Layers

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Coastal Ocean Observing Systems

- Partners: NDBC, GoMOOS, COMPS, CO-OPS, TABS, TCOON, others…

- Data Sets
  - Surface Marine Weather
  - Chemical, Bio-optical
  - Physical Ocean Measurements

http://www.ncddc.noaa.gov/COOS/GIS_Mapping/COOS_Description_Layers

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Data Retrieval and Aggregate Processing

GoMOOS DoDs Server
(netCDF files)

NCDDC Middleware

The software collects all data hourly

Automated Archive Client (NODC)

-The software collects all data weekly;

-Data stored in NetCDF format, subset by date

NCDDC Spatial Data Model

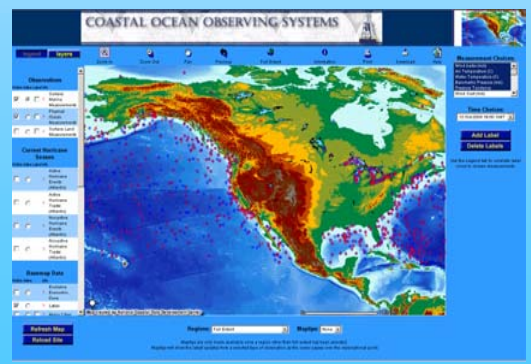
Data are converted to a universal format

Automated Mapping Client

-Parses the data;

-Populates the SDE table

-Transforms to shapefile



IMS points to SDE

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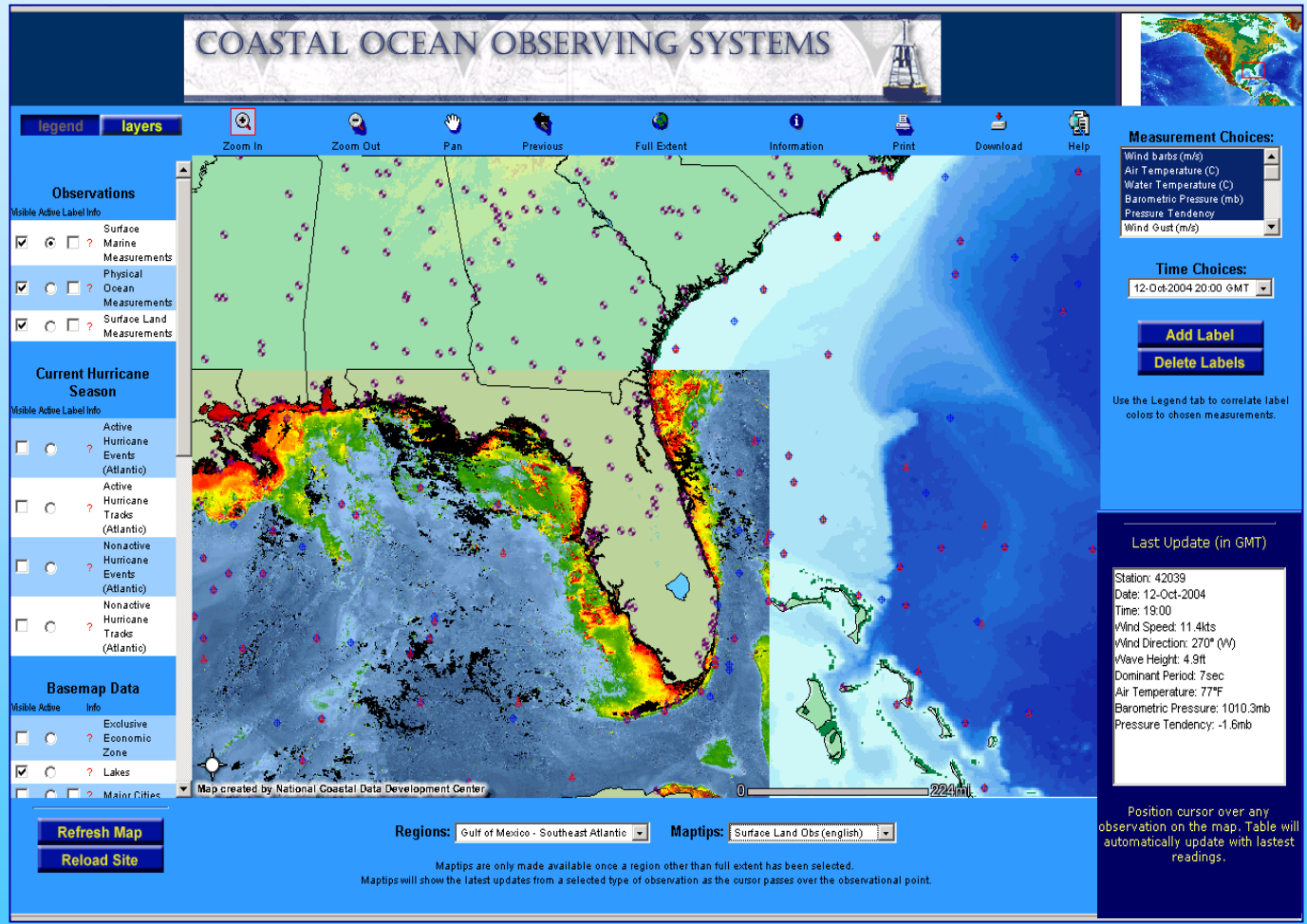
Coastal Ocean Observing Systems



Data Sets:

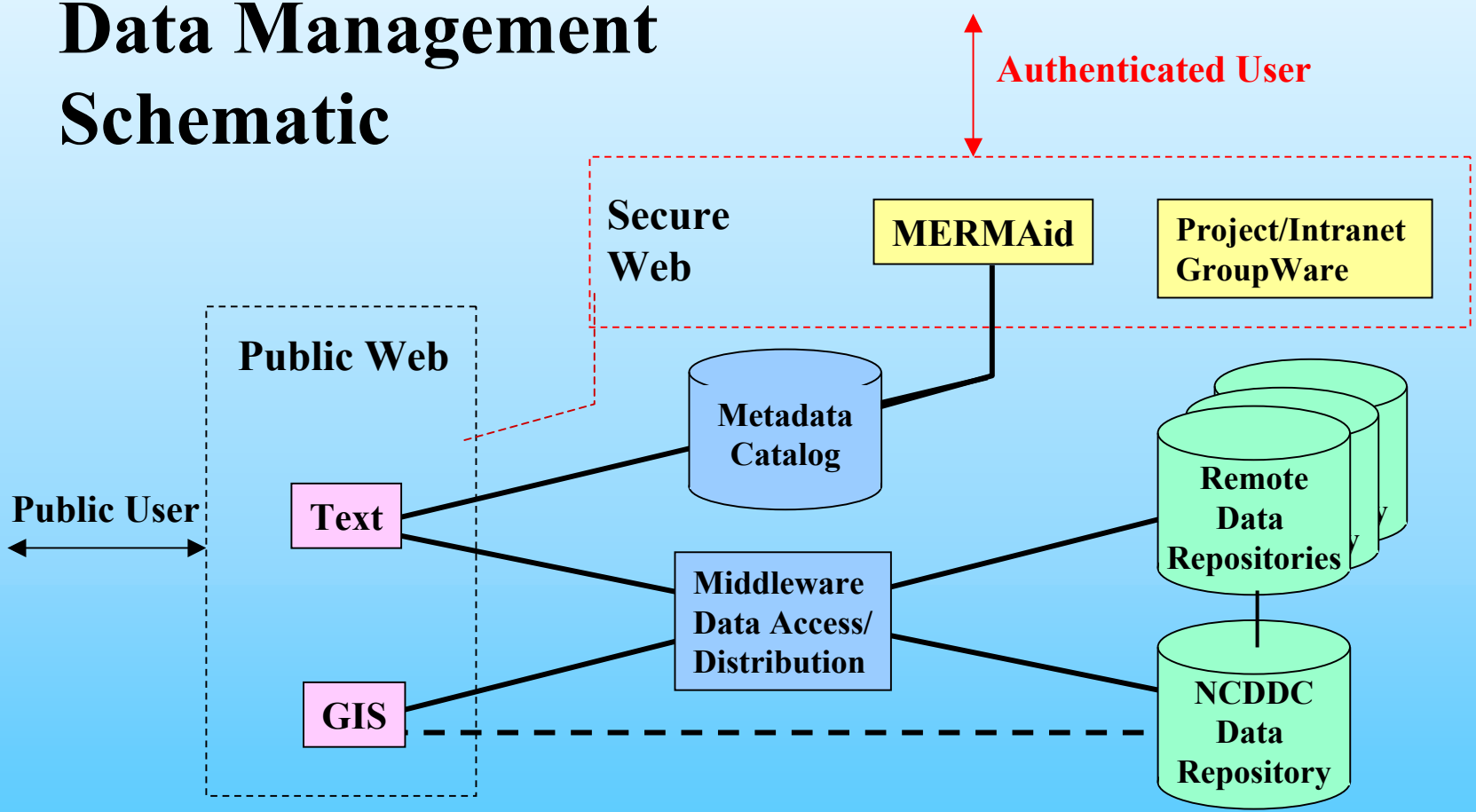
-Meteorological

-Oceanographic

-Surface Land

-Imagery products

Data Management Schematic



On-going Development

- Building the metadata catalog
  - Training, grants & contracts
- Connecting to additional data sources

Future Directions

- Building metadata on-the-fly
- Generating fused geospatial data products on-the-fly
- Application services

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http://www.ncddc.noaa.gov

National Coastal Data Development Center

Stennis Space Center, Mississippi

228-688-2936