





Master Environmental Library



U. S. Department of Defense • Defense Modeling & Simulation Office
Modeling & Simulation Resource Repository

Master Environmental Library



An Interactive Tour of
The One-Stop Environment Shop
<http://mel.dmsomil> Feb 99 Update

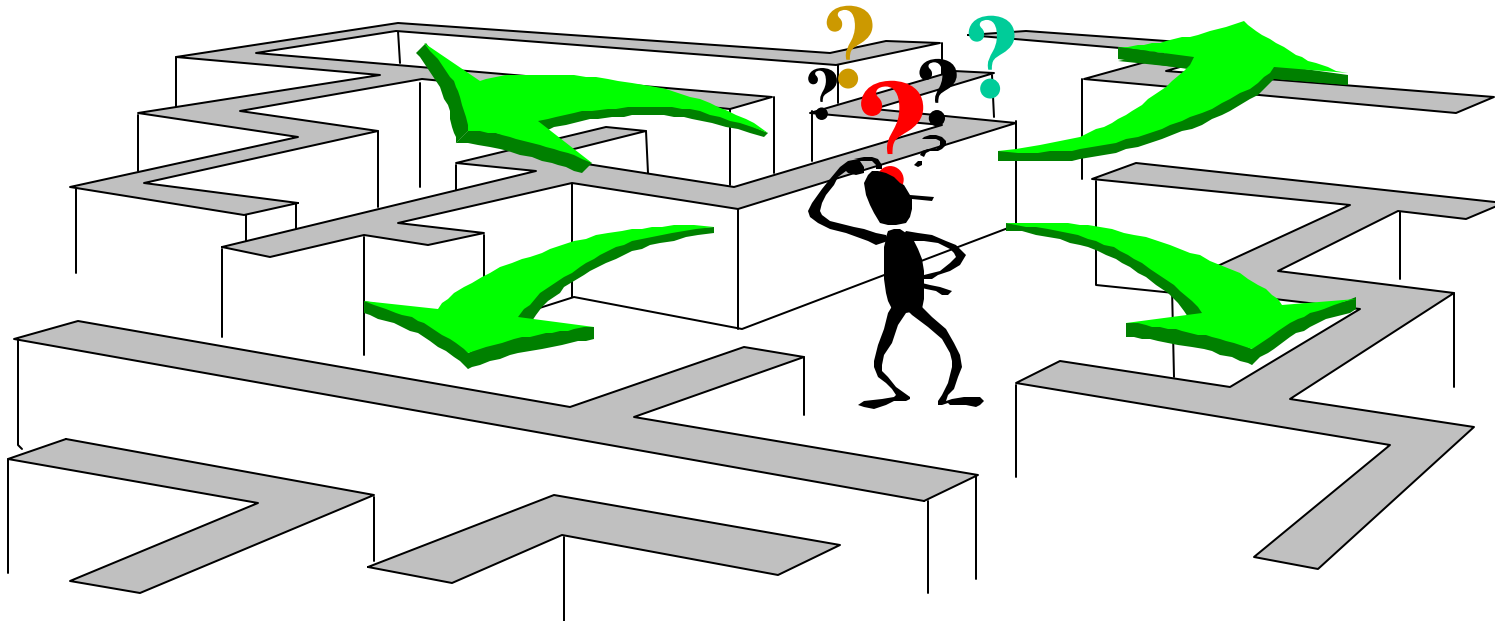
Louis Hembree Naval Research Laboratory SEDRIS Technology Conference 2004



Access is Confusing



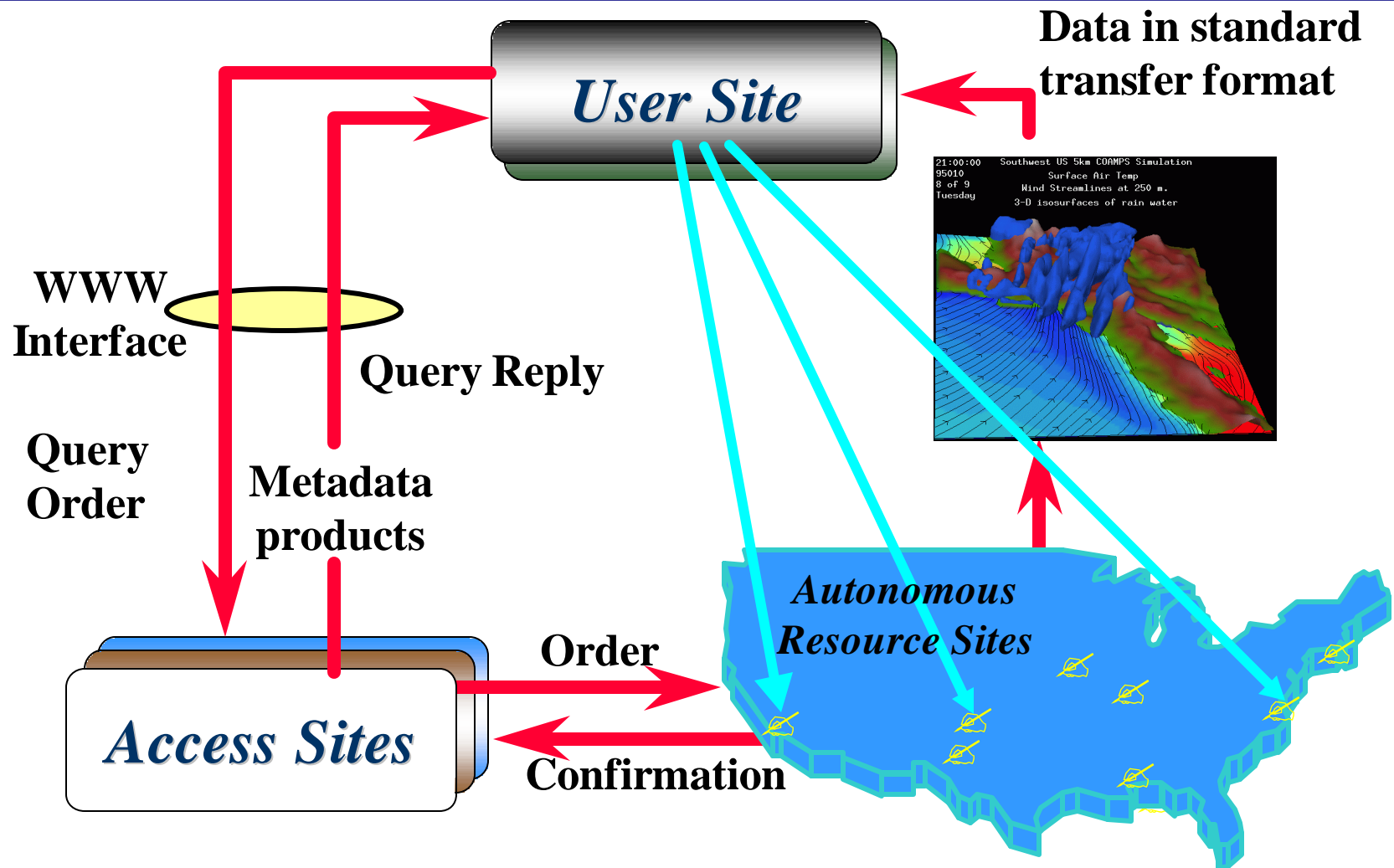
Unique data collection programs, archiving methodology, and data distribution methods lead to duplication of model, algorithm, and database development



THE PROBLEM IS OFTEN NOT A LACK OF DATA BUT DISCOVERING AND RETRIEVING IT.



System Design



MEL APPROACH: 3 TIER ARCHITECTURE SIMPLIFIES USER ACCESS



Key Features

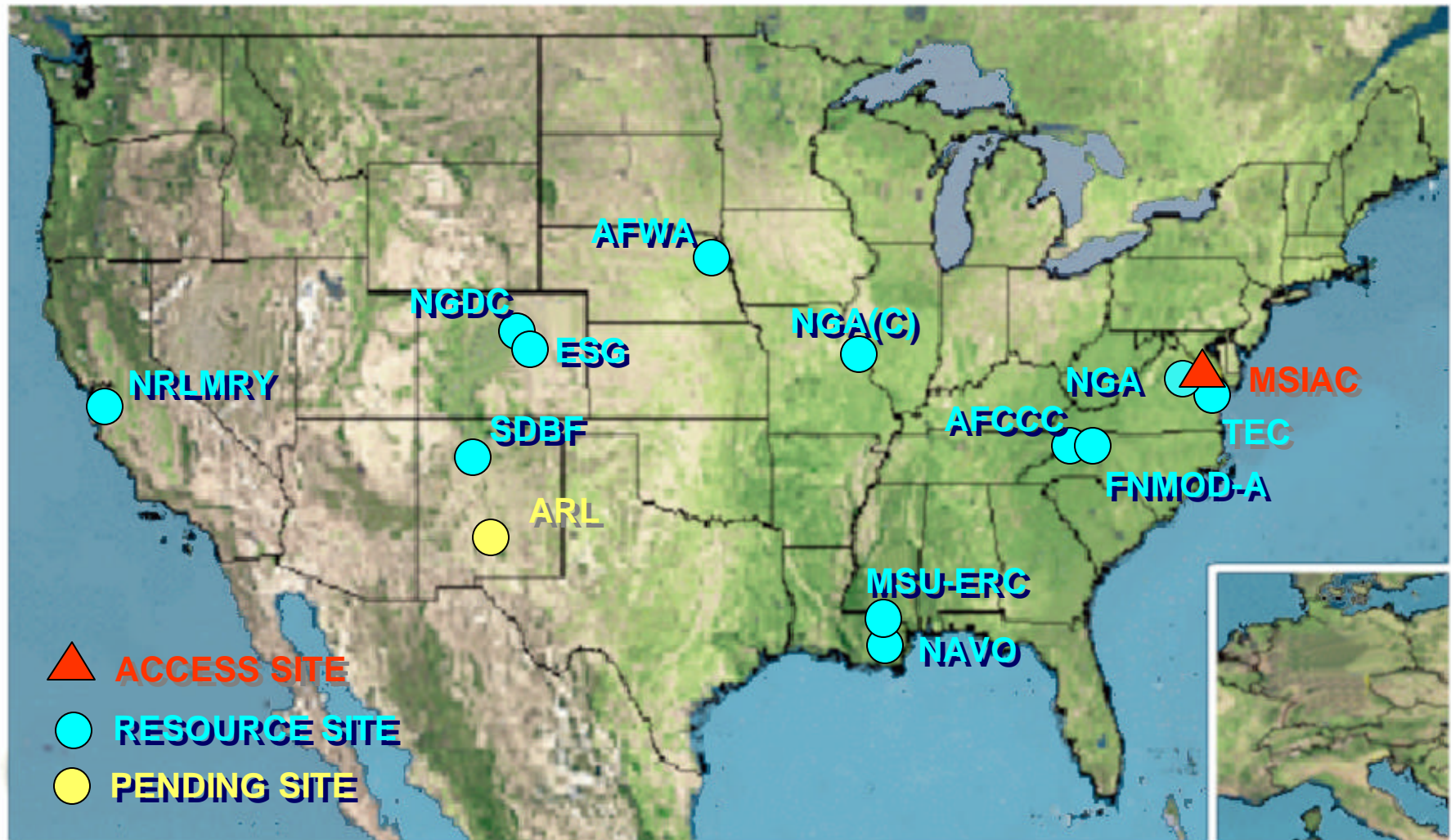


- Data stays at resource sites under local control. Resource site maintains standard metadata.
- MEL provides single point of access to distributed geospatial data.
- MEL provides access to data from all environmental domains.
- Development kit provided so user can develop applications to access MEL directly.
- Metadata consistent with international guidelines.
- Data transfer through standard formats.
 - Gridded binary format, binary universal form for the representation of meteorological data, vector product format, DEM files, shape files, STF, etc.
- Provides access to classified / restricted data.

ACKNOWLEDGES INDEPENDENCE OF DATA SOURCES WHILE PROMOTING INTEROPERABILITY.



MEL Resource Sites





MEL Resource Sites



-
- **Air Force Combat Climatology Center (AFCCC):** Atmospheric climatology; historical observations, PIREPS, satellite profiles, etc.
 - **Air Force Weather Agency (AFWA):** PIREPS, atmospheric observations, drifting buoy weather observations
 - **Fleet Numerical Meteorological and Oceanography Center Detachment Ashville (FNMOC – D):** Northern hemisphere cyclone track, upper air climatology
 - **Mississippi State University (MSU):** Atmospheric and oceanographic model output, bathymetry
 - **National Geophysical Data Center:** Near Earth space observations
 - **National Geospatial-Intelligence Agency (NGA):** Terrain; Internet and SIPRNET
 - **Naval Oceanographic Office (NAVO):** Atmospheric and ocean model output, bathymetry



MEL Resource Sites



-
- **Naval Research Laboratory Monterey (NRL MRY):**
Atmospheric and ocean model outputs
 - **Simulation Database Facility (SDBF):** M&S databases
 - **U.S. Army Topographic Engineering Center (TEC):** Terrain, simulation data bases: Internet and SIPRNET
 - **U.S. Army Atmospheric Research Laboratory (ARL):**
Atmospheric, smoke, illumination: (SIPRNET in work)



2004 Activities



- **First stage of PKE implementation will be deployed soon and allow resource sites to restrict access to specified metadata records.**
 - **End user will be required to have a DoD PKE Identity Certificate to access the restricted metadata records.**
 - **Unrestricted metadata records will still be available to everyone.**
Next stage: Resource sites will have option to restrict access on a metadata by metadata record basis or by a specified user group in addition to the above.
- **Support for 3-D model libraries (SVDR, etc.)**
- **Establish ARL SIPRNET Site**
- **Investigate program links as part of MEL System transition.**