



Workshop Discussion:
HDF & HDF-EOS Future Direction
"Ask the Experts" Forum

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HDF & HDF-EOS Future Directions



- We now have
 - Lots of data in HDF and HDF-EOS
 - Many tools for specific data access or viewing
 - Still end-user frustration

The environment:



- **NASA present thinking is standards for data should be “community driven” rather than “program mandated”.**
 - Projects need to use standards, but the choice of standards must be driven by the science and applications community needs - responsive to the end user.
- **The “visions” for future data processing imply greater need for collaboration**
 - to support distributed and heterogeneous processing systems - from tens to hundreds to thousands of data providers.
 - To support a multitude of scattered and diverse data repositories of different scale.
 - To support many and varied end users and applications world-wide.
 - This implies common data format, flexibility and interoperability.



□ An end user's view

- More emphasis on windows support.
- Need to survey again - more than 50% Modis reproduction tool are windows.
- eostools@eos.nasa.gov is not a users discussion list.
 - Digital image processing for remote sensing data listserv serves users.
- Cohesive view - how do I discover information about data?
 - tools development
 - No "pan-agency" view.
 - Proper funding support to make sure tools can be used.
- Lack of introductory materials
 - Map projections
 - About sensors
 - Conflicting information about what data is available
- How do I get data into format that I can use?

□ Answers

- GCMD for directory - follow to DAAC, follow-up with guide docs and user services
- ECHO for future?
- Usenet group for listserv? May have security issues for some.
- hdfeos.nasa.gov site needs to be better maintained.
 - More introductory material
 - Information about format of products. Or links to DAACs' pages like that.



- ❑ **HDF-EOS distribution needs to be made “pre-compiled” rather than rebuild on site.**
 - Available for some.
 - DLL's with type library for Windows?
- ❑ **Also needed for some tools - like GIS converters.**
- ❑ **Will image in HDF support PNG?**
 - It's been requested, but not “a scheduled task”
 - Present format is usually 8-bit raster bytes (also JPEG)
 - IDL already does- MATLAB too
- ❑ **Images in HDF - a web-browser plug-in for HDF image?**
 - Many browsers available, but no web-browser plug-in
 - Browser development is a moving target
 - ImageMagic can convert HDF to PNG
- ❑ **What about combining the Java HDF viewer with HDF-EOS viewer?**
 - Might be difficult to be sure tool did the right thing with all the different kind of swaths and geolocation information.
- ❑ **MISR-view example -**
 - Large effort to make browser into a GIS viewer.
 - Better to get GIS tool community to read HDF-EOS. How do we do that?
 - RSI, ESRI,



- **Geolocation inside pixel is not specified by HDF-EOS swath format?**
 - Swath there is no standard and also no information.
 - Needs to be in metadata.
 - A new feature/API call in HDF-EOS.
- **Support from vendors**
 - ESRI and ERDAS are planning some support.
 - MATLAB can read HDF4 and HDF-EOS 2 will also read shape files
- **MISR and MODIS data -**
 - Needed "AGP" file is independent, but not clearly identified in distribution.
 - Can EDG package these (as option)
 - But AGP's repeat so not necessary to re-order.
- **NCSA needs feedback about thread-safety.**

Questions:



- ❑ Vision ... What steps should we take for supporting NASA remote sensing data standards in this environment?
- ❑ What is the role of HDF and HDF-EOS in this future?
- ❑ How can we improve the feedback process among users, producers and standards implementers (i.e HDF and HDF-EOS library writers and maintainers) to direct evolution of the standard?

- ❑ Specific technical questions on:
 - HDF4-5 transition
 - HDF performance
 - Parallel HDF