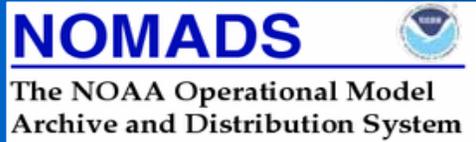


A NOMADS OGC Satellite Server

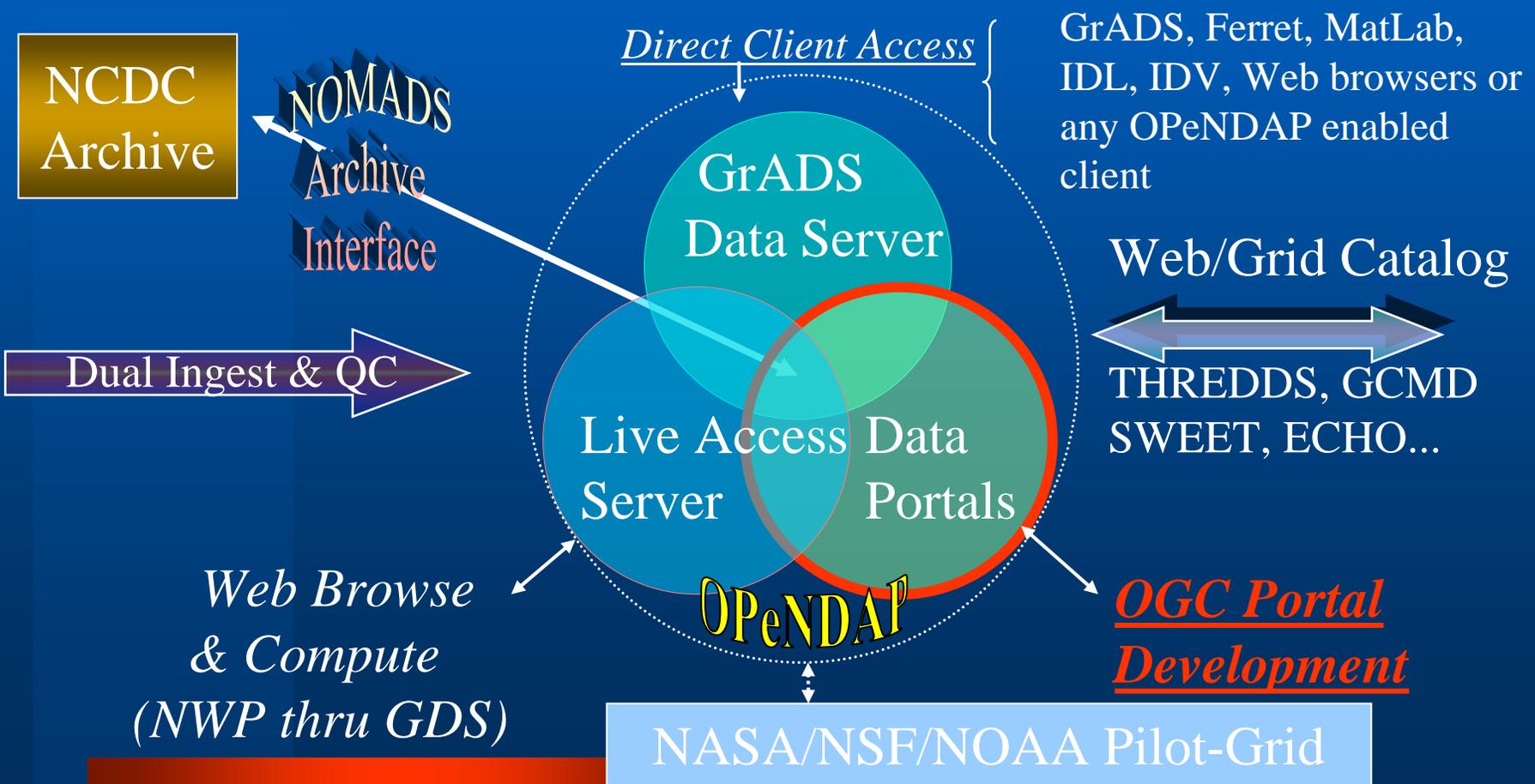
- NOMADS users have demonstrated the need for format neutral access to high volume model sub-sets (5TB w/ ~1 million downloads/month).
- A NOMADS Satellite Data Access Server using an Open GIS Consortium (OGC) Web Coverage Service (WCS) protocol is proposed.
- WCS is widely accepted by geospatial and Earth science communities, supported by many commercial vendors, and becoming an ISO standard .
- It is the next “services based” step for the highly successful NOMADS pilot.

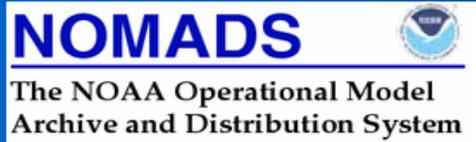


Advancing Collaborations

The NOMADS Philosophy

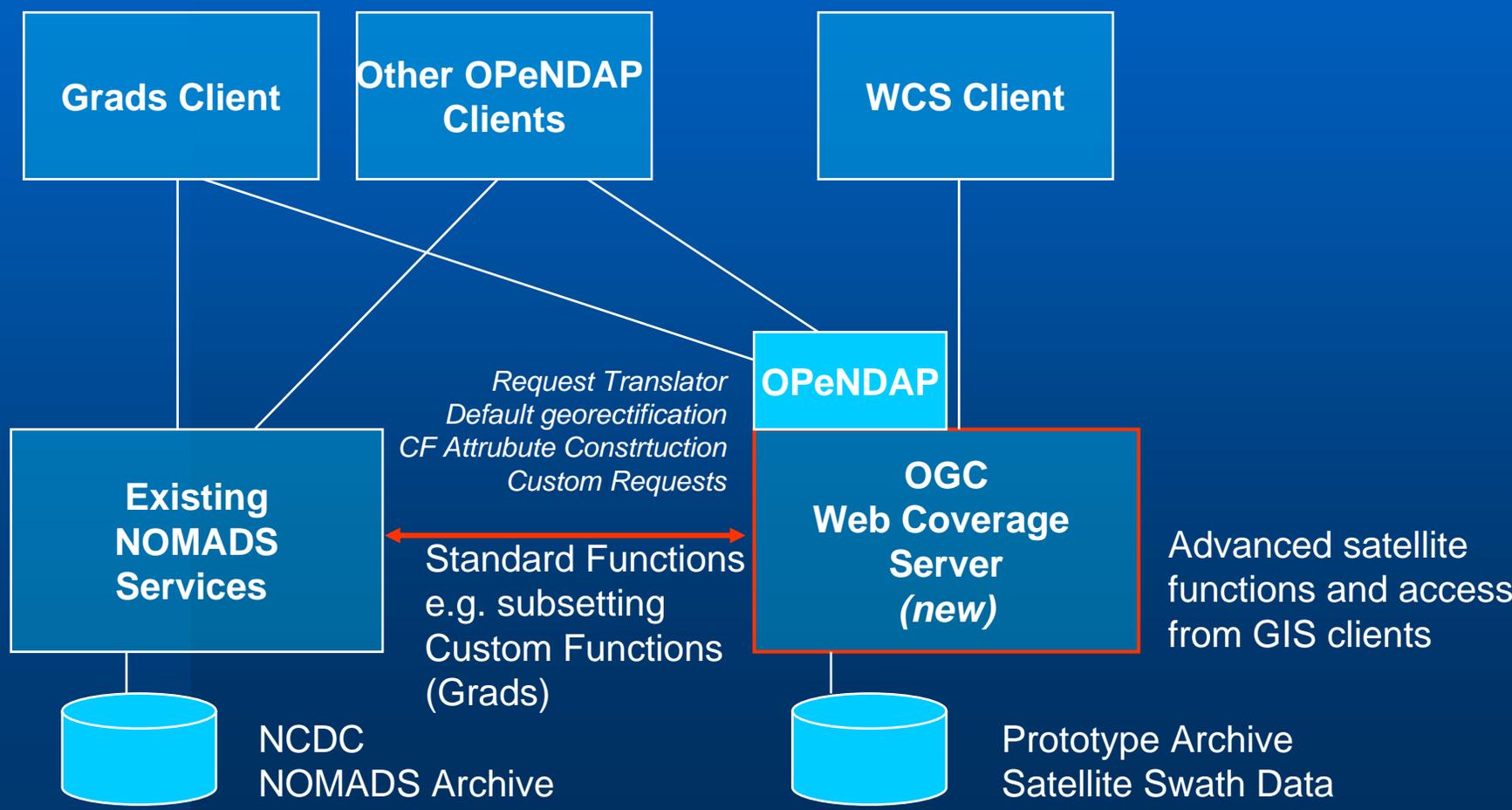
Multiple paths to format independent data access:



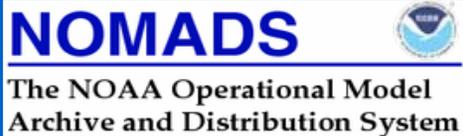


NOMADS Portal Development

A NOMADS OGC Extension

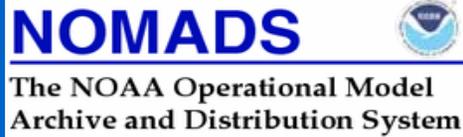


A demonstrated need



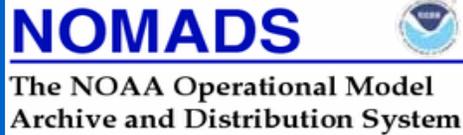
An NOMADS OGC Extension

- The NOMADS is designed for various “portals” and format changes thru extensible libraries and OPeNDAP. It is flexible enough to add a Open GIS Consortium (OGC) Web Coverage Service (WCS) needed for GIS users (ArcView/GRASS/Intergraph/others).
- The OGC community is a rapidly growing sector within Web services. ESRI has beta OPeNDAP libraries available for this effort.
- A services based architecture has been recommended by the IWGEO IEOS Data Management subgroup. NOMADS is listed as a potential IEOS prototype. A GIS capability greatly enhances the user base.



A NOMADS OGC Extension

- A NOMADS OGC extension will allow analysis applications such as ESRI: ArcGIS, InterGraph, PCI, IDL, GRASS, Space Toolkit (UAH client), GrADS, Ferret, and other OPeNDAP enabled desktop tools for distributed access and re-projection of satellite data on demand.
- The data model is FGDC CF-compliant.
- New functionality would include:
 - Georectification of Swath data (which is ungeorectified)
 - Resampling
 - Subsetting
 - Reprojection-To support more than 10 common projections.
 - Reformatting-To support more than 20 formats



A NOMADS OGC Extension

- The NOMADS OGC Server will be developed by NCDC and George Mason University, with direct input from an OPeNDAP developer.
- NCDC/GMU will integrate into existing NOMADS (and NCDC archive services). NCDC will provide operational maintenance and enhancements as required.
- A CLASS-NOMADS OGC Satellite Server will support CLASS efforts directly by demonstrating a prototype for a single point of entry for a services based architecture construct to format neutral access to model, satellite, and observational data. Radar data thru ESML pending HPC proposal (Rutledge).