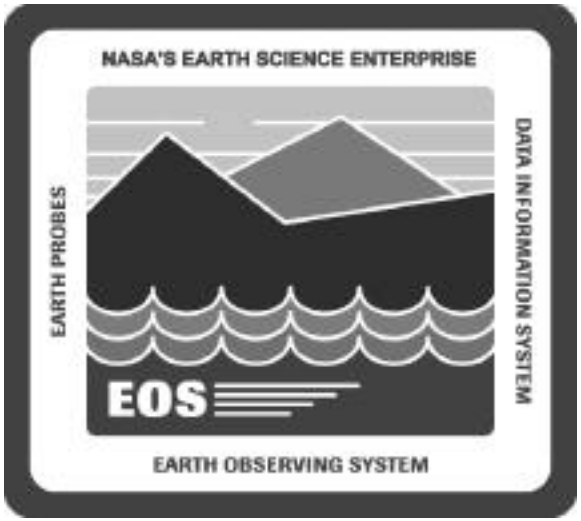


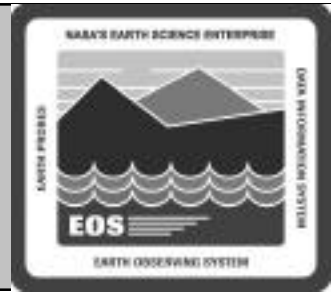
ASTER GDS Interoperability

Guy Swope

Raytheon Raytheon Systems Company

704-CD-510-001

Requirements Summary



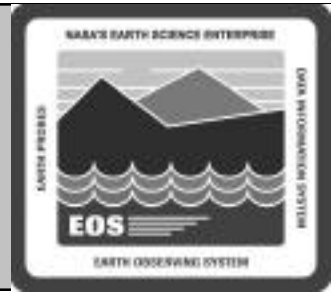
ECS ASTER Gateway supports two-way interoperability between ECS and the ASTER Ground Data System.

- **ECS shall provide an interface to ASTER GDS to support ECS users**
- **ECS shall provide an interface to ECS to support ASTER GDS users**

GDS to ECS Operability Includes

- **Directory Searches**
- **Inventory Searches**
- **Browse**
  - **Including Integrated Browse**

Requirements Summary cont'd



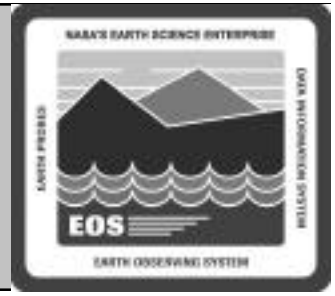
GDS to ECS Operability Also Includes

- Price Estimates
  - Only for Landsat 7 Level 0R WRS (Fixed Scene) datasets
- Orders
- Order Status

GDS to ECS Operability Does Not Include

- ASTER On-Demand Processing
- Landsat 7 0R Floating (partial subinterval) scene
  - Pricing
  - Orders

Requirements Summary cont'd



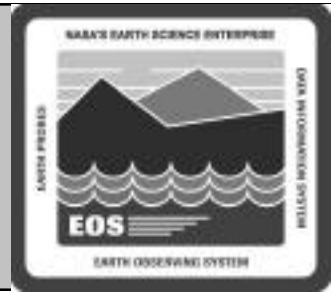
ECS to GDS Operability Includes

- Directory Search
  - Via the same GCMD mechanism as V0
- Inventory Search
- Browse
  - Including Integrated Browse
- Orders

Data Dictionary Maintenance Tool Shall Support

- Import of ASTER GDS dataset valids
- Export of ECS dataset valids

Key Design Drivers



ASTER Interoperability needed to support GDS user access to ECS data holdings

- **Includes access to holdings at all ECS DAACs**
- **Requires cross-DAAC search and order requests**

ASTER Interoperability needed to support ECS user access to GDS data holdings

- **Access using same ECS client (EOS Data Gateway)**
  - **Requires valids exchange between ECS and ASTER GDS**
- **Support for ASTER On-Demand Processing**

Extend/Modify V0 protocol to support new GDS requests, ASTER On-Demand processing

New HW/SW Components

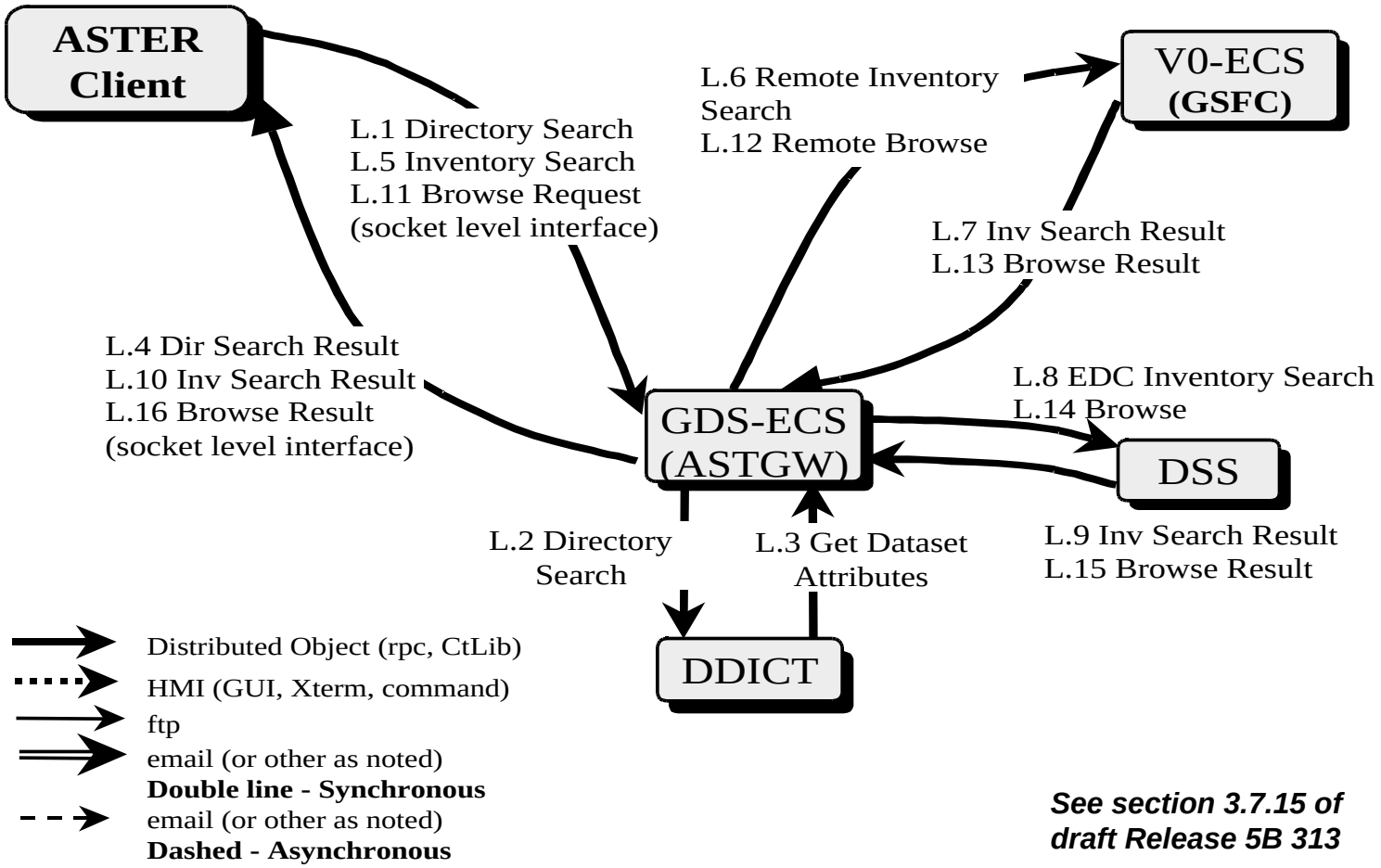
ASTGW - New CSCI in Data Management Subsystem

- Provides two new servers
  - GDS to ECS Gateway
    - Handles request from GDS users
    - Provides the access to ECS data holdings
  - ECS to GDS Gateway
    - Handles requests from ECS users
    - Provides the access to GDS data holdings
- Resides with other Data Management Subsystem applications on INTHW CI (x0ins01, x0ins02)
- Reside only at the EDC DAAC

Modifications to existing SW components

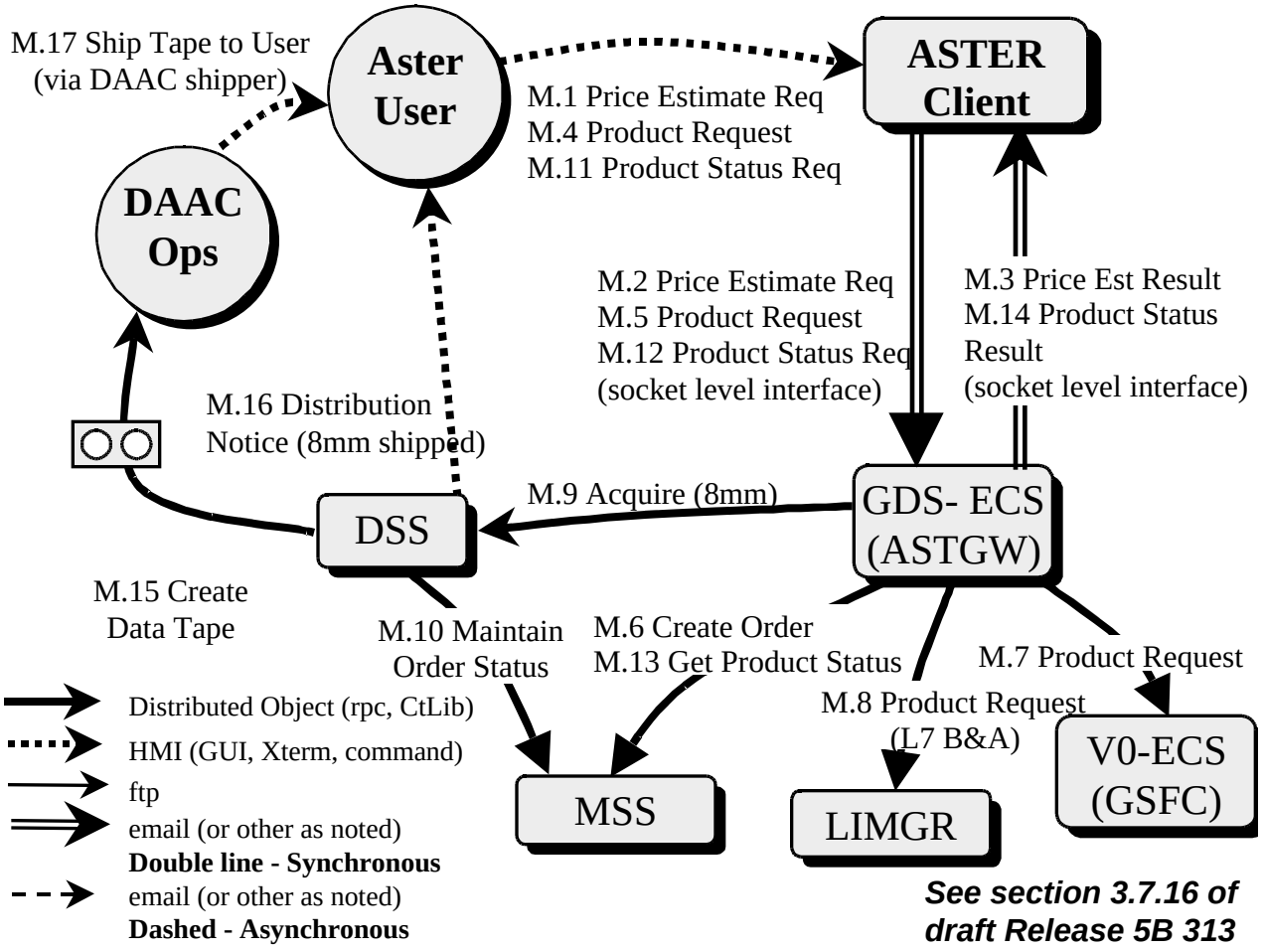
- Data Dictionary Maintenance Tool
  - Modified to map ASTER valids to ECS valids and vice versa
  - Modified to import GDS and export ECS valids information

ASTER GDS User Scenario - Search and Browse

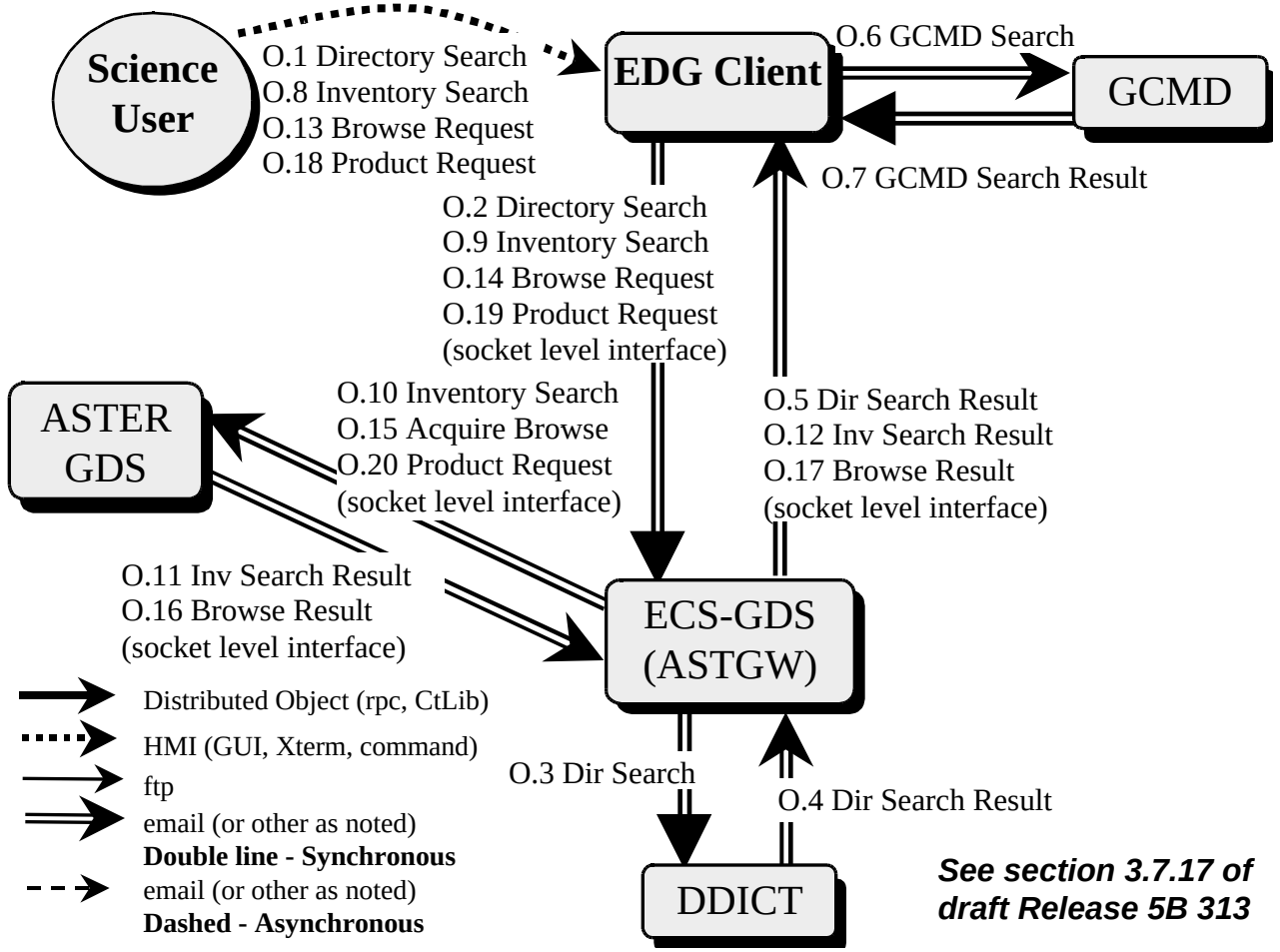


See section 3.7.15 of draft Release 5B 313

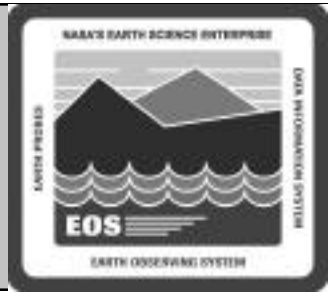
ASTER GDS User Scenario - Price, Order and Order Status



ECS User Search, Browse and Order of ASTER GDS Data



Operational Impacts



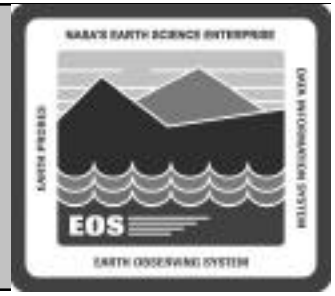
Valids Exchange

- Each DAAC will need to periodically export their ECS collections to ASTER GDS
- EDC DAAC operators will need to periodically import ASTER collections from the ASTER GDS
- EDC DAAC operators will need to periodically import ECS collections in GDS Valids format from other ECS DAACs
  - Needed for cross-DAAC search, browse and order

Two additional sets of configuration parameters for each server including

- Landsat 7 WRS fixed scene price
- Media distribution options

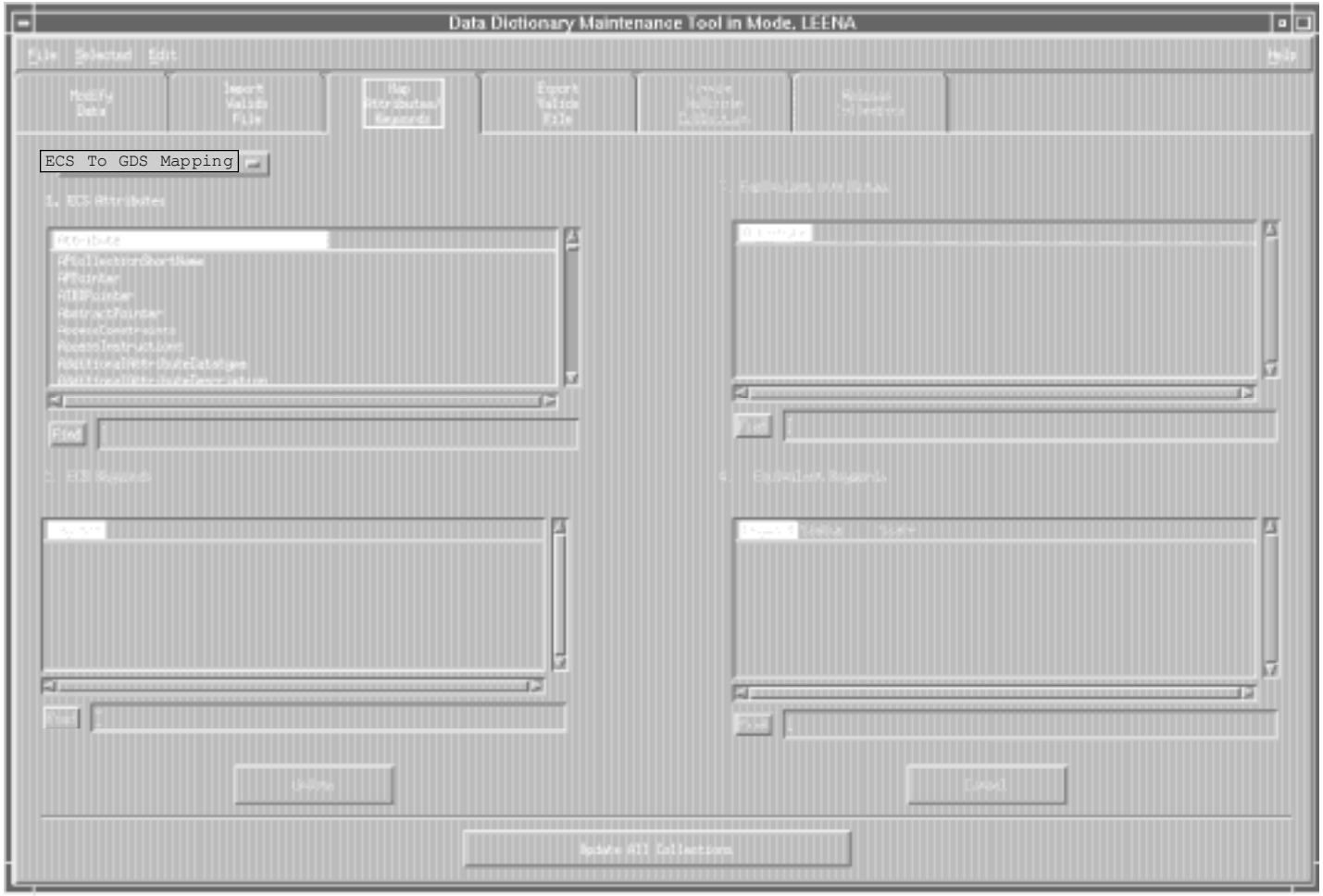
Operational Impacts cont'd



EDC User Services

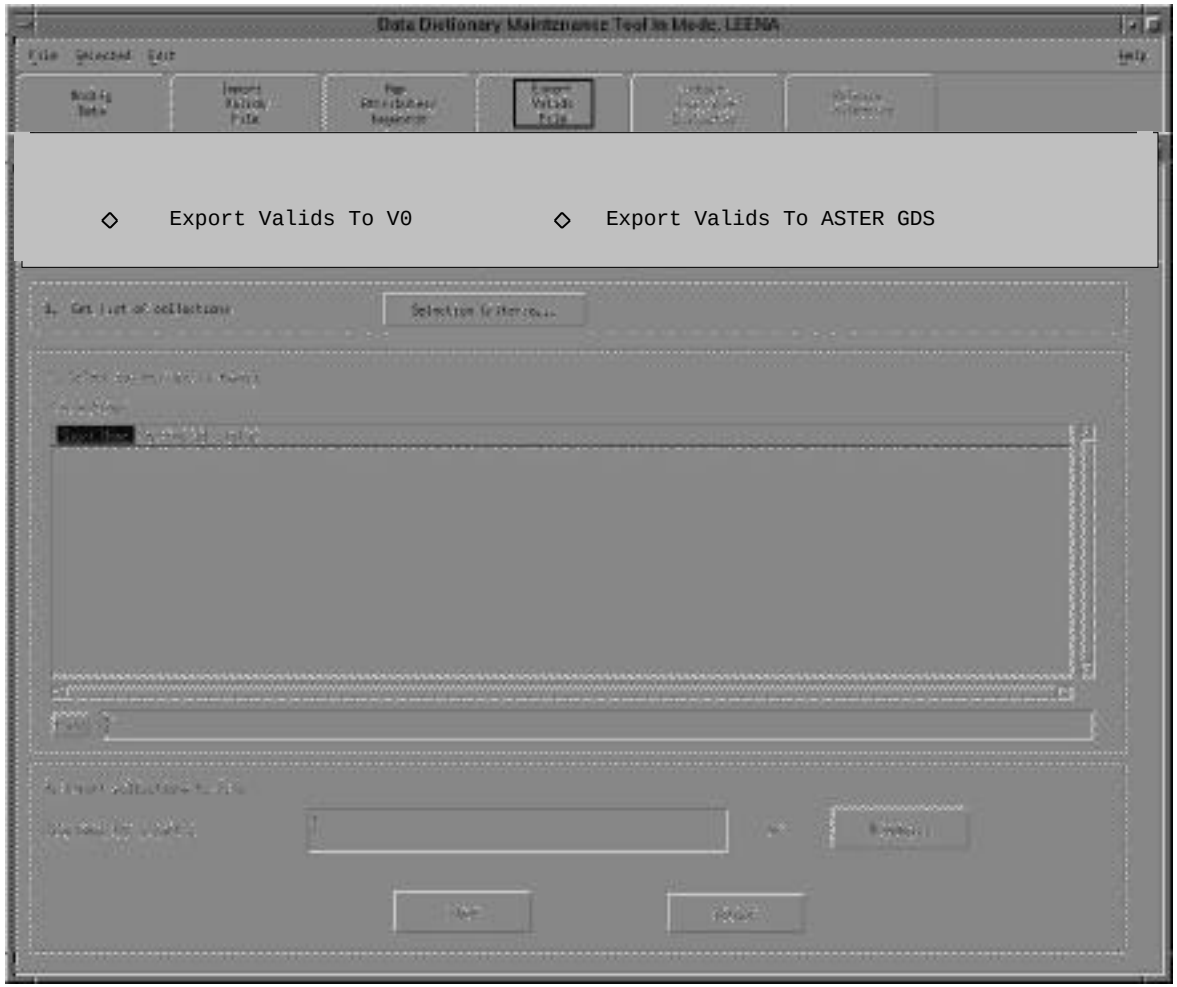
- EDC User Services will be point of contact for order status info from GDS users
  - Typically only for failures since automated status exists
- EDC User Services will be point of contact for ECS orders of GDS data
  - Will be able to match up ECS Order ID with ASTER Order ID to query ASTER GDS for status

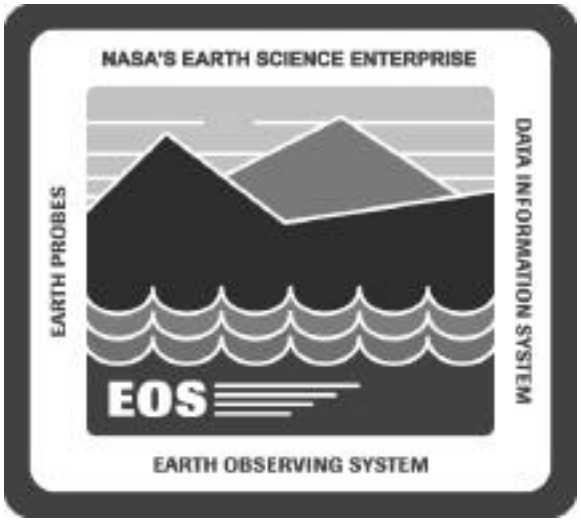
Data Dictionary Maintenance Tool - Map ASTER Attributes Modified Interface



Data Dictionary Maintenance Tool Import Valids Modified Interface

Data Dictionary Maintenance Tool Export Valids Modified Interface





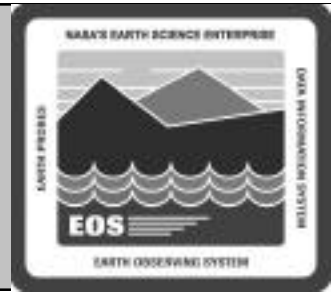
Java DAR Tool (JDT) Update

Mark Pelletier

Raytheon Raytheon Systems Company

704-CD-510-001

Java DAR Tool Background



What is a DAR?

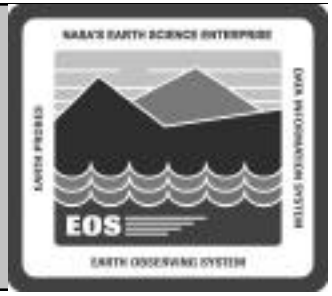
- **A Data Acquisition Request, specifically one generated by this tool.**

Existing tool can create, submit, modify, copy, delete, rename DARs

What is a xAR?

- **Any pre-existing data acquisition requests.**
- **DARs xARS**

Requirements Summary



Search

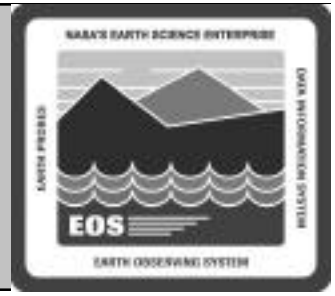
- **Select Area of Search (AOS) -- either graphically or textually**
- **Select temporal parameters**
- **Select additional search parameters**
- **Save/Restore/Delete/Copy search criteria.**

Query Status of search

Results

- **View Results -- display graphically or textually**
- **Show Areas of Interest (AOI) within AOS**
- **Show Observed Scenes within AOI**
- **Save/Restore/Delete/Copy results.**

Key Design Drivers



Web-Based

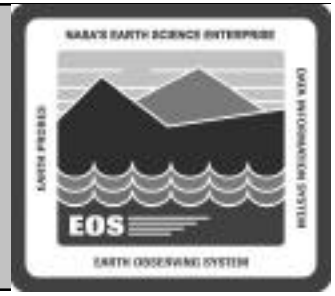
- Run on PC and UNIX
- Java-based tool

User Centered Design

- User Input
- ASTER Science Team Contributed to Gui

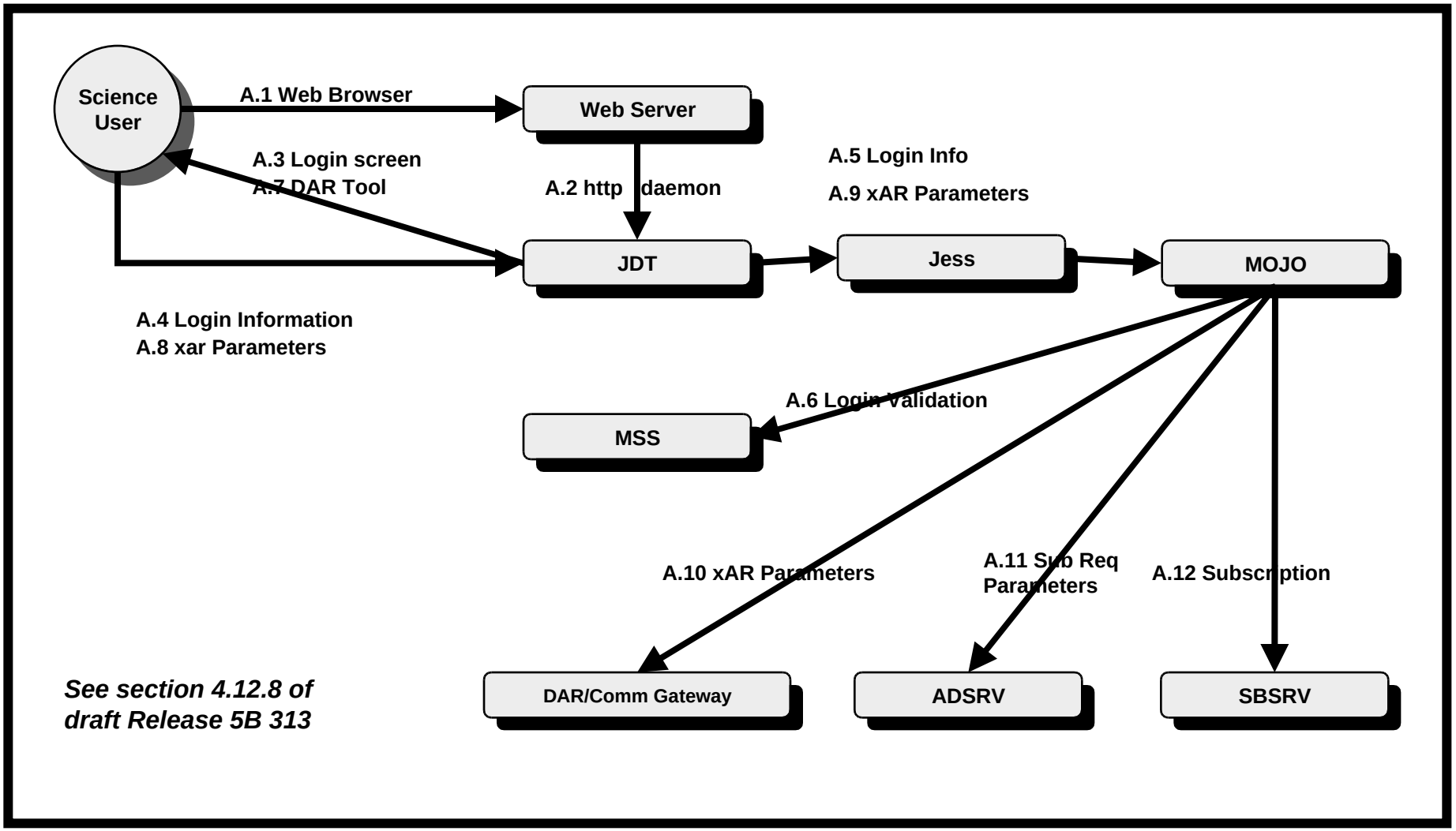
Conformance with ASTER GDS API

New SW Components

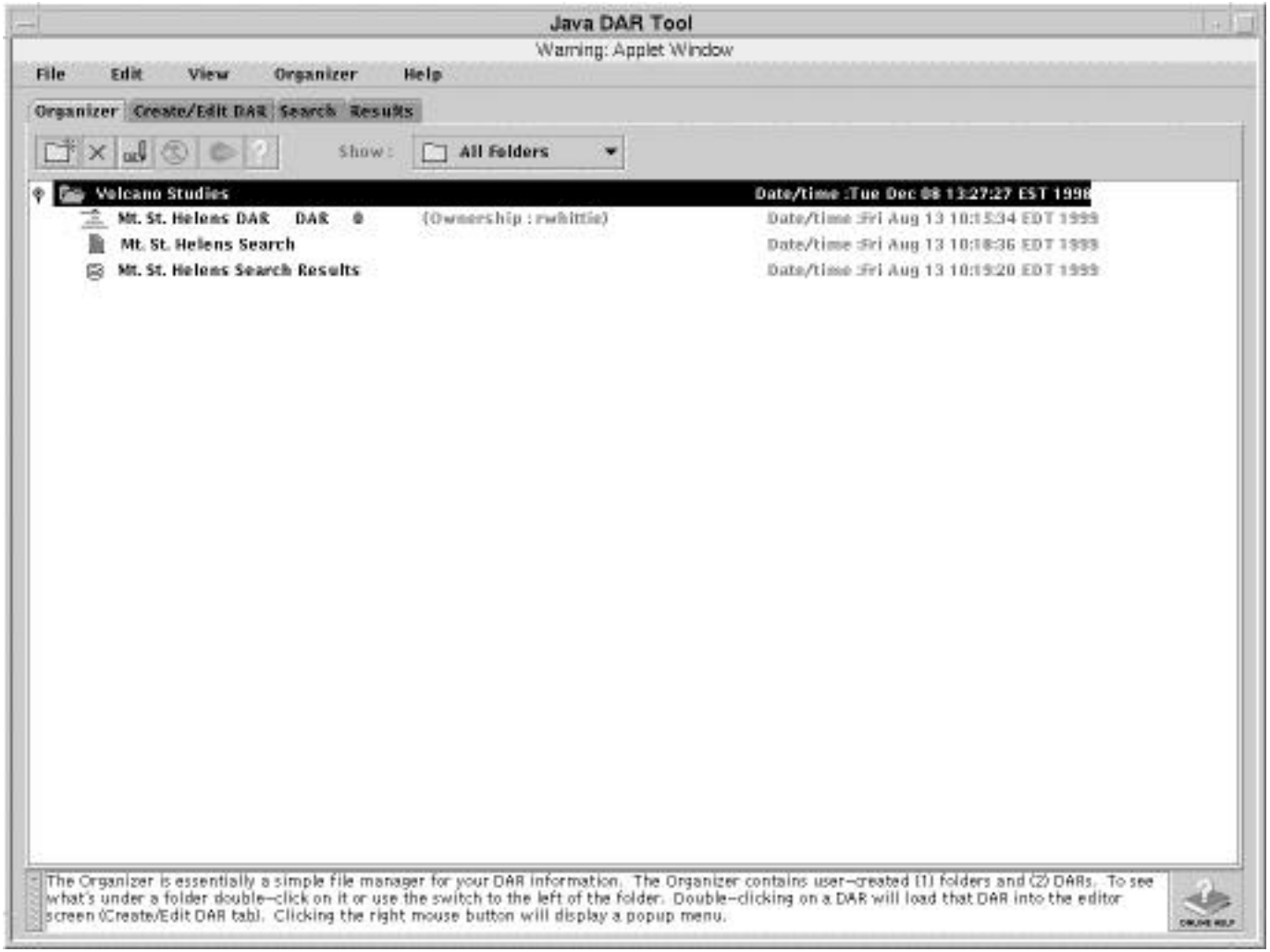


Added tabs to Java DAR tool to search for xARs and retrieve results.

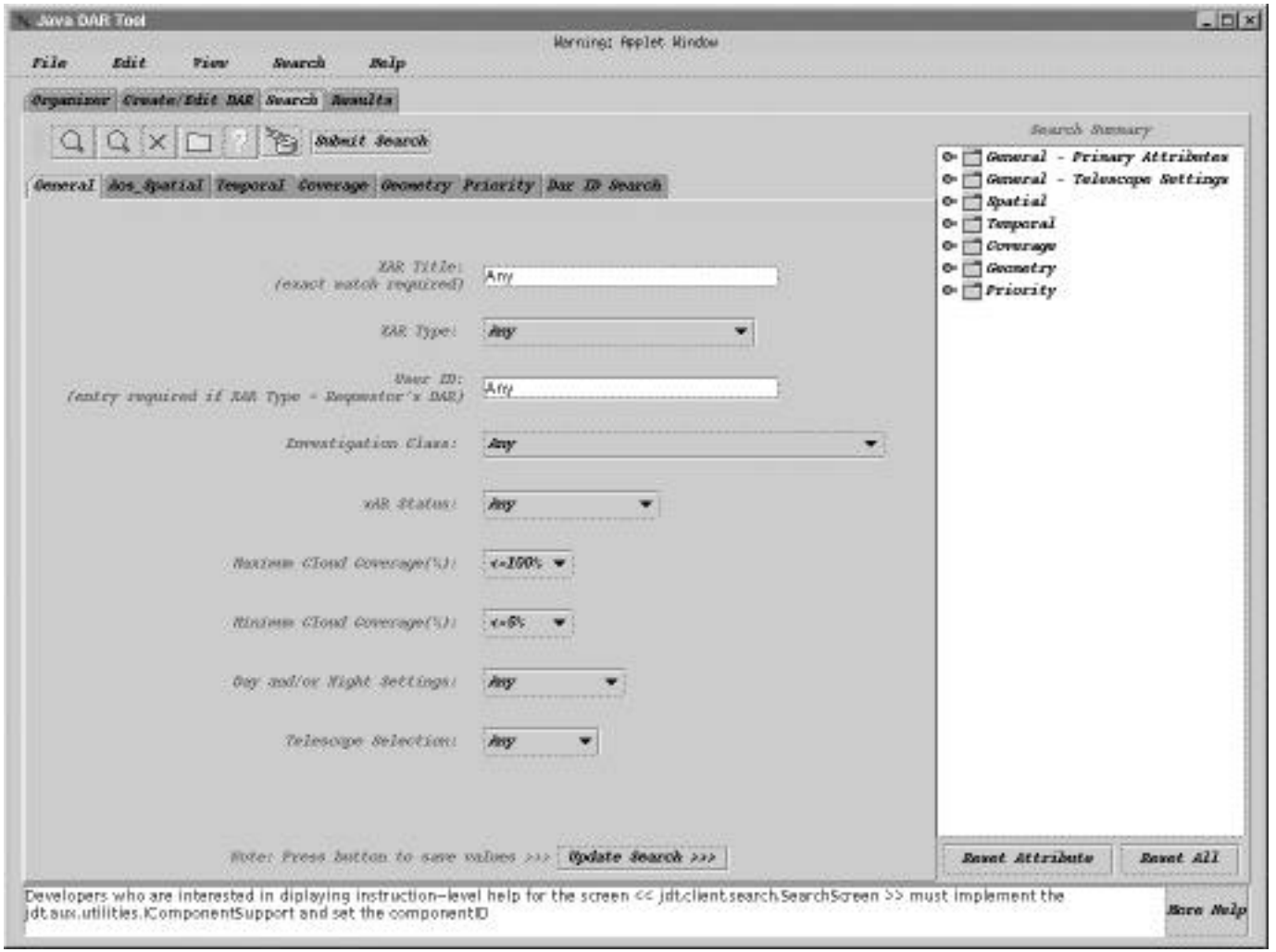
ASTER Search Interaction Diagram



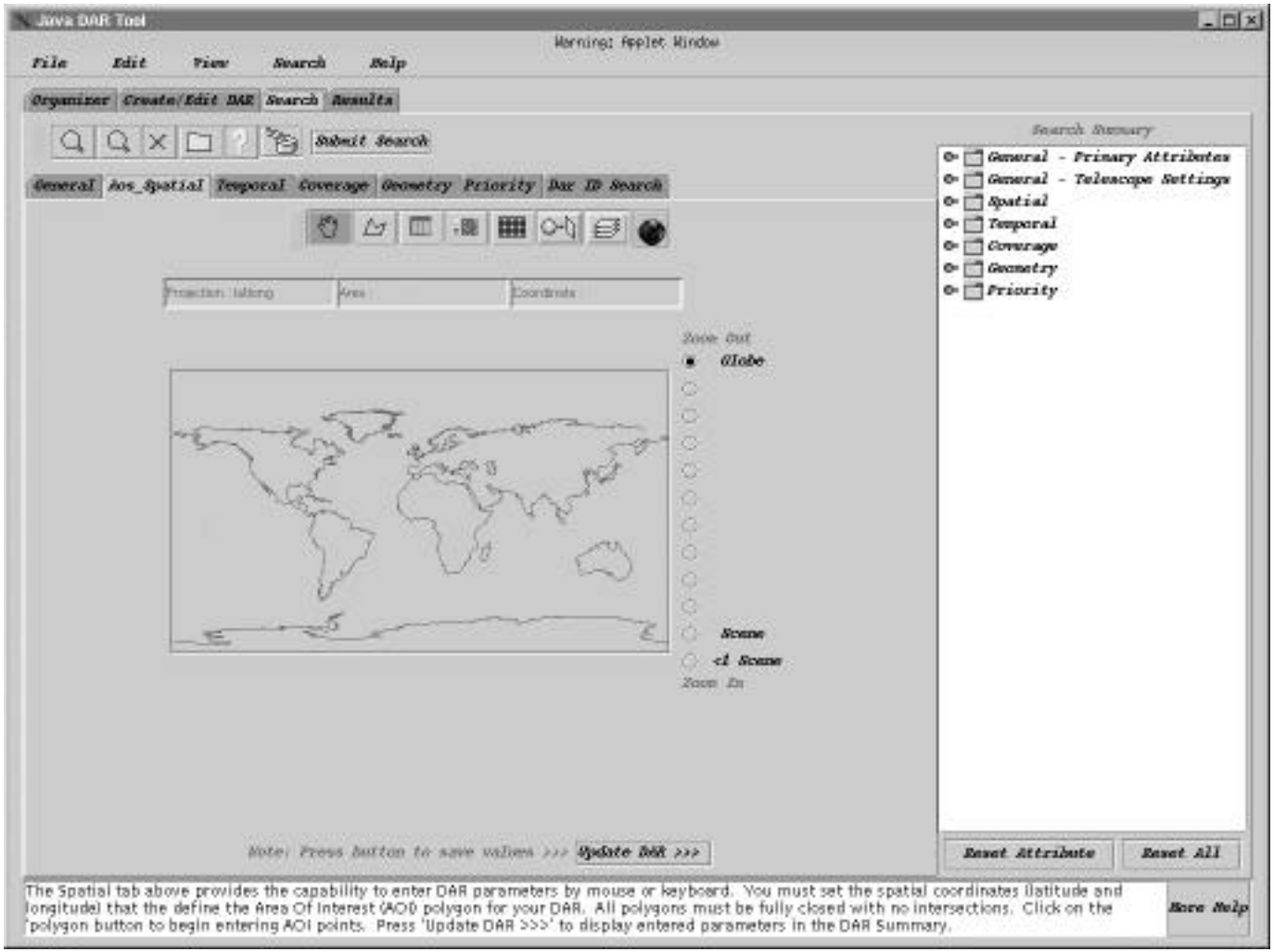
JDAR Tool (JDAR) Organizer Tab



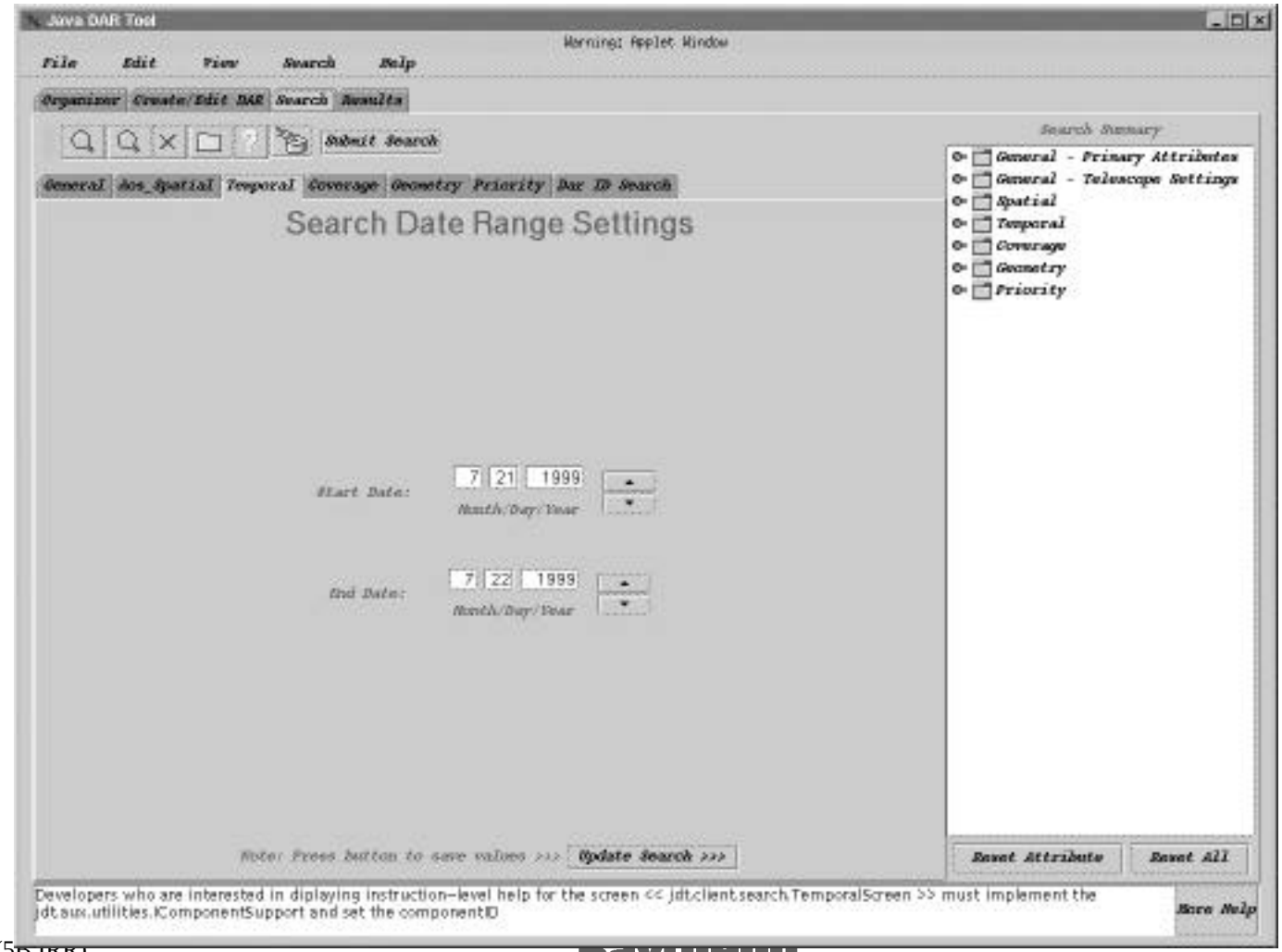
Java DARTOOL General Search Tab (new)



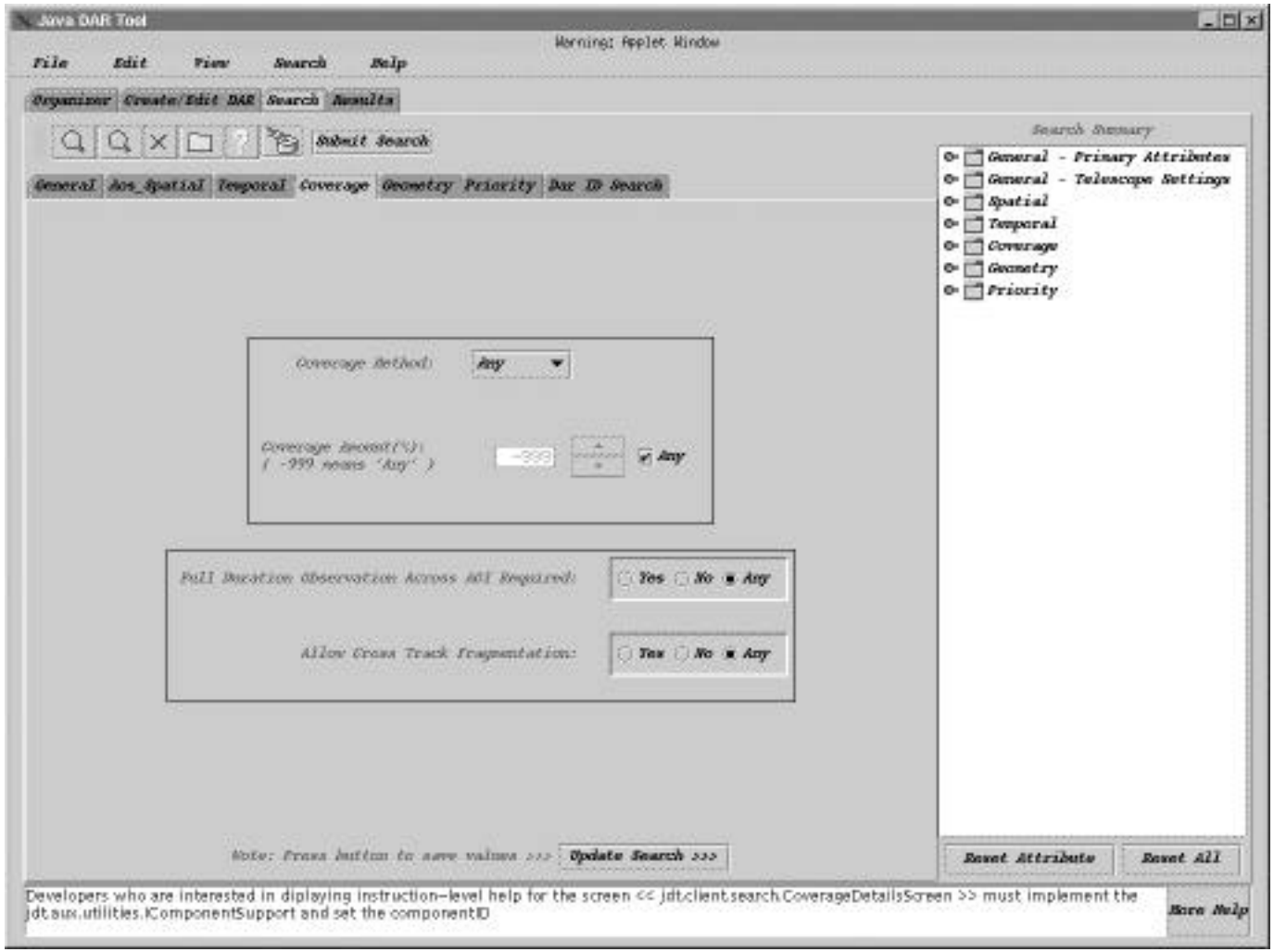
Java DAR Tool Search AOS Tab (new)



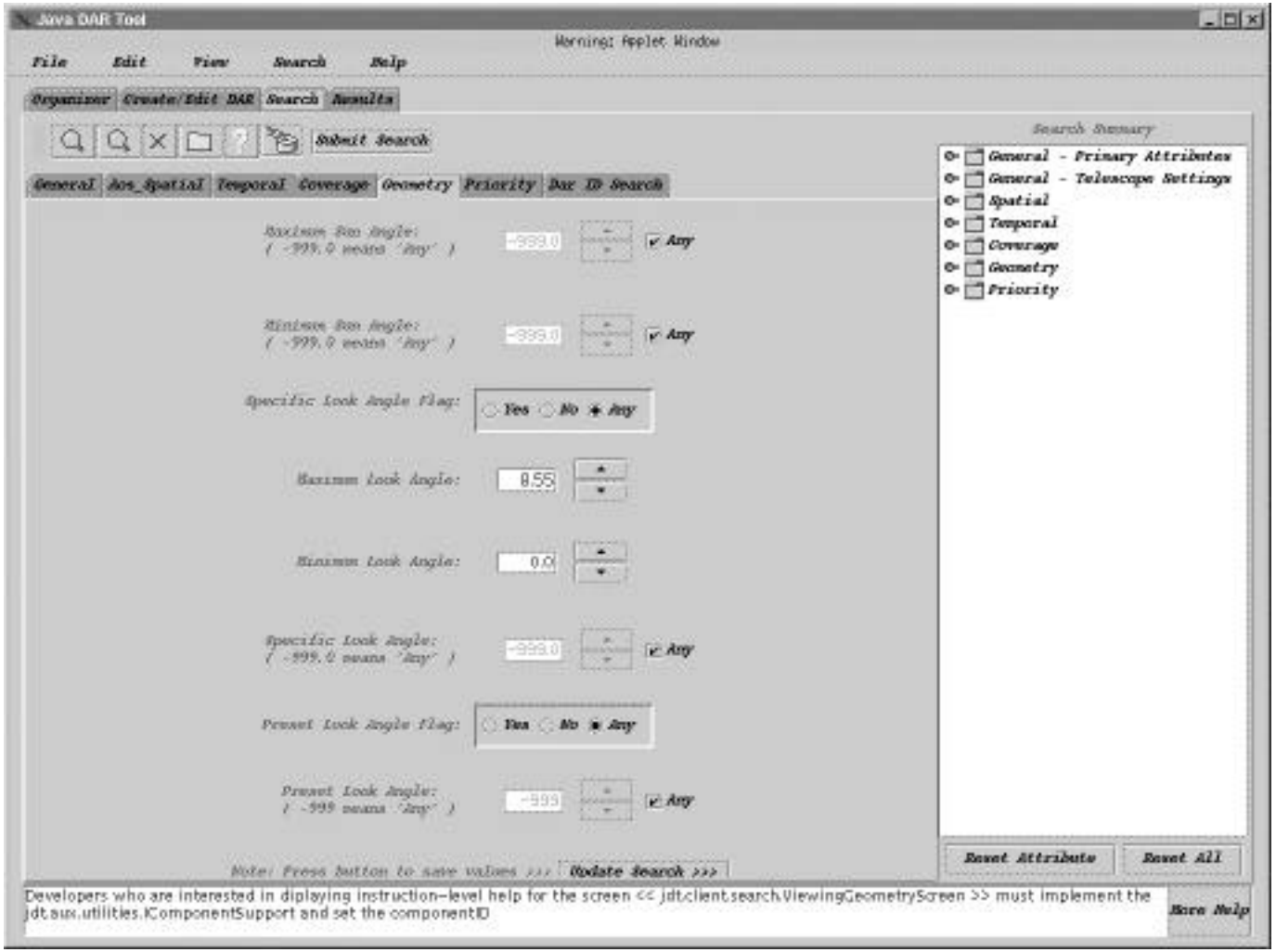
Java DAR Tool Search Temporal Tab (new)



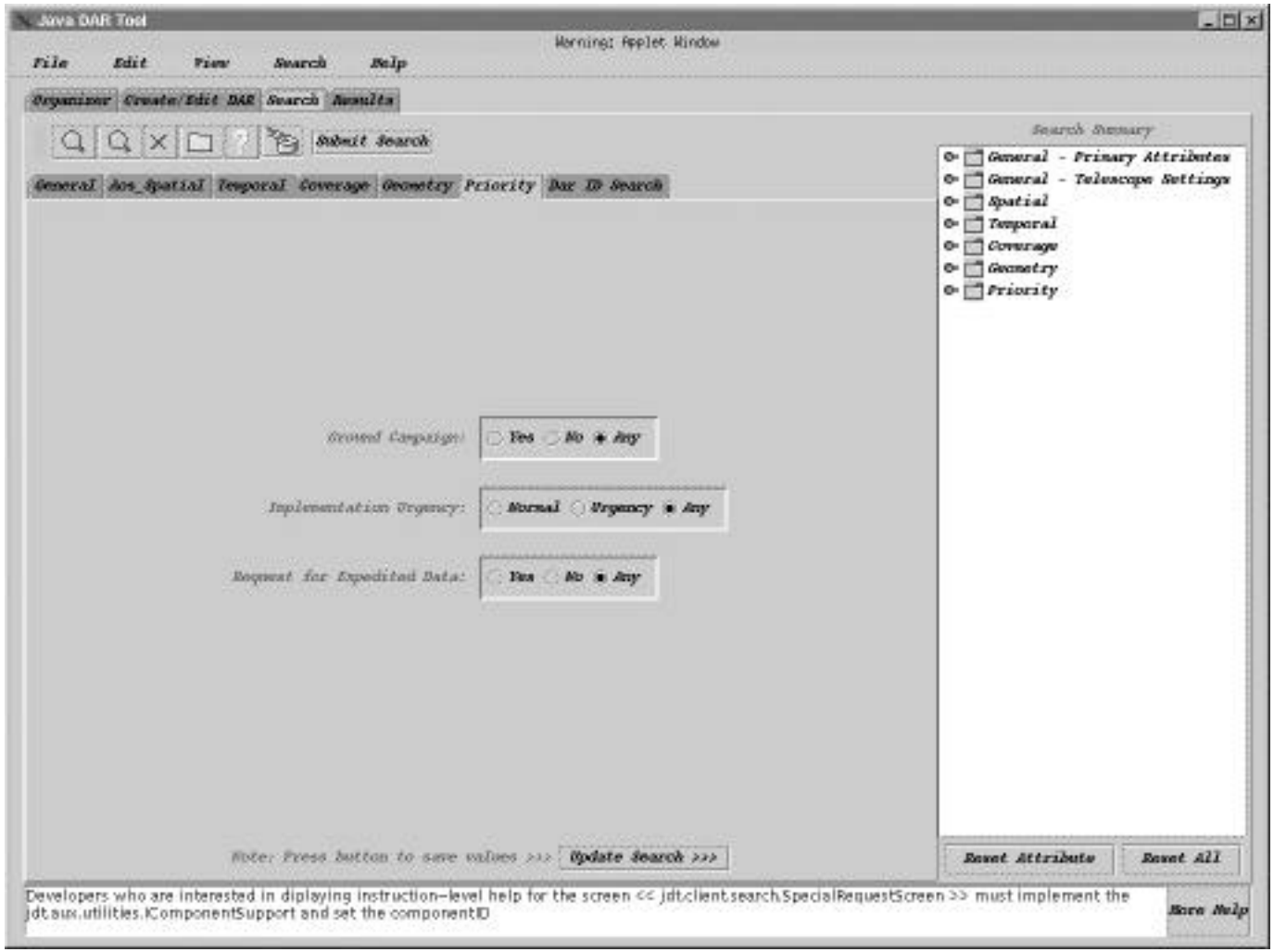
Java DAR Tool Search Coverage Tab (new)



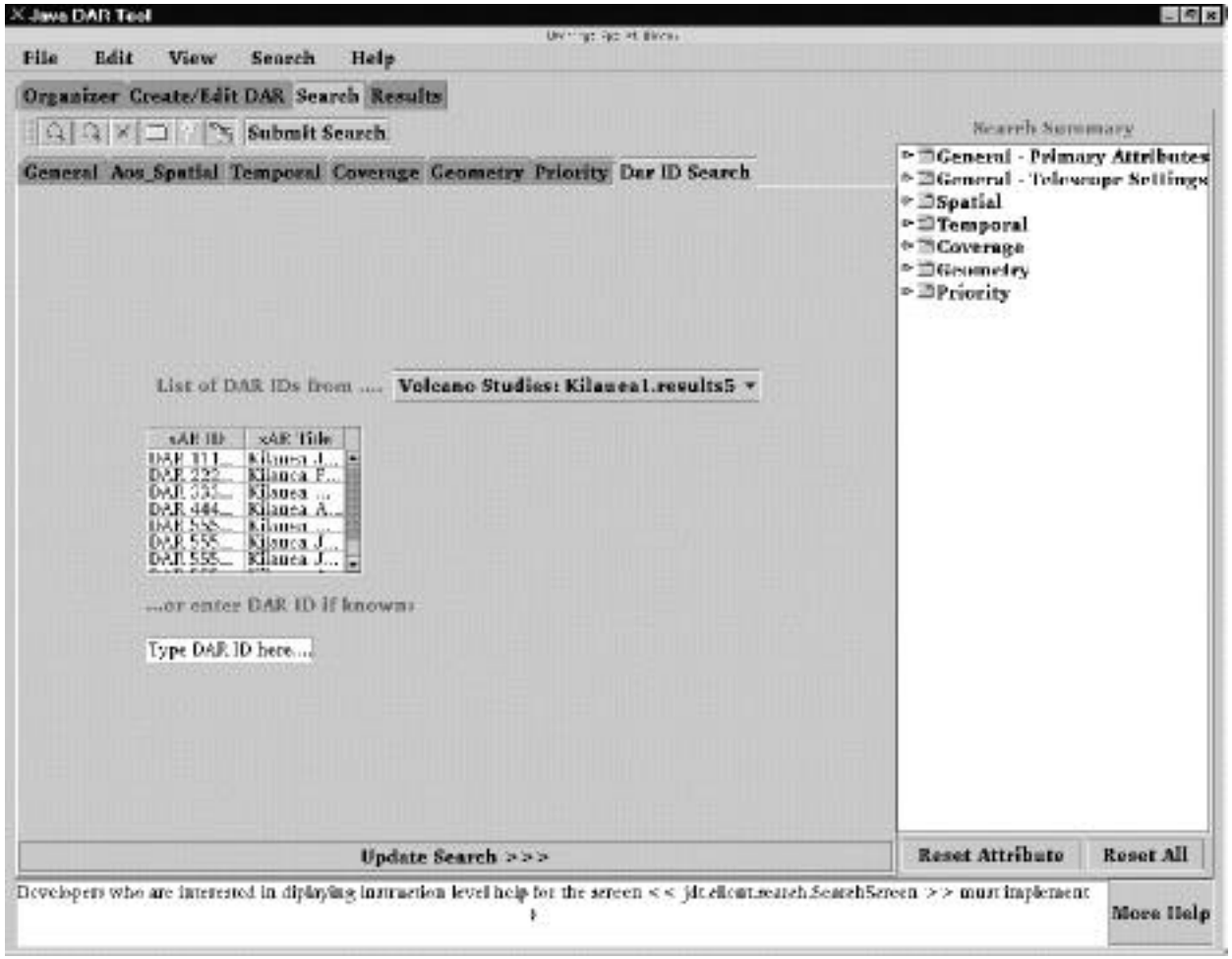
Java DAR Tool Search Geometry Tab (new)



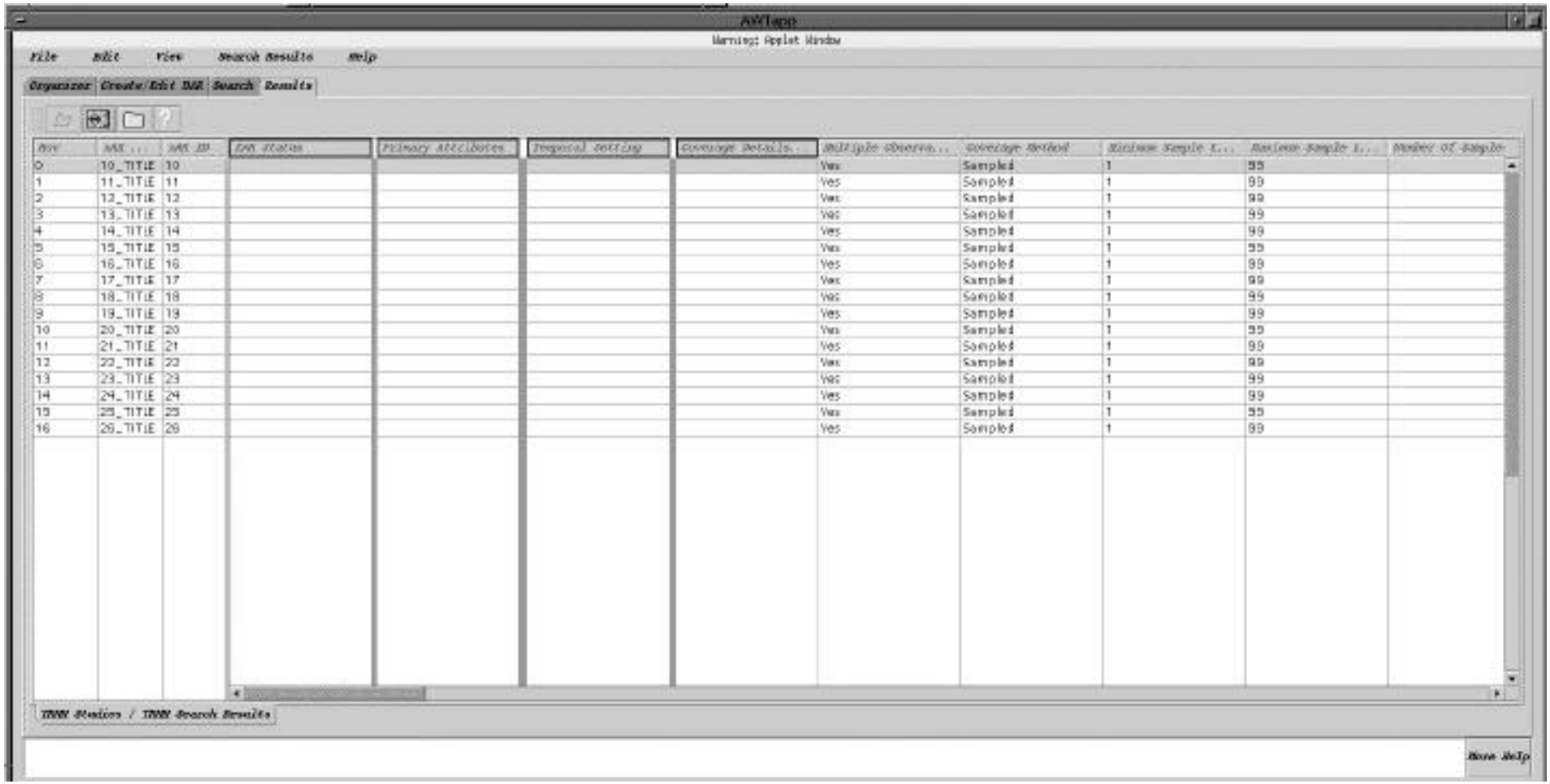
Java DAR Tool Search Priority Tab (new)



DAR ID Search Tab (new)

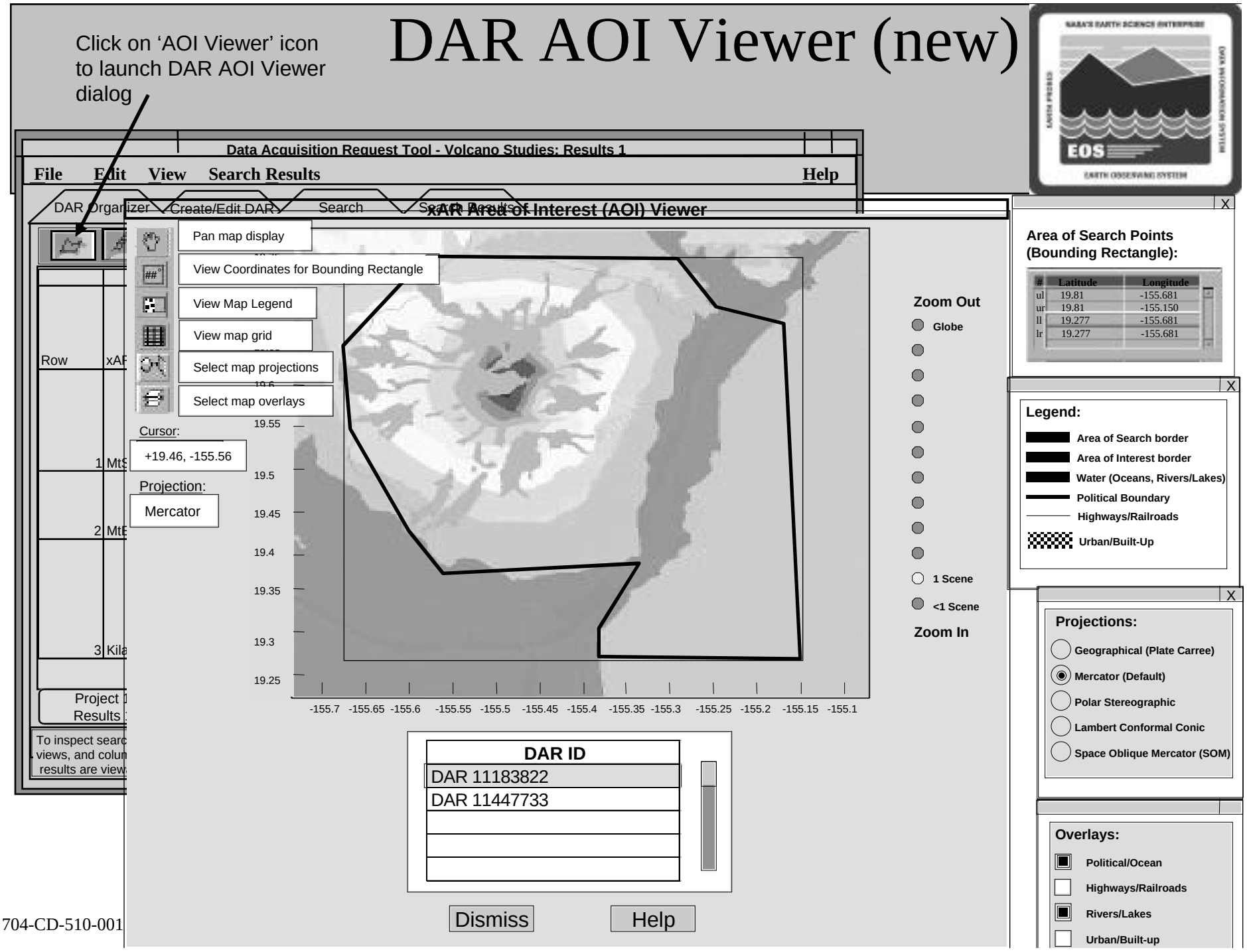


Search Results Tab (new)

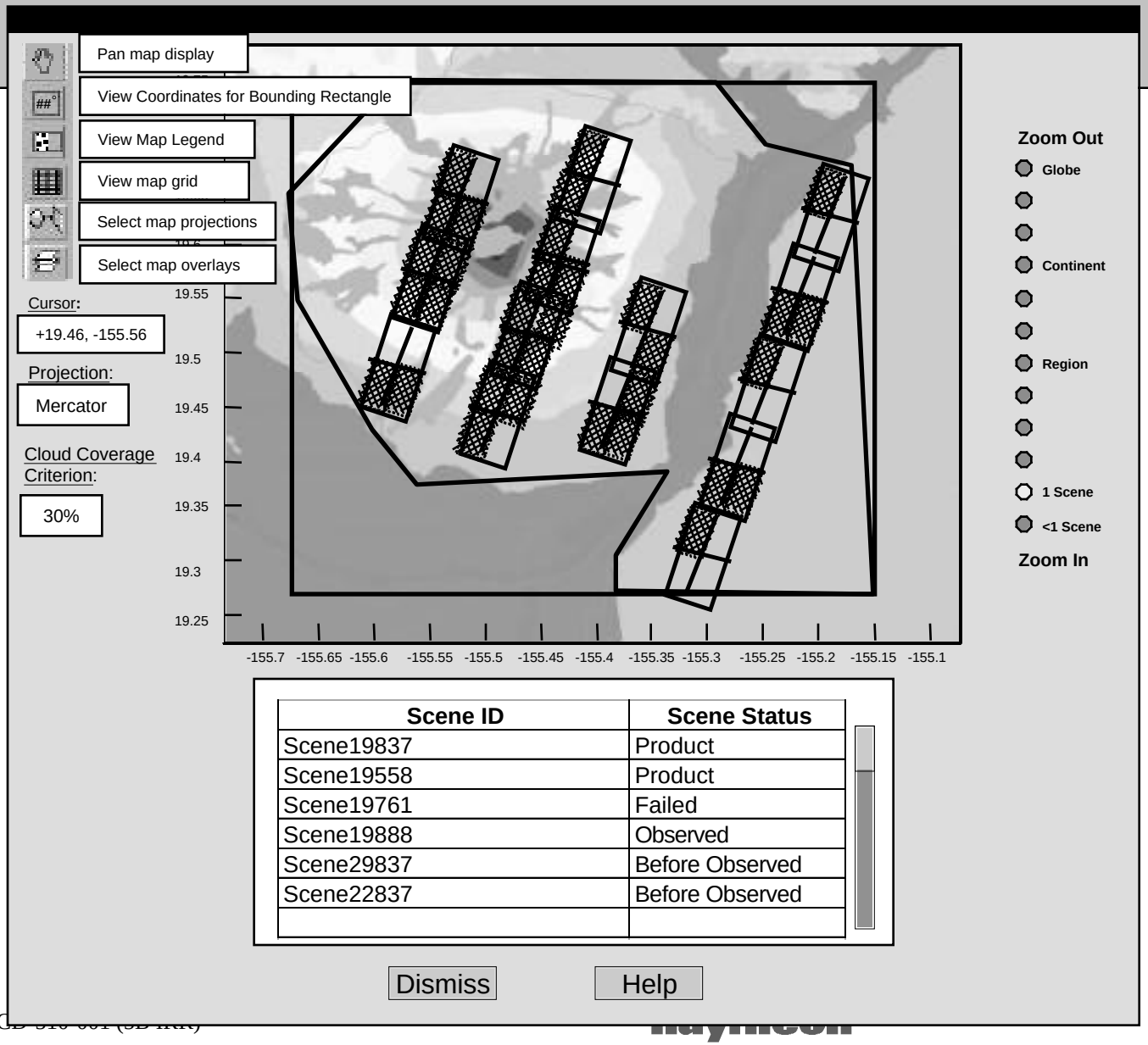


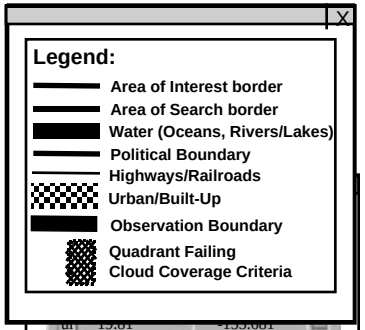
DAR AOI Viewer (new)

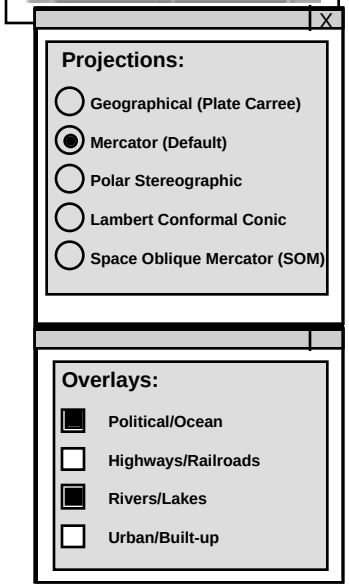
Click on 'AOI Viewer' icon to launch DAR AOI Viewer dialog



DAR Observed Scenes Viewer (new)

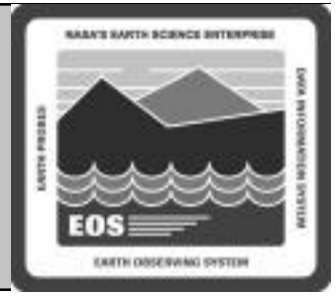






View Observed Scenes Dialog (new)

Operational Impacts



None