

The HDF5 Data Format: High Performance Interoperability for Earth Science Communities IN23C-1780

Sean Gordon (scgordon@hdfgroup.org), Ted Habermann, and John Kozimor, The HDF Group. Lindsay Powers, USGS



The HDF Group

HDF5 is a high-performance information container available for many languages and computing platforms.

Communities customize HDF5 by creating conventions for metadata and data structures that are specific to their domains.

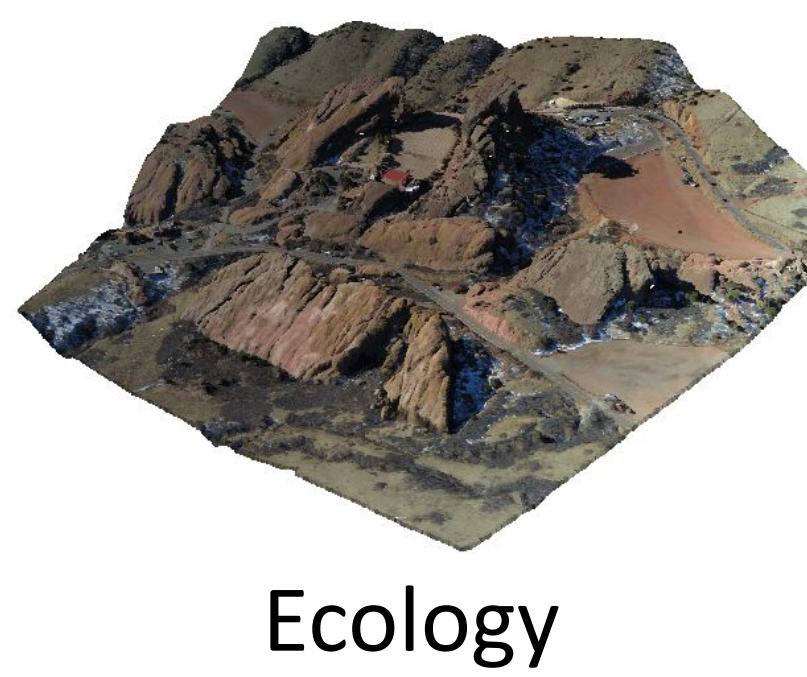
HDF5 is a standard foundation for storing, sharing, and reusing data from these communities.



Seismology



Earth Observation



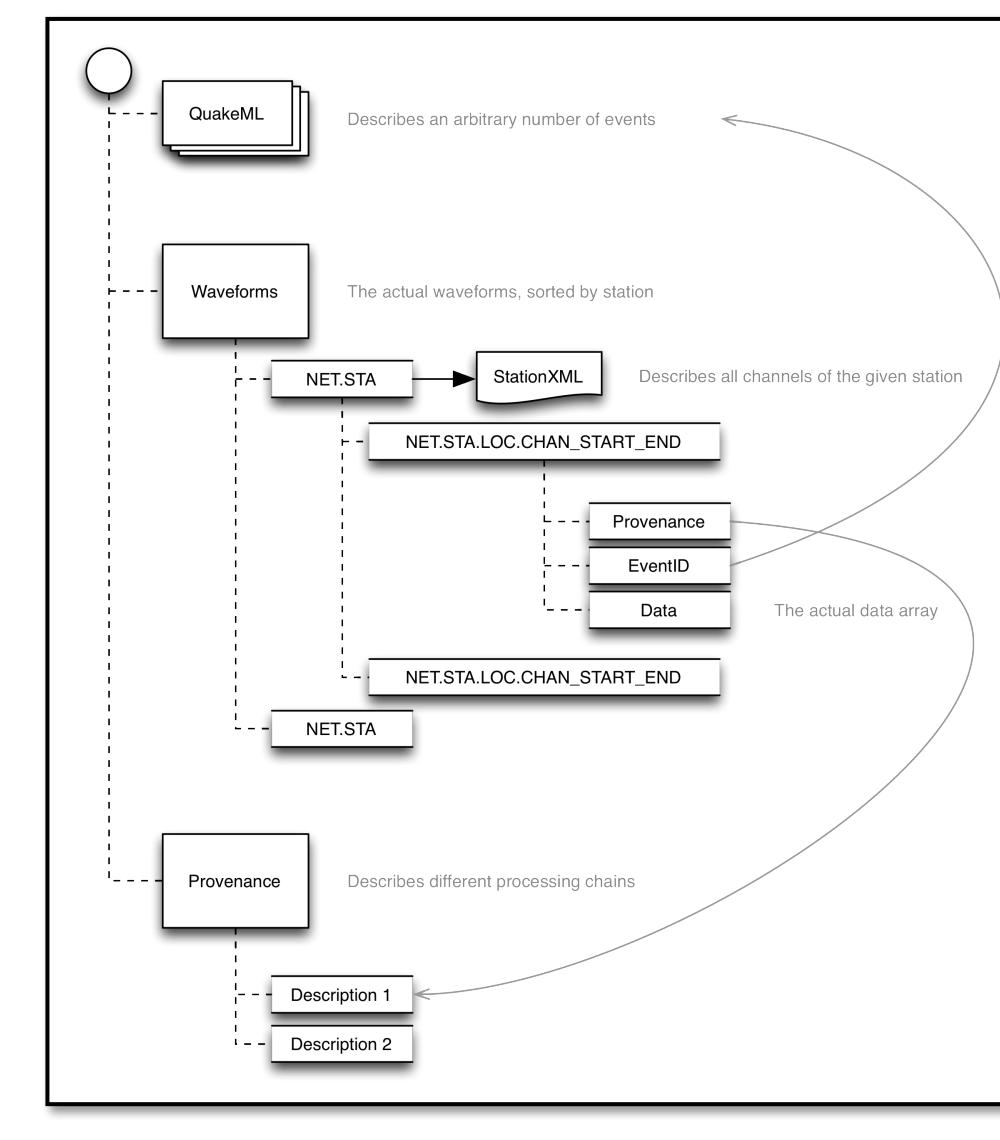
Ecology



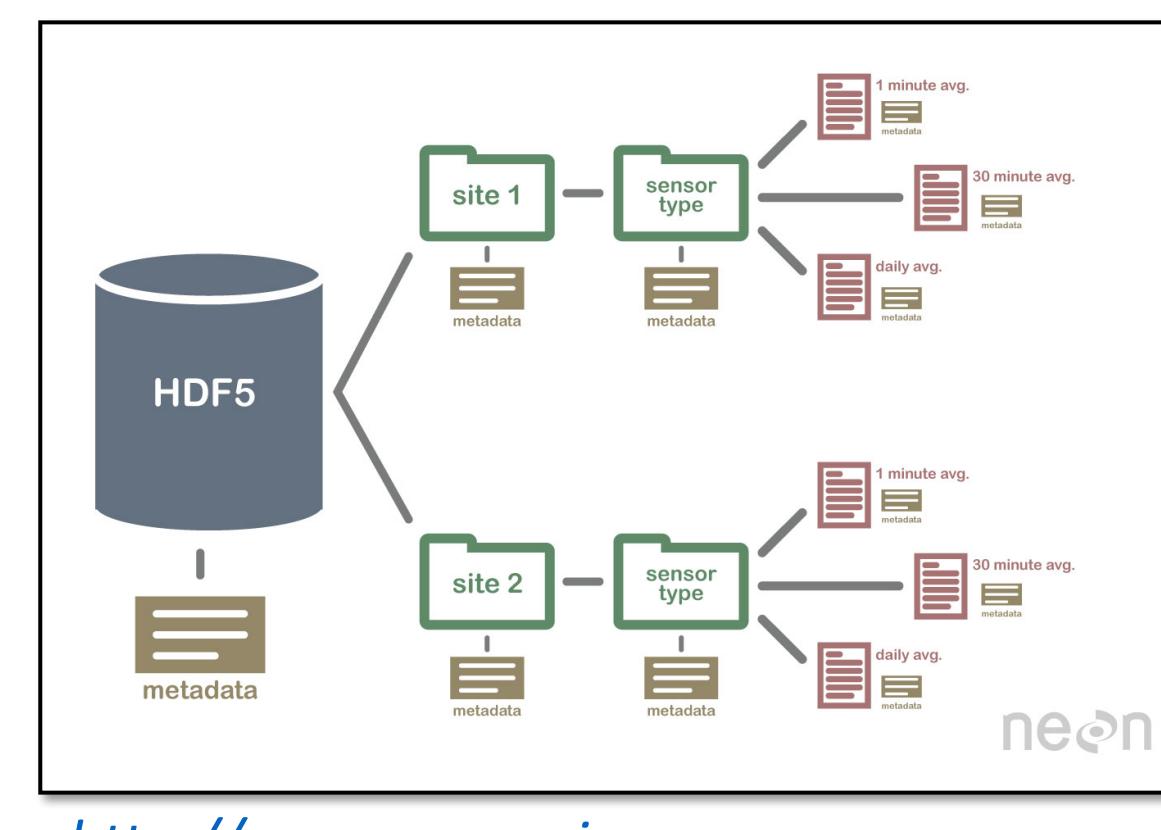
[Seismic-Data](#)



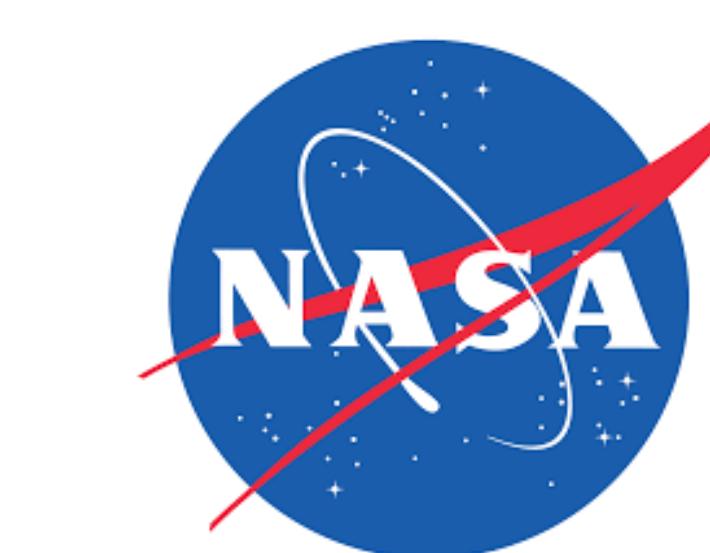
NEON HDF5
Observation Time Series
Model Results
Point Clouds



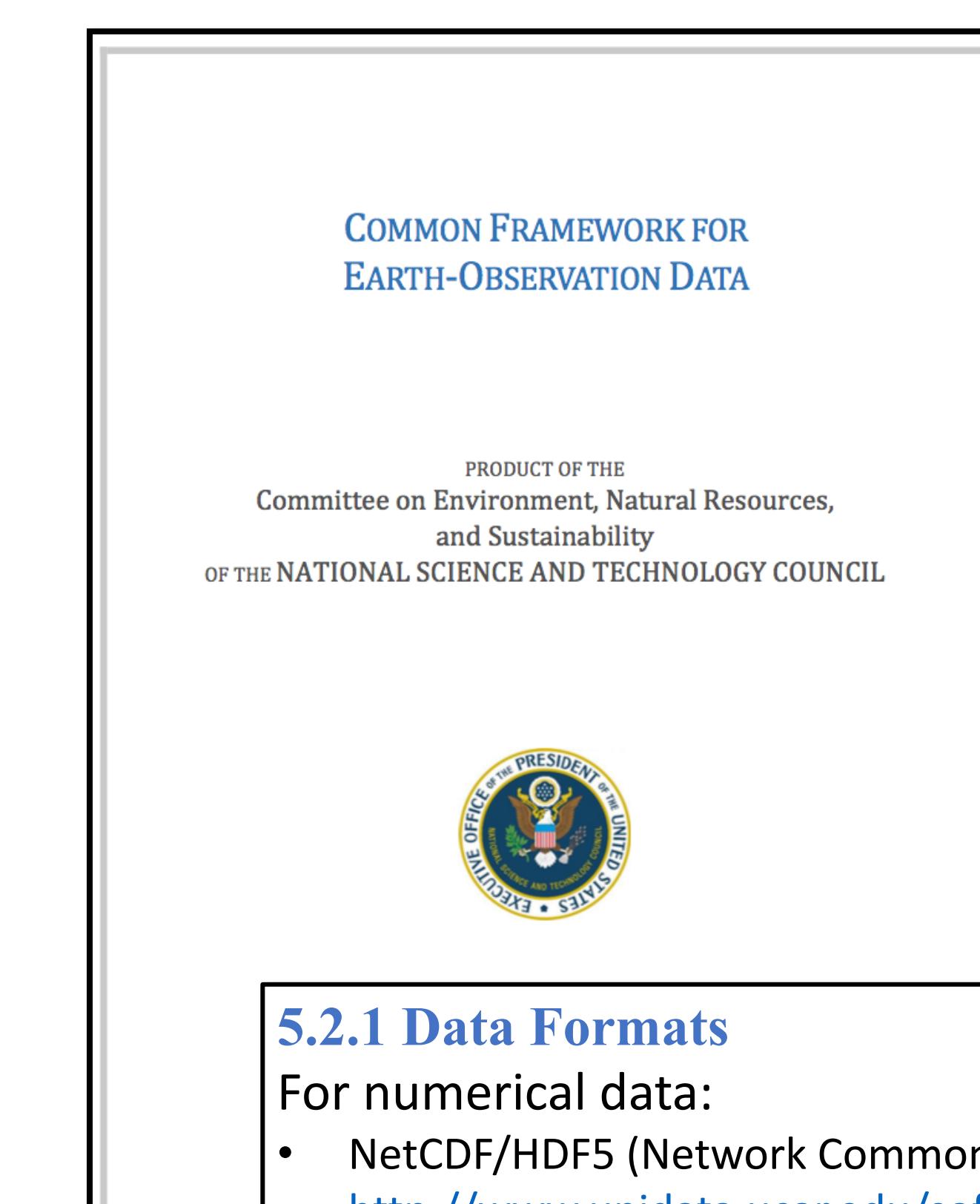
ASDF
Station & Event Metadata
Waveforms
Provenance



<http://www.neonscience.org>



HDF-EOS
Swaths
Multi-dimensional Grids
Zonal Averages
Points



Atmospheric Science
and Oceanography



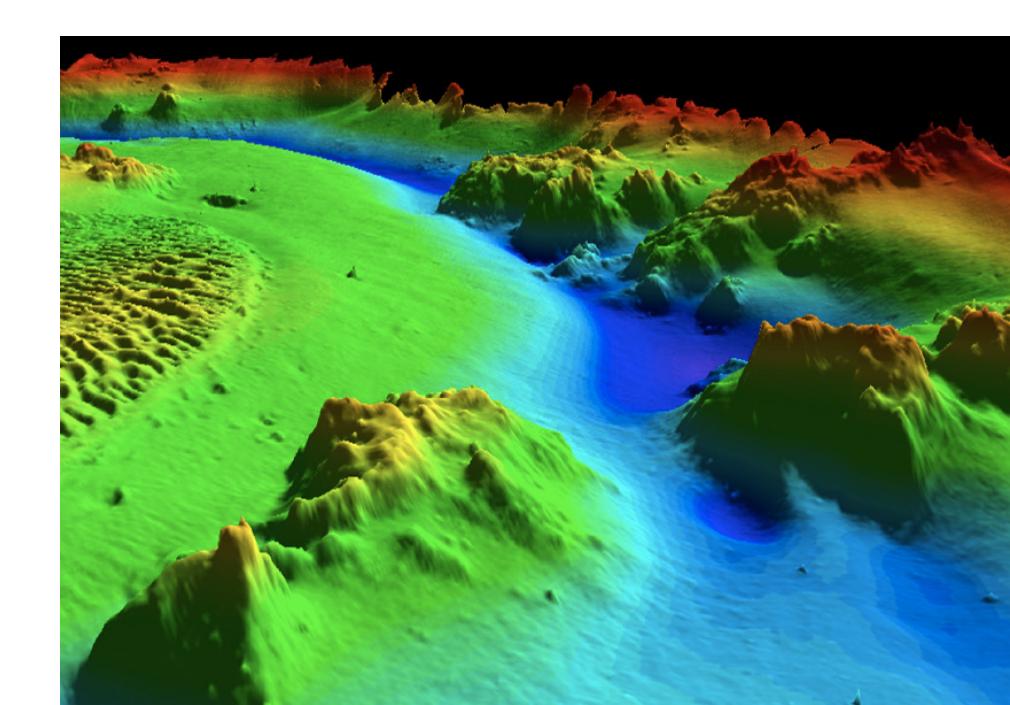
NetCDF / CF
Multi-dimensional Grids
Discrete Sampling Features



Planetary Science



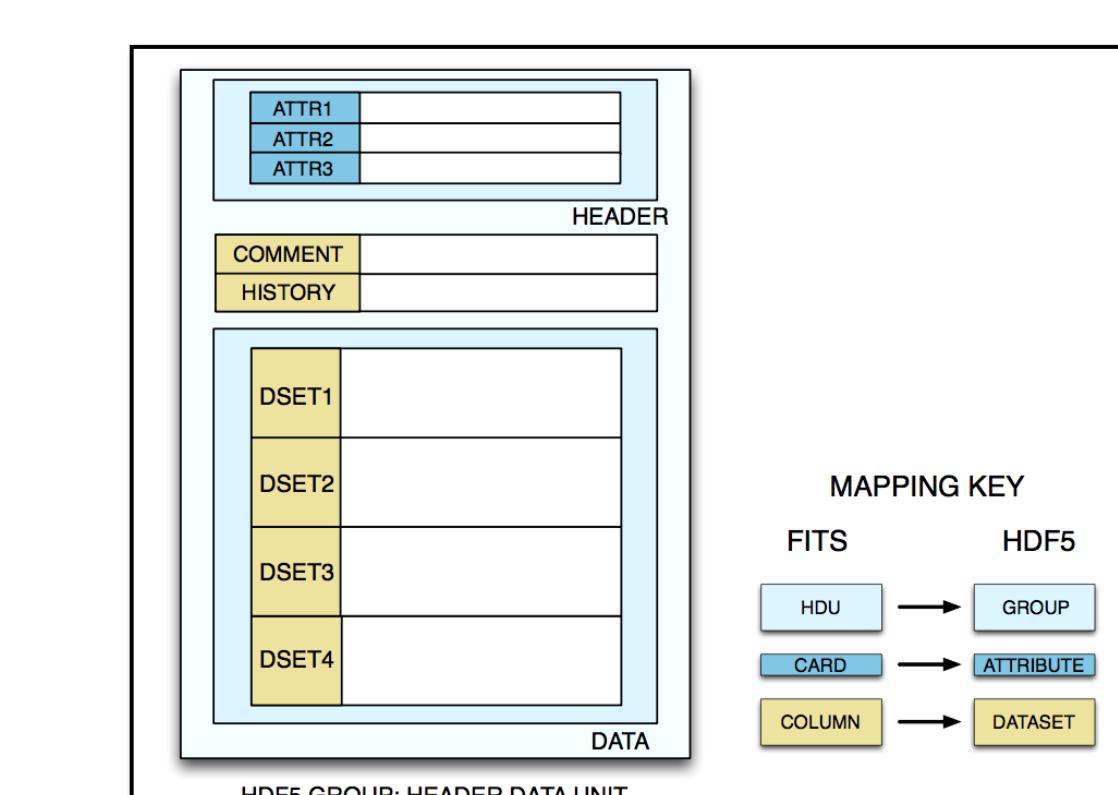
Harvard-Smithsonian
Center for Astrophysics



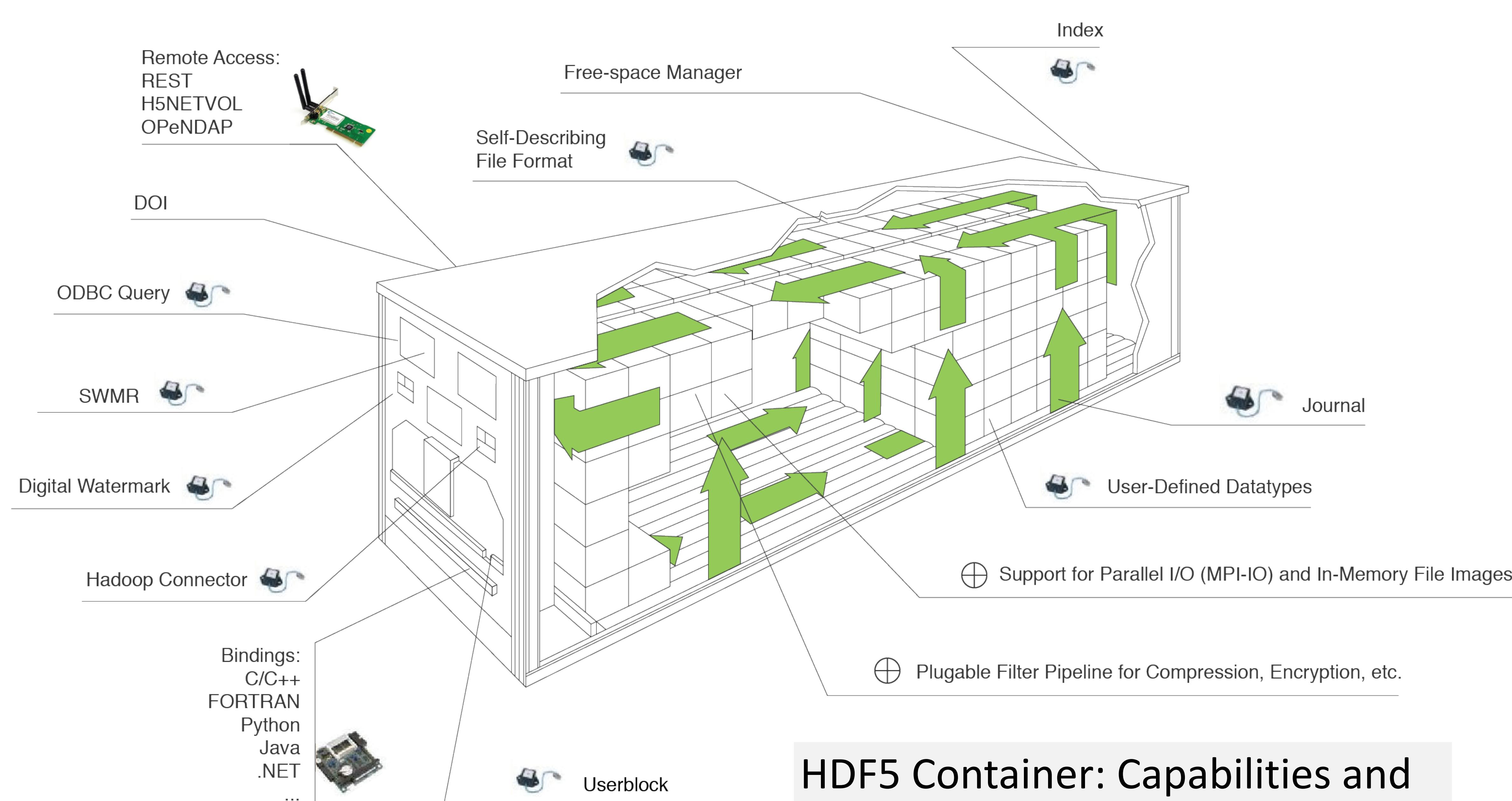
Hydrography



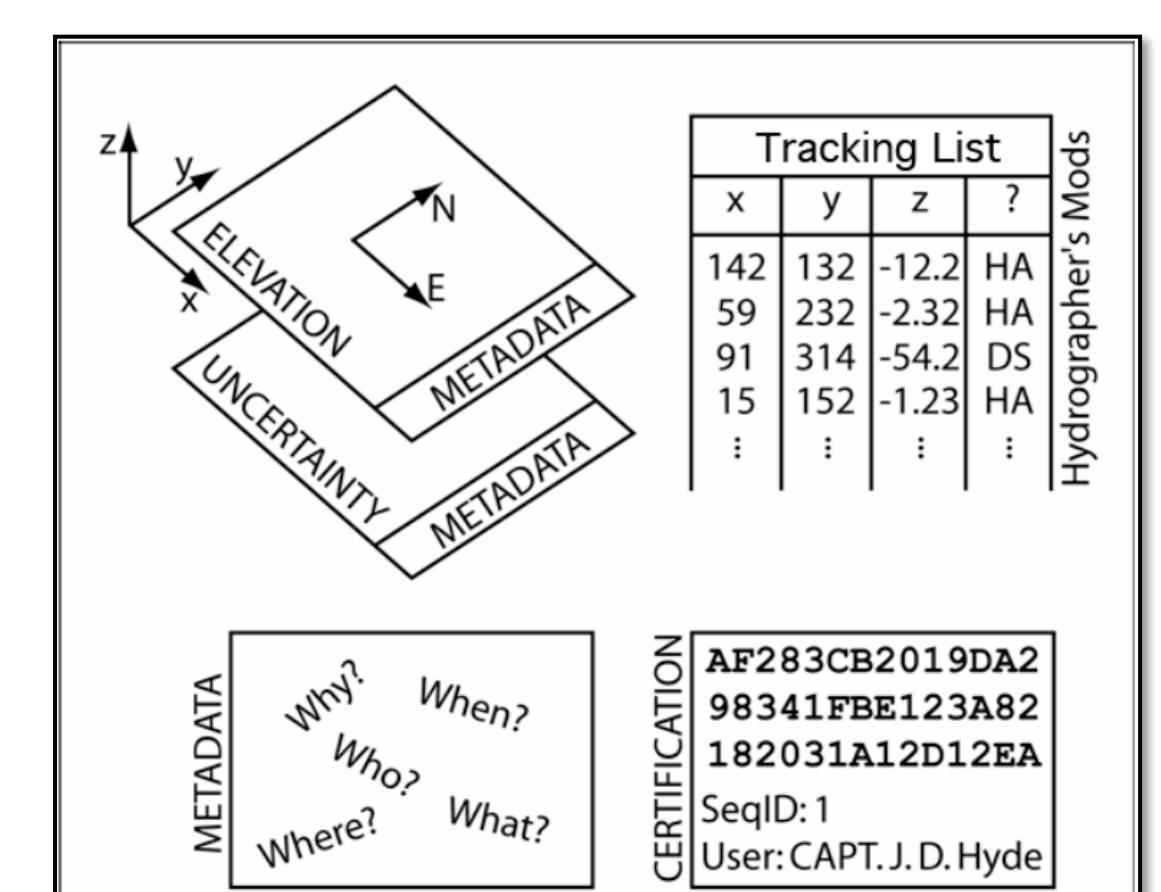
BAG
Tabular metadata
Annotations
Grids



<https://arxiv.org/abs/1505.06421>



HDF5 Container: Capabilities and Future Directions.



<http://www.opennavsurf.org>