



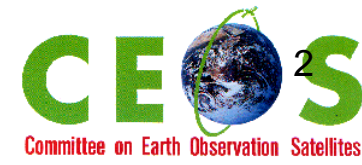
The CEOS WGISS Atmospheric Composition Portal

Presented by
Richard Eckman

on behalf of the
AC Portal Project



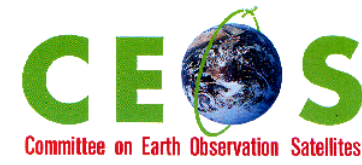
Atmospheric Composition Portal Background



- The Atmospheric Composition Constellation (ACC) and the Workgroup for Information Systems and Services (WGISS) within the Committee on Earth Observation Satellites (CEOS) is developing a portal to support interoperability among the atmospheric composition research and applications communities.
- The portal was called for by CEOS as part of the sanctioned constellations and is a GEO task
- A need was perceived to develop a shared collaboration place for remotely sensed atmospheric composition related data and information
- The aim is to enhance international cooperation, data sharing and services
- The technical challenge is to explore how disparate systems across agencies and countries can work together more seamlessly.



AC Portal Mission Statement



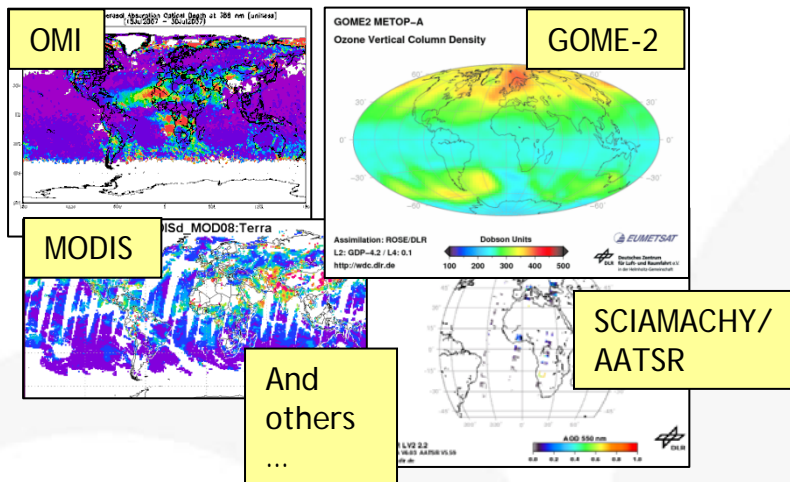
- Provide access, tools, and contextual guidance to scientists and value-adding organizations in using remotely sensed atmospheric composition data, information, and services.
- Help foster interoperability and application of atmospheric composition data, information and services worldwide.
- Identify the unique requirements and common (shared) features of the ACC and GEOSS users to provide a value-added and complementary capability.
- Work with partners in CEOS, the ACC and the broader AC community in advancing the AC Portal

Benefits of AC Portal

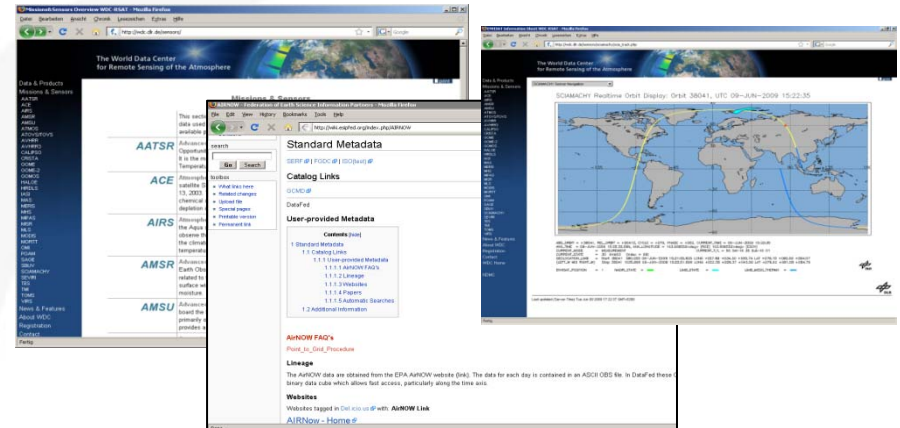
- The AC Portal provides a flexible framework for working with atmospheric composition data using web services based on global and community-specific standards
- The AC Portal complements ongoing projects in the AC community by providing a community-oriented framework for 'connecting' AC projects. For example, it fosters the ability for one AC project's information products to be more easily reused by another AC project's analysis tools.
- The AC Portal provides a forum for dialogue and collaborative interaction in identifying and resolving issues in working within web service infrastructures, such as GEOSS
- The AC Portal is a mechanism that can assist in the increased interaction between AC data providers and data consumers

Planned Features of the AC Portal

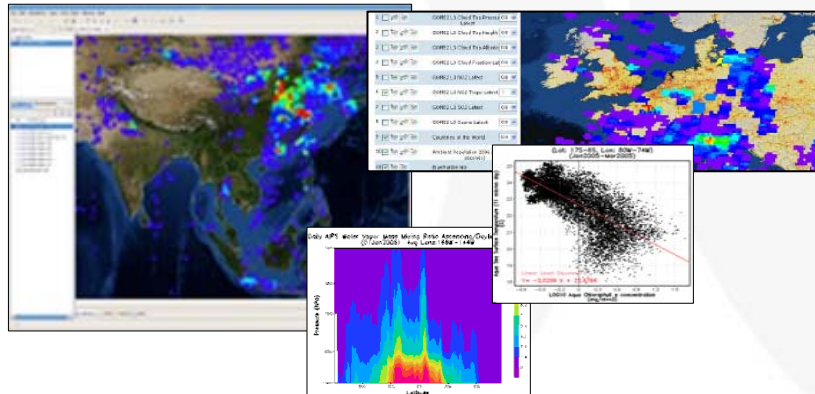
Improved access to data



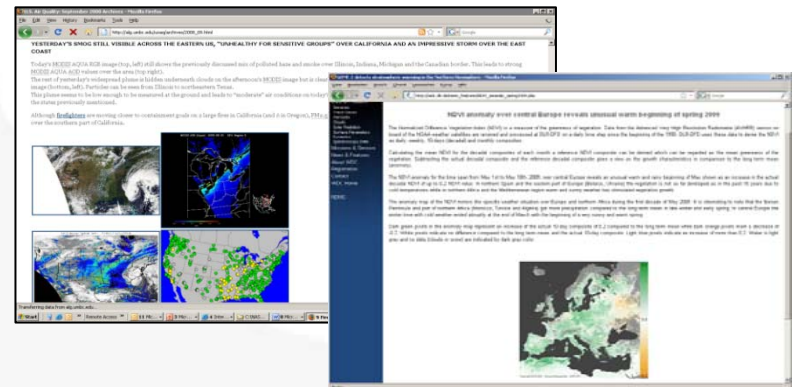
Information to help understand and use data



Tools for processing and analysis

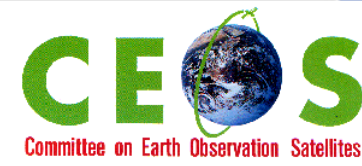


Forums for exchanging analyses and other information





Anticipated AC Portal Users



■ Atmospheric Science Researchers

- Use AC data and analysis tools
- Disseminate research results

■ “Value-adding” organizations

1. Process (aggregate, filter, combine or analyze) remote sensing data
2. Develop decision support tools or particular applications and users

Users can be characterized by their:

Domain Groups: Air Quality, Climate, Stratospheric Ozone

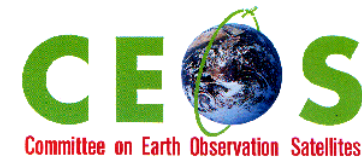
Data Needs: Near-real-time, Forecast, Archived data

Information Context Needs

- Processes used, assumptions made in deriving AC data products
- Understanding applicability of AC data products in their domain
- Availability of data products
- Previous uses of AC data products



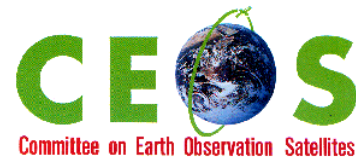
An AC Portal Science Advisory Group



- The advancement of the AC Portal requires *continual* direction and advice from scientists and researchers, on both the science-team and end-user sides.
- Science advice is needed to help ensure the AC Portal is addressing current needs of the AC community and that its implementation and usage of data and analysis tools are appropriate
- We propose the establishment of an AC Portal Science Advisory Group to review the state of the AC Portal and provide input for its future direction
 - ACC would be a core part of the Science Advisory Group
- We also propose that one or two members of the AC Portal Science Advisory Group work directly and closely with the AC Portal development team.



Engage other Participants



The AC Portal alpha and upcoming beta releases have focused on NASA and DLR data providers, analysis tools, and 'end users'. As the AC Portal framework matures, a near term goal is to engage others across the ACC and CEOS communities to broaden the types of data, analyses and 'end' uses.

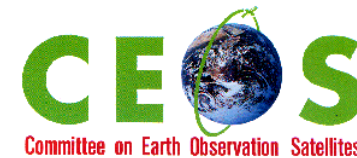
The engagement aims to increase the AC Portal coordination with other CEOS members (e.g., CSA, ESA, MACC and others).

A key aspect of this engagement is defining the framework so that other data and tools can be added and developing guidelines for participating in the AC Portal (i.e., best practices for implementing standards).

The effort would take place in collaboration with other 'collaboration' groups such as the ACC, WADC, GEOSS, and would further their efforts as well.



Input from ACC Workshop Participants



- We seek your recommendations in developing the AC Portal – what would be useful from your perspective?
 - **Data Users**
 - Do you have unmet or challenging remotely sensed AC data needs?
 - Any issues you encounter in working with remotely sensed AC data?
 - Do you need any processing, analysis, visualization tools to supplement your existing tools?
 - Would visualization and analysis tools in an online environment be useful?
 - Do you work with metadata?
 - **Data Providers**
 - What is important for users of your data to know when applying it to air quality or climate applications?
 - What kind of information would you like to get from users of your data?
- Contact at the ACC Workshop:
 - **Richard Eckman**
- To test the alpha version of the AC Portal and provide feedback and comments:
 - **<http://wdc.dlr.de/acp>**



Supplemental Slides

CEOS Constellations



AC Portal



Global Change Master Directory



ECHO



Giovanni



A-Train Depot

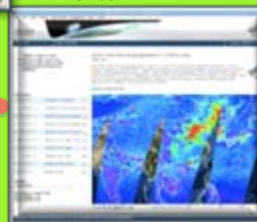
DataFed



NOAA IDEA



Web Mapping Portal



Virtual Lab for Spectroscopic Data



Others



WDC-RSA

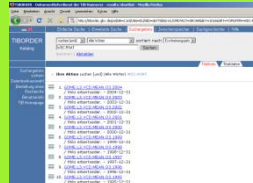
Tailored user driven Data
& Information access
and enhanced services



including Video
and computing on demand



Grid facilities



Data publication with
Digital Object Identifiers (DOI)

GEOSS

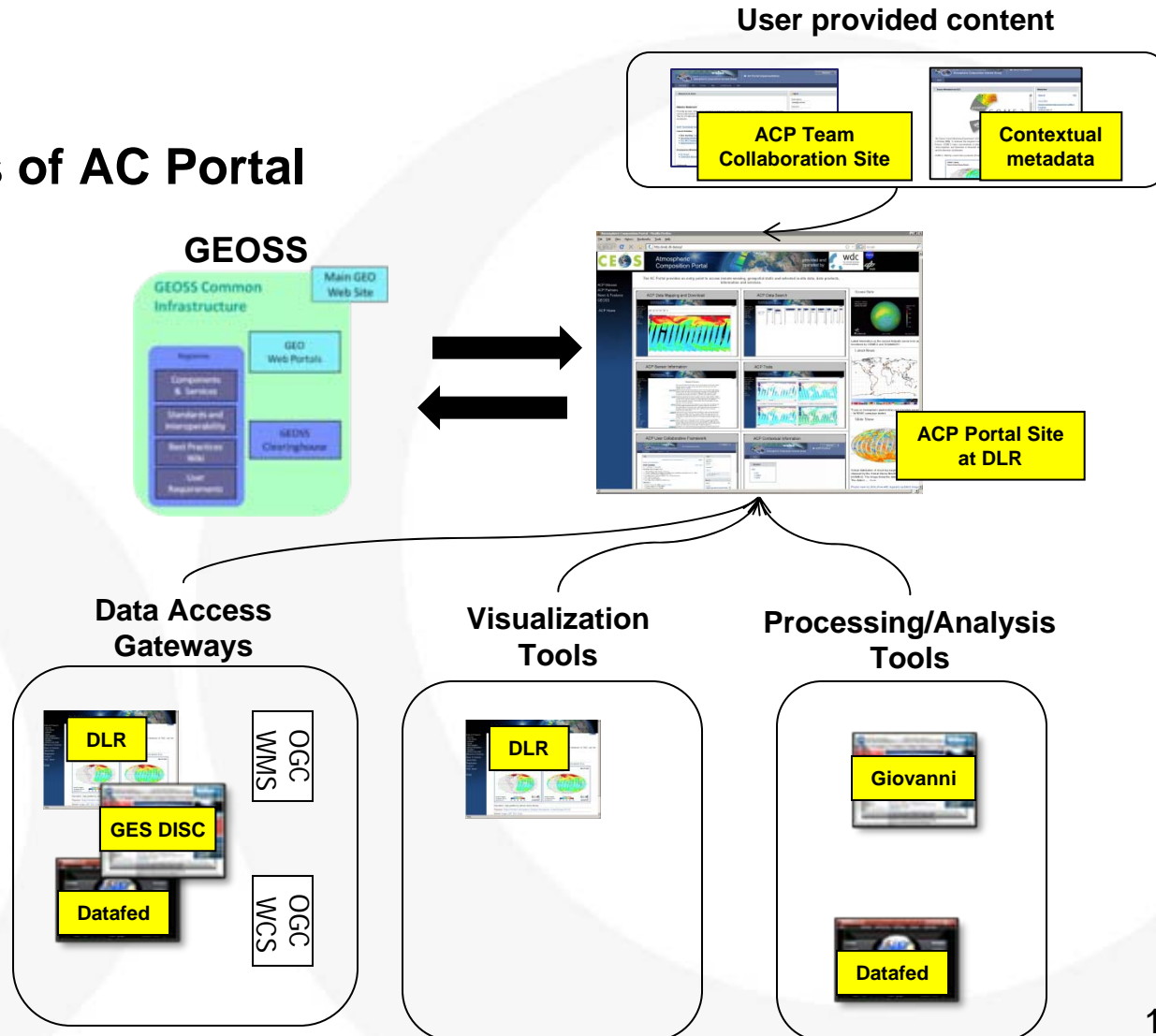


= connectivity between
portal contributors

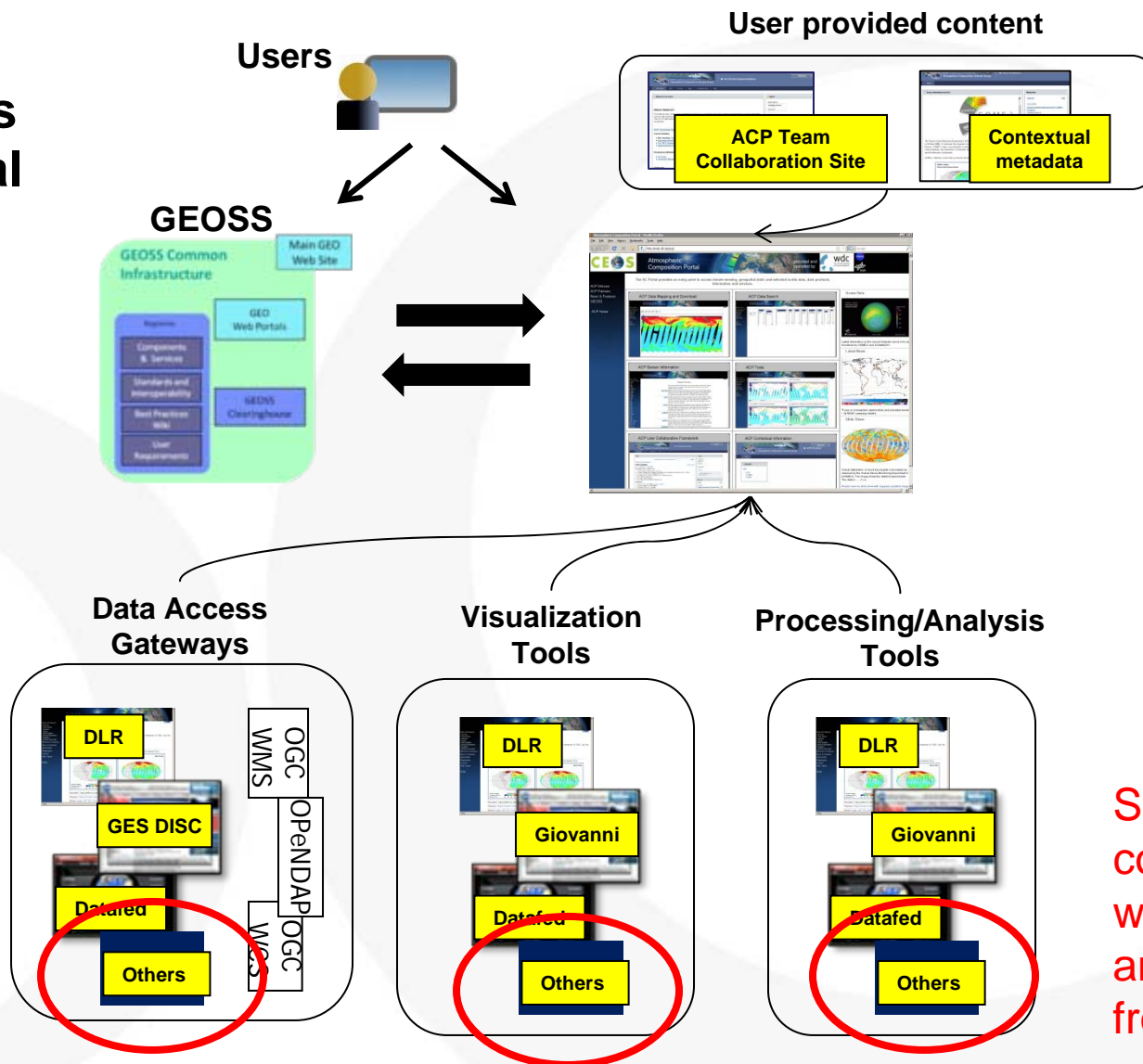
Initial Capability Data and Service Flow

Current Status of AC Portal

‘Alpha’ release



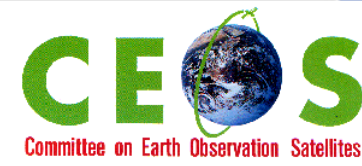
Future Plans for AC Portal



Seek to connect with data and tools from others



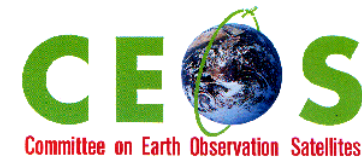
Next Steps



- Connect with more data providers
- Connect more with ACC and scientists
- Connect with more value-adding organizations
- Handle more data types
- Enhance contextual information, including provenance
- Connect more with GEOSS and CEOS



More Data Types



Expansion would take place along several axes:

- a) access to other atmospheric composition data, specifically aerosols
- b) handling data with a vertical component (e.g., level 2 profiles and curtains, 3-dimensional grids)
- c) addressing scenarios and applications in other non-air-quality areas (e.g., climate)