NOMADS
The NOAA Operational Model Archive and Distribution System

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

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The NOMADS Philosophy

Multiple paths to format independent data access:

NCDC Archive

Direct Client Access

GrADS, Ferret, MatLab, IDL, IDV, Web browsers or any OPeNDAP enabled client

GrADS Data Server

Web/Grid Catalog

Dual Ingest & QC

THREDDS, GCMD SWEET, ECHO...

Live Access Server

Data Portals

Web Browse & Compute (NWP thru GDS)

OGC Portal Development

NASA/NSF/NOAA Pilot-Grid

NOMADS Portal Development

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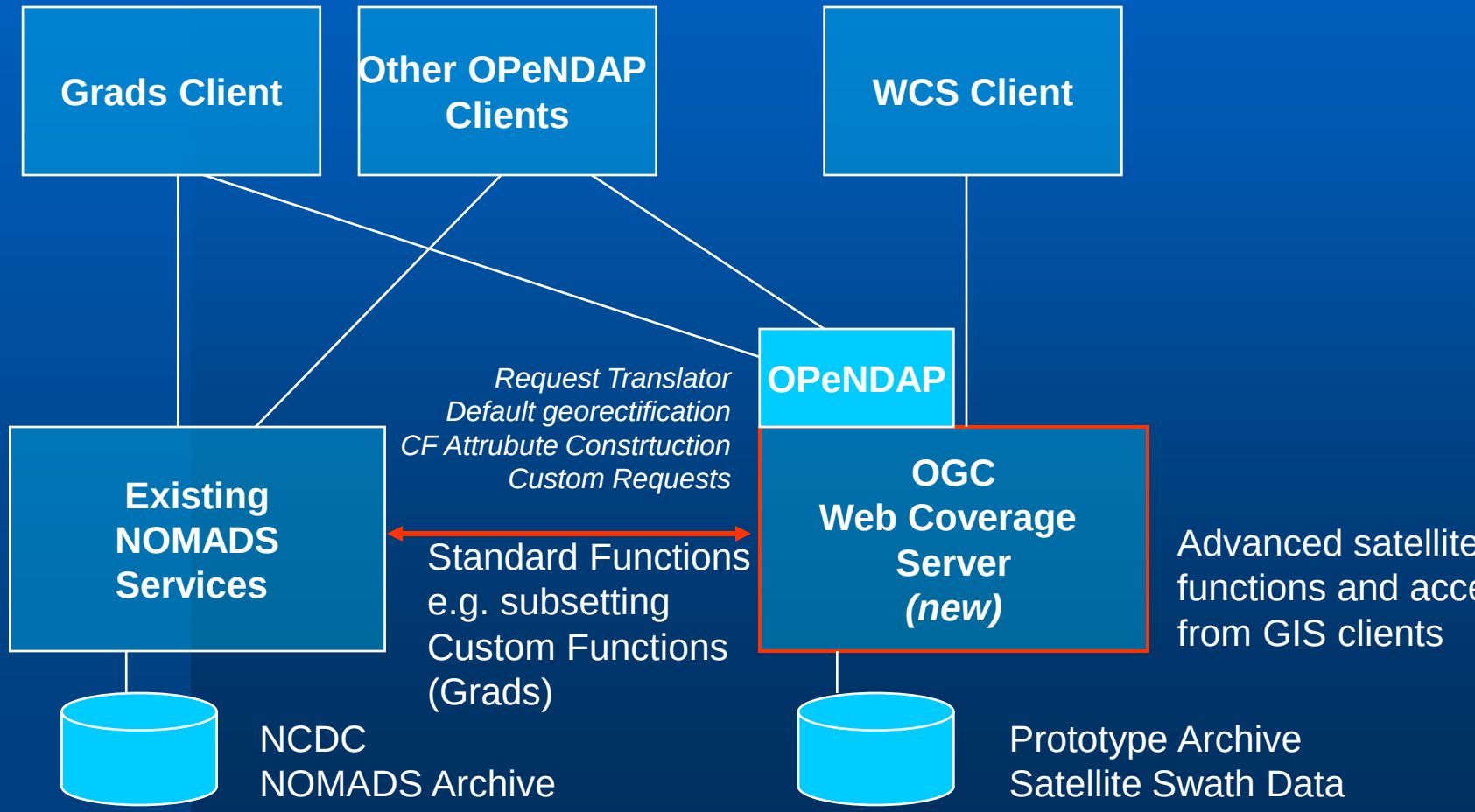
A NOMADS OGC Extension



A demonstrated need

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• 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 y 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.

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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

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- 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).