

Lessons from the GCOS Lead Centers

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NOAA's National Climatic Data Center

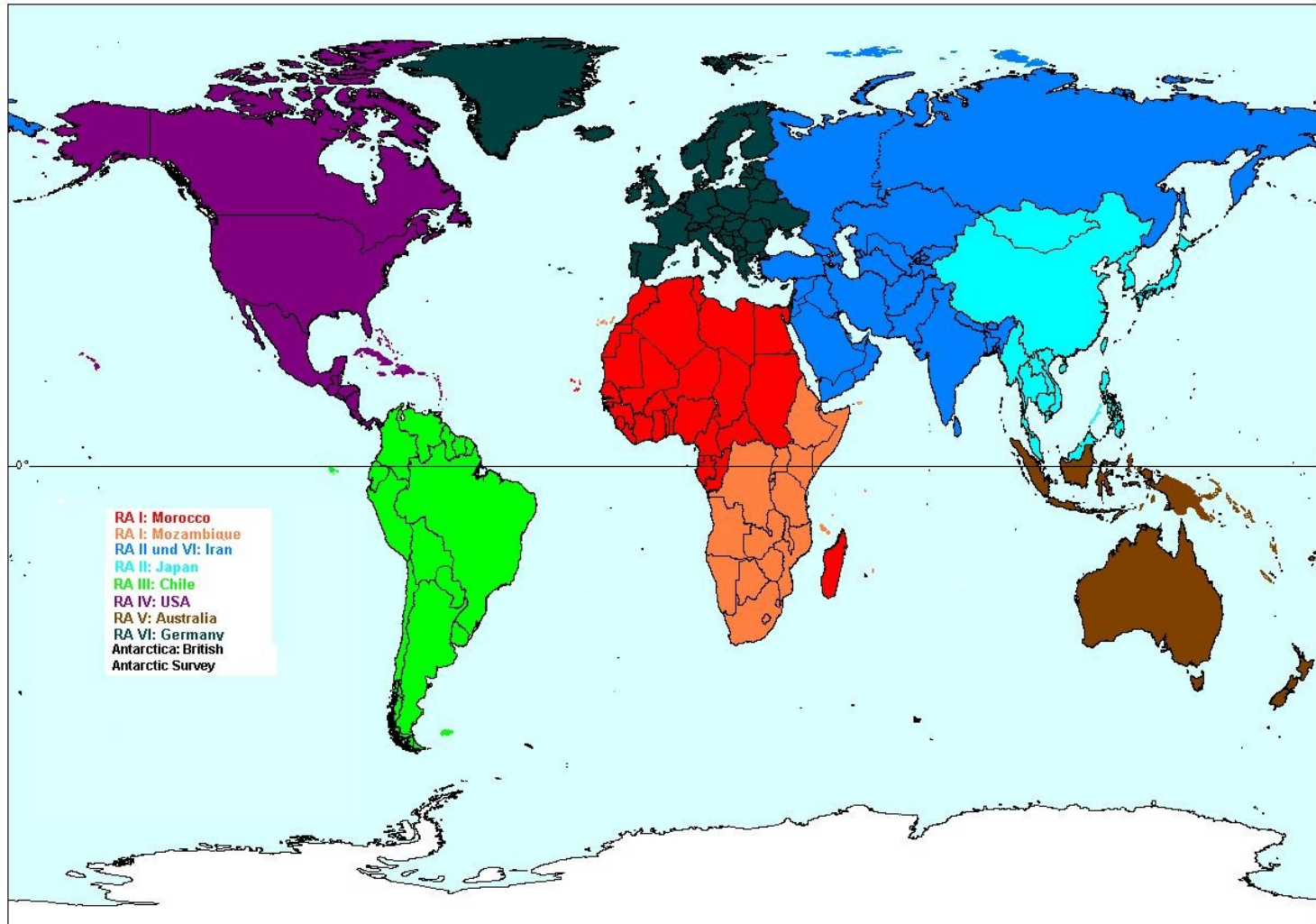
GRUAN Initiation Meeting

Lindenberg, Germany ■ February 26-28, 2008



CBS Lead Centers for GSN and GUAN

Areas of Responsibilities of the CBS Lead Centers for GCOS



Status: 01.01.2008

Some User Feedback

- Desire for easy access to metadata
 - establish minimal standards upfront
- Need to track and resolve problems
- Need for raw values (for ease of reprocessing)
 - configuration management/version control
- Desire for integrated datasets (or access to datasets)
 - Integrated Global Radiosonde Archive (IGRA)
 - Integrated Global Daily and Monthly Data (GHCN)



Error Tracking via Datzilla

Datzilla is a Web-based tool to report and track errors in NOAA-held data, metadata, or data delivery systems.



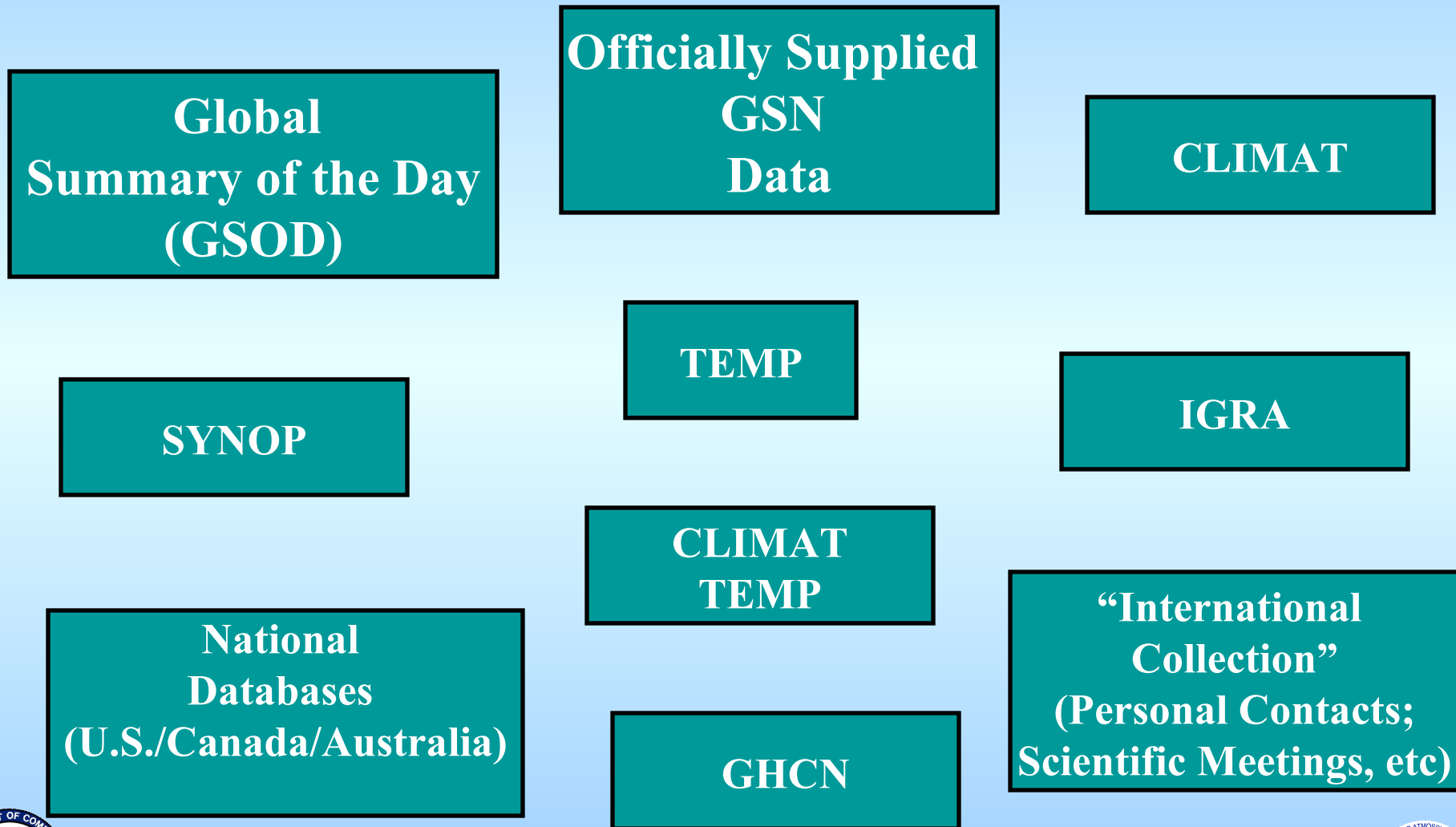
When a Datzilla ticket arrives ...

- The Datzilla gatekeeper
 - Makes an initial determination of the nature of the issue
 - Reassigns the trouble ticket as necessary
 - Issue is investigated
 - Course of action is undertaken
 - Gatekeeper closes the ticket



The Datzilla Gatekeeper

Dataset integration



The GHCN-Daily Model

- Integrate all sources of daily data in NCDC archives
- Dataset is completely reassembled each day from source data
- Suite of quality checks are applied each day to entire period of record and entire dataset is placed on ftp server
 - Allows for ensured consistency between sources and integrated “superset”
 - Routine reprocessing



The NOMADS MODEL

NOMADS (NOAA Operational Model Archive and Distribution System) is a distributed data services pilot for format independent access to climate and weather model output (as well as climate data).

NOMADS developed as a grass-roots framework to share data and research findings over the Internet.



NOMADS
The NOAA Operational Model
Archive and Distribution System

GO-ESSP

Core NOAA NOMADS Collaborators

- ◆ Climate Diagnostics Center (CDC) Boulder, CO
- ◆ Geophysical Fluid Dynamics Laboratory (GFDL) Princeton, NJ
- ◆ National Climatic Data Center (NCDC) Asheville, NC (Project Lead)
- ◆ National Centers for Environmental Prediction (NCEP) Camp Springs, MD
- ◆ Pacific Marine Environmental Laboratory (PMEL) Seattle, WA
- ◆ NOAA Forecast Systems Laboratory (FSL) Boulder, CO

External Core Collaborators

- Center for Ocean-Land-Atmosphere Studies (COLA) (Maryland)
- Department of Energy's Argonne, Los Alamos, Oak Ridge, Lawrence Berkley, Livermore National Laboratories & Information Sciences Institute (ISI), University of Southern California under the Earth System Grid Project
- National Center for Atmospheric Research (NCAR) Colorado
- Unidata Program Center (UCAR/Unidata) Colorado
- LLNL Program for Climate Model Diagnosis and Intercomparison
- NASA's Global Change Master Directory (GCMD) Maryland
- National Coastal Data Development Center
- University of Rhode Island (OPeNDAP Consortium)

External Collaborators include

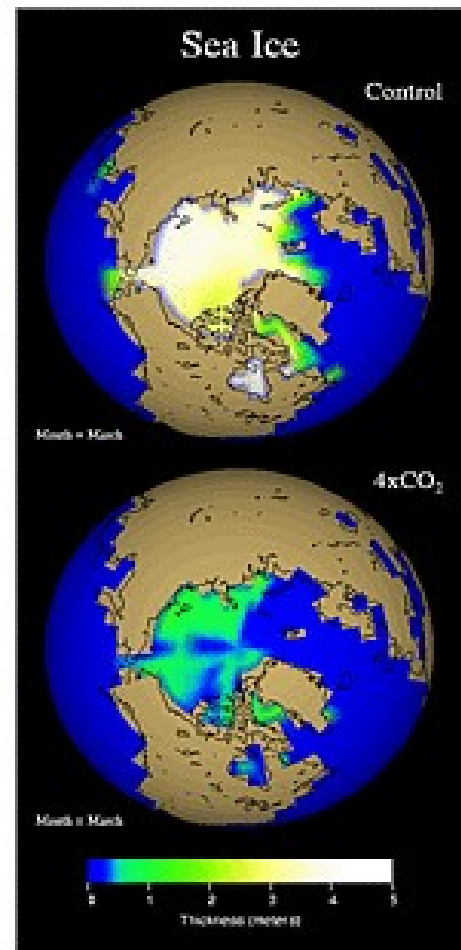
- Center for Earth Observing and Space Research (CEOSR), NASA-GSFC Maryland
- George Mason University (NASA SI-ESIP), Virginia
- National Severe Storms Laboratory (NSSL), Oklahoma/SSEC University of Wisconsin
- Universities of Alabama (Huntsville), California (Santa Barbara), Washington & Iowa St.
- National Science Foundation (NSF) CyberInfrastructure

International Participants

- British Atmospheric Data Center, Oxfordshire, United Kingdom)
- UK's Natural Environment Research Council (NERK DataGrid Project)
- Committee for Earth Observing Satellites (CEOS) Grid Project
- Climate Action Partnership (CAP), BOM Australia (US Depts. of Commerce, Energy, State, and EPA)

NOMADS Goals

- provide distributed access to models and associated data
- promote model evaluation and product development
- foster research within the geo-science communities (ocean, weather, and climate) using collections of distributed data
- develop institutional partnerships via distributed open technologies



Performance Measures

- AOPC consistently asks for some performance measures of lead center efforts (i.e., what are we getting for our efforts)

