

Appendix 1

Data access and application: Demonstrations and Visualization

Abstracts

During the workshop, video and internet demonstrations were presented on accessing oceanographic data from CDs on a microcomputer, on internet-based data distribution systems, and on oceanographic model output useful to fisheries researchers. The abstracts of those demonstrations follow.

COADS on a Microcomputer: An Example of the Differing Needs of Fisheries Science in the Organization and Format of Environmental Data

Roy Mendelsohn, NMFS Southwest Fisheries Science Center, Pacific Fisheries Environmental Group, 1352 Lighthouse Avenue, Pacific Grove, CA 93950-2097

The Comprehensive Ocean Atmosphere Data Set (COADS) represents one of the most significant environmental datasets for fisheries research, given the long time span of the dataset, the quality control of the dataset, and the relative completeness of the dataset. However, the cooperative effort that produces the dataset has been primarily funded by agencies that need synoptic data. The organization of data is such that extracting time series from the data set at a relatively few locations can be a daunting task.

The microcomputer version of COADS is the original dataset organized in a fashion that makes it easier to retrieve time series. At the workshop, the structure presently used and software that can extract data from the COADS using this structure were demonstrated. Future plans to take advantage of some standardized, public scientific libraries to provide even more ready access were also described. More information is available at www.pfeg.noaa.gov/products/code_extraction.html.

The U.S. Navy's Master Environmental Library

Chuck Stein. Mirror Imaging / Naval Research Laboratory, 7 Grace Hopper Ave. stop 2, Monterey, CA 93943-5502

The Master Environmental Library (MEL) is an Internet based data discovery and retrieval system providing access to geographically distributed oceanographic, meteorological, terrain, and near space databases. The MEL is sponsored by the Defense Modeling and Simulation Office for the purpose of providing realtime, scenario, historical, and climatological datasets for simulations, mission planning, scene modeling, etc. Existing data centers can become a MEL regional site without changing their current data management methods or architecture.

At a high level the MEL is based on the library

paradigm. Users query the card catalogue, referred to as the master site, an Internet HTTP server with supporting HTML and Java interfaces. The cards in the card catalogue are the common denominator among all datasets in the library. These cards are metadata records compliant with the US Federal Geographic Data Committee's (FGDC) Content Standards for Digital Geospatial Metadata. Using either the HTML or Java interface, users with a WWW browser interactively create a query made up of region of interest, time range, category, keyword, and data center elements. A WAIS query is run against metadata records for all the data centers specified in the query. Query results are



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CHANGING OCEANS AND CHANGING FISHERIES: ENVIRONMENTAL DATA FOR FISHERIES RESEARCH AND MANAGEMENT A WORKSHOP

George W. Boehlert¹
James D. Schumacher²

¹Pacific Fisheries Environmental Group (PFE)
Southwest Fisheries Science Center
1352 Lighthouse Avenue
Pacific Grove, California 93950-2097

²NOAA/OAR
Pacific Marine Environmental Laboratory
7600 Sand Point Way NE
Seattle, WA 98115-0070

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U.S. DEPARTMENT OF COMMERCE

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