



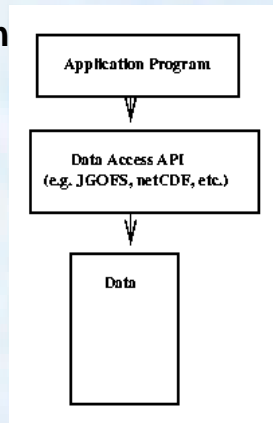
# DODS: Distributed Oceanographic Data System

- **What is DODS?**
  - DODS is a framework that simplifies all aspects of scientific data networking.
  - DODS provides tools ( DODS servers) for making local data accessible to remote locations regardless of local storage format. DODS also provides tools for transforming existing applications into DODS clients (i.e., enabling them to remotely access DODS served data).
  - DODS software is free.
  - DODS is a protocol for requesting and transporting data across the web. The current DODS Data Access Protocol (DAP) uses HTTP to frame the requests and responses.

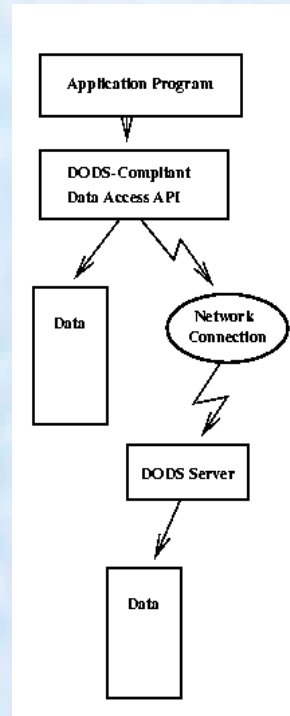


# DODS: Distributed Oceanographic Data System

Initial application



Relinked application





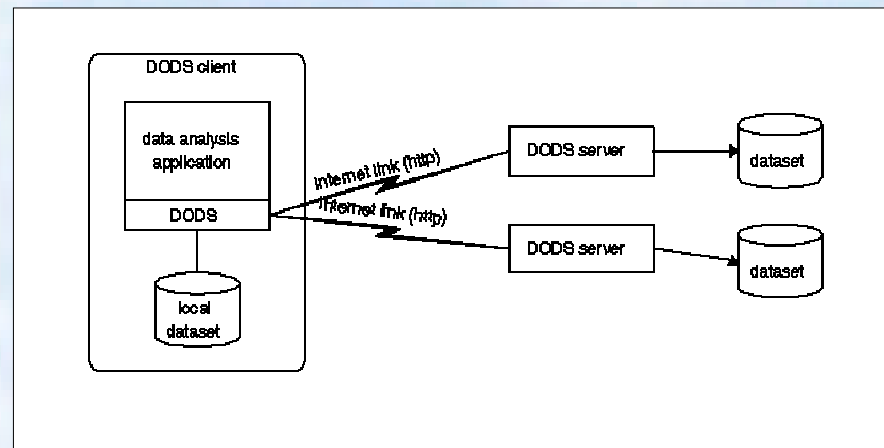
# DODS: Distributed Oceanographic Data System

- **What will DODS do for me ?**
  - **DODS allows you to access remote data over the internet**
    - **using familiar data analysis and visualization packages like:**
      - **Matlab**
      - **Ferret**
      - **IDL**
      - **Your client**
    - **without worrying about data storage formats**
    - **accessing only the data of interest**
  - **DODS allows you to make your data available remotely.**
    - **Your data can be in a variety of data format, including**
      - **netCDF and HDF**
      - **Other formats (ascii...)**

# DODS: Distributed Oceanographic Data System

- **DODS Architecture**

- DODS links a data-handling application with disparate datasets in remote locations.
- DODS uses the client-server model, with a client sending a data request across the Internet to a server, which answers with the requested data. The client is an application that uses DODS functions for getting data. The server is a Web server that can retrieve data from particular datasets.



<http://yourmachine/cgi-bin/nph-dods/datasets/atlantic/cooldata.nc>



## DODS and PRISM



- **How DODS and PRISM are related ?**
  - **DODS will be use in Deliverable D4a4**
    - To distribute results from Data repository
    - To access data from Data repository
  - **Post processing toolkit and visualization package should be recommended as being DODS clients**
    - **Many of them identified for PRISM are already DODS clients**
      - **Python (CDMS)**
      - **Ferret**

Using DODS datasets in Ferret is just like using any other data set.  
For example:

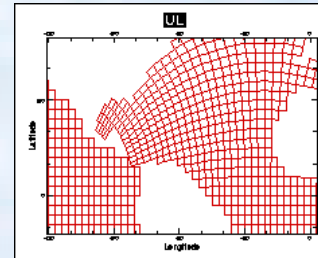
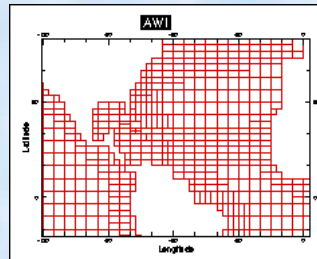
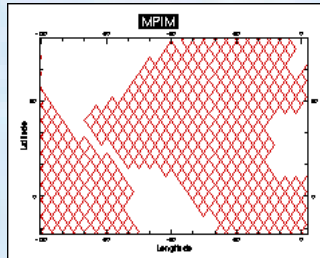
```
yes? SET DATA "http://ferret.wrc.noaa.gov/cgi-bin/nph-nc/data/levitus_climatology.nc"  
yes? SHADE temp[z=0]
```



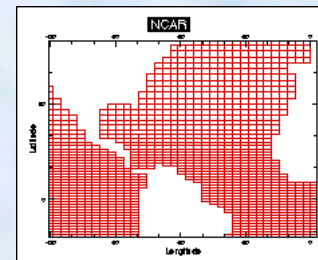
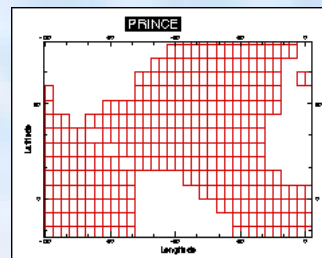
# DODS and PRISM



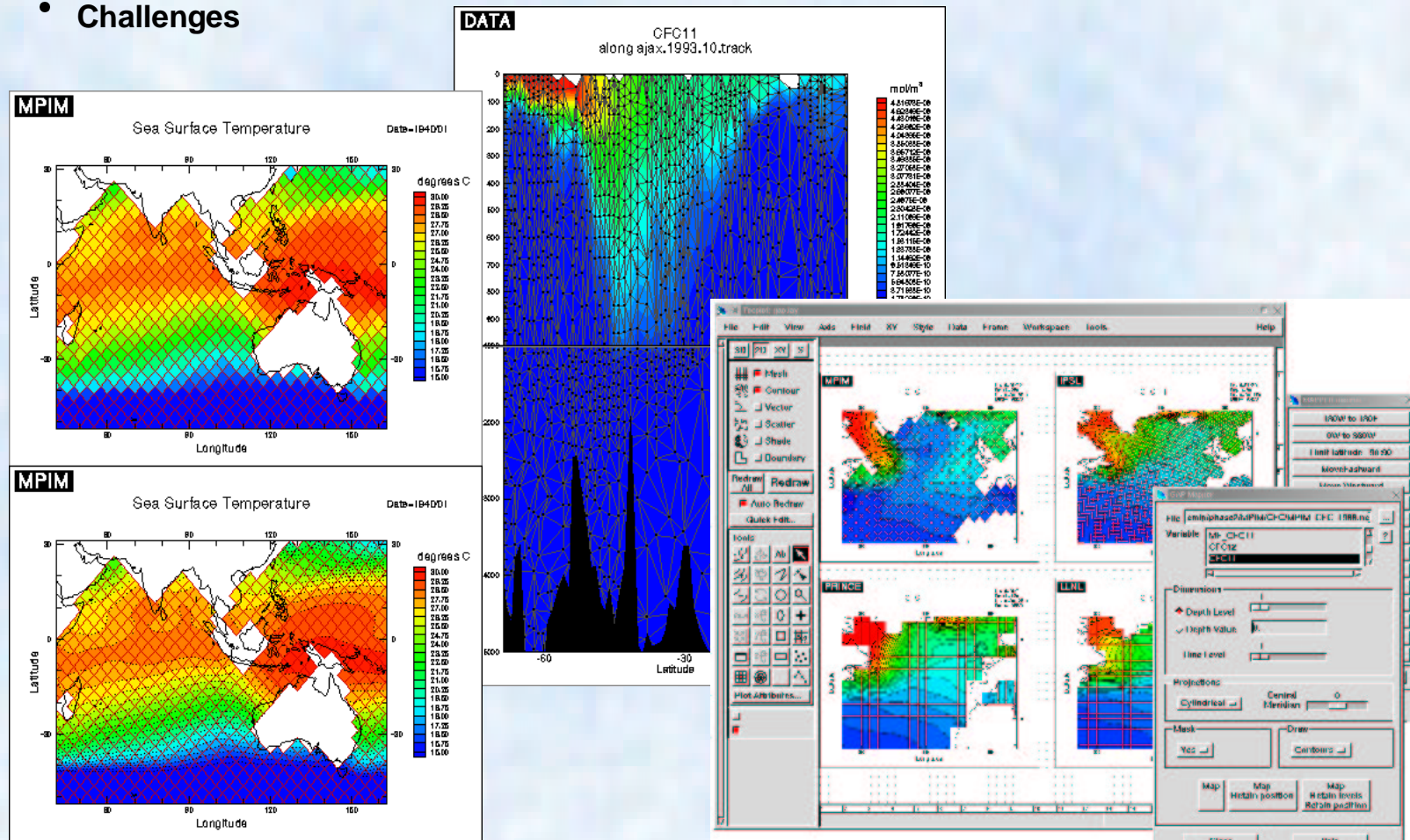
- Evaluation of package (processing and visualization)
  - DODS server from IPSL (<http://dods.ipsl.jussieu.fr/prism>)



Different model grid types: regular, curvilinear, structured, unstructured in netCDF format respecting the CF convention



- Challenges





- Challenges



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 • [Forestry](#) - [Soils](#) - [more](#)

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 • [Temperature](#) - [Winds](#) - [more](#)

**Biosphere**  
 • [Vegetation](#) - [Wetlands](#) - [more](#)

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Mozilla: DODS Datasets List

Adresse : <http://www.unidata.ucar.edu/cgi-bin/dods/datasets/datasets.cgi?xmlfilename>

**DODS** Getting Started News

DODS Datasets  
[Click here to submit a dataset](#)

Keywords:

separate multiple keywords with spaces

Constraints: none

Provider:

- ▼ Center for Ocean Land Atmosphere Studies (COLA)
- ▼ Columbia University/LEO - International Research Institute (IRLDEO)
- ▼ Florida State University - Center for Ocean-Atmospheric Prediction Studies (COAPS)
- ▼ George Mason University - Seasonal to Interannual Earth Science Information Partner (Seasonal)
- ▼ IFREMER - Department d'Océanographie Spatiale (CERSAT)
- ▼ Maine - Department of Marine Resources (Maine DMR)
- ▼ Massachusetts Institute of Technology (MIT Ecco-Group)
- ▼ Monterey Bay Aquarium Research Institute (MBARI)
- ▼ Naval Oceanographic Office (NAVOCEANO)
- ▼ NASA/GSFC - Goddard Distributed Active Archive Center (GDAAC)
- ▼ NASA/JPL - Physical Oceanography Distributed Active Archive Center (PODAAC)
- ▼ NASA/JPL - Ocean Earth Science Information Partner (OceanESIP)
- ▼ NCAR - Oceanography Section, Climate and Global Dynamics Division (CGD)
- ▼ NCAR - Vegetation/Ecosystem Modeling and Analysis Project (VEMAP)
- ▼ NOAA - Climate Diagnostic Center (CDC)
- ▼ NOAA - Geophysical Fluid Dynamics Laboratory (GFDL)
- ▼ NOAA - National Data Buoy Center (NDBC)
- ▼ NOAA - Northeast Fisheries Science Center (NMFS/NEFSC)

- Use of LDAP server to search database

- What is LDAP?

- Lightweight Directory Access Protocol (LDAP) is an open-standard protocol for accessing information services. The protocol runs over Internet transport protocols, such as TCP, and can be used to access stand-alone directory servers or X.500 directories.

LDAP is a lightweight alternative to the X.500 Directory Access Protocol (DAP) for use on the Internet. It uses TCP/IP stack verses the overly complex OSI stack. It also has other simplifications, such as the representing most attribute values and many protocol items as textual strings, that are designed to make clients easier to implement.

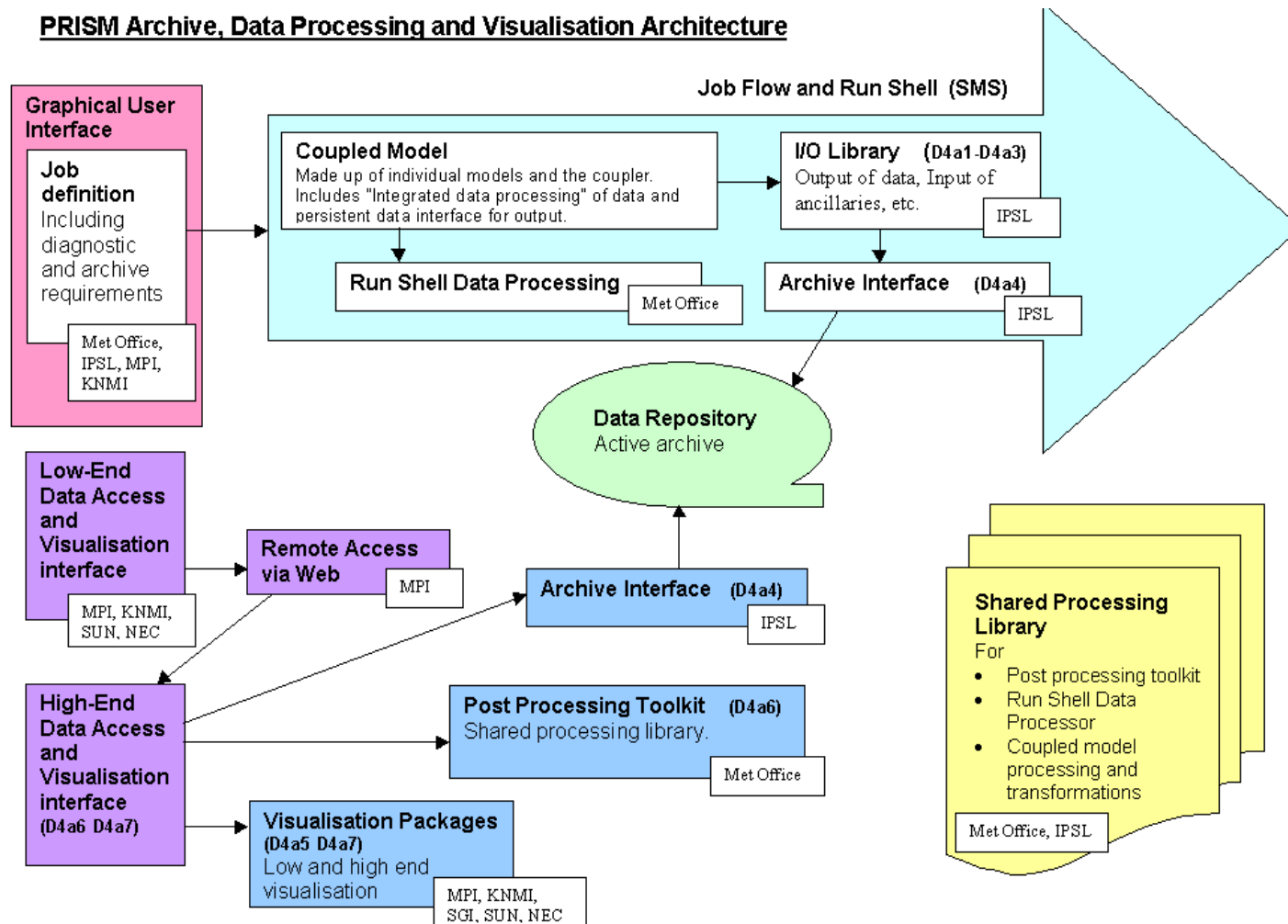
- What is a Directory?

- A directory is a database optimized for read operations. Directories often support powerful search and browsing capabilities.



# PRISM: Diagram architecture (Steve Mullerworth)

## PRISM Archive, Data Processing and Visualisation Architecture





## PRISM: Leaders

#	Title	Lead	Person	Start	End	Length	Deliverables
wp1	General coordination	<a href="#">MPI-Met</a>	<a href="#">Reinhard G. Budich</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp2a	System specification	<a href="#">DMI</a>	<a href="#">Dr. Martin Stendel</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp2b	Quality assurance, coding rules and portability	<a href="#">ETH Zurich/CSCS</a>	<a href="#">Angelo Mangili</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp2c	Specification of the data management system	<a href="#">CNRS/IPSL</a>	<a href="#">Marie-Alice Foujols</a>	Dec 1 2001	Nov 30 2002	12 mth	
wp3a	Development of PRISM System Coupler	<a href="#">CERFACS</a>	<a href="#">Dr. Sophie Valcke</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp3b	Interfacing of Atmosphere with PRISM System	<a href="#">METEO-FRANCE</a>	<a href="#">Prof.Dr. Serge Planton</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3c	Interfacing of Atmospheric Chemistry with PRISM System	<a href="#">MPI-Met</a>	<a href="#">Dr. Guy Brasseur</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3d	Interfacing Land-surface schemes with PRISM System	<a href="#">IPSL</a>	<a href="#">Dr. Jan Polcher</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3e	Interfacing of Ocean Models with PRISM System	<a href="#">UREADMY</a>	<a href="#">Dr. Eric Guilyardi</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3f	Interfacing of Sea Ice with PRISM System	<a href="#">NERSC</a>	<a href="#">Dr. Helge Drange</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3g	Interfacing of Ocean Bio-geochemistry with PRISM System	<a href="#">MPI-BGC</a>	<a href="#">Dr. Corinne LeQuéré</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3h	Interfacing regional models with PRISM System	<a href="#">SMHI</a>	<a href="#">Dr. Ralf Döscher</a>	Dec 1 2001	Nov 30 2003	24 mth	
wp3i	<a href="#">Assembling of the PRISM System</a>	<a href="#">MPI-M&amp;D</a>	<a href="#">Dr. Stefanie Legutke</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp4a	<a href="#">Development of diagnostics and visualisation tools</a>	<a href="#">UKMO-HC</a>	<a href="#">Mick Carter</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp4b	<a href="#">System installation, Communication and Networking</a>	<a href="#">MPI-M&amp;D</a>	<a href="#">Hannes Thiemann</a>	Dec 1 2001	Nov 30 2004	36 mth	
wp5	Demonstration Experiments with PRISM	<a href="#">IGV</a>	<a href="#">Prof. Dr. Antonio Navarra</a>	Jun 1 2002	Nov 30 2004	36 mth	



# PRISM Wp4a:

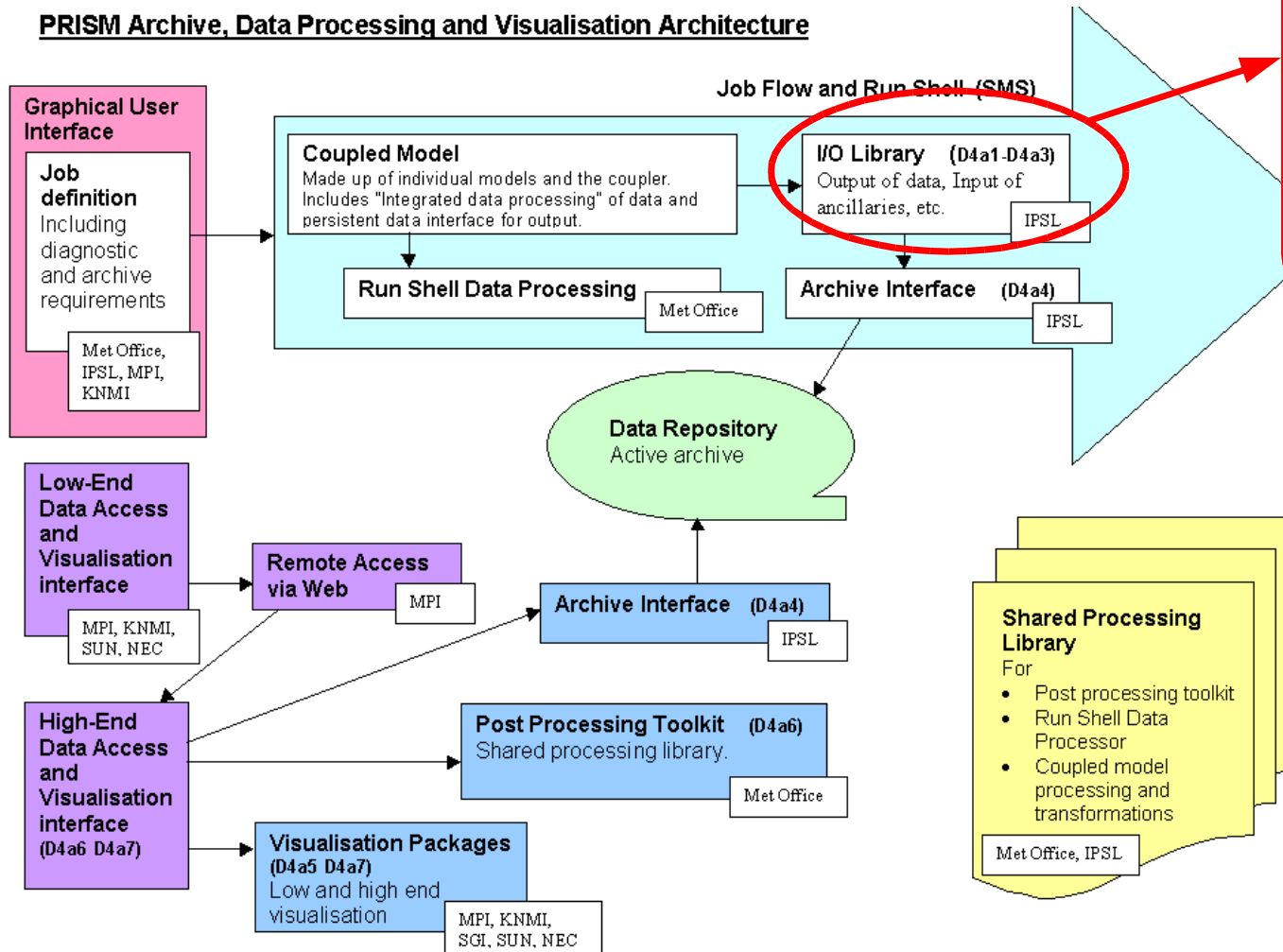
## Development of Data Generation, Diagnostics and Visualization Tools



**PSMILe library**  
**PRISM System Model**  
**Interface Library**  
 = a common coupling and  
 I/O model interface library

*Deliverable D4a1, D4a2  
 D4a 3*

### PRISM Archive, Data Processing and Visualisation Architecture





# PRISM Wp4a:

PRISM Development of Data Generation, Diagnostics and Visualization Tools

## PRISM Archive, Data Processing and Visualisation Architecture

